

# IDNext -HC

Electronic devices compatible with flammable  
refrigerant gases

User Manual

02/2023



## Legal Information

The Schneider Electric brand and any trademarks of Schneider Electric SE and its subsidiaries referred to in this guide are the property of Schneider Electric SE or its subsidiaries. All other brands may be trademarks of their respective owners.

This guide and its content are protected under applicable copyright laws and furnished for informational use only. No part of this guide may be reproduced or transmitted in any form or by any means (electronic, mechanical, photocopying, recording, or otherwise), for any purpose, without the prior written permission of Schneider Electric.

Schneider Electric does not grant any right or license for commercial use of the guide or its content, except for a nonexclusive and personal license to consult it on an "as is" basis. Schneider Electric products and equipment should be installed, operated, serviced, and maintained only by qualified personnel.

As standards, specifications, and designs change from time to time, information contained in this guide may be subject to change without notice.

To the extent permitted by applicable law, no responsibility or liability is assumed by Schneider Electric and its subsidiaries for any errors or omissions in the informational content of this material or consequences arising out of or resulting from the use of the information contained herein.

As part of a group of responsible, inclusive companies, we are updating our communications that contain non-inclusive terminology. Until we complete this process, however, our content may still contain standardized industry terms that may be deemed inappropriate by our customers.

© 2023 Eliwell. All rights reserved.



|                                      |           |
|--------------------------------------|-----------|
| <b>Safety information</b>            | <b>5</b>  |
| <b>About the book</b>                | <b>7</b>  |
| <b>Introduction</b>                  | <b>11</b> |
| Introduction                         | 12        |
| Models                               | 13        |
| Accessories                          | 14        |
| <b>Preliminary configurations</b>    | <b>15</b> |
| Introduction                         | 16        |
| IDNext 902 P (12 Vac/dc - 230 Vac)   | 18        |
| IDNext 961 P (12 Vac/dc - 230 Vac)   | 19        |
| IDNext 971 P/B (12 Vac/dc - 230 Vac) | 20        |
| IDNext 974 P/B (12 Vac/dc - 230 Vac) | 21        |
| IDNext 974 P/C (230 Vac)             | 22        |
| IDNext 974 P/CI (230 Vac)            | 23        |
| IDNext 978 P/B (230 Vac)             | 24        |
| IDNext 978 P/C (230 Vac)             | 25        |
| IDNext 978 P/CI (230 Vac)            | 26        |
| <b>Mechanical installation</b>       | <b>27</b> |
| Before starting                      | 28        |
| Power supply disconnection           | 28        |
| Operating environment                | 29        |
| Comments concerning installation     | 30        |
| Mechanical dimensions                | 31        |
| Installation                         | 31        |
| <b>Electrical connections</b>        | <b>32</b> |
| Best wiring practices                | 33        |
| IDNext 902 P (12 Vac/dc - 230 Vac)   | 36        |
| IDNext 961 P (12 Vac/dc - 230 Vac)   | 37        |
| IDNext 971 P/B (12 Vac/dc - 230 Vac) | 38        |
| IDNext 974 P/B (12 Vac/dc - 230 Vac) | 39        |
| IDNext 974 P/C (230 Vac)             | 40        |
| IDNext 974 P/CI (230 Vac)            | 40        |
| IDNext 978 P/B (230 Vac)             | 41        |
| IDNext 978 P/C (230 Vac)             | 41        |
| IDNext 978 P/CI (230 Vac)            | 42        |
| <b>Technical characteristics</b>     | <b>43</b> |
| Technical data                       | 44        |
| 'Power supply / Power draw' table    | 44        |
| 'Loads' table                        | 45        |
| Further Information                  | 46        |
| <b>User interface and operation</b>  | <b>47</b> |
| User interface                       | 48        |
| Using the device                     | 50        |
| Setting the probes                   | 54        |
| Setting the displayed values         | 55        |

|                                                                 |            |
|-----------------------------------------------------------------|------------|
| <b>Defrost</b>                                                  | <b>56</b>  |
| Introduction                                                    | 57         |
| Display and alarm operation                                     | 58         |
| Manual defrost                                                  | 59         |
| Modulating Defrost                                              | 61         |
| Standard defrost                                                | 70         |
| Dual evaporator defrost                                         | 78         |
| <b>Tools</b>                                                    | <b>80</b>  |
| Door switch                                                     | 81         |
| Stand-by                                                        | 82         |
| Copy parameters (UNICARD)                                       | 83         |
| Reset TelevisAir diagnostic counters                            | 84         |
| <b>Regulators</b>                                               | <b>85</b>  |
| Heat/Cool                                                       | 86         |
| Compressor                                                      | 87         |
| Managing the compressor with the probe in error                 | 90         |
| Variable-speed compressor                                       | 91         |
| Activating the Auto-tuning function for the PID regulator (VSC) | 93         |
| Dual compressor                                                 | 94         |
| Deep cooling cycle (DCC)                                        | 95         |
| Evaporator Fans                                                 | 96         |
| Condenser Fans                                                  | 99         |
| Pressure switch                                                 | 102        |
| Auxiliary Output                                                | 104        |
| Light output                                                    | 105        |
| Deadband                                                        | 106        |
| Night/Day                                                       | 107        |
| Energy Saving - Reduced Set                                     | 109        |
| <b>Diagnostics</b>                                              | <b>111</b> |
| Alarms and indications                                          | 112        |
| Minimum and maximum temperature alarm                           | 114        |
| <b>Parameters IDNext -HC</b>                                    | <b>116</b> |
| Parameters IDNext 902 P                                         | 117        |
| Parameters IDNext 961 P                                         | 124        |
| Parameters IDNext 971 P/B                                       | 131        |
| Parameters IDNext 974 P/B                                       | 139        |
| Parameters IDNext 974 P/C                                       | 147        |
| Parameters IDNext 974 P/CI                                      | 157        |
| Parameters IDNext 978 P/B                                       | 168        |
| Parameters IDNext 978 P/C                                       | 176        |
| Parameters IDNext 978 P/CI                                      | 186        |
| <b>Modbus MSK 750 functions and resources</b>                   | <b>197</b> |
| Setting parameters via Modbus                                   | 198        |
| Modbus table content                                            | 199        |
| Table of Modbus Parameters                                      | 201        |
| Visibility table for folders relating to applications           | 223        |
| Table of Modbus Resources                                       | 225        |



## Important information

Read these instructions carefully and visually inspect the equipment to familiarize yourself with the device before attempting to install it and/or put it into operation, or before servicing it. The following warning messages may appear anywhere in this documentation or on the equipment to warn of potential dangers or to call attention to information that can clarify or simplify a procedure.



The addition of this symbol to a “Danger” or “Warning” label indicates the existence of an electrical hazard that could result in personal injury should the user fail to follow the instructions.



This is the safety warning symbol. It is used to warn the user of the potential dangers of personal injury. Observe all the safety warnings that follow this symbol to avoid the risk of serious injury or death.



### DANGER

**DANGER** indicates a dangerous situation which, if not avoided, **will result in** death or serious injury.



### WARNING

**WARNING** indicates a dangerous situation which, if not avoided, **could result in** death or serious injury.



### CAUTION

**CAUTION** indicates a potentially dangerous situation which, if not avoided, **could result in** minor or moderate injury.

### NOTICE

**NOTICE** used in reference to procedures not associated with physical injuries.

## Note

Electrical equipment must only be installed, used and repaired by qualified technicians. Schneider Electric and Eliwell do not accept any liability for any consequences arising from the use of this material.

An authorized person is someone in possession of the skills and knowledge applicable to the structure, to the operation of the electrical equipment and to its installation, and who has received safety training in order to recognize and avoid the risks involved.

## Personnel qualification

Only personnel with suitable training and an in-depth knowledge and understanding of the contents of this manual and any other documentation relevant to the product are authorized to work on and with this product. Qualified personnel must be capable of identifying any dangers which may arise from the parameterization or changing of parameter values, and from the use of mechanical, electric and electronic equipment in general.

Plus, they must be familiar with the personal safety laws, provisions and regulations which must be observed during system planning and implementation.

## Permitted use

This product is used to control refrigerated cabinets, display units and refrigerated units.

The device must be installed and used in accordance with the provided instructions and in particular, in normal conditions, dangerous energized parts must not be accessible.

The device should be suitably protected from water and dust. Access to the various product parts from the front should involve the use of a keyed or tooled locking mechanism.

The device is suited for being used to control refrigerated cabinets, display units and refrigerated units and has been checked on the basis of the harmonized European standards of reference.

Only use the product with the specified cables and accessories. Only use genuine accessories and spare parts.

## Prohibited use

Any use other than that indicated in the above paragraph "Permitted use" is strictly prohibited.

The relay contacts supplied are electromechanical and are subject to wear. The functional safety protection devices, specified by international or local laws, must be installed outside this device.

## Liability and residual risks

The liability of Schneider Electric and Eliwell is limited to the correct and professional use of the product according to the directives referred to herein and in the other supporting documents, and does not cover any damage (including but not limited to) the following causes:

- unspecified installation/use and, in particular, in contravention of the safety requirements of the legislation in force in the country of installation and/or specified in this document;
- use on equipment which does not provide adequate protection against electrocution, water and dust in the actual installation conditions;
- use on devices which allow access to dangerous parts without the aid of tools and/or which do not have a keyed locking mechanism;
- product tampering and/or alteration;
- installation/use on equipment that does not comply with the regulations in force in the country of installation.

## Disposal



The equipment (or product) must be subjected to separate waste collection in compliance with local legislation regarding waste disposal.

---

# About the book

---

## Document Scope

This document describes the **IDNext -HC** devices and corresponding accessories, including information regarding installation and wiring.

**Note:** read this document and all related documents carefully before installing, operating or servicing the device.

## Validity Note

The technical characteristics of the devices described in this manual are also available online, through the Eliwell website ([www.eliwell.com](http://www.eliwell.com)).

The characteristics illustrated in this manual should be identical to those which can be found online. In accordance with our policy of continuous improvement, the content of the documentation may be revised from time to time in order to improve its clarity and accuracy. If there are any discrepancies between the manual and the information available online, use the latter as your point of reference.

## Related documents

| Publication title          | Reference document code                                                                                                                                    |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Technical Sheet IDNext -HC | 9IS54728 (16L)<br>9IS54839DE<br>9IS54839EN<br>9IS54839ES<br>9IS54839FI<br>9IS54839FR<br>9IS54839GR<br>9IS54839IT<br>9IS54839NL<br>9IS54839SV<br>9IS54839RU |

All available technical documentation and other technical information is available to download from the website: [www.eliwell.com](http://www.eliwell.com)

## Product related information

### **DANGER**

#### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, FIRE OR ARC FLASH**

- Disconnect all power from all equipment including connected devices prior to removing any covers or doors, or installing or removing any accessories, hardware, cables or wires.
- Always use a properly rated voltage sensing device to confirm the power is off where and when indicated.
- Before restoring the power supply, replace and secure all covers, hardware components and cables.
- Use only the specified voltage when operating this device and any associated products.
- Use appropriate safety interlocks where personnel and/or equipment hazards exist.
- Install and use this equipment in an enclosure appropriately rated for its intended environment.
- Do not use this equipment for safety-critical functions.
- Do not disassemble, repair, or modify this equipment.

**Failure to follow these instructions will result in death or serious injury.**

### **DANGER**

#### **HAZARD OF ELECTRIC SHOCK AND/OR FIRE**

- Do not expose the equipment to liquids.
- Do not exceed the temperature and humidity ranges specified in the technical data and keep the area surrounding the cooling slits aerated.
- Do not apply dangerous voltages to the SELV connection terminals (see "Connections" section).
- Only connect compatible accessories - as specified in the section "Accessories" - to the device.
- Only use cables with a suitable cross-section (see "Wiring guidelines" section).

**Failure to follow these instructions will result in death or serious injury.**

### **DANGER**

#### **LOOSE WIRING CAN RESULT IN ELECTRIC SHOCK AND/OR FIRE**

Tighten the connections in compliance with the technical specifications for torque values and make sure the wiring is correct.

**Failure to follow these instructions will result in death or serious injury.**

**12 Vac/dc models:**

### **DANGER**

#### **HAZARD OF ELECTRIC SHOCK, OVERHEATING AND/OR FIRE**

- Do not connect the equipment power supply directly to line voltage.
- Use only isolating SELV, Class 2 power suppliers/transformers to supply power to the equipment.

**Failure to follow these instructions will result in death or serious injury.**

## **WARNING**

### **HAZARD OF OVERHEATING AND/OR FIRE**

- Do not use with loads other than those indicated in the technical data.
- Do not exceed the maximum permitted current; in the case of higher loads, use a contactor with suitable power.
- Make sure the application has not been designed with the device outputs connected directly to instruments that generate a frequently activated capacitive load <sup>(1)</sup>.
- Power lines and output connections must be suitably wired and protected by means of fuses when required by national and local regulations.
- Connect the relay output, including the shared pole, using cables with a cross-section of 2.5 mm<sup>2</sup> (14 AWG) and a length of at least 200 mm (7.87 in.).

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

<sup>(1)</sup> Even if the application does not apply a frequently activated capacitive load to the relay, capacitive loads reduce the life of any electromechanical relay and the installation of a contactor or external relay, sized and maintained according to the ratings and characteristics of the capacitive load, helps to minimize the consequences of relay degradation. When handling the equipment, take care to avoid damage caused by electrostatic discharge. In particular, the unshielded connectors are extremely vulnerable to electrostatic discharge.

## **WARNING**

### **UNINTENDED EQUIPMENT OPERATION DUE TO ELECTROSTATIC DISCHARGE**

Before handling the equipment, always discharge the static electricity from the body by touching an earthed surface or type-approved antistatic mat.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

## **NOTICE**

### **INOPERABLE DEVICE**

- For connection of the probes, the digital input and the Open Collector output, use cables no longer than 10 m (32.80 ft).
- For TTL serial line connection, use cables no longer than 1 m (3.28 ft).
- For all devices powered at 12 Vac/dc, use power cables no longer than 3 m (9.84 ft)

**Failure to follow these instructions can result in equipment damage.**

## **NOTICE**

### **UNINTENDED EQUIPMENT OPERATION**

The SELV wiring must be laid separately from all the other wiring (see "Connections" chapter).

**Failure to follow these instructions can result in equipment damage.**

The temperature (NTC/PTC/Pt1000) probes have no specified connection polarity; the connections can be extended using a normal bipolar cable. Extending the probe wiring influences the electromagnetic compatibility (EMC) of the device.

## Flammable refrigerant gases

The use of flammable refrigerant gases depends on many factors, including current local, regional and/or national standards.

The devices and relative accessories described in the documentation supplied with the product use components and - to be more specific - electromechanical relays tested in accordance with standard IEC 60079-15 and classified as nC components (non-sparking electrical devices with protection 'n').

Conformity with standard IEC 60079-15 is considered sufficient - and therefore suitable - for commercial refrigeration and HVAC systems using flammable refrigerant gases such as R290. Nevertheless, there may be other limitations, devices, locations and/or machine types (refrigerators, automatic distributors and dispensers, bottle coolers, ice machines, chiller cabinets for self-service facilities, etc.) involved, leading to the application of further restrictions and/or obligations.

The use and application of the information contained in this document requires experience in the design and parameterization/programming of control systems for refrigeration and HVAC systems. Only you, i.e. the original equipment producers, installers or users, can be aware of the conditions and factors present, in addition to the applicable regulations during the planning, installation and setup, operation and maintenance of the machine, or the related processes. Therefore, only you can decide on the suitability of the automation and the associated equipment, and the resulting safety measures and interlock devices that can be applied effectively and adequately in the locations in which the relevant equipment is to be commissioned. When choosing the automation and control equipment - and any other related equipment or software - for a particular application, you must also take account of all the standards set out by applicable national legislation or by the relevant certifying authorities.

When using flammable refrigerant gases, at the end of the installation process for this device and related equipment you must make sure the machine conforms to current standards and regulations. Although all the declarations and information contained herein are to be considered accurate and reliable, they are not covered by warranty. The information provided herein does not absolve the user from responsibility in terms of performing their own tests and certifications of conformity to all applicable regulations.

### **WARNING**

#### **REGULATORY INCOMPATIBILITY**

Make sure that all equipment used and systems designed comply with all applicable local, regional and national laws.  
**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

---

# Introduction

---

## Contents

This section includes the following topics:

|                    |    |
|--------------------|----|
| Introduction ..... | 12 |
| Models .....       | 13 |
| Accessories .....  | 14 |

# Introduction

## General Description

**IDNext -HC** is a family of electronic devices for managing refrigerated cabinets, display units and refrigerated units.

## Main regulators

The main regulators for the device are as follows:

- heat/cool
- compressor
- deep cooling cycle
- dual compressor
- variable-speed compressor
- evaporator/condenser fans
- modulating defrost
- standard defrost
- dual evaporator defrost
- door switch
- AUX output (Auxiliary/Light)
- pressure switch
- day/night
- energy saving
- deadband

In this manual, the photographs and diagrams are provided to illustrate the device (and other Eliwell devices) and are purely illustrative. The corresponding dimensions and proportions may not correspond to actual dimensions in terms of life-size or scale. Furthermore, all the wiring or electrical diagrams should be considered as simplified representations which may not exactly correspond to the reality.

## Models

The following is a list of **IDNext -HC** models:

| Product                | Description                                        |
|------------------------|----------------------------------------------------|
| <b>IDNext 902 P</b>    | IDNext 902 P NTC 10A 12 Vac/dc AIR -HC             |
|                        | IDNext 902 P NTC 10A 230 Vac AIR -HC               |
| <b>IDNext 961 P</b>    | IDNext 961 P NTC 2Hp 12 Vac/dc AIR -HC             |
|                        | IDNext 961 P NTC 2Hp 230 Vac AIR -HC               |
| <b>IDNext 971 P/B</b>  | IDNext 971 P NTC 2Hp/8 12 Vac/dc BUZ AIR -HC       |
|                        | IDNext 971 P NTC 2Hp/8 230 Vac BUZ AIR -HC         |
| <b>IDNext 974 P/B</b>  | IDNext 974 P NTC 2Hp/8/5 12 Vac/dc BUZ AIR -HC     |
|                        | IDNext 974 P NTC 2Hp/8/5 230 Vac BUZ AIR -HC       |
| <b>IDNext 974 P/C</b>  | IDNext 974 P NTC 2Hp/8/5 230 Vac RTC AIR -HC       |
| <b>IDNext 974 P/CI</b> | IDNext 974 P NTC VSC/1.5Hp/8 230 Vac RTC AIR -HC   |
| <b>IDNext 978 P/B</b>  | IDNext 978 P NTC 1.5Hp/8/5/5 230 Vac BUZ AIR -HC   |
| <b>IDNext 978 P/C</b>  | IDNext 978 P NTC 1.5Hp/8/5/5 230 Vac RTC AIR -HC   |
| <b>IDNext 978 P/CI</b> | IDNext 978 P NTC VSC/1.5Hp/8/5 230 Vac RTC AIR -HC |

## Abbreviations

The following is a list of abbreviations used in the descriptions:

- **AIR** = the device is compatible with the BTLE Dongle
- **BUZ (/B)** = the device has a Buzzer
- **RTC (/C)** = the device has the RTC
- **VSC (/I)** = the device has an Open Collector output for connecting a variable-speed compressor

## Accessories

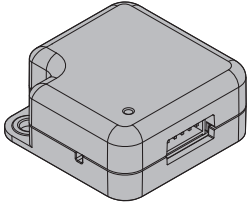
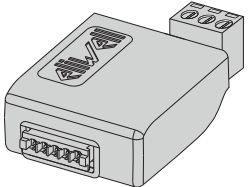
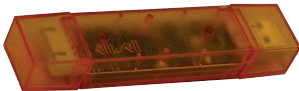
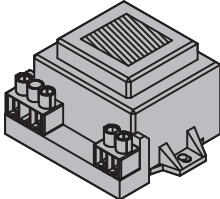
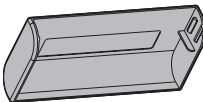


### HAZARD OF ELECTRIC SHOCK, FIRE OR ARC FLASH

Only connect compatible accessories to the instrument.

**Failure to follow these instructions will result in death or serious injury.**

Contact an Eliwell representative for further information regarding the accessories that can be used.

| Accessory                                                                           | Description                                                                                          |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
|    | <b>HACCP Module:</b> TTL/Bluetooth communication interface                                           |
|    | <b>BusAdapter 150 Dongle:</b> Non-opto-isolated TTL/RS485 communication interface                    |
|   | <b>BusAdapter:</b> Opto-isolated TTL/RS485 communication interface                                   |
|  | <b>UNICARD:</b> Programming key                                                                      |
|  | <b>DMI:</b> Programming interface                                                                    |
|  | <b>Probes:</b> NTC, PTC, Pt1000                                                                      |
|  | <b>Transformers:</b> 230 V / 12 V power supply transformers (for models with 12 Vac/dc power supply) |
|  | <b>Protection:</b> Dripping protection for connections                                               |

---

# Preliminary configurations

---

## Contents

This section includes the following topics:

|                                            |    |
|--------------------------------------------|----|
| Introduction .....                         | 16 |
| IDNext 902 P (12 Vac/dc - 230 Vac) .....   | 18 |
| IDNext 961 P (12 Vac/dc - 230 Vac) .....   | 19 |
| IDNext 971 P/B (12 Vac/dc - 230 Vac) ..... | 20 |
| IDNext 974 P/B (12 Vac/dc - 230 Vac) ..... | 21 |
| IDNext 974 P/C (230 Vac) .....             | 22 |
| IDNext 974 P/CI (230 Vac) .....            | 23 |
| IDNext 978 P/B (230 Vac) .....             | 24 |
| IDNext 978 P/C (230 Vac) .....             | 25 |
| IDNext 978 P/CI (230 Vac) .....            | 26 |

# Introduction

## Overview

**IDNext -HC** is a family of electronic devices for managing refrigerated cabinets, display units and refrigerated units.

Every device has 3 preset applications: **AP1**, **AP2** and **AP3**, that pre-configure the device to work with 3 real usage situations, reducing installation time and only requiring precision changes to parameters.

## Applications

Changing the device operating parameters does not affect the preset application values.

The first time the device is switched on, the operating parameters are the same (for value and visibility) as those for application **AP1**.

Applications **AP1**, **AP2** and **AP3** cannot be edited from the device.

Applications **AP2** and **AP3** can only be edited via Device Manager, an Eliwell proprietary software.

Application **AP1** can never be edited (not even using Device Manager) so that the device can be restored with a reliably working application.

## Switching on for the first time

Once the electrical connections have been completed, simply power up the device for it to start working.

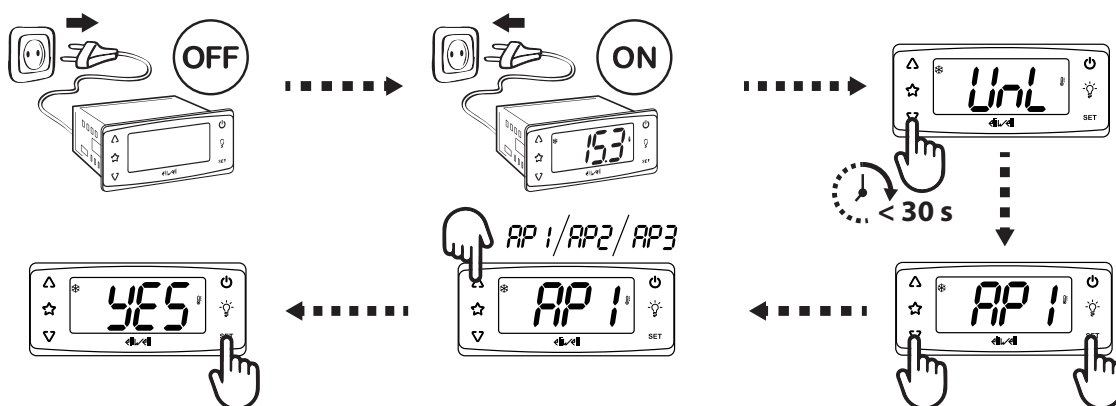
At the first startup:

1. Select and load the preset application - **AP1**, **AP2** or **AP3** - that best reflects the usage requirements.
2. Check and, if necessary, adjust the value of the main device parameters to adapt the selected application to your system.
3. Make sure there are no active alarms.

## Loading Preset Applications

The procedure for loading one of the preset applications is:

1. If the device is on, switch it off
  2. Switch on the device
  3. Press and hold  $\nabla$  for at least 3 seconds, until the keypad unlock label "UnL" appears
  4. Within 30 seconds of switching the device on, press and hold (SET +  $\nabla$ ) for at least 5 seconds, until the label "AP1" appears
  5. Scroll through applications **AP1**, **AP2** and **AP3** using  $\Delta$  and  $\nabla$
  6. Confirm the selected preset application using SET.
- Note:** The process can be canceled by pressing  $\odot$  or letting a timeout occur (15 seconds)
7. If the procedure was completed successfully, the display will show "yES"; otherwise it will show "no"
  8. The device will restart



The procedure for loading one of the preset applications restores the respective default values, with the exception of the parameters NON specific to the application that retain the value set previously. These values, left unaltered, may not be suitable and may therefore need to be changed.

## NOTICE

### INOPERABLE DEVICE

Check the parameters after loading a preset application.

**Failure to follow these instructions can result in equipment damage.**

## Restore default values

When necessary, you can restore the parameters to their default values, by loading one of the preset applications **AP1**, **AP2** or **AP3**.

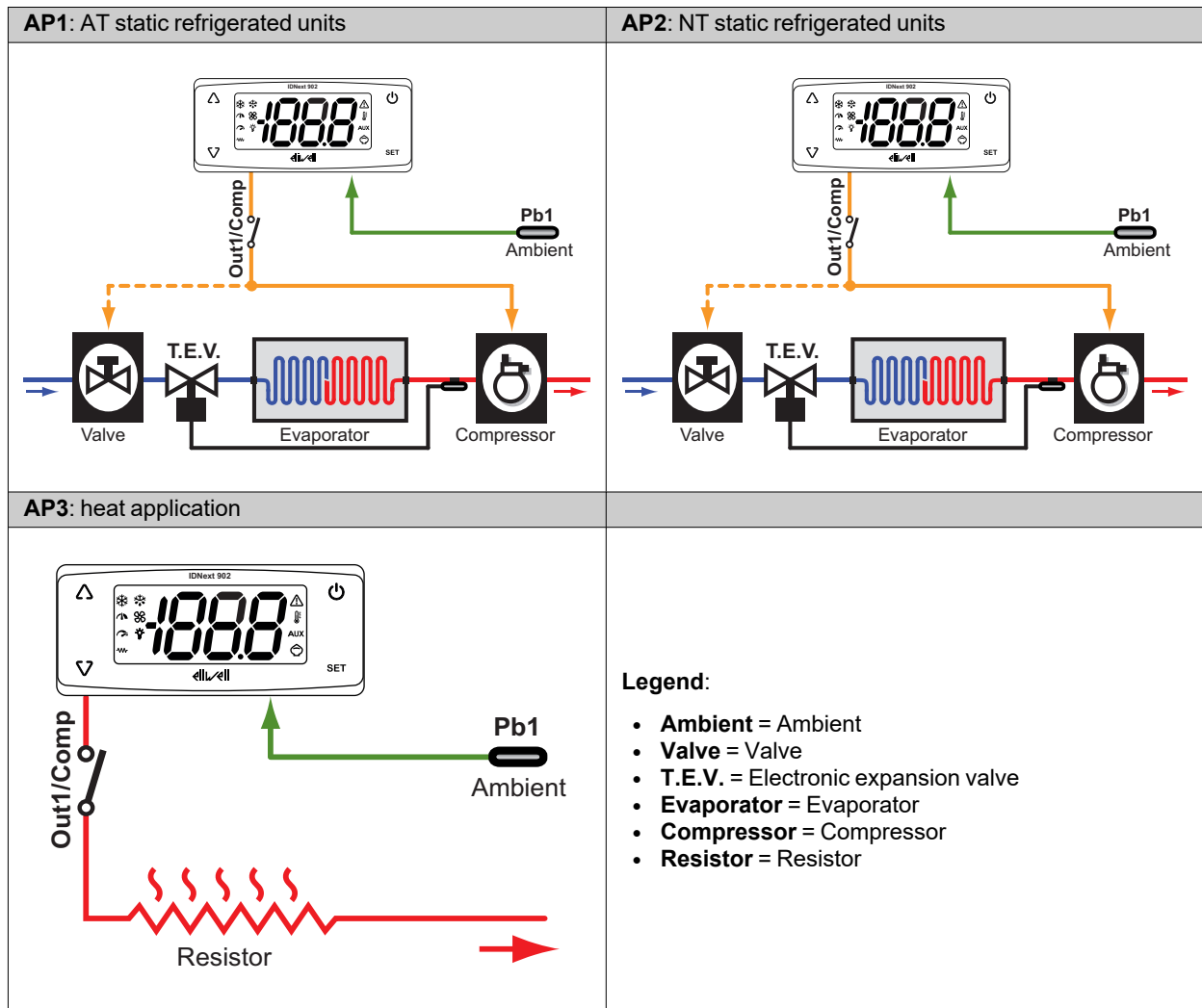
## View Preset applications

Click on the device model purchased to access the corresponding Preset applications:

- IDNext 902 P
- IDNext 961 P
- IDNext 971 P/B
- IDNext 974 P/B
- IDNext 974 P/C
- IDNext 974 P/CI
- IDNext 978 P/B
- IDNext 978 P/C
- IDNext 978 P/CI

## IDNext 902 P (12 Vac/dc - 230 Vac)

### Application overview

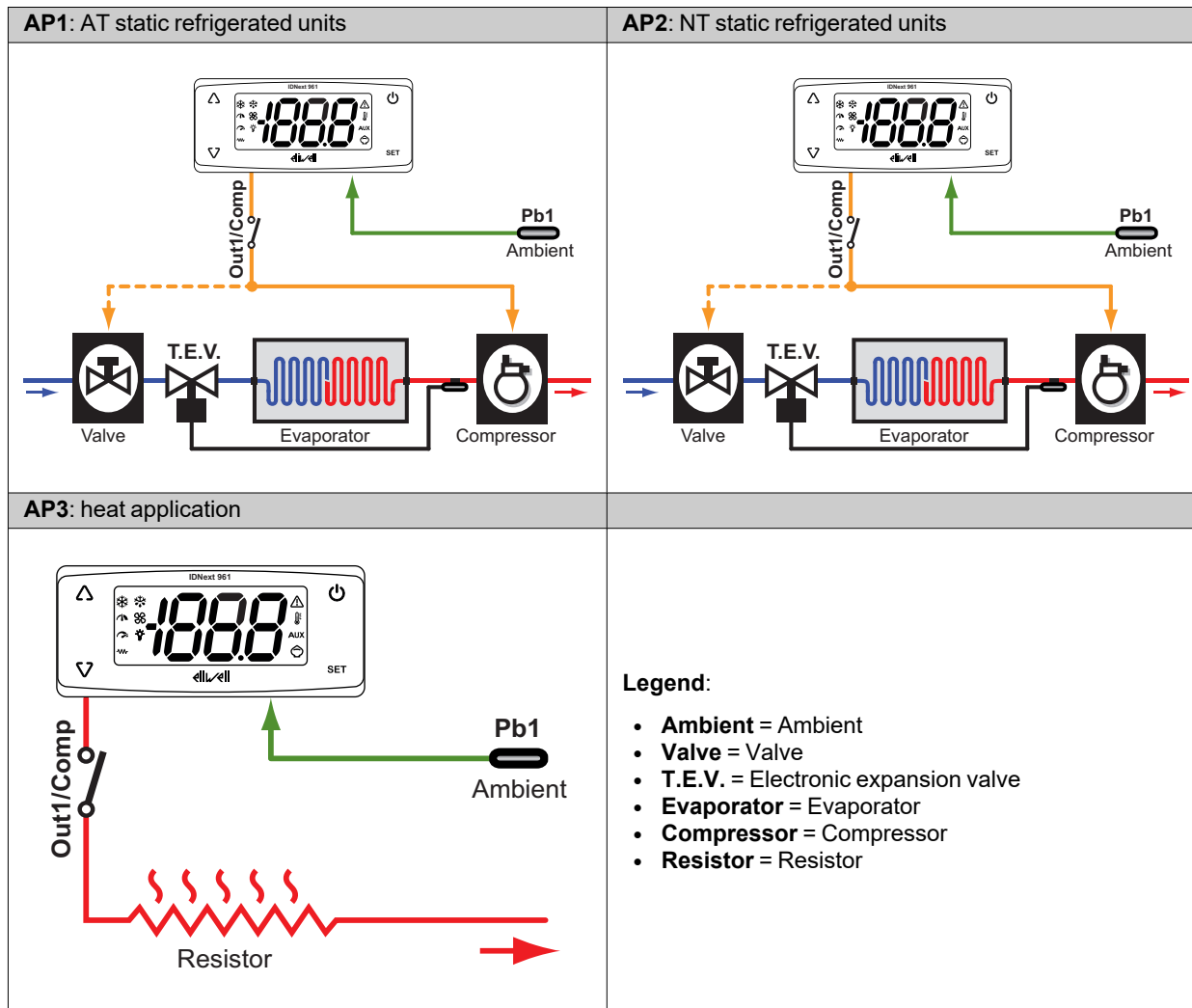


### Application details

|                          |                                                                                                                                                                |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Setpoint</b>          | <b>AP1</b> = 3.0 °C (37.4 °F); <b>AP2</b> = 0.0 °C (32.0 °F); <b>AP3</b> = 0.0 °C (32.0 °F)                                                                    |
| <b>Analog inputs</b>     | 1 NTC input ( <b>Pb1</b> )                                                                                                                                     |
| <b>Digital inputs</b>    | 1 digital input not set ( <b>H11</b> = 0)                                                                                                                      |
| <b>Digital outputs</b>   | <b>Out1/Comp</b> relay (default: Compressor)                                                                                                                   |
| <b>Buzzer</b>            | NO                                                                                                                                                             |
| <b>RTC</b>               | NO                                                                                                                                                             |
| <b>Type of defrost</b>   | <b>AP1, AP2</b> = due to compressor stop; <b>AP3</b> = ---                                                                                                     |
| <b>End of defrost</b>    | <b>AP1, AP2</b> = due to compressor stop; <b>AP3</b> = ---                                                                                                     |
| <b>Active alarms</b>     | Pb1 maximum/minimum temperature ( <b>HAL</b> and <b>LAL</b> )                                                                                                  |
| <b>Key configuration</b> | △: <b>AP1, AP2</b> = manual defrost ( <b>H31</b> = 1); <b>AP3</b> = not set ( <b>H31</b> = 0)<br>∇: not set ( <b>H32</b> = 0)<br>Ⓟ: stand-by ( <b>H33</b> = 4) |

## IDNext 961 P (12 Vac/dc - 230 Vac)

### Application overview

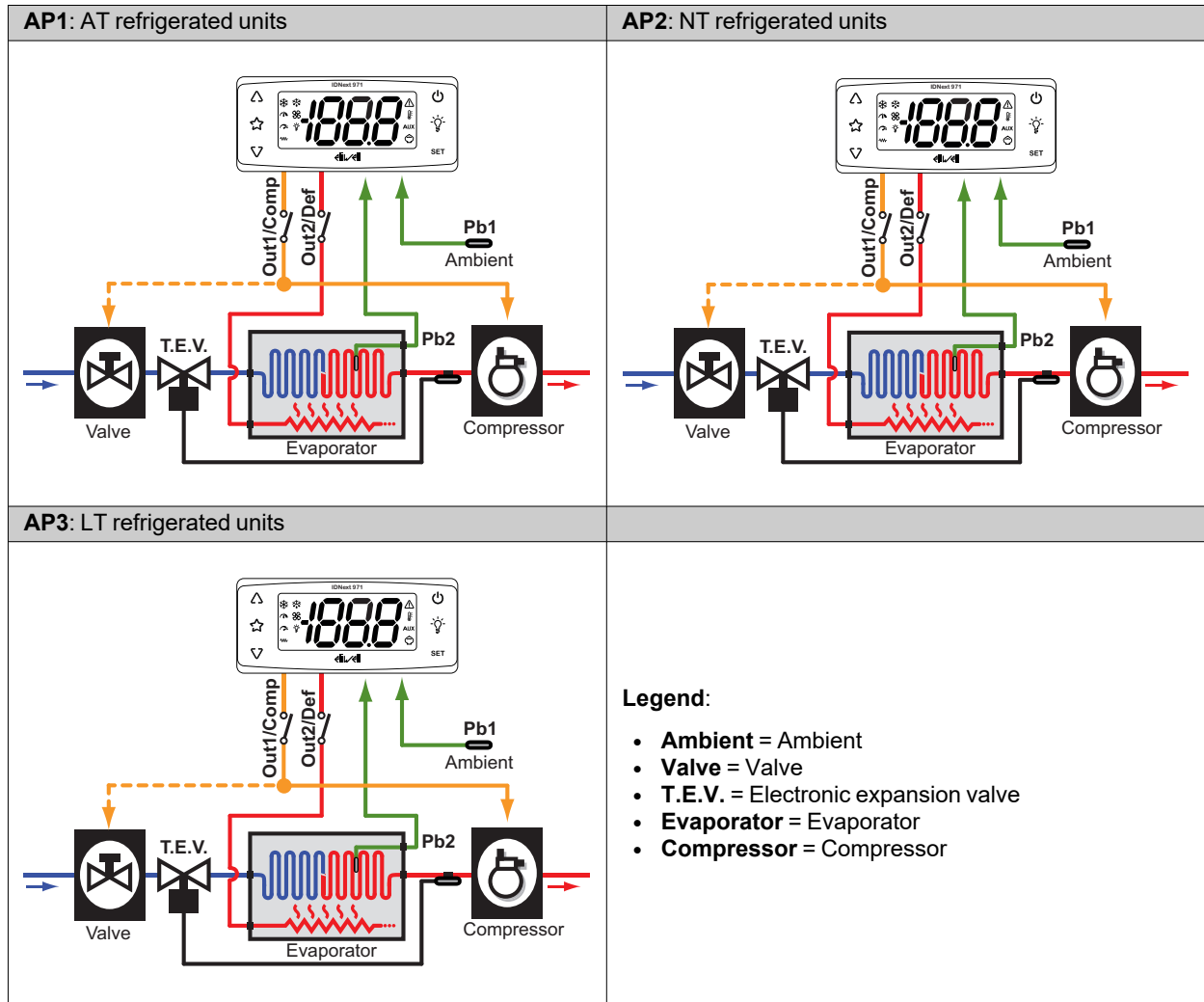


### Application details

|                          |                                                                                                                                                                |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Setpoint</b>          | <b>AP1</b> = 3.0 °C (37.4 °F); <b>AP2</b> = 0.0 °C (32.0 °F); <b>AP3</b> = 0.0 °C (32.0 °F)                                                                    |
| <b>Analog inputs</b>     | 1 NTC input ( <b>Pb1</b> )                                                                                                                                     |
| <b>Digital inputs</b>    | 1 digital input not set ( <b>H11</b> = 0)                                                                                                                      |
| <b>Digital outputs</b>   | <b>Out1/Comp</b> relay (default: Compressor)                                                                                                                   |
| <b>Buzzer</b>            | NO                                                                                                                                                             |
| <b>RTC</b>               | NO                                                                                                                                                             |
| <b>Type of defrost</b>   | <b>AP1, AP2</b> = due to compressor stop; <b>AP3</b> = ---                                                                                                     |
| <b>End of defrost</b>    | <b>AP1, AP2</b> = due to compressor stop; <b>AP3</b> = ---                                                                                                     |
| <b>Active alarms</b>     | Pb1 maximum/minimum temperature ( <b>HAL</b> and <b>LAL</b> )                                                                                                  |
| <b>Key configuration</b> | Δ: <b>AP1, AP2</b> = manual defrost ( <b>H31</b> = 1); <b>AP3</b> = not set ( <b>H31</b> = 0)<br>∇: not set ( <b>H32</b> = 0)<br>Ⓟ: stand-by ( <b>H33</b> = 4) |

# IDNext 971 P/B (12 Vac/dc - 230 Vac)

## Application overview

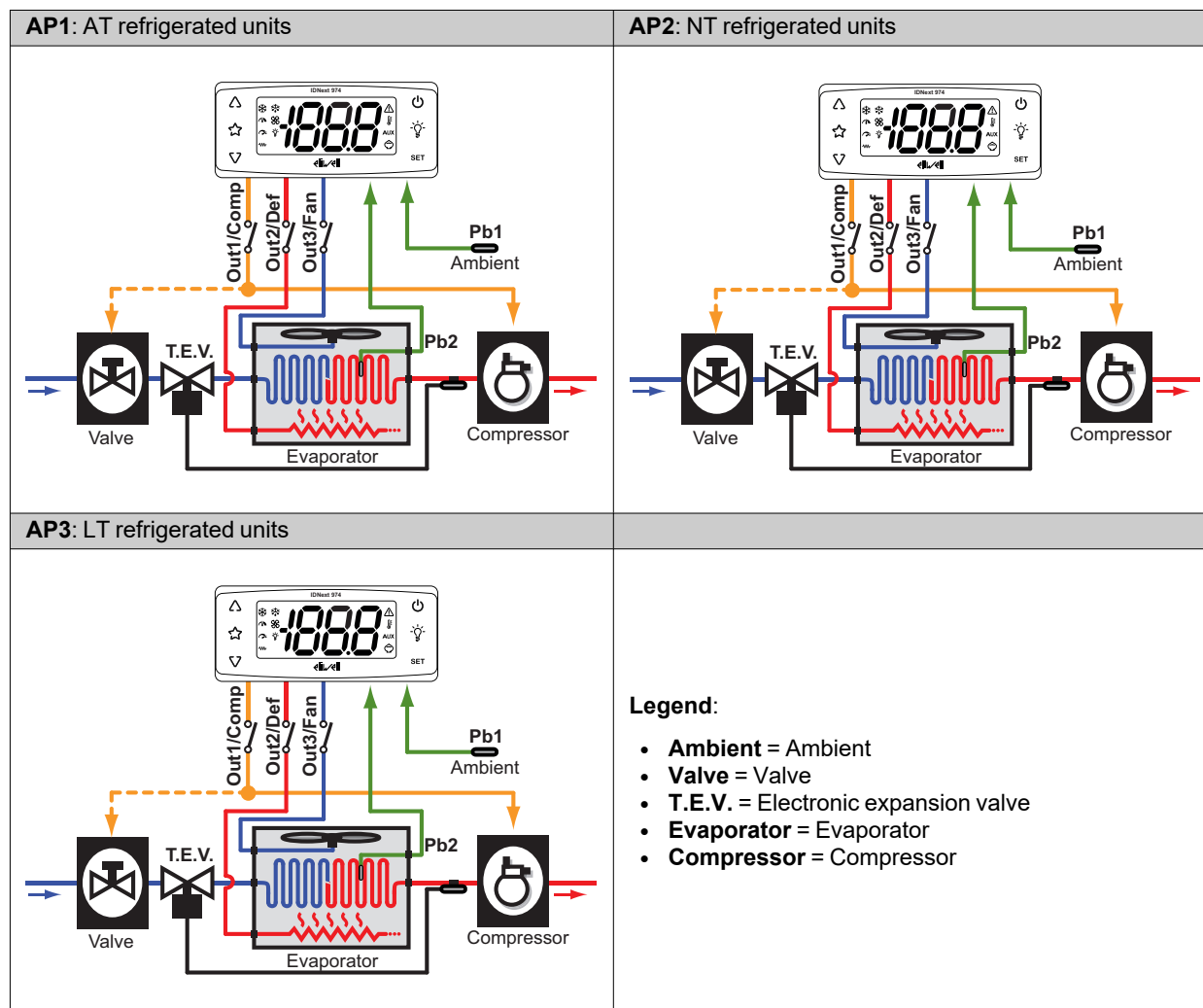


## Application details

|                          |                                                                                                                                                                                        |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Setpoint</b>          | <b>AP1</b> = 3.0 °C (37.4 °F); <b>AP2</b> = 0.0 °C (32.0 °F); <b>AP3</b> = -18.0 °C (0.4 °F)                                                                                           |
| <b>Analog inputs</b>     | 2 NTC inputs ( <b>Pb1</b> , <b>Pb2</b> )                                                                                                                                               |
| <b>Digital inputs</b>    | 1 digital input not set ( <b>H11</b> = 0)                                                                                                                                              |
| <b>Digital outputs</b>   | <b>Out1/Comp</b> relay (default: Compressor)<br><b>Out2/Def</b> relay (default: Defrost)                                                                                               |
| <b>Buzzer</b>            | YES                                                                                                                                                                                    |
| <b>RTC</b>               | NO                                                                                                                                                                                     |
| <b>Type of defrost</b>   | Electric heater defrost                                                                                                                                                                |
| <b>End of defrost</b>    | due to temperature <b>dS1</b> = 8.0 °C (46.4 °F)                                                                                                                                       |
| <b>Active alarms</b>     | Pb1 maximum/minimum temperature ( <b>HAL</b> and <b>LAL</b> )                                                                                                                          |
| <b>Key configuration</b> | <p>△: manual defrost (<b>H31</b> = 1)</p> <p>▽: not set (<b>H32</b> = 0)</p> <p>⊖: stand-by (<b>H33</b> = 4)</p> <p>⚡: not set (<b>H34</b> = 0)</p> <p>☆: not set (<b>H35</b> = 0)</p> |

## IDNext 974 P/B (12 Vac/dc - 230 Vac)

### Application overview

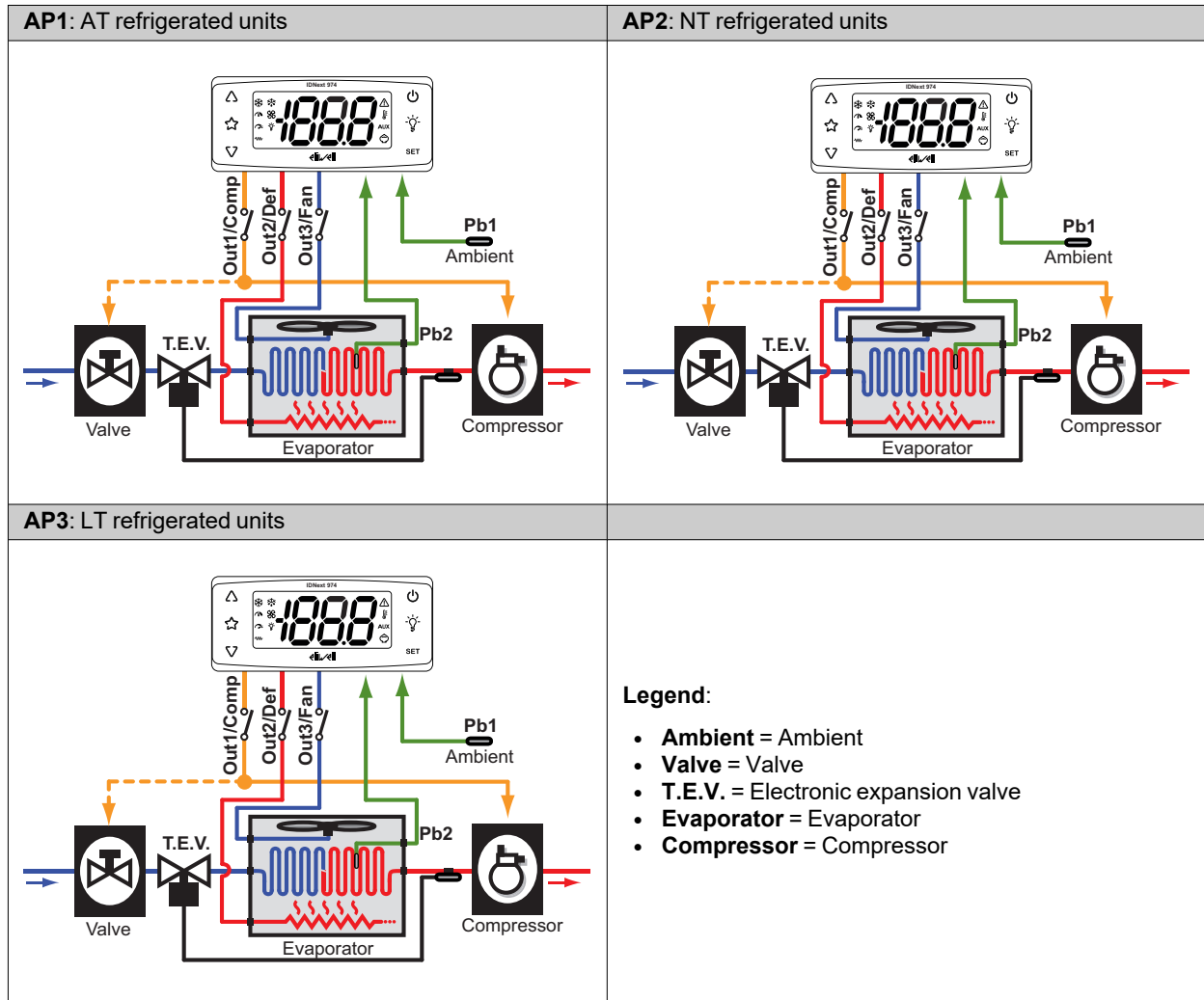


### Application details

|                          |                                                                                                                                                                      |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Setpoint</b>          | <b>AP1</b> = 3.0 °C (37.4 °F); <b>AP2</b> = 0.0 °C (32.0 °F); <b>AP3</b> = -18.0 °C (0.4 °F)                                                                         |
| <b>Analog inputs</b>     | 2 NTC inputs ( <b>Pb1</b> , <b>Pb2</b> )                                                                                                                             |
| <b>Digital inputs</b>    | 1 digital input not set ( <b>H11</b> = 0)                                                                                                                            |
| <b>Digital outputs</b>   | <b>Out1/Comp</b> relay (default: Compressor)<br><b>Out2/Def</b> relay (default: Defrost)<br><b>Out3/Fan</b> relay (default: Evaporator fans)                         |
| <b>Buzzer</b>            | YES                                                                                                                                                                  |
| <b>RTC</b>               | NO                                                                                                                                                                   |
| <b>Type of defrost</b>   | Electric heater defrost                                                                                                                                              |
| <b>End of defrost</b>    | due to temperature <b>ds1</b> = 8.0 °C (46.4 °F)                                                                                                                     |
| <b>Active alarms</b>     | <b>Pb1</b> maximum/minimum temperature ( <b>HAL</b> and <b>LAL</b> )                                                                                                 |
| <b>Key configuration</b> | △: manual defrost ( <b>H31</b> = 1)<br>∇: not set ( <b>H32</b> = 0)<br>Ⓟ: stand-by ( <b>H33</b> = 4)<br>⚡: not set ( <b>H34</b> = 0)<br>☆: not set ( <b>H35</b> = 0) |

## IDNext 974 P/C (230 Vac)

### Application overview

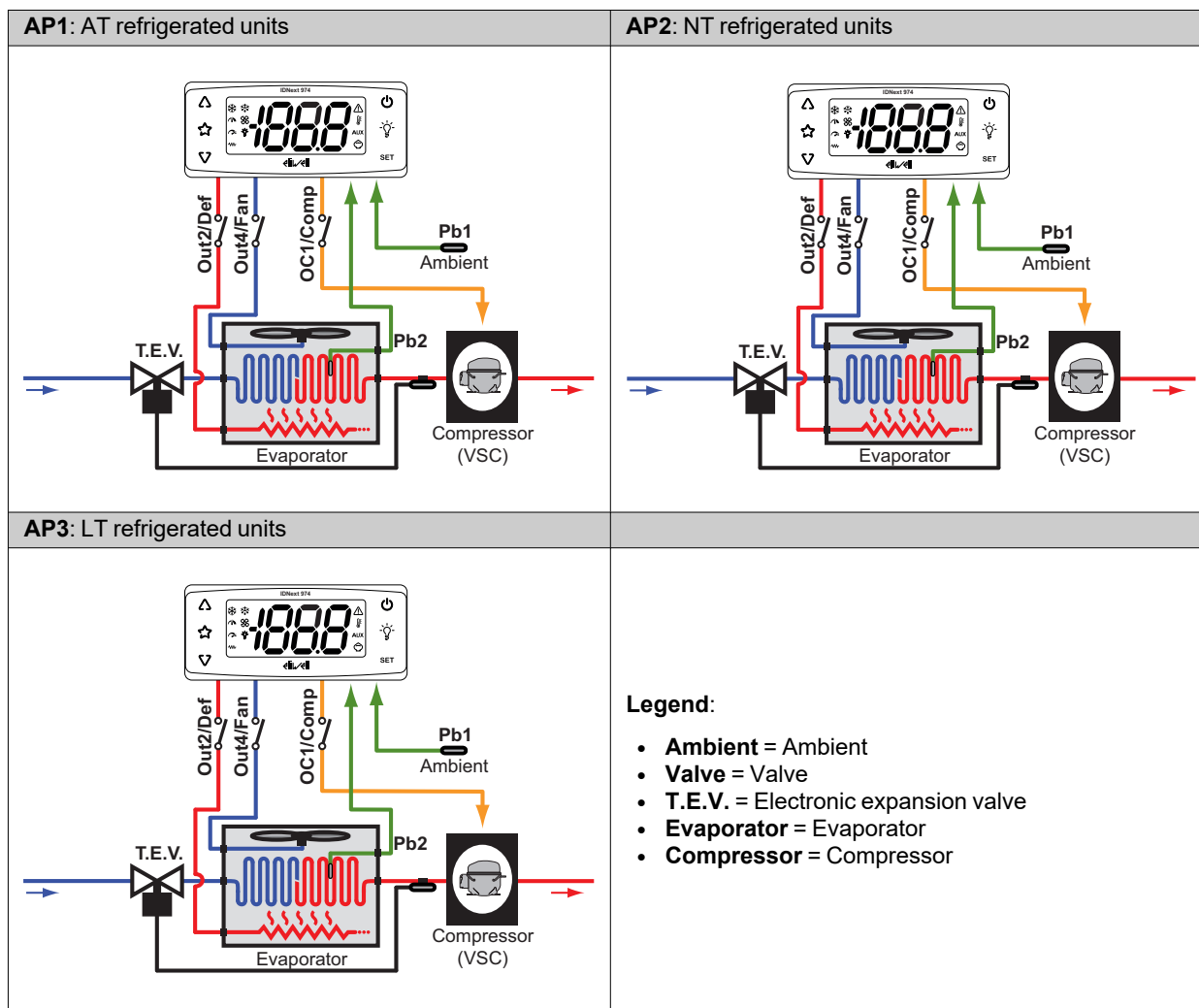


### Application details

|                          |                                                                                                                                                                      |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Setpoint</b>          | <b>AP1</b> = 3.0 °C (37.4 °F); <b>AP2</b> = 0.0 °C (32.0 °F); <b>AP3</b> = -18.0 °C (0.4 °F)                                                                         |
| <b>Analog inputs</b>     | 2 NTC inputs ( <b>Pb1</b> , <b>Pb2</b> )                                                                                                                             |
| <b>Digital inputs</b>    | 1 digital input not set ( <b>H11</b> = 0)                                                                                                                            |
| <b>Digital outputs</b>   | <b>Out1/Comp</b> relay (default: Compressor)<br><b>Out2/Def</b> relay (default: Defrost)<br><b>Out3/Fan</b> relay (default: Evaporator fans)                         |
| <b>Buzzer</b>            | NO                                                                                                                                                                   |
| <b>RTC</b>               | YES                                                                                                                                                                  |
| <b>Type of defrost</b>   | Electric heater defrost                                                                                                                                              |
| <b>End of defrost</b>    | due to temperature <b>ds1</b> = 8.0 °C (46.4 °F)                                                                                                                     |
| <b>Active alarms</b>     | <b>Pb1</b> maximum/minimum temperature ( <b>HAL</b> and <b>LAL</b> )                                                                                                 |
| <b>Key configuration</b> | △: manual defrost ( <b>H31</b> = 1)<br>∇: not set ( <b>H32</b> = 0)<br>Ⓟ: stand-by ( <b>H33</b> = 4)<br>⚡: not set ( <b>H34</b> = 0)<br>☆: not set ( <b>H35</b> = 0) |

## IDNext 974 P/CI (230 Vac)

### Application overview

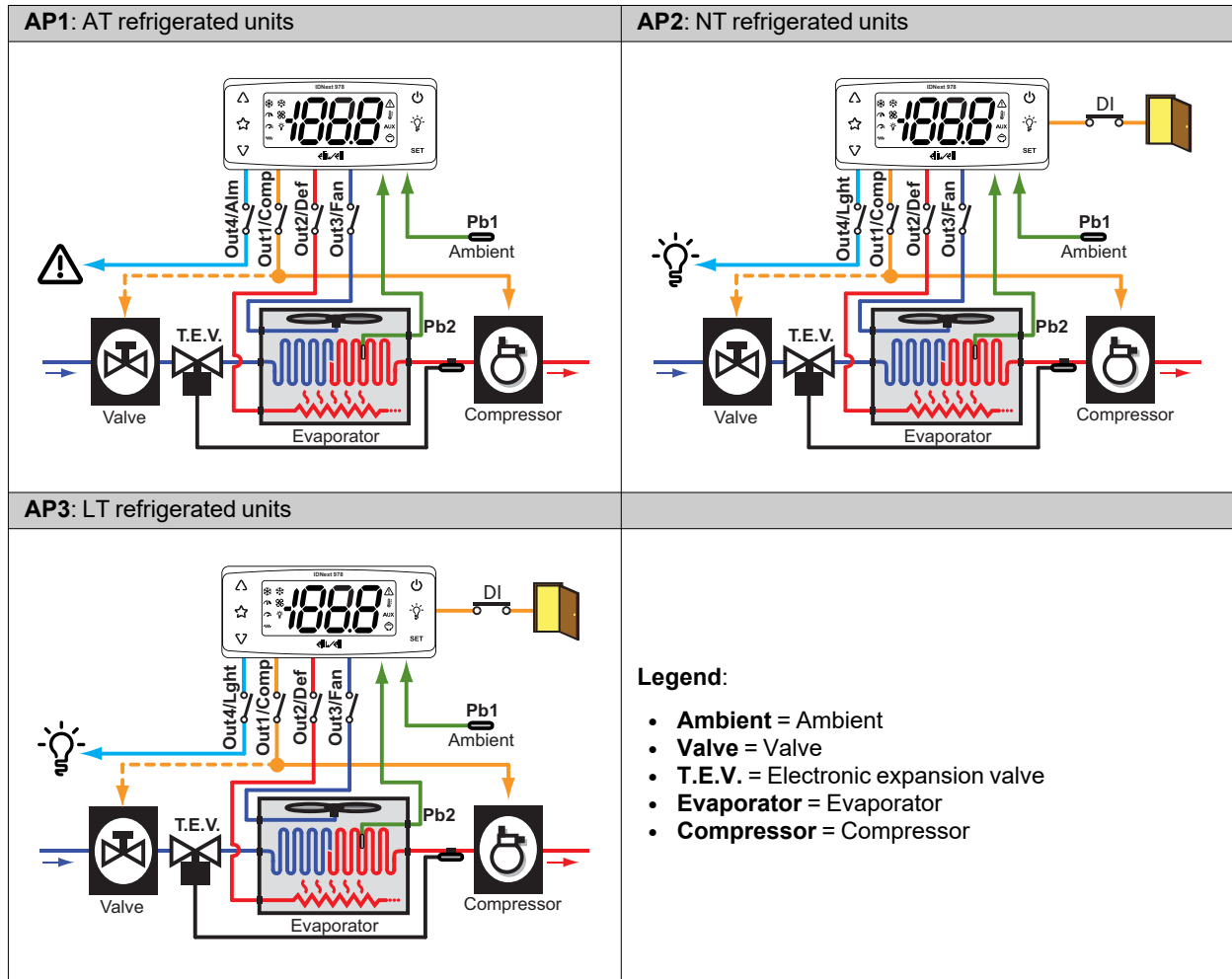


### Application details

|                          |                                                                                                                                                                      |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Setpoint</b>          | <b>AP1</b> = 3.0 °C (37.4 °F); <b>AP2</b> = 0.0 °C (32.0 °F); <b>AP3</b> = -18.0 °C (0.4 °F)                                                                         |
| <b>Analog inputs</b>     | 2 NTC inputs ( <b>Pb1</b> , <b>Pb2</b> )                                                                                                                             |
| <b>Digital inputs</b>    | 1 digital input not set ( <b>H11</b> = 0)                                                                                                                            |
| <b>Digital outputs</b>   | <b>OC1/Comp</b> relay (default: variable-speed compressor)<br><b>Out2/Def</b> relay (default: Defrost)<br><b>Out4/Fan</b> relay (default: Evaporator fans)           |
| <b>Buzzer</b>            | NO                                                                                                                                                                   |
| <b>RTC</b>               | YES                                                                                                                                                                  |
| <b>Type of defrost</b>   | Electric heater defrost                                                                                                                                              |
| <b>End of defrost</b>    | due to temperature <b>ds1</b> = 8.0 °C (46.4 °F)                                                                                                                     |
| <b>Active alarms</b>     | Pb1 maximum/minimum temperature ( <b>HAL</b> and <b>LAL</b> )                                                                                                        |
| <b>Key configuration</b> | △: manual defrost ( <b>H31</b> = 1)<br>∇: not set ( <b>H32</b> = 0)<br>⏻: stand-by ( <b>H33</b> = 4)<br>⚡: not set ( <b>H34</b> = 0)<br>☆: not set ( <b>H35</b> = 0) |

## IDNext 978 P/B (230 Vac)

### Application overview

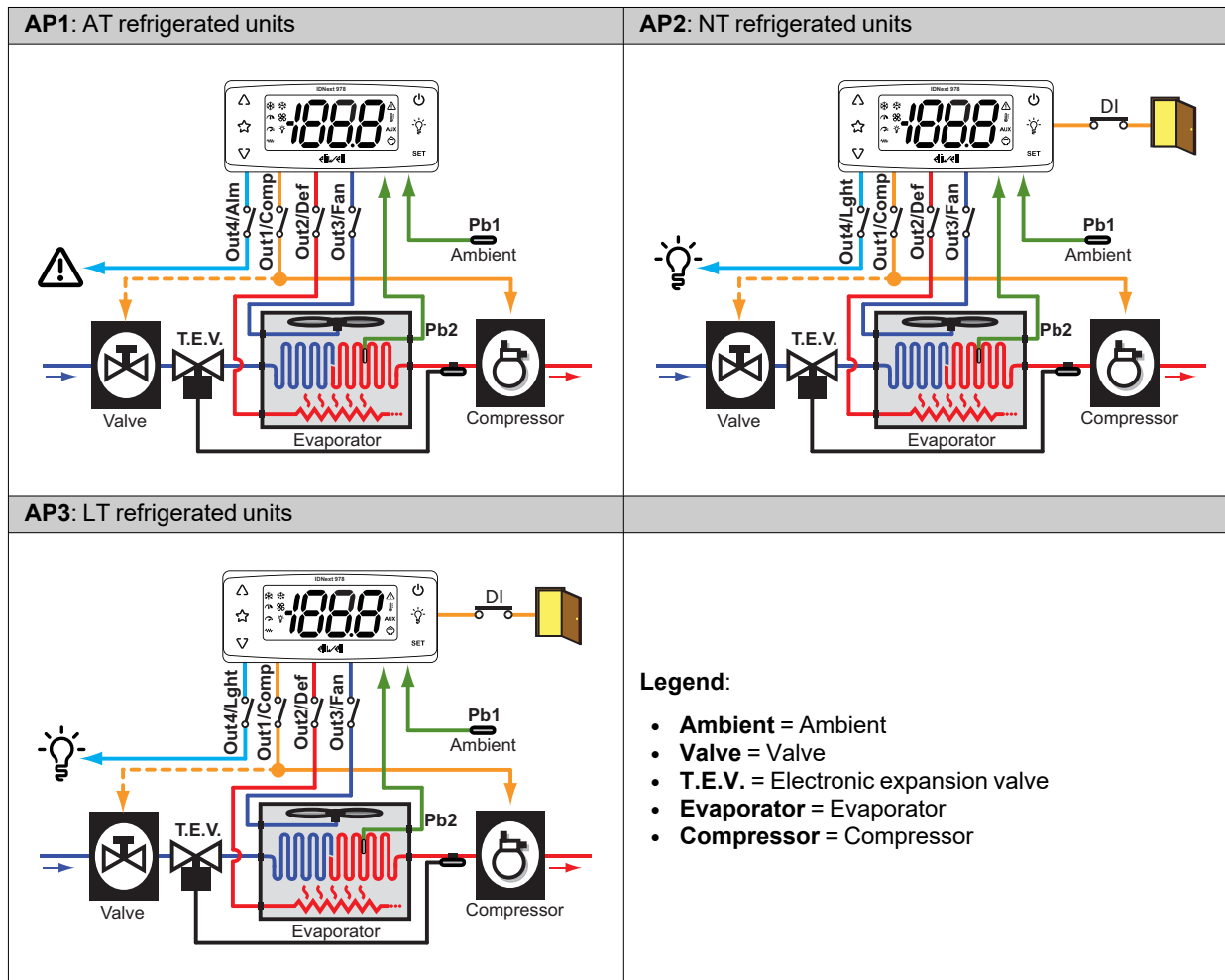


### Application details

|                          |                                                                                                                                                                                                                                                    |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Setpoint</b>          | <b>AP1</b> = 3.0 °C (37.4 °F); <b>AP2</b> = 0.0 °C (32.0 °F); <b>AP3</b> = -18.0 °C (0.4 °F)                                                                                                                                                       |
| <b>Analog inputs</b>     | 2 NTC inputs ( <b>Pb1</b> , <b>Pb2</b> )                                                                                                                                                                                                           |
| <b>Digital inputs</b>    | <ul style="list-style-type: none"> <li>• <b>AP1</b>: 1 digital input not set (<b>H11</b> = 0)</li> <li>• <b>AP2/AP3</b>: 1 digital input set for door switch (<b>H11</b> = -4) that, if activated, switches off the compressor and fans</li> </ul> |
| <b>Digital outputs</b>   | <b>Out1/Comp</b> relay (default: Compressor)<br><b>Out2/Def</b> relay (default: Defrost)<br><b>Out3/Fan</b> relay (default: Evaporator fans)<br><b>Out4/Alm</b> relay (default: <b>AP1</b> = Alarm; <b>AP2/AP3</b> = Light)                        |
| <b>Buzzer</b>            | YES                                                                                                                                                                                                                                                |
| <b>RTC</b>               | NO                                                                                                                                                                                                                                                 |
| <b>Type of defrost</b>   | Electric heater defrost                                                                                                                                                                                                                            |
| <b>End of defrost</b>    | due to temperature <b>ds1</b> = 8.0 °C (46.4 °F)                                                                                                                                                                                                   |
| <b>Active alarms</b>     | Pb1 maximum/minimum temperature ( <b>HAL</b> and <b>LAL</b> )                                                                                                                                                                                      |
| <b>Key configuration</b> | △: manual defrost ( <b>H31</b> = 1)<br>∇: not set ( <b>H32</b> = 0)<br>⏻: stand-by ( <b>H33</b> = 4)<br>⚡: not set ( <b>H34</b> = 0)<br>☆: not set ( <b>H35</b> = 0)                                                                               |

## IDNext 978 P/C (230 Vac)

### Application overview

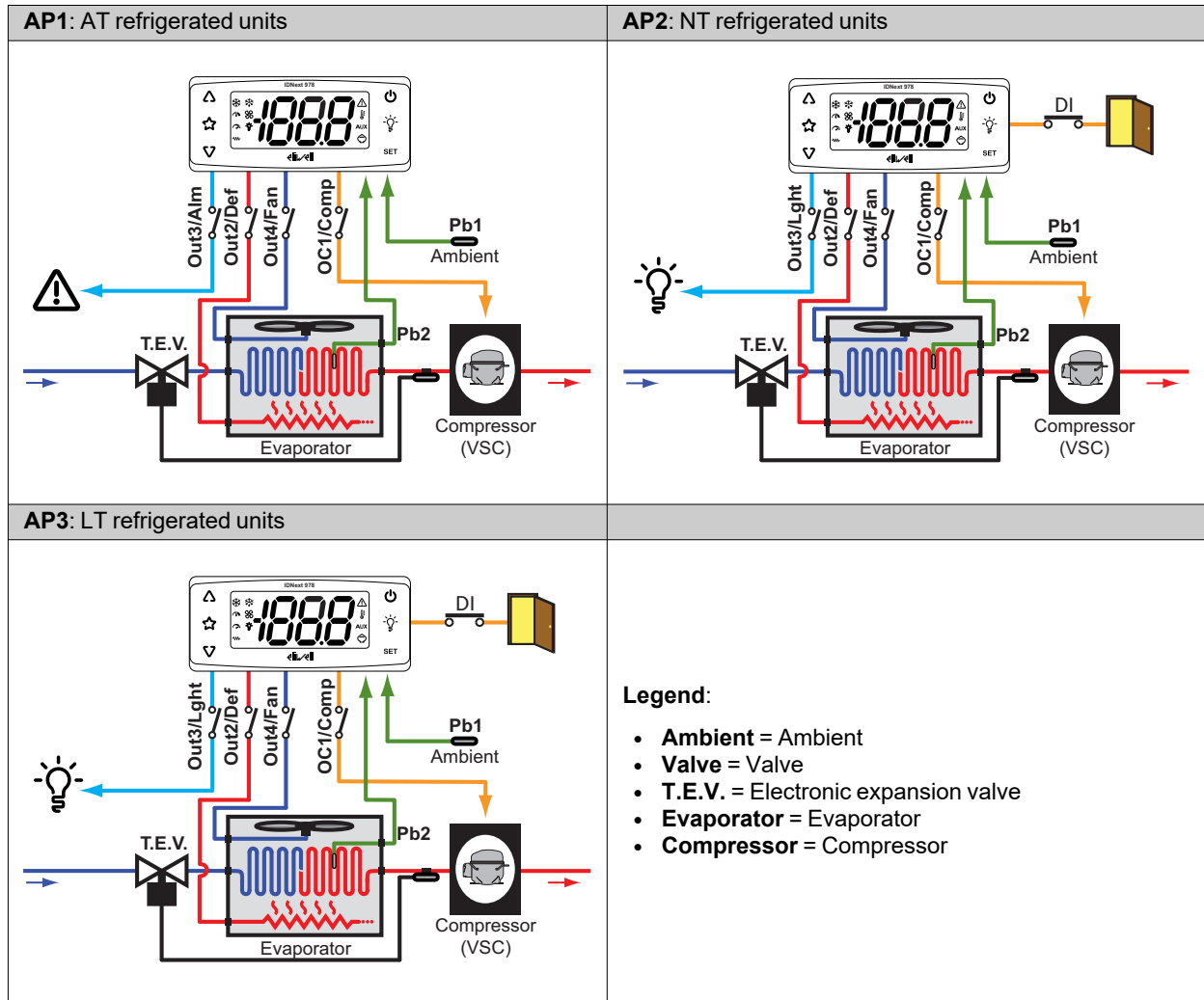


### Application details

|                          |                                                                                                                                                                                                                                                    |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Setpoint</b>          | <b>AP1</b> = 3.0 °C (37.4 °F); <b>AP2</b> = 0.0 °C (32.0 °F); <b>AP3</b> = -18.0 °C (0.4 °F)                                                                                                                                                       |
| <b>Analog inputs</b>     | 2 NTC inputs ( <b>Pb1</b> , <b>Pb2</b> )                                                                                                                                                                                                           |
| <b>Digital inputs</b>    | <ul style="list-style-type: none"> <li>• <b>AP1</b>: 1 digital input not set (<b>H11</b> = 0)</li> <li>• <b>AP2/AP3</b>: 1 digital input set for door switch (<b>H11</b> = -4) that, if activated, switches off the compressor and fans</li> </ul> |
| <b>Digital outputs</b>   | <b>Out1/Comp</b> relay (default: Compressor)<br><b>Out2/Def</b> relay (default: Defrost)<br><b>Out3/Fan</b> relay (default: Evaporator fans)<br><b>Out4/Alm</b> relay (default: <b>AP1</b> = Alarm; <b>AP2/AP3</b> = Light)                        |
| <b>Buzzer</b>            | NO                                                                                                                                                                                                                                                 |
| <b>RTC</b>               | YES                                                                                                                                                                                                                                                |
| <b>Type of defrost</b>   | Electric heater defrost                                                                                                                                                                                                                            |
| <b>End of defrost</b>    | due to temperature <b>ds1</b> = 8.0 °C (46.4 °F)                                                                                                                                                                                                   |
| <b>Active alarms</b>     | Pb1 maximum/minimum temperature ( <b>HAL</b> and <b>LAL</b> )                                                                                                                                                                                      |
| <b>Key configuration</b> | △: manual defrost ( <b>H31</b> = 1)<br>∇: not set ( <b>H32</b> = 0)<br>⏻: stand-by ( <b>H33</b> = 4)<br>⚡: not set ( <b>H34</b> = 0)<br>☆: not set ( <b>H35</b> = 0)                                                                               |

## IDNext 978 P/CI (230 Vac)

### Application overview



### Application details

|                          |                                                                                                                                                                                                                                                    |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Setpoint</b>          | <b>AP1</b> = 3.0 °C (37.4 °F); <b>AP2</b> = 0.0 °C (32.0 °F); <b>AP3</b> = -18.0 °C (0.4 °F)                                                                                                                                                       |
| <b>Analog inputs</b>     | 2 NTC inputs ( <b>Pb1</b> , <b>Pb2</b> )                                                                                                                                                                                                           |
| <b>Digital inputs</b>    | <ul style="list-style-type: none"> <li>• <b>AP1</b>: 1 digital input not set (<b>H11</b> = 0)</li> <li>• <b>AP2/AP3</b>: 1 digital input set for door switch (<b>H11</b> = -4) that, if activated, switches off the compressor and fans</li> </ul> |
| <b>Digital outputs</b>   | <b>OC1/Comp</b> relay (default: variable-speed compressor)<br><b>Out2/Def</b> relay (default: Defrost)<br><b>Out3/Alm</b> relay (default: <b>AP1</b> = Alarm; <b>AP2/AP3</b> = Light)<br><b>Out4/Fan</b> relay (default: Evaporator fans)          |
| <b>Buzzer</b>            | NO                                                                                                                                                                                                                                                 |
| <b>RTC</b>               | YES                                                                                                                                                                                                                                                |
| <b>Type of defrost</b>   | Electric heater defrost                                                                                                                                                                                                                            |
| <b>End of defrost</b>    | due to temperature <b>ds1</b> = 8.0 °C (46.4 °F)                                                                                                                                                                                                   |
| <b>Active alarms</b>     | Pb1 maximum/minimum temperature ( <b>HAL</b> and <b>LAL</b> )                                                                                                                                                                                      |
| <b>Key configuration</b> | △: manual defrost ( <b>H31</b> = 1)<br>∇: not set ( <b>H32</b> = 0)<br>⏻: stand-by ( <b>H33</b> = 4)<br>⚡: not set ( <b>H34</b> = 0)<br>☆: not set ( <b>H35</b> = 0)                                                                               |

---

# Mechanical installation

---

## Contents

This section includes the following topics:

|                                        |    |
|----------------------------------------|----|
| Before starting .....                  | 28 |
| Power supply disconnection .....       | 28 |
| Operating environment .....            | 29 |
| Comments concerning installation ..... | 30 |
| Mechanical dimensions .....            | 31 |
| Installation .....                     | 31 |

## Before starting

Read this manual carefully before installing the device and its accessories.

In particular, ensure conformity with all safety indications, electrical requirements and current legislation for the machine or the process used with this equipment.

The use and application of information contained herein requires experience in the design and programming of automated control systems. Only the machine user, integrator or manufacturer will be aware of all the conditions and factors affecting installation, configuration, operation and maintenance of the machine or process and can therefore identify the associated equipment and corresponding safety interlocks and systems that can be used appropriately and efficiently. When selecting automation and control equipment, other equipment and connected software for a particular application, all local, regional and national standards and/or legislation must be taken into account.

### **WARNING**

#### **REGULATORY INCOMPATIBILITY**

Make sure that all equipment used and systems designed comply with all applicable local, regional and national laws.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

## Power supply disconnection

### **DANGER**

#### **HAZARD OF ELECTRIC SHOCK, EXPLOSION, FIRE OR ARC FLASH**

- Disconnect all power from all equipment including connected devices prior to removing any covers or doors, or installing or removing any accessories, hardware, cables or wires.
- Always use a properly rated voltage sensing device to confirm the power is off where and when indicated.
- Before restoring the power supply, replace and secure all covers, hardware components and cables.
- Use only the specified voltage when operating this device and any associated products.
- Use appropriate safety interlocks where personnel and/or equipment hazards exist.
- Install and use this equipment in an enclosure appropriately rated for its intended environment.
- Do not use this equipment for safety-critical functions.
- Do not disassemble, repair, or modify this equipment.

**Failure to follow these instructions will result in death or serious injury.**

## Operating environment

The use of flammable refrigerant gases depends on many factors, including current local, regional and/or national standards.

The devices and relative accessories described in the documentation supplied with the product use components and - to be more specific - electromechanical relays tested in accordance with standard IEC 60079-15 and classified as nC components (non-sparking electrical devices with protection 'n').

Conformity with standard IEC 60079-15 is considered sufficient - and therefore suitable - for commercial refrigeration and HVAC systems using flammable refrigerant gases such as R290. Nevertheless, there may be other limitations, devices, locations and/or machine types (refrigerators, automatic distributors and dispensers, bottle coolers, ice machines, chiller cabinets for self-service facilities, etc.) involved, leading to the application of further restrictions and/or obligations.

The use and application of the information contained in this document requires experience in the design and parameterization/programming of control systems for refrigeration and HVAC systems. Only you, i.e. the original equipment producers, installers or users, can be aware of the conditions and factors present, in addition to the applicable regulations during the planning, installation and setup, operation and maintenance of the machine, or the related processes. Therefore, only you can decide on the suitability of the automation and the associated equipment, and the resulting safety measures and interlock devices that can be applied effectively and adequately in the locations in which the relevant equipment is to be commissioned. When choosing the automation and control equipment - and any other related equipment or software - for a particular application, you must also take account of all the standards set out by applicable national legislation or by the relevant certifying authorities.

When using flammable refrigerant gases, at the end of the installation process for this device and related equipment you must make sure the machine conforms to current standards and regulations. Although all the declarations and information contained herein are to be considered accurate and reliable, they are not covered by warranty. The information provided herein does not absolve the user from responsibility in terms of performing their own tests and certifications of conformity to all applicable regulations.

### **WARNING**

#### **REGULATORY INCOMPATIBILITY**

Make sure that all equipment used and systems designed comply with all applicable local, regional and national laws.

**Failure to follow these instructions can result in death, serious injury, or equipment damage.**

## Comments concerning installation

### Important information

|   <b>DANGER</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HAZARD OF ELECTRIC SHOCK, EXPLOSION, FIRE OR ARC FLASH</b> <ul style="list-style-type: none"><li>• Disconnect all power from all equipment including connected devices prior to removing any covers or doors, or installing or removing any accessories, hardware, cables or wires.</li><li>• Always use a properly rated voltage sensing device to confirm the power is off where and when indicated.</li><li>• Before restoring the power supply, replace and secure all covers, hardware components and cables.</li><li>• Use only the specified voltage when operating this device and any associated products.</li><li>• Use appropriate safety interlocks where personnel and/or equipment hazards exist.</li><li>• Install and use this equipment in an enclosure appropriately rated for its intended environment.</li><li>• Do not use this equipment for safety-critical functions.</li><li>• Do not disassemble, repair, or modify this equipment.</li></ul> <b>Failure to follow these instructions will result in death or serious injury.</b> |

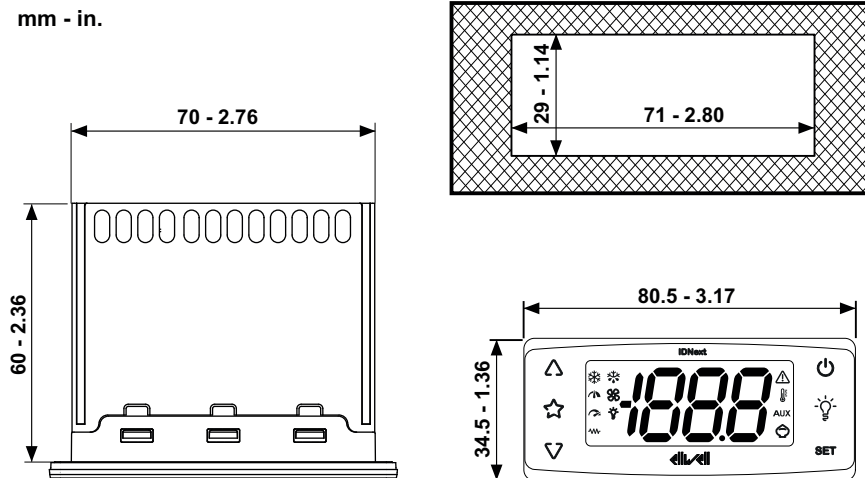
**12 Vac/dc models:**

|   <b>DANGER</b>                                                                                                                                                                                            |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HAZARD OF ELECTRIC SHOCK, OVERHEATING AND/OR FIRE</b> <ul style="list-style-type: none"><li>• Do not connect the equipment power supply directly to line voltage.</li><li>• Use only isolating SELV, Class 2 power suppliers/transformers to supply power to the equipment.</li></ul> <b>Failure to follow these instructions will result in death or serious injury.</b> |

When handling the equipment, take care to avoid damage caused by electrostatic discharge. In particular, the unshielded connectors are extremely vulnerable to electrostatic discharge.

|  <b>WARNING</b>                                                                                                                                                                                                                                     |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>UNINTENDED EQUIPMENT OPERATION DUE TO ELECTROSTATIC DISCHARGE</b> <p>Before handling the equipment, always discharge the static electricity from the body by touching an earthed surface or type-approved antistatic mat.</p> <b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b> |

## Mechanical dimensions



## Installation

### Installing/uninstalling the device

Mount the device horizontally.

To install, proceed as follows:

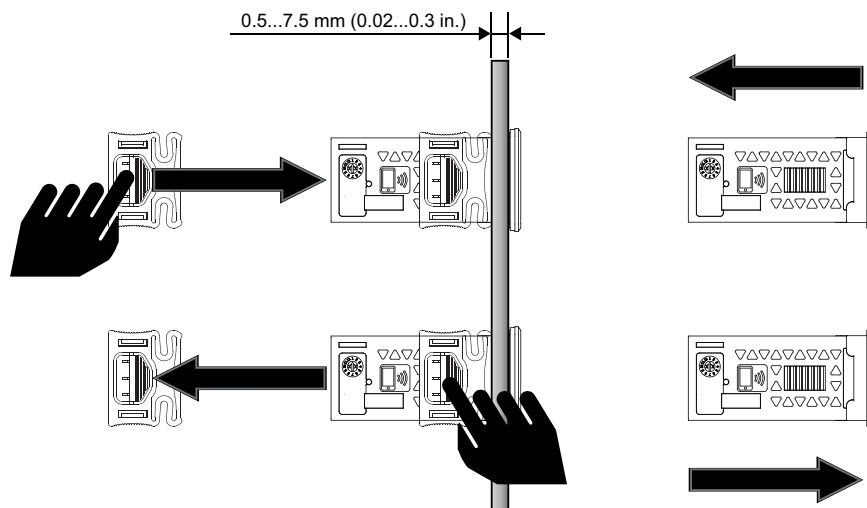
1. Make a hole measuring 71 x 29 mm (2.80 x 1.14 in.)
2. Introducing the device
3. Secure it by inserting the brackets in the relevant rails at the 2 sides of the device, until it clicks into place

To uninstall it, proceed as follows:

1. Press the brackets on the 2 sides of the device until you hear a click and take them out
2. Remove the device

**Note:** Leave the area around the slits clear to allow air to circulate, keeping the device cool.

**Note:** The panel thickness must be between 0.5 mm (0.02 in.) and 7.5 mm (0.3 in.) inclusive.



---

# Electrical connections

---

## Contents

This section includes the following topics:

|                                            |    |
|--------------------------------------------|----|
| Best wiring practices .....                | 33 |
| IDNext 902 P (12 Vac/dc - 230 Vac) .....   | 36 |
| IDNext 961 P (12 Vac/dc - 230 Vac) .....   | 37 |
| IDNext 971 P/B (12 Vac/dc - 230 Vac) ..... | 38 |
| IDNext 974 P/B (12 Vac/dc - 230 Vac) ..... | 39 |
| IDNext 974 P/C (230 Vac) .....             | 40 |
| IDNext 974 P/CI (230 Vac) .....            | 40 |
| IDNext 978 P/B (230 Vac) .....             | 41 |
| IDNext 978 P/C (230 Vac) .....             | 41 |
| IDNext 978 P/CI (230 Vac) .....            | 42 |

## Best wiring practices

### Warnings

| ⚡ ⚠ DANGER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HAZARD OF ELECTRIC SHOCK, EXPLOSION, FIRE OR ARC FLASH</b> <ul style="list-style-type: none"> <li>• Disconnect all power from all equipment including connected devices prior to removing any covers or doors, or installing or removing any accessories, hardware, cables or wires.</li> <li>• Always use a properly rated voltage sensing device to confirm the power is off where and when indicated.</li> <li>• Before restoring the power supply, replace and secure all covers, hardware components and cables.</li> <li>• Use only the specified voltage when operating this device and any associated products.</li> <li>• Use appropriate safety interlocks where personnel and/or equipment hazards exist.</li> <li>• Install and use this equipment in an enclosure appropriately rated for its intended environment.</li> <li>• Do not use this equipment for safety-critical functions.</li> <li>• Do not disassemble, repair, or modify this equipment.</li> </ul> <p><b>Failure to follow these instructions will result in death or serious injury.</b></p> |

| ⚡ ⚠ DANGER                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HAZARD OF ELECTRIC SHOCK AND/OR FIRE</b> <ul style="list-style-type: none"> <li>• Do not expose the equipment to liquids.</li> <li>• Do not exceed the temperature and humidity ranges specified in the technical data and keep the area surrounding the cooling slits aerated.</li> <li>• Do not apply dangerous voltages to the SELV connection terminals (see "Connections" section).</li> <li>• Only connect compatible accessories - as specified in the section "Accessories" - to the device.</li> <li>• Only use cables with a suitable cross-section (see "Wiring guidelines" section).</li> </ul> <p><b>Failure to follow these instructions will result in death or serious injury.</b></p> |

| ⚠ WARNING                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>HAZARD OF OVERHEATING AND/OR FIRE</b> <ul style="list-style-type: none"> <li>• Do not use with loads other than those indicated in the technical data.</li> <li>• Do not exceed the maximum permitted current; in the case of higher loads, use a contactor with suitable power.</li> <li>• Make sure the application has not been designed with the device outputs connected directly to instruments that generate a frequently activated capacitive load <sup>(1)</sup>.</li> <li>• Power lines and output connections must be suitably wired and protected by means of fuses when required by national and local regulations.</li> <li>• Connect the relay output, including the shared pole, using cables with a cross-section of 2.5 mm<sup>2</sup> (14 AWG) and a length of at least 200 mm (7.87 in.).</li> </ul> <p><b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b></p> |

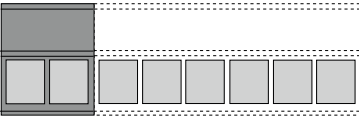
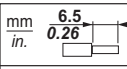
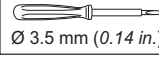
(1) Even if the application does not apply a frequently activated capacitive load to the relay, capacitive loads reduce the life of any electromechanical relay and the installation of a contactor or external relay, sized and maintained according to the ratings and characteristics of the capacitive load, helps to minimize the consequences of relay degradation.

| ⚠ WARNING                                                                                                                                                                                                                                                                  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>REGULATORY INCOMPATIBILITY</b> <p>Make sure that all equipment used and systems designed comply with all applicable local, regional and national laws.</p> <p><b>Failure to follow these instructions can result in death, serious injury, or equipment damage.</b></p> |

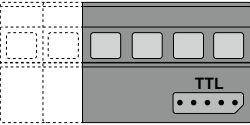
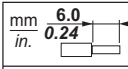
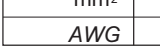
### Wiring guidelines

| ⚡ ⚠ DANGER                                                                                                                                                                                                                                                                                    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>LOOSE WIRING CAN RESULT IN ELECTRIC SHOCK AND/OR FIRE</b> <p>Tighten the connections in compliance with the technical specifications for torque values and make sure the wiring is correct.</p> <p><b>Failure to follow these instructions will result in death or serious injury.</b></p> |

Use copper wires (obligatory).  
The table below shows the type and size of permitted cables for the type of screw terminals illustrated below and the torque values:

|                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |  |  |  |  |
|                                                                                   | mm <sup>2</sup>                                                                   | 0.2...2.5                                                                         | 0.2...2.5                                                                         | 0.25...2.5                                                                        | 0.25...2.5                                                                         | 2 x 0.2...0.75                                                                      | 2 x 0.2...0.75                                                                      | 2 x 0.25...0.75                                                                     | 2 x 0.5...1.5                                                                       |
|                                                                                   | AWG                                                                               | 24...14                                                                           | 24...14                                                                           | 24...14                                                                           | 24...14                                                                            | 2 x 24...18                                                                         | 2 x 24...18                                                                         | 2 x 24...18                                                                         | 2 x 20...16                                                                         |
|  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
|  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| N•m 0.5...0.6                                                                     |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |
| lb-in 4.42...5.31                                                                 |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |                                                                                     |

The table below shows the type and size of permitted cables for the type of screw terminals illustrated below and the torque values.

|                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
|  |  |  |  |  |  |  |  |  |  |
|                                                                                   | mm <sup>2</sup>                                                                   | 0.05...2.5                                                                        | 0.05...2.5                                                                        | 0.05...1.5                                                                        | 0.05...1.5                                                                        | 0.05...1.5                                                                         | 0.05...1.5                                                                          | 0.05...1.5                                                                          | 0.05...1.5                                                                          |
|                                                                                   | AWG                                                                               | 30...14                                                                           | 30...14                                                                           | 30...16                                                                           | 30...16                                                                           | 30...16                                                                            | 30...16                                                                             | 30...16                                                                             | 30...16                                                                             |
|  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
|  |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
| N•m 0.5                                                                           |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |
| lb-in 4.5                                                                         |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                   |                                                                                    |                                                                                     |                                                                                     |                                                                                     |

## NOTICE

### UNINTENDED EQUIPMENT OPERATION

The SELV wiring must be laid separately from all the other wiring (see "Connections" chapter).

**Failure to follow these instructions can result in equipment damage.**

## NOTICE

### INOPERABLE DEVICE

- For connection of the probes, the digital input and the Open Collector output, use cables no longer than 10 m (32.80 ft).
- For TTL serial line connection, use cables no longer than 1 m (3.28 ft).
- For all devices powered at 12 Vac/dc, use power cables no longer than 3 m (9.84 ft)

**Failure to follow these instructions can result in equipment damage.**

The temperature (NTC/PTC/Pt1000) probes have no specified connection polarity; the connections can be extended using a normal bipolar cable. Extending the probe wiring influences the electromagnetic compatibility (EMC) of the device.

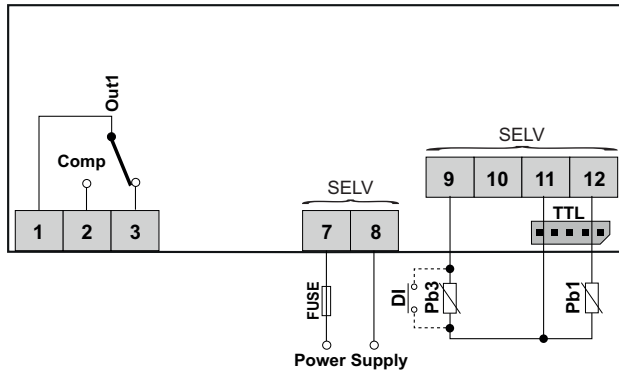
## Wiring diagrams

Click on the device model to access the corresponding wiring diagram:

- **IDNext 902 P**
- **IDNext 961 P**
- **IDNext 971 P/B**
- **IDNext 974 P/B**
- **IDNext 974 P/C**
- **IDNext 974 P/CI**
- **IDNext 978 P/B**
- **IDNext 978 P/C**
- **IDNext 978 P/CI**

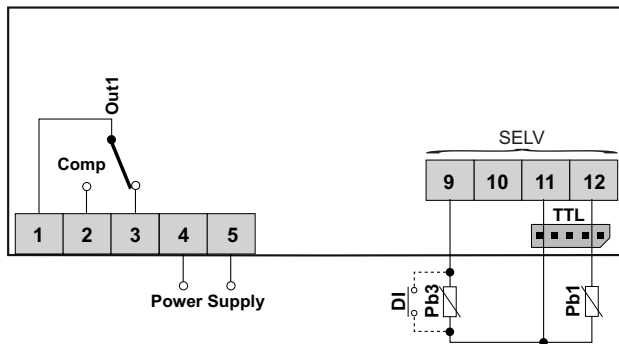
## IDNext 902 P (12 Vac/dc - 230 Vac)

### IDNext 902 P (12 Vac/dc)



| Terminals    | Description                                                                                        |
|--------------|----------------------------------------------------------------------------------------------------|
| <b>1-2-3</b> | Compressor relay ( <b>Out1/Comp</b> )                                                              |
| <b>7-8</b>   | 12 Vac/dc power supply input                                                                       |
| <b>FUSE</b>  | Time-delay fuse 500 mA (T500mAH250V)                                                               |
| <b>9-11</b>  | Digital input DI ( <b>H11</b> ≠0 and <b>H43</b> =n) / probe Pb3 ( <b>H11</b> =0 and <b>H43</b> =y) |
| <b>12-11</b> | Probe Pb1                                                                                          |
| <b>TTL</b>   | TTL serial                                                                                         |
| <b>SELV</b>  | SELV terminals                                                                                     |

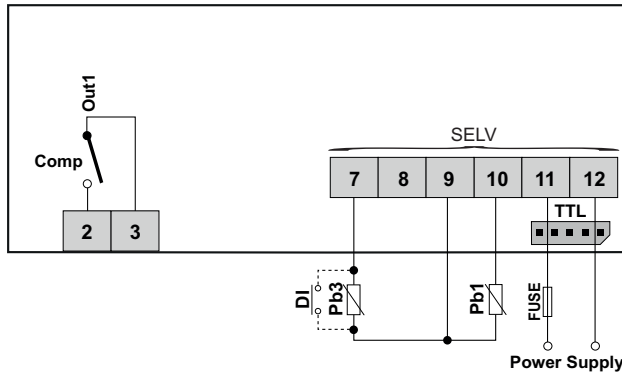
### IDNext 902 P (230 Vac)



| Terminals    | Description                                                                                        |
|--------------|----------------------------------------------------------------------------------------------------|
| <b>1-2-3</b> | Compressor relay ( <b>Out1/Comp</b> )                                                              |
| <b>4-5</b>   | 230 Vac power supply input                                                                         |
| <b>9-11</b>  | Digital input DI ( <b>H11</b> ≠0 and <b>H43</b> =n) / probe Pb3 ( <b>H11</b> =0 and <b>H43</b> =y) |
| <b>12-11</b> | Probe Pb1                                                                                          |
| <b>TTL</b>   | TTL serial                                                                                         |
| <b>SELV</b>  | SELV terminal                                                                                      |

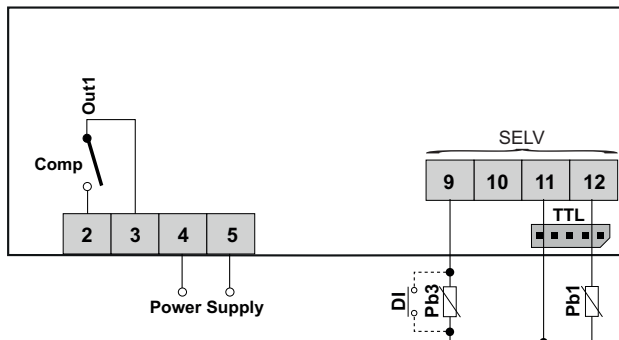
## IDNext 961 P (12 Vac/dc - 230 Vac)

### IDNext 961 P (12 Vac/dc)



| Terminals | Description                                                                                        |
|-----------|----------------------------------------------------------------------------------------------------|
| 2-3       | Compressor relay ( <b>Out1/Comp</b> )                                                              |
| 7-9       | Digital input DI ( <b>H11</b> ≠0 and <b>H43</b> =n) / probe Pb3 ( <b>H11</b> =0 and <b>H43</b> =y) |
| 10-9      | Pb1 probe                                                                                          |
| 11-12     | 12 Vac/dc power supply input                                                                       |
| FUSE      | Time-delay fuse 500 mA (T500mAH250V)                                                               |
| TTL       | TTL serial                                                                                         |
| SELV      | SELV terminal                                                                                      |

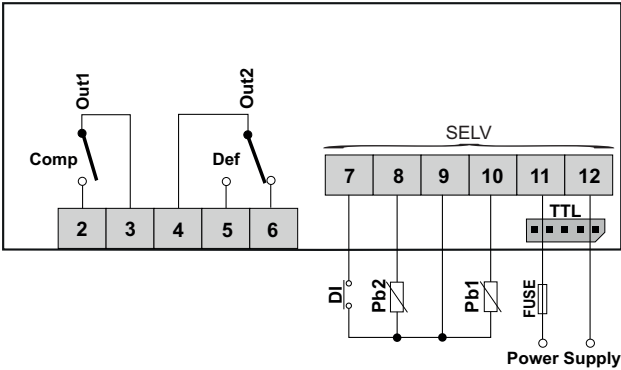
### IDNext 961 P (230 Vac)



| Terminals | Description                                                                                        |
|-----------|----------------------------------------------------------------------------------------------------|
| 2-3       | Compressor relay ( <b>Out1/Comp</b> )                                                              |
| 4-5       | 230 Vac power supply input                                                                         |
| 9-11      | Digital input DI ( <b>H11</b> ≠0 and <b>H43</b> =n) / probe Pb3 ( <b>H11</b> =0 and <b>H43</b> =y) |
| 12-11     | Pb1 probe                                                                                          |
| TTL       | TTL serial                                                                                         |
| SELV      | SELV terminal                                                                                      |

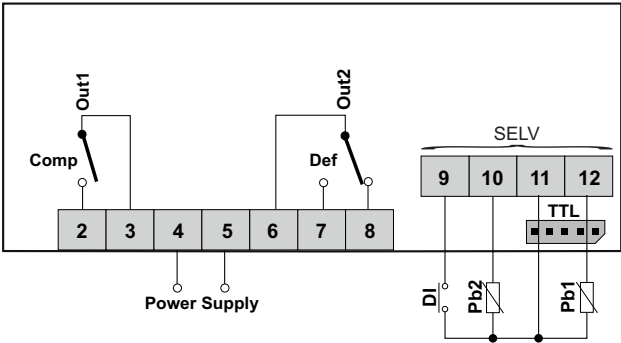
## IDNext 971 P/B (12 Vac/dc - 230 Vac)

### IDNext 971 P/B (12 Vac/dc)



| Terminals | Description                           |
|-----------|---------------------------------------|
| 2-3       | Compressor relay ( <b>Out1/Comp</b> ) |
| 4-5-6     | Defrost relay ( <b>Out2/Def</b> )     |
| 7-9       | Digital input DI                      |
| 8-9       | Pb2 probe                             |
| 10-9      | Pb1 probe                             |
| 11-12     | 12 Vac/dc power supply input          |
| FUSE      | Time-delay fuse 500 mA (T500mAH250V)  |
| TTL       | TTL serial                            |
| SELV      | SELV terminal                         |

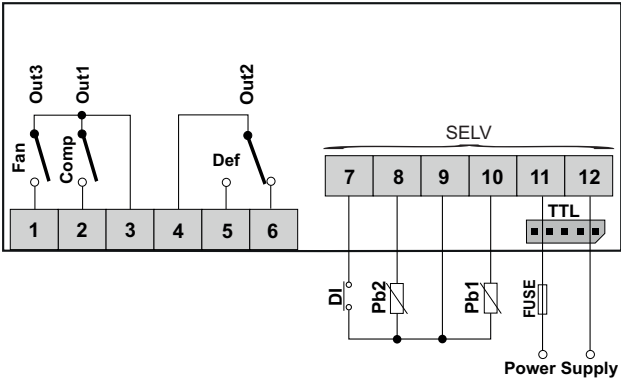
### IDNext 971 P/B (230 Vac)



| Terminals | Description                           |
|-----------|---------------------------------------|
| 2-3       | Compressor relay ( <b>Out1/Comp</b> ) |
| 4-5       | 230 Vac power supply input            |
| 6-7-8     | Defrost relay ( <b>Out2/Def</b> )     |
| 9-11      | Digital input DI                      |
| 10-11     | Pb2 probe                             |
| 12-11     | Pb1 probe                             |
| TTL       | TTL serial                            |
| SELV      | SELV terminal                         |

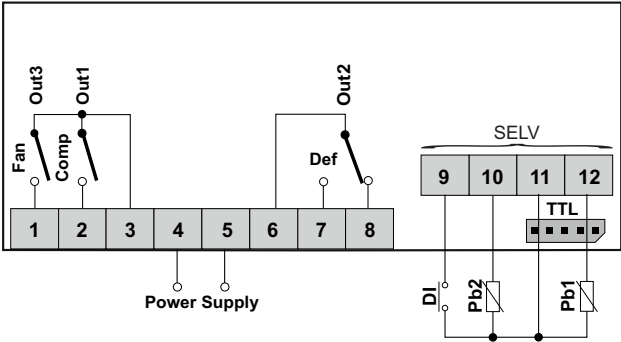
# IDNext 974 P/B (12 Vac/dc - 230 Vac)

## IDNext 974 P/B (12 Vac/dc)



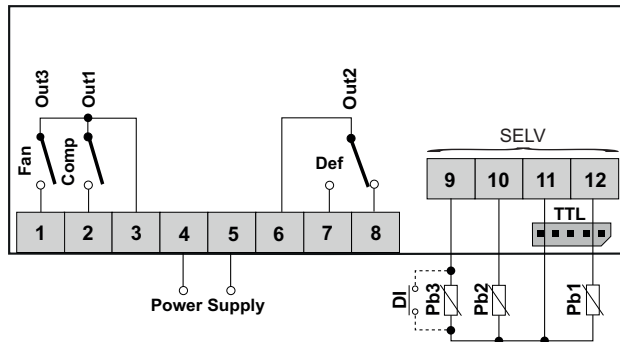
| Terminals | Description                               |
|-----------|-------------------------------------------|
| 1-3       | Evaporator fans relay ( <b>Out3/Fan</b> ) |
| 2-3       | Compressor relay ( <b>Out1/Comp</b> )     |
| 4-5-6     | Defrost relay ( <b>Out2/Def</b> )         |
| 7-9       | Digital input DI                          |
| 8-9       | Pb2 probe                                 |
| 10-9      | Pb1 probe                                 |
| 11-12     | 12 Vac/dc power supply input              |
| FUSE      | Time-delay fuse 500 mA (T500mAH250V)      |
| TTL       | TTL serial                                |
| SELV      | SELV terminal                             |

## IDNext 974 P/B (230 Vac)



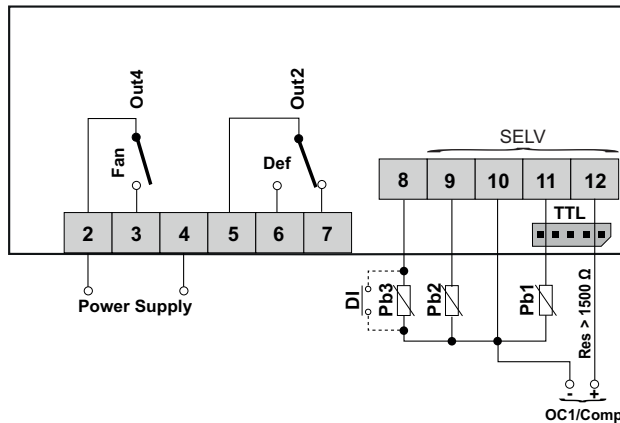
| Terminals | Description                               |
|-----------|-------------------------------------------|
| 1-3       | Evaporator fans relay ( <b>Out3/Fan</b> ) |
| 2-3       | Compressor relay ( <b>Out1/Comp</b> )     |
| 4-5       | 230 Vac power supply input                |
| 6-7-8     | Defrost relay ( <b>Out2/Def</b> )         |
| 9-11      | Digital input DI                          |
| 10-11     | Pb2 probe                                 |
| 12-11     | Pb1 probe                                 |
| TTL       | TTL serial                                |
| SELV      | SELV terminal                             |

## IDNext 974 P/C (230 Vac)



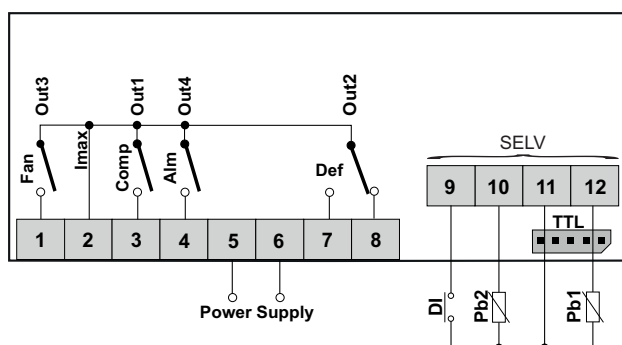
| Terminals | Description                                                                                      |
|-----------|--------------------------------------------------------------------------------------------------|
| 1-3       | Evaporator fans relay ( <b>Out3/Fan</b> )                                                        |
| 2-3       | Compressor relay ( <b>Out1/Comp</b> )                                                            |
| 4-5       | 230 Vac power supply input                                                                       |
| 6-7-8     | Defrost relay ( <b>Out2/Def</b> )                                                                |
| 9-11      | Digital input DI ( <b>H11≠0</b> and <b>H43=n</b> ) / probe Pb3 ( <b>H11=0</b> and <b>H43=y</b> ) |
| 10-11     | Pb2 probe                                                                                        |
| 12-11     | Pb1 probe                                                                                        |
| TTL       | TTL serial                                                                                       |
| SELV      | SELV terminal                                                                                    |

## IDNext 974 P/CI (230 Vac)



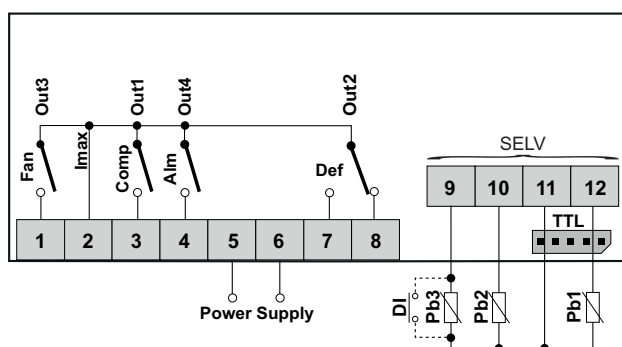
| Terminals | Description                                                                                                                                              |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2-3       | Evaporator fans relay ( <b>Out4/Fan</b> )                                                                                                                |
| 2-4       | 230 Vac power supply input                                                                                                                               |
| 5-6-7     | Defrost relay ( <b>Out2/Def</b> )                                                                                                                        |
| 8-10      | Digital input DI ( <b>H11≠0</b> and <b>H43=n</b> ) / probe Pb3 ( <b>H11=0</b> and <b>H43=y</b> )                                                         |
| 9-10      | Pb2 probe                                                                                                                                                |
| 11-10     | Pb1 probe                                                                                                                                                |
| 12-10     | Open Collector Output ( <b>OC1/Comp</b> : 10 = negative terminal OC1 ( - ) and 12 = positive terminal OC1 ( + ). 16 Vdc ±40 % - Load impedance ≥ 1500 Ω. |
| TTL       | TTL serial                                                                                                                                               |
| SELV      | SELV terminal                                                                                                                                            |

## IDNext 978 P/B (230 Vac)



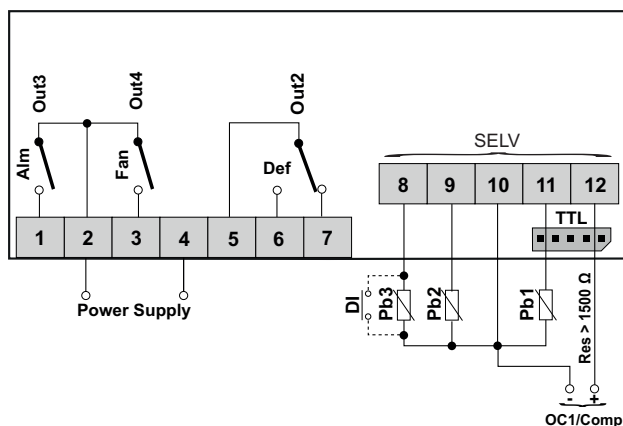
| Terminals   | Description                               |
|-------------|-------------------------------------------|
| 1-2         | Evaporator fans relay ( <b>Out3/Fan</b> ) |
| 3-2         | Compressor relay ( <b>Out1/Comp</b> )     |
| 4-2         | Alarm relay ( <b>Out4/Alm</b> )           |
| 5-6         | 230 Vac power supply input                |
| 2-7-8       | Defrost relay ( <b>Out2/Def</b> )         |
| 9-11        | Digital input DI                          |
| 10-11       | Pb2 probe                                 |
| 12-11       | Pb1 probe                                 |
| <b>Imax</b> | Maximum current 17 A                      |
| <b>TTL</b>  | TTL serial                                |
| <b>SELV</b> | SELV terminal                             |

## IDNext 978 P/C (230 Vac)



| Terminals   | Description                                                                                      |
|-------------|--------------------------------------------------------------------------------------------------|
| 1-2         | Evaporator fans relay ( <b>Out3/Fan</b> )                                                        |
| 3-2         | Compressor relay ( <b>Out1/Comp</b> )                                                            |
| 4-2         | Alarm relay ( <b>Out4/Alm</b> )                                                                  |
| 5-6         | 230 Vac power supply input                                                                       |
| 2-7-8       | Defrost relay ( <b>Out2/Def</b> )                                                                |
| 9-11        | Digital input DI ( <b>H11≠0</b> and <b>H43=n</b> ) / probe Pb3 ( <b>H11=0</b> and <b>H43=y</b> ) |
| 10-11       | Pb2 probe                                                                                        |
| 12-11       | Pb1 probe                                                                                        |
| <b>Imax</b> | Maximum current 17 A                                                                             |
| <b>TTL</b>  | TTL serial                                                                                       |
| <b>SELV</b> | SELV terminal                                                                                    |

## IDNext 978 P/CI (230 Vac)



| Terminals | Description                                                                                                                                               |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2-1       | Alarm relay ( <b>Out3/Alm</b> )                                                                                                                           |
| 2-3       | Evaporator fans relay ( <b>Out4/Fan</b> )                                                                                                                 |
| 2-4       | 230 Vac power supply input                                                                                                                                |
| 5-6-7     | Defrost relay ( <b>Out2/Def</b> )                                                                                                                         |
| 10-8      | Digital input DI ( <b>H11</b> ≠0 and <b>H43</b> =n) / probe Pb3 ( <b>H11</b> =0 and <b>H43</b> =y)                                                        |
| 10-9      | Pb2 probe                                                                                                                                                 |
| 10-11     | Pb1 probe                                                                                                                                                 |
| 10-12     | Open Collector Output ( <b>OC1/Comp</b> ): 10 = negative terminal OC1 ( - ) and 12 = positive terminal OC1 ( + ). 16 Vdc ±40 % - Load impedance ≥ 1500 Ω. |
| TTL       | TTL serial (SELV)                                                                                                                                         |
| SELV      | SELV terminal                                                                                                                                             |

---

# Technical characteristics

---

## Contents

This section includes the following topics:

|                                         |    |
|-----------------------------------------|----|
| Technical data .....                    | 44 |
| 'Power supply / Power draw' table ..... | 44 |
| 'Loads' table .....                     | 45 |
| Further Information .....               | 46 |

## Technical data

|                                                                                                  |                                                                                                                         |
|--------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>The product complies with the following harmonized Standards:</b> EN 60730-1 and EN 60730-2-9 |                                                                                                                         |
| <b>Construction of control:</b>                                                                  | Electronic automatic Incorporated Control                                                                               |
| <b>Purpose of control:</b>                                                                       | Operating control (not safety related)                                                                                  |
| <b>Type of action:</b>                                                                           | 1.C                                                                                                                     |
| <b>Degree of protection by enclosure:</b>                                                        | IP20<br>IP65 front panel only (tested in accordance with EN 60529 with a steel sheet 2 mm (0.08 in.) thick $\pm 10\%$ ) |
| <b>Pollution degree:</b>                                                                         | 2                                                                                                                       |
| <b>Overvoltage category:</b>                                                                     | II                                                                                                                      |
| <b>Rated impulse voltage:</b>                                                                    | 2500 V                                                                                                                  |
| <b>Power supply:</b>                                                                             | See 'Power supply / Power draw' table                                                                                   |
| <b>Power draw (maximum):</b>                                                                     | See 'Power supply / Power draw' table                                                                                   |
| <b>Environmental operating conditions:</b>                                                       | Temperature: -5...55°C (23...131°F)<br>Humidity: 10...90 % RH (non-condensing)                                          |
| <b>Transportation and storage conditions:</b>                                                    | Temperature: -30...85°C (-22...185°F)<br>Humidity: 10...90 % RH (non-condensing)                                        |
| <b>Software class:</b>                                                                           | A                                                                                                                       |
| <b>Loads:</b>                                                                                    | See 'Loads' table                                                                                                       |
| <b>Front panel environmental protection:</b>                                                     | Type 1                                                                                                                  |
| <b>Temperature for the ball pressure test:</b>                                                   | Front and Rear cover: 128 °C<br>Terminal blocks: 107 °C                                                                 |

## 'Power supply / Power draw' table

| Model                      | Power supply                                                | Power draw (maximum) |
|----------------------------|-------------------------------------------------------------|----------------------|
| IDNext 902 P (12 Vac/dc)   | 12 Vac $\pm 10\%$ 50/60 Hz / 12 Vdc $\pm 10\%$ Class 2/SELV | 3 VA / 1.5 W         |
| IDNext 902 P (230 Vac)     | 230 Vac ( $\pm 10\%$ ) 50/60 Hz                             | 5 VA                 |
| IDNext 961 P (12 Vac/dc)   | 12 Vac $\pm 10\%$ 50/60 Hz / 12 Vdc $\pm 10\%$ Class 2/SELV | 5 VA / 2.5 W         |
| IDNext 961 P (230 Vac)     | 230 Vac ( $\pm 10\%$ ) 50/60 Hz                             | 5.5 VA               |
| IDNext 971 P/B (12 Vac/dc) | 12 Vac $\pm 10\%$ 50/60 Hz / 12 Vdc $\pm 10\%$ Class 2/SELV | 5 VA / 2.5 W         |
| IDNext 971 P/B (230 Vac)   | 230 Vac ( $\pm 10\%$ ) 50/60 Hz                             | 5.5 VA               |
| IDNext 974 P/B (12 Vac/dc) | 12 Vac $\pm 10\%$ 50/60 Hz / 12 Vdc $\pm 10\%$ Class 2/SELV | 5 VA / 2.5 W         |
| IDNext 974 P/B (230 Vac)   | 230 Vac ( $\pm 10\%$ ) 50/60 Hz                             | 5.5 VA               |
| IDNext 974 P/C (230 Vac)   | 230 Vac ( $\pm 10\%$ ) 50/60 Hz                             | 5.5 VA               |
| IDNext 974 P/CI (230 Vac)  | 230 Vac ( $\pm 10\%$ ) 50/60 Hz                             | 5.5 VA               |
| IDNext 978 P/B (230 Vac)   | 230 Vac ( $\pm 10\%$ ) 50/60 Hz                             | 5.5 VA               |
| IDNext 978 P/C (230 Vac)   | 230 Vac ( $\pm 10\%$ ) 50/60 Hz                             | 5.5 VA               |
| IDNext 978 P/CI (230 Vac)  | 230 Vac ( $\pm 10\%$ ) 50/60 Hz                             | 5.5 VA               |

**Note:** check the power supply specified on the device label.

## 12 Vac/dc models:

|                                                                                                                                                                                                                                                                                                                                                                             |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   <b>DANGER</b>                                                                                                                                                                                           |
| <b>HAZARD OF ELECTRIC SHOCK, OVERHEATING AND/OR FIRE</b> <ul style="list-style-type: none"> <li>Do not connect the equipment power supply directly to line voltage.</li> <li>Use only isolating SELV, Class 2 power suppliers/transformers to supply power to the equipment.</li> </ul> <b>Failure to follow these instructions will result in death or serious injury.</b> |

## ‘Loads’ table

| Model                            | Output                                                                                | EU (230 Vac maximum)                                   | USA (230 Vac maximum)                                   |
|----------------------------------|---------------------------------------------------------------------------------------|--------------------------------------------------------|---------------------------------------------------------|
| IDNext 902 P                     | Out1/Comp                                                                             | NO 10(6) A - NC 9(5) A - CO 9 A resistive              | NO 10 A - NC 9 A resistive<br>NO 5FLA 30LRA             |
| IDNext 961 P                     | Out1/Comp                                                                             | 12 (8) A                                               | 12FLA 72LRA                                             |
| IDNext 971 P/B                   | Out1/Comp                                                                             | 12(8) A                                                | 12FLA 72LRA                                             |
|                                  | Out2/Def                                                                              | NO 8(4) A - NC 6(3) A - CO 6 A resistive               | NO 8 A - NC 6 A - CO 6 A resistive<br>NO 4,9FLA 29,4LRA |
| IDNext 974 P/B<br>IDNext 974 P/C | Out1/Comp                                                                             | 12(8) A                                                | 12FLA - 72LRA                                           |
|                                  | Out2/Def                                                                              | NO 8(4) A - NC 6(3) A - CO 6 A resistive               | NO 8 A - NC 6 A - CO 6 A resistive<br>NO 4,9FLA 29,4LRA |
|                                  | Out3/Fan                                                                              | 5(2) A                                                 | 5 A resistive - 2FLA 12LRA                              |
| IDNext 974 P/CI                  | OC1/Comp                                                                              | 16 Vdc $\pm$ 40% - Load impedance $\geq$ 1500 $\Omega$ |                                                         |
|                                  | Out2/Def                                                                              | NO 8(4) A - NC 6(3) A - CO 6 A resistive               | NO 8 A - NC 6 A - CO 6 A resistive<br>NO 4,9FLA 29,4LRA |
|                                  | Out4/Fan                                                                              | 10(6) A                                                | 10FLA 60LRA                                             |
| IDNext 978 P/B<br>IDNext 978 P/C | Out1/Comp                                                                             | 10(6) A                                                | 10FLA 60LRA                                             |
|                                  | Out2/Def                                                                              | NO 8(4) A - NC 6(3) A - CO 6 A resistive               | NO 8 A - NC 6 A - CO 6 A resistive<br>NO 4,9FLA 29,4LRA |
|                                  | Out3/Fan                                                                              | 5(2) A                                                 | 5 A resistive - 2FLA 12LRA                              |
|                                  | Out4/Alm                                                                              | 5(2) A                                                 | 5 A resistive - 2FLA 12LRA                              |
|                                  | <b>I<sub>max</sub> = Maximum current 17 A on common pole (Out1+ Out2+ Out3+ Out4)</b> |                                                        |                                                         |
| IDNext 978 P/CI                  | OC1/Comp                                                                              | 16 Vdc $\pm$ 40% - Load impedance $\geq$ 1500 $\Omega$ |                                                         |
|                                  | Out2/Def                                                                              | NO 8(4) A - NC 6(3) A - CO 6 A resistive               | NO 8 A - NC 6 A - CO 6 A resistive<br>NO 4,9FLA 29,4LRA |
|                                  | Out3/Alm                                                                              | 5(2) A                                                 | 5 A resistive - 2FLA 12LRA                              |
|                                  | Out4/Fan                                                                              | 10(6) A                                                | 10FLA 60LRA                                             |

## Further Information

### Input characteristics

|                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display ranges:  | -99.9...99.9 or -999...999                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Measuring range: | <b>NTC</b> : -50...110 °C (-58...230 °F) - on 3-digit display with +/- sign<br><b>PTC</b> : -55...140 °C (-67...284 °F) - on 3-digit display with +/- sign<br><b>Pt1000</b> : -55...150 °C (-67...302 °F) - on 3-digit display with +/- sign                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Accuracy:        | <b>NTC</b> : -50...-30 °C (-58...-22 °F) → Better than $\pm 2.4$ °C ( $\pm 4.3$ °F) $\pm 1$ digit<br><b>NTC</b> : -30...110 °C (-22...230 °F) → Better than $\pm 1.6$ °C ( $\pm 2.9$ °F) $\pm 1$ digit<br><b>PTC</b> : -55...140 °C (-67...284 °F) → Better than $\pm 2.0$ °C ( $\pm 3.5$ °F) $\pm 1$ digit<br><b>Pt1000</b> : -55...150 °C (-67...302 °F) → Better than $\pm 2.3$ °C ( $\pm 4.1$ °F) $\pm 1$ digit                                                                                                                                                                                                                                                                                                                                                                                          |
| Resolution:      | 0.1 °C/°F or 1 °C/°F (depending on the display range setting)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Buzzer:          | YES (depends on model - /B)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Analog Inputs:   | <ul style="list-style-type: none"> <li>• <b>IDNext 902 P</b>: 1 NTC/PTC/Pt1000 input (<b>Pb1</b>)</li> <li>• <b>IDNext 961 P</b>: 1 NTC/PTC/Pt1000 input (<b>Pb1</b>)</li> <li>• <b>IDNext 971 P/B</b>: 2 NTC/PTC/Pt1000 inputs (<b>Pb1</b> and <b>Pb2</b>)</li> <li>• <b>IDNext 974 P/B</b>: 2 NTC/PTC/Pt1000 inputs (<b>Pb1</b> and <b>Pb2</b>)</li> <li>• <b>IDNext 974 P/C</b>: 2 NTC/PTC/Pt1000 inputs (<b>Pb1</b> and <b>Pb2</b>)</li> <li>• <b>IDNext 974 P/CI</b>: 2 NTC/PTC/Pt1000 inputs (<b>Pb1</b> and <b>Pb2</b>)</li> <li>• <b>IDNext 978 P/B</b>: 2 NTC/PTC/Pt1000 inputs (<b>Pb1</b> and <b>Pb2</b>)</li> <li>• <b>IDNext 978 P/C</b>: 2 NTC/PTC/Pt1000 inputs (<b>Pb1</b> and <b>Pb2</b>)</li> <li>• <b>IDNext 978 P/CI</b>: 2 NTC/PTC/Pt1000 inputs (<b>Pb1</b> and <b>Pb2</b>)</li> </ul> |
| Digital Inputs:  | <ul style="list-style-type: none"> <li>• <b>IDNext 902 P</b>: 1 voltage free digital input (<b>DI</b>)*</li> <li>• <b>IDNext 961 P</b>: 1 voltage free digital input (<b>DI</b>)*</li> <li>• <b>IDNext 971 P/B</b>: 1 voltage free digital input (<b>DI</b>)</li> <li>• <b>IDNext 974 P/B</b>: 1 voltage free digital input (<b>DI</b>)</li> <li>• <b>IDNext 974 P/C</b>: 1 voltage free digital input (<b>DI</b>)*</li> <li>• <b>IDNext 974 P/CI</b>: 1 voltage free digital input (<b>DI</b>)*</li> <li>• <b>IDNext 978 P/B</b>: 1 voltage free digital input (<b>DI</b>)</li> <li>• <b>IDNext 978 P/C</b>: 1 voltage free digital input (<b>DI</b>)*</li> <li>• <b>IDNext 978 P/CI</b>: 1 voltage free digital input (<b>DI</b>)*</li> </ul>                                                              |

(\*) **DI** can also be configured as a probe input **Pb3** (**H11**=0 and **H43**=y)

### Mechanical characteristics

|                           |                                                                      |
|---------------------------|----------------------------------------------------------------------|
| Terminals:                | Screw terminal blocks                                                |
| Connectors:               | TTL serial for connection of compatible accessories                  |
| Dimensions:               | Front panel 80.5 x 34.5 mm (3.17 x 1.36 in.), depth 60 mm (2.36 in.) |
| Mounting panel thickness: | 0.5...7.5 mm (0.02...0.3 in.)                                        |

**Note:** the technical characteristics provided in this document concerning measurement (range, accuracy, resolution, etc.) refer to the device itself only and not to any accessories supplied, such as the probes.

---

# User interface and operation

---

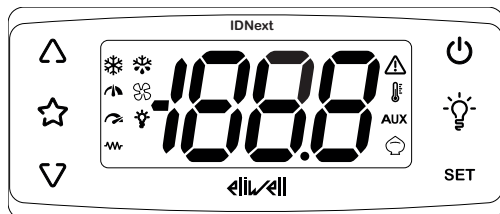
## Contents

This section includes the following topics:

|                                    |    |
|------------------------------------|----|
| User interface .....               | 48 |
| Using the device .....             | 50 |
| Setting the probes .....           | 54 |
| Setting the displayed values ..... | 55 |

## User interface

### Interface



### Keys

| Keys         | press and release                                                                                                         | press for at least 5 seconds                                                                                                                                                                       |
|--------------|---------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|              | <ul style="list-style-type: none"> <li>Scroll through the menu options.</li> <li>Increase the values.</li> </ul>          | From outside the menus only. Can be configured by the user (parameter <b>H31</b> ). Default: activates manual defrost.                                                                             |
|              | Direct access to the function set with parameter <b>H35</b> .<br>From outside the menus only.                             | ---                                                                                                                                                                                                |
|              | <ul style="list-style-type: none"> <li>Scroll through the menu options.</li> <li>Decrease the values.</li> </ul>          | <ul style="list-style-type: none"> <li>From outside the menus only. Can be configured by the user (parameter <b>H32</b>)</li> <li>Unlock keypad (press and hold for at least 3 seconds)</li> </ul> |
|              | <ul style="list-style-type: none"> <li>Go back up one level in the menu.</li> <li>Confirm the parameter value.</li> </ul> | From outside the menus only. Can be configured by the user (parameter <b>H33</b> ). Default: Activate stand-by.                                                                                    |
|              | Direct access to the function set with parameter <b>H34</b> .<br>From outside the menus only.                             | ---                                                                                                                                                                                                |
| <b>SET</b>   | <ul style="list-style-type: none"> <li>Access the "Machine Status" menu.</li> <li>Display alarms (if present).</li> </ul> | <ul style="list-style-type: none"> <li>Access the "Programming" menu.</li> <li>Confirm commands.</li> </ul>                                                                                        |
| + <b>SET</b> | Press and hold for 5 seconds when switching on to load the preset applications (only after unlocking the keypad)          |                                                                                                                                                                                                    |

**Note:** some keys may not be present, depending on the model.

**Note:** On startup or when 30 seconds have passed since the last action carried out on the user interface, the device keypad locks automatically. If it is locked and any key is pressed, the text "**LOC**" will appear. To unlock the keypad, press and hold for at least 3 seconds until the text "**UnL**" appears.

## Connection to HACCP Module



When the HACCP Module is connected to the TTL serial port and the Bluetooth connection to the Eliwell Air App is active, the **btL** label appears on the display and icons are turned off.

## Icons

| Icon | Function          | Description                                                                                                                                              |
|------|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | Compressor        | On steadily: compressor active<br>Flashing: delay, protection or activation inhibited<br>Off: compressor off                                             |
|      | Defrost           | On steadily: defrost active<br>Flashing: defrost activated manually or via digital input<br>Off: defrost inactive                                        |
|      | Evaporator fans   | On steadily: fans active<br>Off: fans off                                                                                                                |
|      | Average VSC speed | On steadily: $V_{min} \leq \text{required speed} < 90\% V_{max}$<br>Off: $0\% \leq \text{required speed} < V_{min}$                                      |
|      | Maximum VSC speed | On steadily: $\text{required speed} \geq 90\% V_{max}$<br>Off: $\text{required speed} < 90\% V_{max}$                                                    |
|      | Light             | On steadily: light on<br>Off: light off                                                                                                                  |
|      | Heating           | On steadily: Heating regulator active<br>Off: Heating regulator off                                                                                      |
|      | Alarm             | On steadily: alarm present<br>Flashing: alarm silenced<br>Off: No alarm active                                                                           |
|      | Temperature       | On steadily: a temperature is displayed ( $^{\circ}\text{C}$ or $^{\circ}\text{F}$ )<br>Off: a value not relating to temperature or a label is displayed |
|      | AUX               | On steadily: AUX output active (depending on model)<br>Flashing: Deep cooling active<br>Off: AUX output off                                              |
|      | Energy saving     | On steadily: Energy saving active<br>Flashing: reduced set active                                                                                        |

**Note:**  $V_{min}$  = minimum compressor speed;  $V_{max}$  = maximum compressor speed.

**Note:** some icons may not be available for activation, depending on the model.

# Using the device

## Switching on for the first time

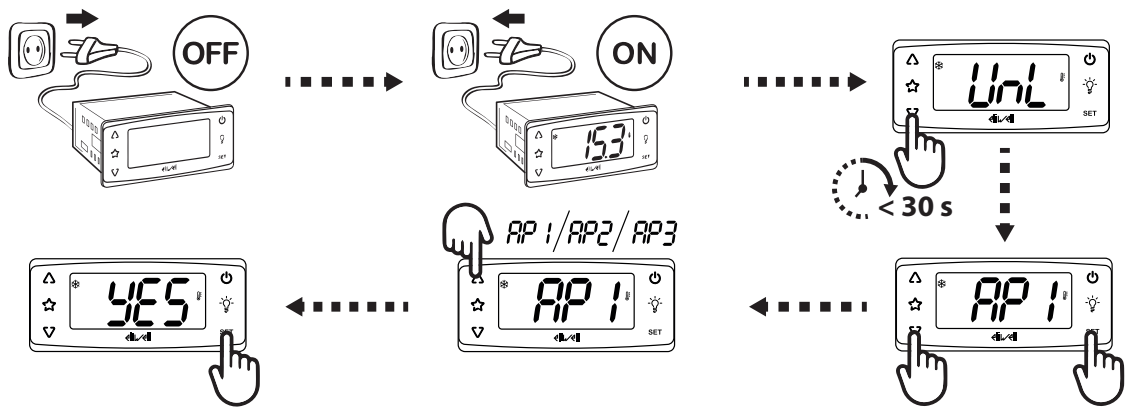
Once the electrical connections have been completed, simply power up the device for it to start working.  
At the first startup:

- 1. Select and load the preset application - **AP1**, **AP2** or **AP3** - that best reflects the usage requirements.
- 2. Check and, if necessary, adjust the value of the main device parameters to adapt the selected application to your system.
- 3. Make sure there are no active alarms.

## Loading Preset Applications

The procedure for loading one of the preset applications is:

- 1. If the device is on, switch it off
- 2. Switch on the device
- 3. Press and hold  for at least 3 seconds, until the keypad unlock label “UnL” appears
- 4. Within 30 seconds of switching the device on, press and hold (SET + ) for at least 5 seconds, until the label “AP1” appears
- 5. Scroll through applications **AP1**, **AP2** and **AP3** using  and 
- 6. Confirm the selected preset application using SET.
- Note:** The process can be canceled by pressing  or letting a timeout occur (15 seconds)
- 7. If the procedure was completed successfully, the display will show “yES”; otherwise it will show “no”
- 8. The device will restart



The procedure for loading one of the preset applications restores the respective default values, with the exception of the parameters NON specific to the application that retain the value set previously. These values, left unaltered, may not be suitable and may therefore need to be changed.

### NOTICE

#### INOPERABLE DEVICE

Check the parameters after loading a preset application.

**Failure to follow these instructions can result in equipment damage.**

## Password

Passwords **PA1** and **PA2** are required to:

- **PA1**: access the User parameters (default: **PA1** = 0 - disabled)
- **PA2**: access the Installer parameters (default: **PA2** = 15 - enabled)

To change the password value:

1. To unlock the keypad, press and hold **∇** for at least 3 seconds, until the label '**UnL**' appears
2. Press and hold for at least 5 seconds **SET**
3. Scroll through the parameters with **△** and **∇** until the label 'PA2' is found
4. Press and release **SET**
5. Set the value '15' using **△** and **∇**
6. Confirm the value by pressing **SET** (the first folder will be displayed)
7. Scroll through the folders with **△** and **∇** until the label 'diS' is found
8. Press and release **SET**
9. Scroll through the folders with **△** and **∇** until the label 'PS1' or 'PS2', depending on whether you want to change access password **PA1** or **PA2**
10. To confirm the value, press **SET** or **⏻**, or let a timeout occur (15 seconds).

**Note:** If **PA1**=0, the User parameters will not be protected and will be displayed before label **PA2**.

**Note:** If the value entered is incorrect, the label **PA1/PA2** will be shown again. Repeat the procedure.

## Machine Status menu

To enter the Machine Status menu:

1. To unlock the keypad, press and hold **∇** for at least 3 seconds, until the label '**UnL**' appears
2. Press and release **SET**
3. Scroll through the folders using **△** and **∇** until you find the label for the desired folder
4. Press and release **SET**
5. View the value read
6. To exit press **SET** or **⏻**, or let a timeout occur (15 seconds).

### List of folders:

The folders shown are as follows:

- **SEt**: setpoint selection folder
- **AL**: alarms folder (only visible if there are active alarms)
- **rtC**: clock parameters folder (if present)
  - **dAy**: day
  - **h**: hours
  - **'**: minutes
- **Pb1**: Pb1 probe value folder
- **Pb2**: Pb2 probe value folder (if present)
- **Pb3**: Pb3 probe value folder (if present)
- **VSC**: VSC value folder (if present)
- **idF**: firmware mask value folder
- **rEL**: firmware release value folder
- **nAM**: product name folder

**Note:** some folders may not be present, depending on the model.

## Programming menu

To enter the Programming menu:

- To unlock the keypad, press and hold **▽** for at least 3 seconds, until the label 'UnL' appears
- Press and hold **SET** for at least 5 seconds

If required, an access PASSWORD **PA1** will be requested for User parameters and **PA2** for Installer (Inst) parameters (see **Password** section).

### User (User) parameters:

Upon access the first parameter (**diF**) will be shown.

- Scroll through the parameters using **△** and **▽** until you find the label for the parameter you want to change
- Press and release **SET**
- Set the desired value using **△** and **▽**
- To confirm the value press **SET** or **⏻**, or let a timeout occur (15 seconds).

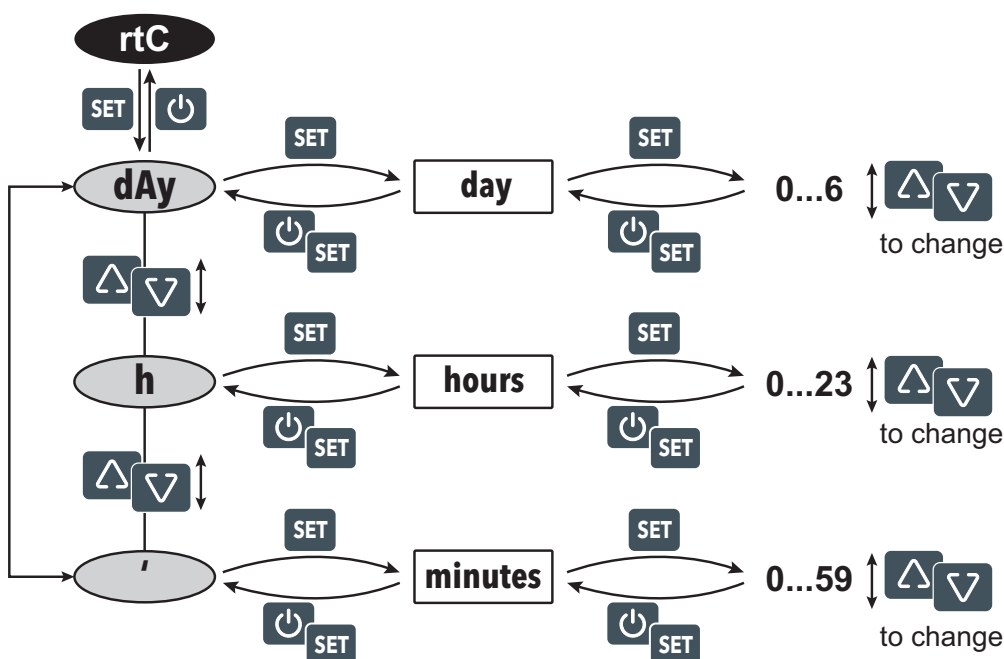
### Installer (Inst) parameters:

Upon access the first folder (**CP**) will be shown.

- Scroll through the folders using **△** and **▽** until you find the label for the desired folder
- Press and release **SET**
- Scroll through the parameters using **△** and **▽** until you find the label for the parameter you want to change
- Press and release **SET**
- Set the desired value using **△** and **▽**
- To confirm the value press **SET** or **⏻**, or let a timeout occur (15 seconds).

**Note:** Switch the device off and on again every time you change the parameter configuration.

## Set RTC



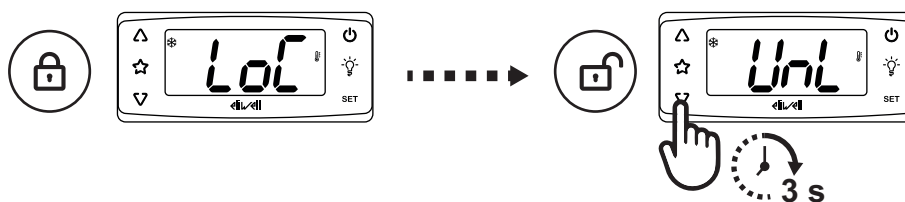
**Legenda:** **day** = day of the week; **hours** = hours; **minutes** = minutes; **to change** = to change.

## Locking/unlocking the keypad

The keypad locks automatically in the following situations:

- on startup
- after 30 seconds of inactivity

To unlock the keypad, press and hold **▽** for at least 3 seconds, until the label "UnL" appears.



## Viewing the probe values

1. Unlock the keypad by pressing and holding  $\nabla$  for at least 3 seconds, until the label “UnL” appears.
2. Press and release **SET** to access the “Machine status” menu.
3. Scroll through the folders with  $\Delta$  and  $\nabla$  until you find the folder **Pb1**, **Pb2** or **Pb3**.
4. Press **SET** to view the value measured by the corresponding probe.

### Notes:

- the displayed value cannot be changed.
- folder **Pb2** can only be viewed on models that manage probe Pb2.
- folder **Pb3** can only be viewed on models that manage probe Pb3.

## Setting the setpoint

1. To unlock the keypad, press and hold  $\nabla$  for at least 3 seconds, until the label “UnL” appears.
2. Press and release **SET** to access the “Machine status” menu.
3. Scroll through the folders with  $\Delta$  and  $\nabla$  until you find the folder **SEt**.
4. Press **SET** to view the current setpoint value.
5. Change the setpoint value using  $\Delta$  and  $\nabla$  within 15 seconds.
6. To confirm the value press **SET** or  $\Phi$ , or let a timeout occur (15 seconds).

## Setting frequently used functions

Some frequently used functions may be paired with the keys by suitably configuring the corresponding parameters; they can then be activated by pressing and holding the paired key.

**Note:** some keys may not be present, depending on the model.

| Key            | Parameter |
|----------------|-----------|
| $\Delta$       | H31       |
| $\nabla$       | H32       |
| $\Phi$         | H33       |
| $\text{Light}$ | H34       |
| $\text{Star}$  | H35       |

| Value H31/H32/H33/H34/H35 | Description                           |
|---------------------------|---------------------------------------|
| 0                         | disabled                              |
| 1                         | defrost                               |
| 2                         | AUX                                   |
| 3                         | reduced set                           |
| 4                         | stand-by                              |
| 5                         | nPL autotuning procedure (VSC models) |
| 6                         | tun autotuning procedure (VSC models) |
| 7                         | deep cooling                          |
| 8                         | light                                 |

## Setting the main parameters

See "User" menu in the parameters table for the various models.

## Setting the probes

### Introduction

Only connect probes of the same type to the device (all NTC, PTC or Pt1000).

### Probe inputs

Depending on the model, the device has the following inputs:

- one or two analog inputs (**Pb1** / **Pb2**)
- one digital input (**DI**)\*

(\*) **DI** can also be configured as a probe input **Pb3** (**H11**=0 and **H43**=y) for models without buzzer.

### Setting the probe type

To configure the probe type, you need to set parameter **H00** in folder **CnF**, within the "Installer" menu:

| H00 value   | Probe type |
|-------------|------------|
| 0           | PTC        |
| 1 (default) | NTC        |
| 2           | Pt1000     |

### Probe calibration

In folder **diS**, within the "Installer" menu, you will find parameters:

- **CA1** (probe Pb1)
- **CA2** (probe Pb2)
- **CA3** (probe Pb3)

to force an additional value (with sign) when reading the corresponding probe (if managed by that specific model).

## Setting the displayed values

### Introduction

The following settings refer to the parameters in folder **diS**.

### Display with decimal point

You need to set parameter **ndt**:

| ndt value | Description                                                     |
|-----------|-----------------------------------------------------------------|
| y         | Display with decimal point and resolution to tenths of a degree |
| n         | Display with no decimal point                                   |

**Note:** this setting only influences the displaying of data, not the resolution of the measurement or the accuracy of the device's calculations.

### Default display

You need to set parameter **ddd**:

| ddd value | Description                                                             |
|-----------|-------------------------------------------------------------------------|
| 0         | Display setpoint                                                        |
| 1         | Display the value read by Pb1                                           |
| 2         | Display the value read by Pb2                                           |
| 3         | Display the value read by Pb3 (only if <b>H11</b> =0 and <b>H43</b> =y) |

**Note:** If the selected probe is not managed by that specific model, the displayed data should not be considered reliable.

### Display during defrost

You need to set parameter **ddL**:

| ddL value | Description                                           |
|-----------|-------------------------------------------------------|
| 0         | Display the values read by Pb1                        |
| 1         | Display the value read by Pb1 at the start of defrost |
| 2         | Display the label <b>dEF</b>                          |

### Set the unit of measure for the temperatures

You need to set parameter **dro**:

| dro value | Description                   |
|-----------|-------------------------------|
| 0         | Display the temperature in °C |
| 1         | Display the temperature in °F |

**Note:** this setting only influences how the temperatures read by the probes are displayed. After changing the unit of measure from °C to °F, the value of parameters **SEt**, **diF**, etc, remains the same and they will take on a different meaning, since they are expressed in a new unit of measure (**SEt** = 10°C becomes **SEt** = 10°F).

---

# Defrost

---

## Contents

This section includes the following topics:

- Introduction ..... 57
- Display and alarm operation ..... 58
- Manual defrost ..... 59
- Modulating Defrost ..... 61
- Standard defrost ..... 70
- Dual evaporator defrost ..... 78

## Introduction

In addition to Standard defrosts, a Modulating Defrost has been developed with the aim of activating the defrost function "when necessary", on the basis of conditions defined previously.

In models that manage probe Pb3, defrost can be managed on two separate evaporators that, on the basis of the value of parameter **H45**, can be activated individually, at the same time or alternately.

### List of defrost types

Click on the desired defrost type to access the relevant section:

- Modulating defrost
- Standard defrost
- Dual evaporator defrost

### Operating conditions

Defrosting removes ice from the surface of the evaporator.

If **dt** ≠ 0, once defrost is complete, a dripping cycle takes place to prevent the water left on the evaporator from freezing again.

Defrost is triggered automatically if:

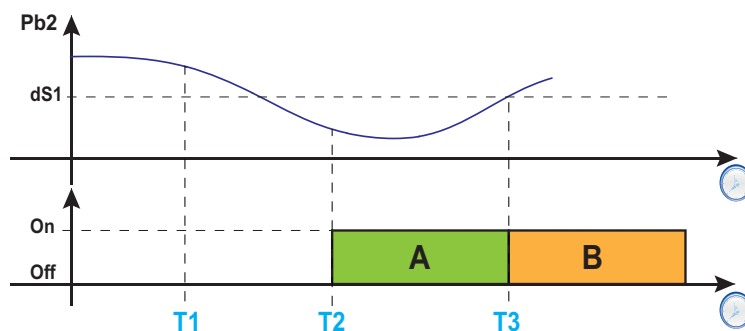
- the temperature of the evaporator is lower than the defrost end setpoint **dS1\*** (**dS2\*\*** for defrost on the evaporator 2).
- the defrost activation timer has elapsed but the temperature of the first evaporator is lower than the defrost end setpoint **dS1\*** (**dS2\*\*** for defrost on the evaporator 2).

Defrost is NOT triggered automatically if:

- a manual defrost is already underway.
- the defrost activation timer has elapsed and the temperature of the first evaporator is higher than the defrost end setpoint **dS1\*** (**dS2\*\*** for defrost on the evaporator 2), in which case a new timer count will begin.

(\*) models that manage probe Pb2.

(\*\*) models that manage probe Pb3.



**Legend:** **A** = Defrost; **B** = Dripping; **T1** = Defrost request rejected; **T2** = Defrost request accepted; **T3** = End of defrost and start of dripping cycle.

### Setting the dripping interval

To activate dripping at the end of the defrost cycle, set parameter **dt** ≠ 0. During dripping, the fans are switched off even if **Fdt** < **dt**.

**Note:** parameter **dt** is only present in models that manage probe Pb2 and that can control the evaporator fans.

### Parameters

| Parameter  | Description                                                   |
|------------|---------------------------------------------------------------|
| <b>dS1</b> | Temperature value set for the end of defrost on evaporator 1. |
| <b>dS2</b> | Temperature value set for the end of defrost on evaporator 2. |
| <b>Fdt</b> | Fan activation delay after a defrost.                         |
| <b>dt</b>  | Dripping duration.                                            |

## Display and alarm operation

### Alarm operation during defrost

You can activate an alarm for defrost ending due to timeout, by setting parameter **dAt** = y (see alarm **Ad2** in the section "Alarms and indications" a pagina 112).

**Note:** this function can only be activated on models that manage probe Pb2.

In the event of a regulation probe (Pb1) error, defrosts will still take place and, during defrost, the temperature alarm associated with the probe error will be excluded.

### Displayed values

By setting parameter **ddL**, you can choose the values displayed during the defrost phase until the end of dripping time.

The value shown on the display may be configured in one of the following ways:

- **ddL** = 0: display the temperature read by the regulation probe (Pb1)
- **ddL** = 1: display the temperature read by the regulation probe (Pb1) at the start of defrost
- **ddL** = 2: display (steadily) the label **dEF** (defrost)

### Unlocking the display

The display can be unlocked in one of the following ways:

- on reaching the setpoint and after dripping
- on reaching the display unlock timeout value, defined by parameter **Ldd**

### Parameters

| Parameter  | Description                                       |
|------------|---------------------------------------------------|
| <b>dAt</b> | Defrost ended due to timeout alarm indication.    |
| <b>ddL</b> | Display mode during defrosting.                   |
| <b>Ldd</b> | Display unlock timeout value - label <b>dEF</b> . |

## Manual defrost

### Introduction

The Manual Defrost function can be activated in one of the following ways:

- press and hold a key (configured with **H3x** = 1)
- digital input (**DI**) (only if **H11** =  $\pm 1$ )
- using a Supervisor, via Modbus command (serial)
- via APP (if the HACCP Module is fitted. See accessories section)

**Note:** if the **OdO** count is in progress, the defrost cycle does not begin, the request is rejected and the display will flash three times to indicate that defrosting is not possible.

### Functioning conditions

If manual defrost is activated, depending on the value of parameter **dMR**, the defrost interval count (**dit** time):

- if **dMR** (0) = **n** the count is not reset.
- if **dMR** (1) = **y** the count is reset

If the **OdO** count is in progress and the evaporator temperature is greater than the value of parameter **ds1\*** (Evaporator 1) or **ds2\*\*** (Evaporator 2), the defrost will not be activated and the display will flash three times.

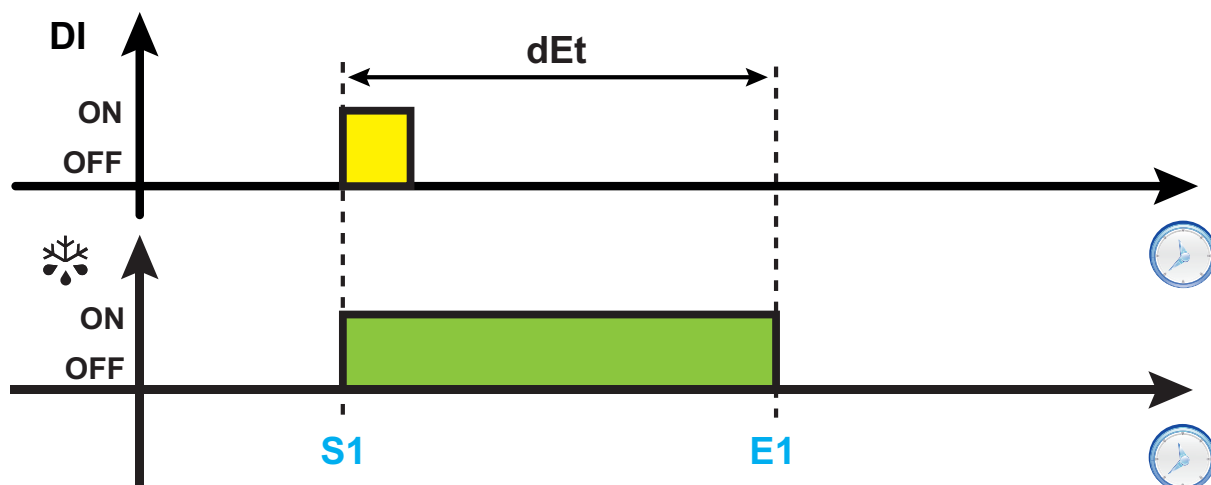
(\*): only models that manage probe Pb2.

(\*\*): only models that manage probe Pb3.

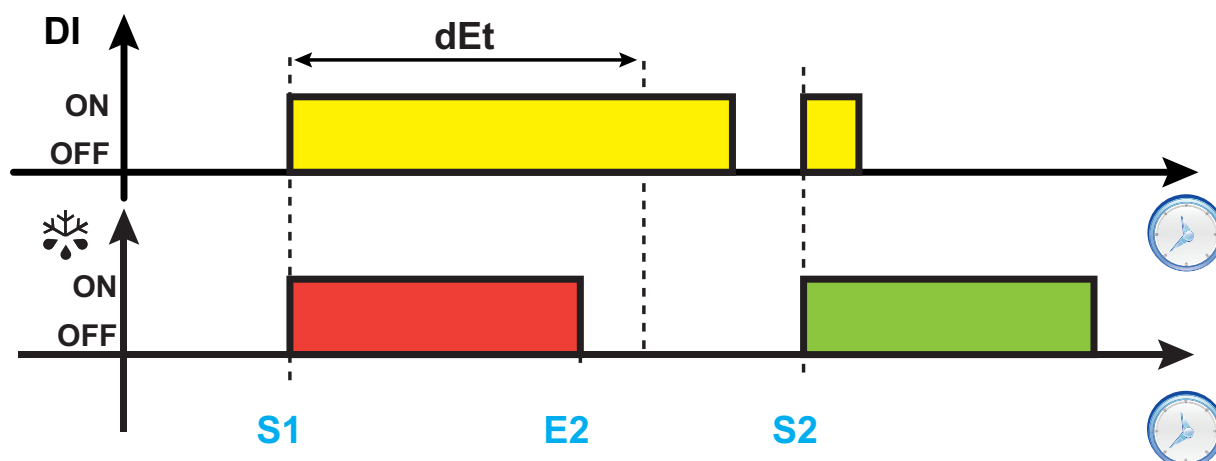
**Note:** defrost activation takes place upon closure ( $H11 > 0$ ) or opening ( $H11 < 0$ ) of the digital input DI (if activated). You can only activate a defrost, not end an active one. Any defrost or dripping cycle in progress and the defrost or dripping time cannot be suspended.

### Regulation examples

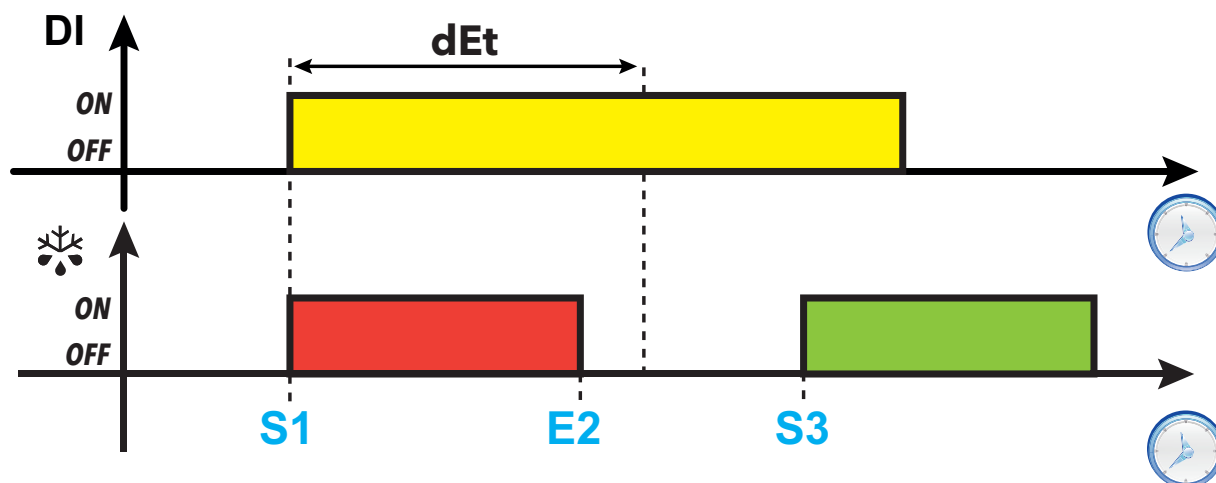
Example 1:



Example 2:



Example 3:



**Legend:** **S1** = Defrost 1 start; **S2** = Defrost 2 start; **S3** = Regular defrost start with fixed expiration; **E1** = End of defrost due to timeout; **E2** = End of defrost due to temperature.

## Parameters

| Parameter | Description                                                                         |
|-----------|-------------------------------------------------------------------------------------|
| dit       | Time interval between one defrost and the next.                                     |
| OdO       | Output activation delay time from switching on the device or after a power failure. |
| dS1       | Evaporator 1 defrost end temperature.                                               |
| dS2       | Evaporator 2 defrost end temperature.                                               |
| H11       | Digital input 1/polarity configuration.                                             |
| H31       | △ key configuration.                                                                |
| H32       | ▽ key configuration.                                                                |
| H33       | ⊖ key configuration.                                                                |
| H34       | ✱ key configuration.                                                                |
| H35       | ☆ key configuration.                                                                |

## Modulating Defrost

The Modulating defrost methods that can be activated simultaneously are as follows:

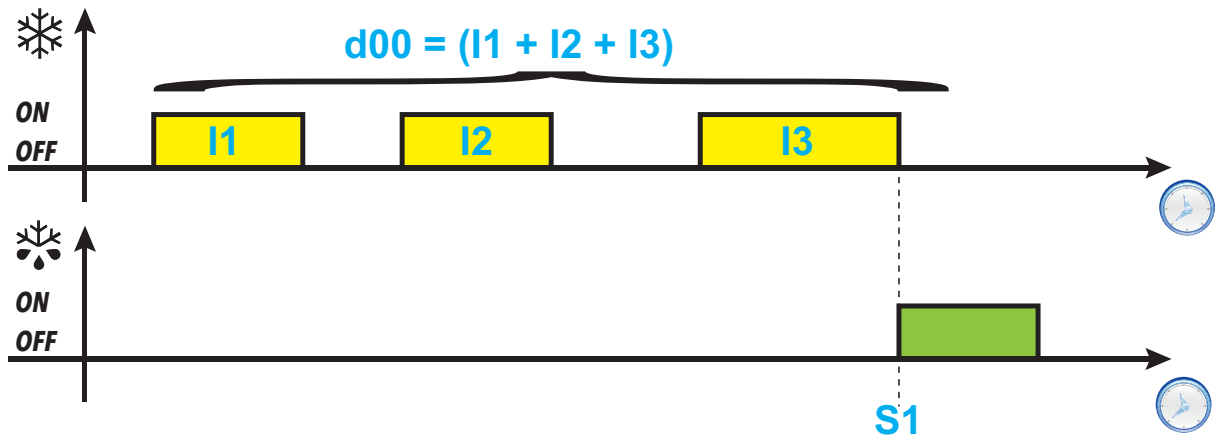
| Parameters       | Activation method                                                                                                                        |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| <b>d00/d01</b>   | Compressor running time<br>The defrost is activated when the sum of compressor operating period durations reaches the value <b>d00</b> . |
| <b>dit/d11</b>   | Device running time<br>The defrost is activated when the device operating period duration reaches the value <b>dit</b> .                 |
| <b>d20</b>       | Compressor stop<br>The defrost is activated when the compressor switches off (if <b>d20</b> = 1 only).                                   |
| <b>d40...d44</b> | Evaporator temperature<br>The defrost is activated when the Evaporator temperature drops below the set threshold <b>d41</b> .            |
| <b>d90...d94</b> | RTC (Real Time Clock)<br>The defrost will be activated at preset intervals and on specified days (RTC with fixed or regular intervals)   |

## Compressor running time

This defrost can be configured via the following parameters:

| Parameter  | Description                                                                                                                                                                                                      |
|------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>d00</b> | Compressor running time before defrost is activated.<br>When the compressor on time is equal to <b>d00</b> , defrost is active. the value of <b>d00</b> is calculated as the sum of all the compressor on times. |
| <b>d01</b> | Set the unit of measure in <b>d00</b> : <ul style="list-style-type: none"> <li>• <b>0</b> = hours</li> <li>• <b>1</b> = minutes</li> <li>• <b>2</b> = seconds</li> </ul>                                         |

## Regulation diagram



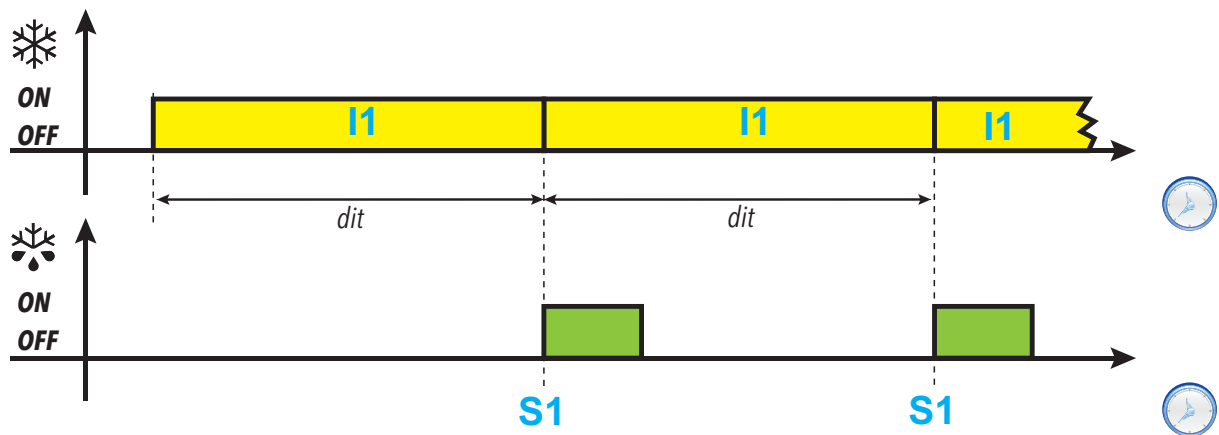
**Legend:** **I1, I2, I3** = Compressor switch-on time; **S1** = Defrost start

## Device running time

This defrost can be configured via the following parameters:

| Parameter  | Description                                                                                                                                                                                                                                                                                                  |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>dit</b> | Time interval between one defrost and the next.<br>After the device is switched on, a meter is activated and remains on independent from the compressor status.<br>When the <b>dit</b> time has elapsed, defrost will be activated and the meter will start a new count until the next defrost is activated. |
| <b>d11</b> | Set the unit of measure in <b>dit</b> : <ul style="list-style-type: none"> <li>• <b>0</b> = hours</li> <li>• <b>1</b> = minutes</li> <li>• <b>2</b> = seconds</li> </ul>                                                                                                                                     |

## Regulation diagram



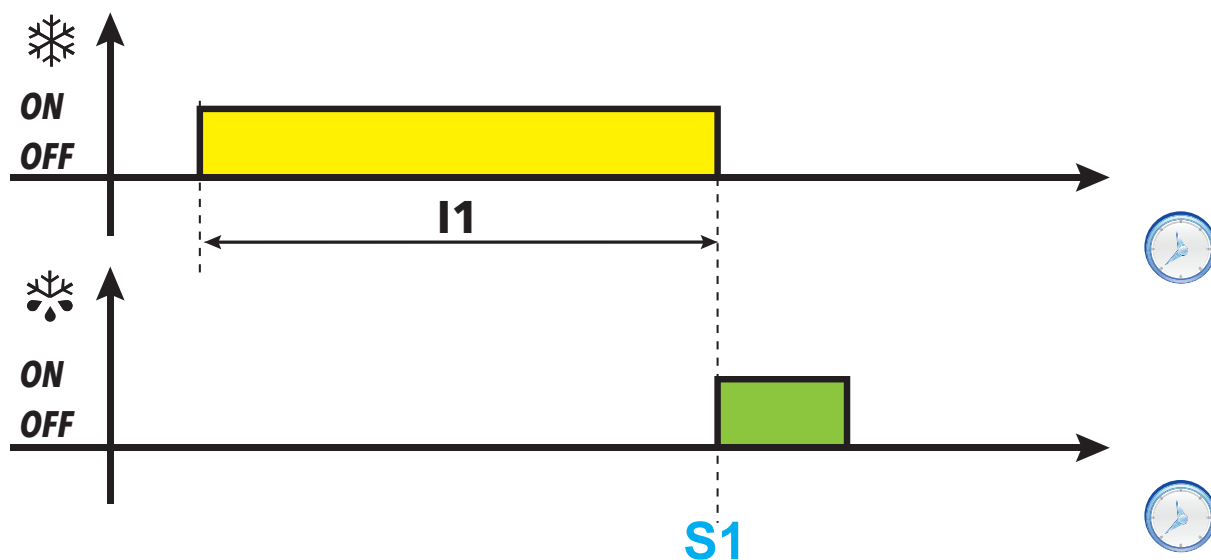
**Legend:** I1 = Compressor switch-on time; S1 = Defrost start

## Compressor stop

This defrost can be configured via the following parameters:

| Parameter | Description                                                                                                                                                                                                                 |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| d20       | Can be used to activate the defrost when the compressor switches off. <ul style="list-style-type: none"> <li>• 0 = mode disabled.</li> <li>• 1 = enabled. Defrost is activated when the compressor switches off.</li> </ul> |

## Regulation diagram



**Legend:** I1 = Compressor switch-on time; S1 = Defrost start

## Evaporator temperature

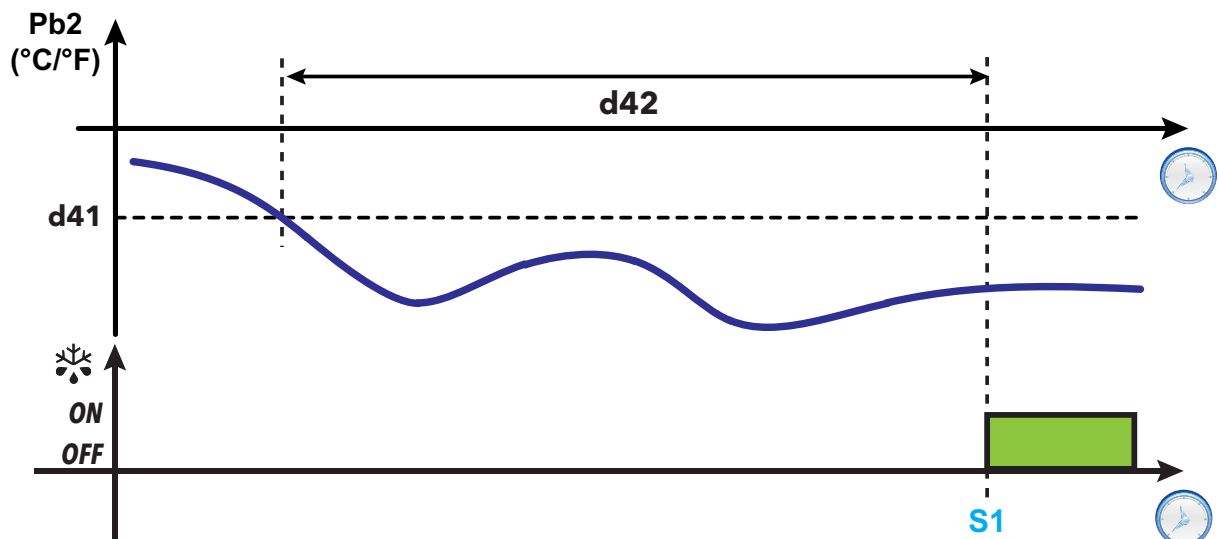
This defrost can be configured via the following parameters:

| Parameter  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>d40</b> | Enables/disables use of probe Pb2. <ul style="list-style-type: none"> <li><b>0</b> = mode disabled</li> <li><b>1</b> = enabled. Defrost runs according to the value read by Pb2 (refers only to the defrost with threshold)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>d41</b> | Sets the defrost activation threshold (on the value read by probe Pb2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>d42</b> | Sets the maximum time for which the evaporator can remain under the threshold <b>d41</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>d43</b> | Sets the type of incremental time count in which the evaporator temperature remains under the threshold value. <ul style="list-style-type: none"> <li><b>0</b> = incremental count independent of the compressor status</li> <li><b>1</b> = incremental count with compressor on (when the compressor is off the incremental count is reset)</li> <li><b>2</b> = incremental count independent of the compressor status. The incremental count stops when the temperature rises above the threshold <b>d41</b></li> <li><b>3</b> = incremental count with compressor on and until the temperature rises above the threshold <b>d41</b></li> </ul> |
| <b>d44</b> | Sets the threshold management mode. <ul style="list-style-type: none"> <li><b>0</b> = absolute value (for example: <b>d41</b> = -25°C means that the threshold temperature is exactly -25°C)</li> <li><b>1</b> = relative value (negative offset, relative to the value measured by the defrost probe Pb2 (if <b>d40</b> = 1) at the end of the first cooling cycle or on startup). Set the threshold to a value equal to the value measured by probe Pb2 at the end of the first cooling cycle or at startup (if <b>d40</b> = 1) reduced by the amount set in parameter <b>d41</b>.</li> </ul>                                                   |

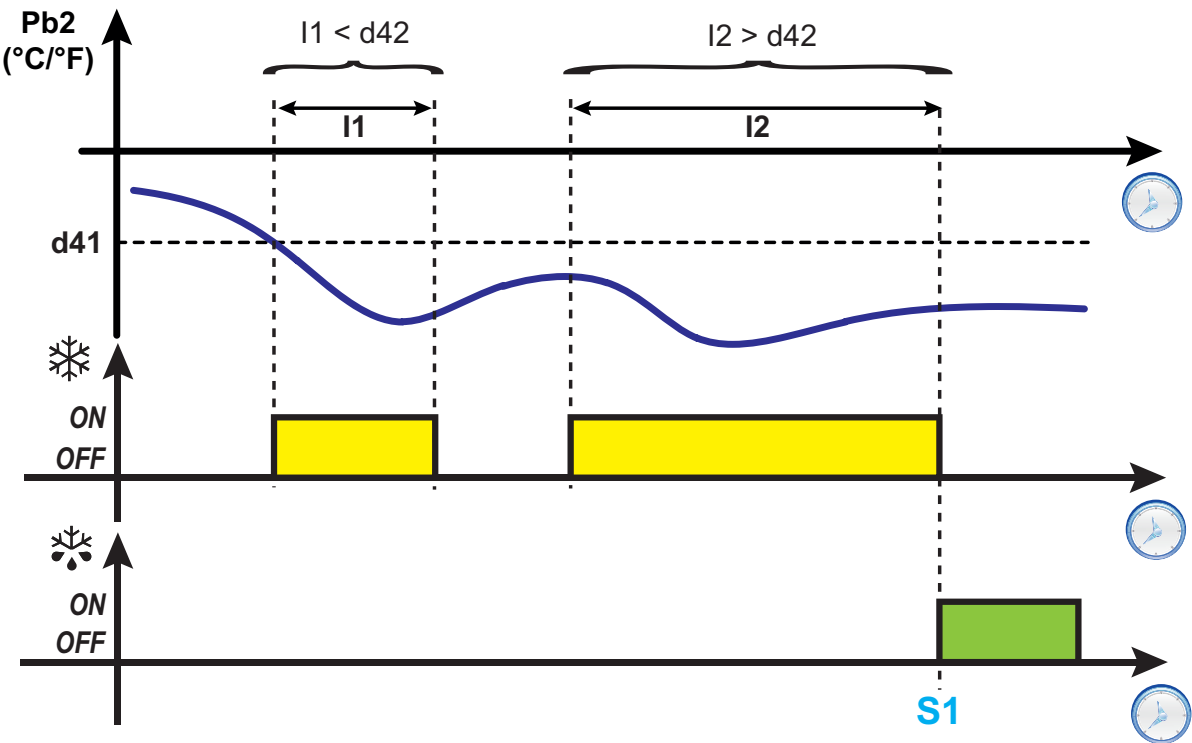
**Note:** this function can only be activated in models which manage probe Pb2 (as long as the conditions are correct to do so).

## Regulation diagrams

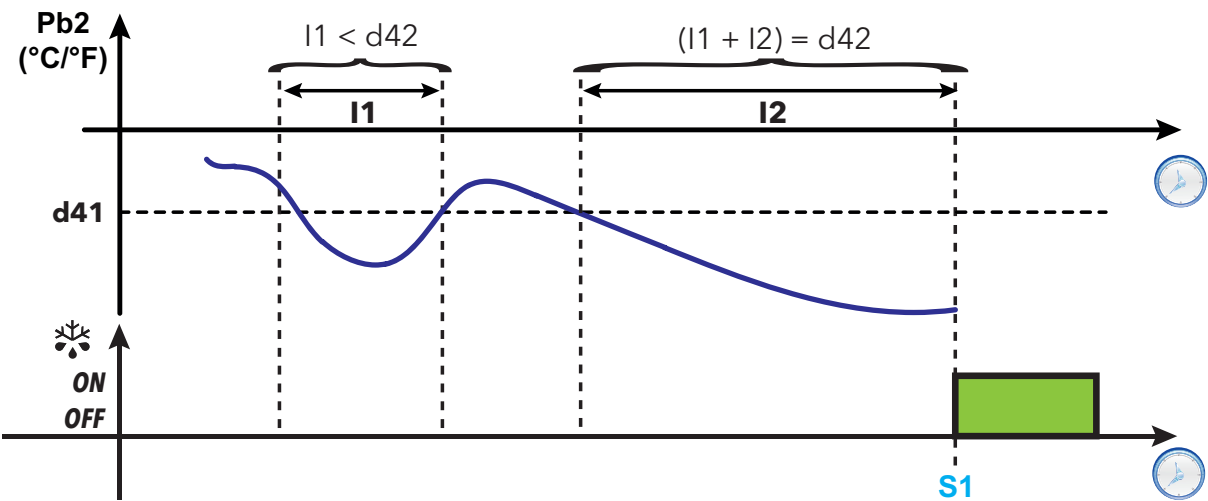
**d43 = 0: count independent of the compressor status**



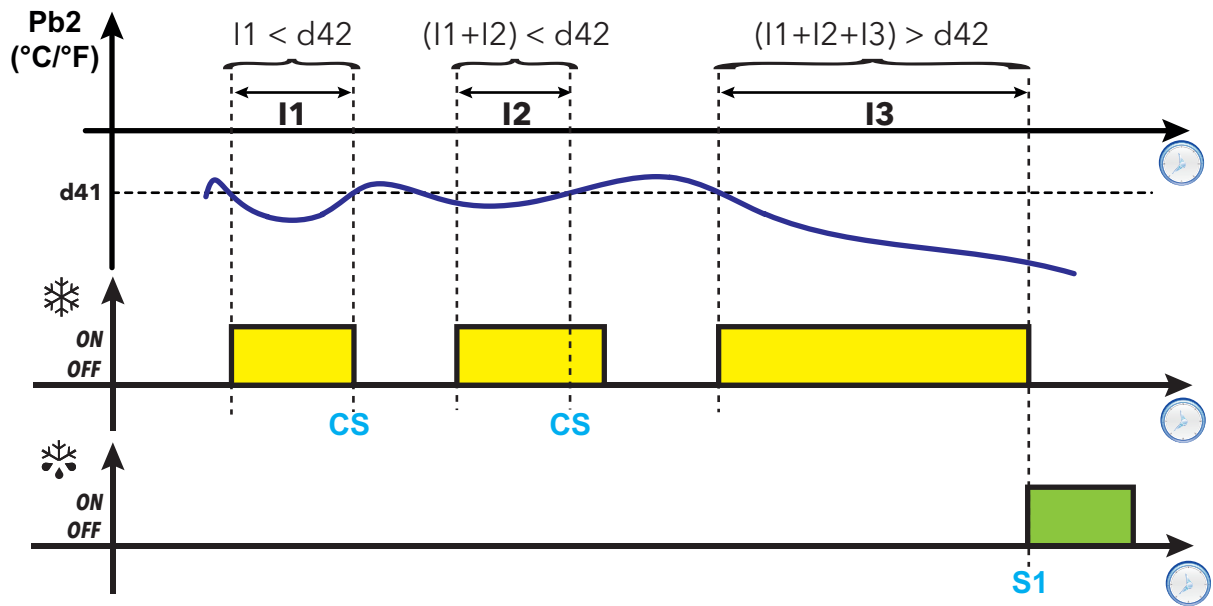
d43 = 1: count with compressor on



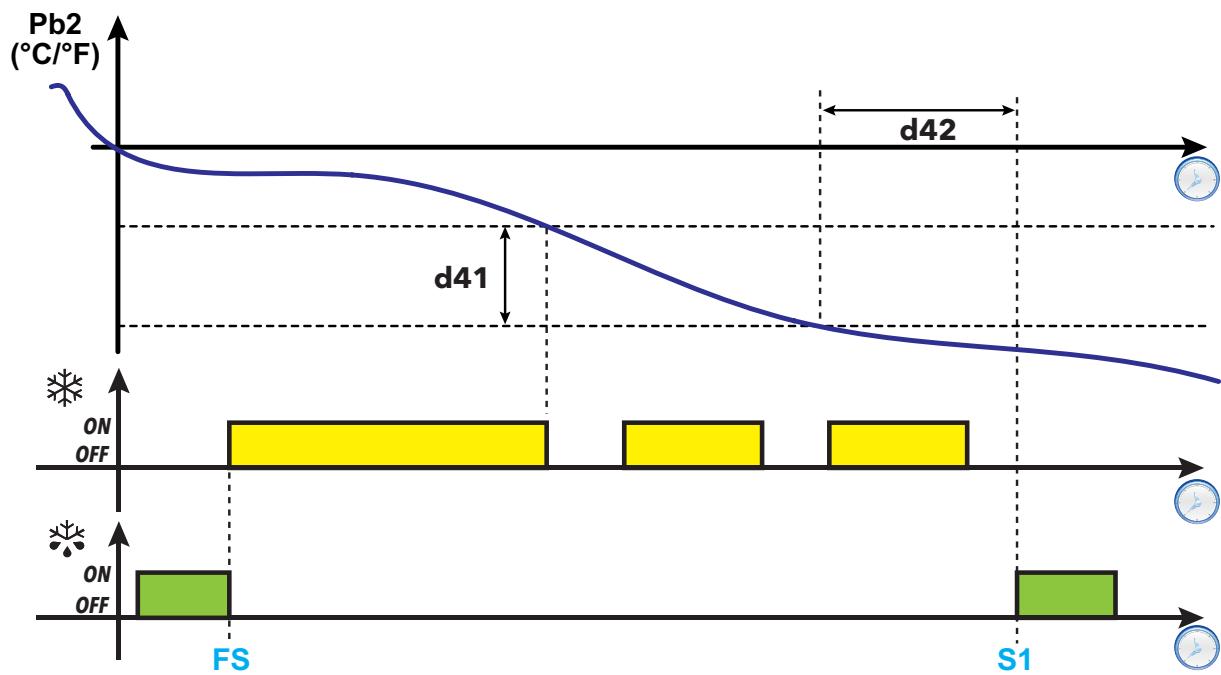
d43 = 2: count independent of the compressor status, count active for Pb2 values below the threshold d41



d43 = 3: count with compressor on, count active for Pb2 values below the threshold d41



d44 = 1: Threshold in relative value



**Legend:** I1, I2, I3 = Compressor switch-on time; FS = Defrost end; S1 = Defrost start; CS = Count stop (Pb2 > d41)

## RTC (Real Time Clock)

This defrost can be configured via the following parameters:

| Parameter  | Description                                                                                                                                                                                                                                                                                                                                             |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>d90</b> | Sets the defrost mode with RTC. <ul style="list-style-type: none"> <li>• <b>0</b> = Mode disabled</li> <li>• <b>1</b> = Reserved</li> <li>• <b>2</b> = RTC at fixed intervals (<b>d91</b>)</li> <li>• <b>3</b> = Regular RTC</li> </ul>                                                                                                                 |
| <b>d91</b> | Sets the number of daily defrosts (only if <b>d90</b> = 2).                                                                                                                                                                                                                                                                                             |
| <b>d92</b> | Sets the first weekend/holiday day (only if <b>d90</b> ≠ 3). <ul style="list-style-type: none"> <li>• <b>0</b> = Sunday</li> <li>• <b>1</b> = Monday</li> <li>• <b>2</b> = Tuesday</li> <li>• <b>3</b> = Wednesday</li> <li>• <b>4</b> = Thursday</li> <li>• <b>5</b> = Friday</li> <li>• <b>6</b> = Saturday</li> <li>• <b>7</b> = Disabled</li> </ul> |
| <b>d93</b> | Sets the second weekend/holiday day. Same as <b>d92</b> .                                                                                                                                                                                                                                                                                               |
| <b>d94</b> | Sets the interval (duration) of the regular defrost expressed in days                                                                                                                                                                                                                                                                                   |

**Note:** this function can only be activated in models with RTC (as long as the conditions are correct to do so).

### RTC operation at fixed intervals

If RTC at fixed intervals mode is selected (**d90**=2), the first defrost starts with the first programmed defrost time (holiday / weekday). The next defrost begins at fixed intervals: the time between two defrosts (expressed in hours) is calculated with the formula 24 h/**d91** (example: if **d91**=6, defrost begins every 4 hours after the first).

The defrost events are described via parameters:

- **d1H** (weekday start hour)
- **d1n** (weekday start minute)
- **F1H** (weekend/holiday start hour)
- **F1n** (weekend/holiday start minute).

### Regular RTC operation

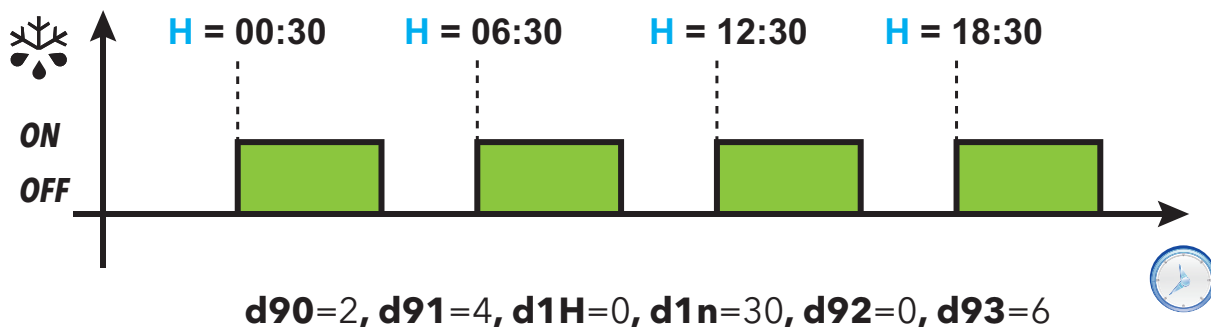
If regular interval RTC is selected (**d90**=3), the first defrost begins at the time programmed using parameters **d1H**, **d1n** (**F1H** and **F1n** are not taken into account).

After **d94** days from the first defrost, at the time **d1H** & **d1n**, a new defrost begins. After **d94** days from the second defrost, at the time **d1H** & **d1n**, a new defrost begins and so on.

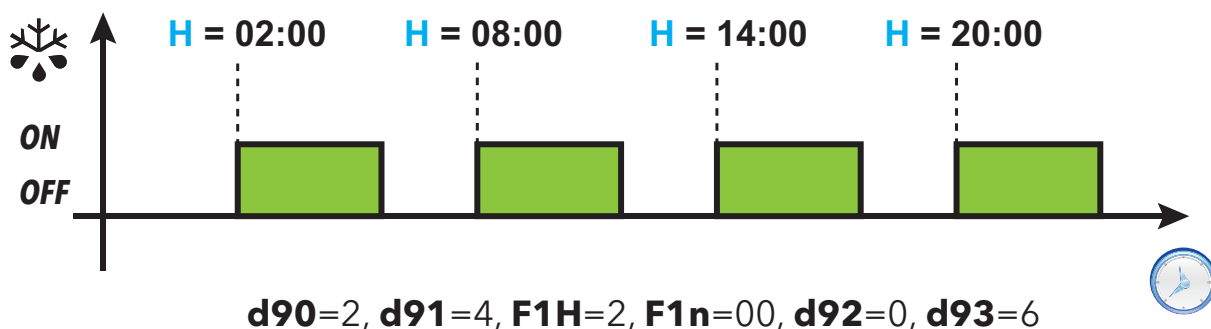
**Note:** No distinction is made between weekdays and weekends/holidays. The value of parameter **d92** is not important.

## Regulation diagrams

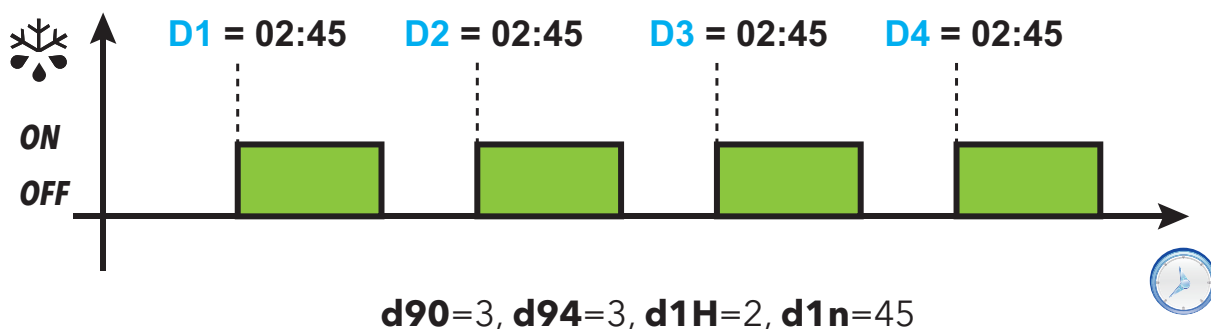
1) Example of defrost at fixed intervals during the week (Monday...Friday)



2) Example of defrost at fixed intervals on weekends/holiday (Saturday/Sunday)



3) Example of defrost at regular intervals (Sunday switch-on)



### Legend:

- **H** = Defrost start time;
- **Dx** = day of the week (Start day **D1**=Sunday; **d94** = 3 days; subsequent defrosts will start with **D2**=Wednesday;**D3**=Saturday;**D4**=Tuesday).

## Standard defrost

To select this defrost mode, set parameter **dtty** (defrost type).

Defrost takes place due to the evaporator heating up, in one of the following ways:

| dtty value | Defrost mode                       |
|------------|------------------------------------|
| 0          | Electric heater defrost            |
|            | Defrost due to compressor stoppage |
| 1          | Cycle inversion (hot gas) defrost* |
| 2          | Free defrost*                      |

(\*): only models that manage probe Pb2.

## Electric heater defrost

When defrost is activated (**dt** = 0):

- The compressor stops
- the relay to which the electric heaters are connected, configured as defrost regulator output, is activated

At the end of defrost, the heaters switch off and the compressor remains inactive for the dripping time set in parameter **dt** (if a value other than zero). At the end of the dripping time, temperature control begins again as normal.

## End of defrost

Defrost ends in the following conditions:

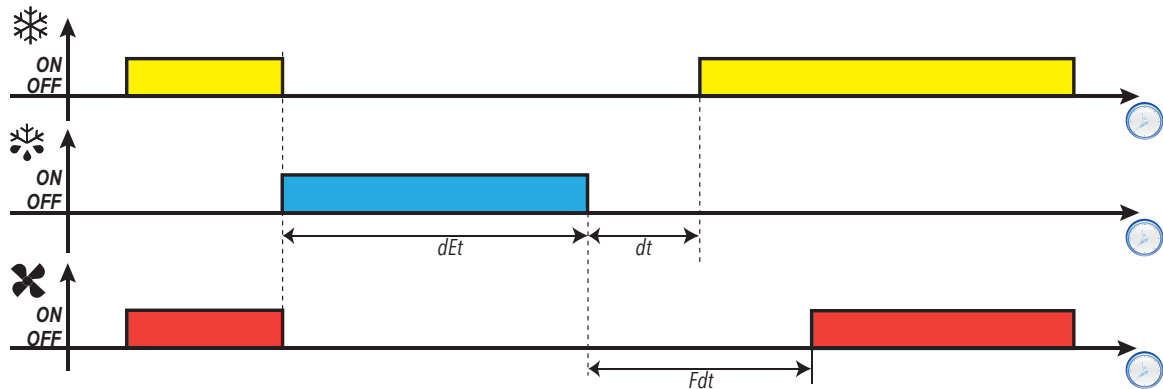
| Condition                                                                                                                                        | H42 value | Evaporator probe (Pb2) |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------|
| End of timeout period set using parameter <b>dEt</b> .                                                                                           | 0         | Not managed            |
| Defrost end setpoint set using parameter <b>dS1</b> reached or due to timeout if the setpoint is not reached within the time period <b>dEt</b> . | 1         | Managed                |

### Notes:

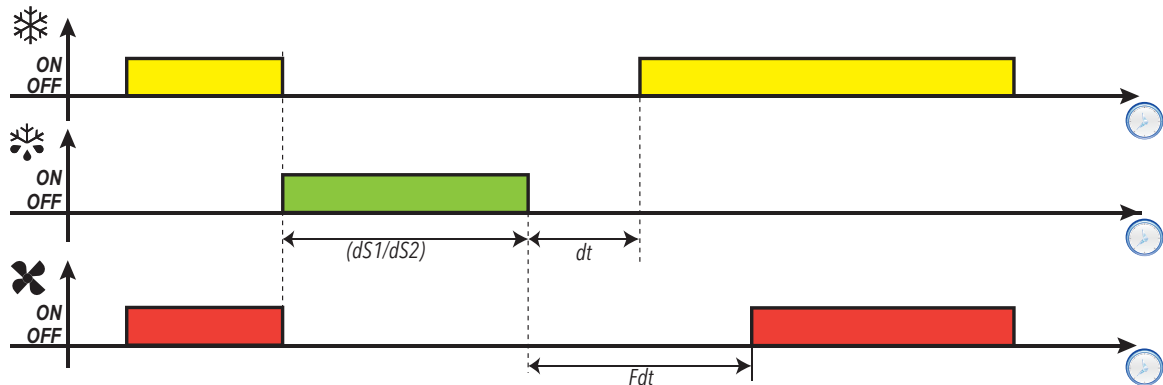
- To end defrost manually, switch the device off and on again or use the stand-by function.
- Temperature alarms are excluded during defrost
- If **dS1** intervenes before **dEt**, dripping (managed by parameters **dt** and **Fdt**) is activated in correspondence with **dS1**
- If **Fdt** < **dt** **Fdt** = **dt** is set
- During the defrost the fans are off if **dFd** = y, otherwise they follow the other settings for the fan regulator
- The programmed defrost is carried out regardless of the status of Pb1
- Defrost and dripping are made regardless on the activation or not of the door switch.

## Regulation diagram

### End of electric heater defrost due to timeout



### End of electric heater defrost due to temperature



## Parameters

| Parameter  | Description                                                          |
|------------|----------------------------------------------------------------------|
| <b>don</b> | Compressor relay activation delay time from call.                    |
| <b>doF</b> | Delay time after compressor relay switch-off and the next switch-on. |
| <b>dbi</b> | Delay time between two compressor switch-ons.                        |
| <b>dtY</b> | Type of defrost.                                                     |
| <b>dEt</b> | Defrost timeout. Determines the maximum duration of the defrost.     |
| <b>dS1</b> | Evaporator 1 defrost end temperature.                                |
| <b>d40</b> | Enables/disables use of probe Pb2.                                   |
| <b>Fdt</b> | Fan activation delay after a defrost.                                |
| <b>dFd</b> | Evaporator fan cut-out during defrosting.                            |
| <b>dt</b>  | Dripping duration.                                                   |

## Defrost due to compressor stoppage

When defrost is activated (**dt** = 0),

- The compressor stops
- No relay is configured as defrost regulator output

## End of defrost

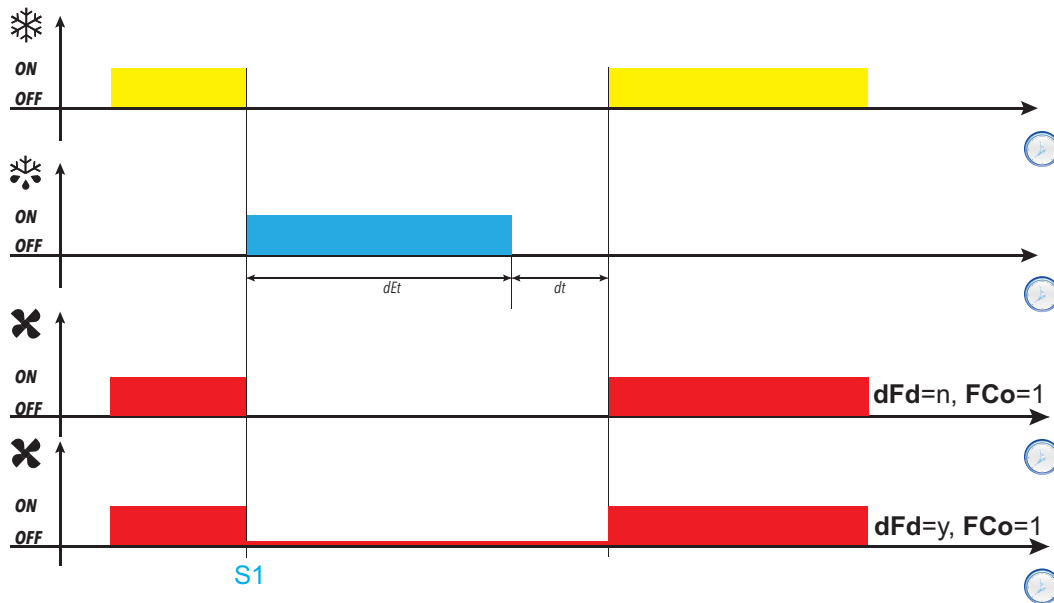
Defrost ends in the following conditions:

| Condition                                                                                                                                        | H42 value | Evaporator probe (Pb2) |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------|
| End of timeout period set using parameter <b>dEt</b> .                                                                                           | 0         | Not managed            |
| Defrost end setpoint set using parameter <b>dS1</b> reached or due to timeout if the setpoint is not reached within the time period <b>dEt</b> . | 1         | Managed                |

### Notes:

- To end defrost manually, switch the device off and on again or use the stand-by function
- Temperature alarms are excluded during defrost
- If **dt** ≠ 0, at the end of defrost the compressor and fans remain off for the time period **dt** (dripping time)
- During the defrost the fans are off if **dFd** = y, otherwise they follow the other settings for the fan regulator
- The programmed defrost is carried out regardless of the status of Pb1
- Defrost and dripping are made regardless on the activation or not of the door switch.

## Regulation diagram



Legend: **S1** = Start of defrost

## Parameters

| Parameter  | Description                                                      |
|------------|------------------------------------------------------------------|
| <b>dt</b>  | Type of defrost.                                                 |
| <b>dEt</b> | Defrost timeout. Determines the maximum duration of the defrost. |
| <b>dFd</b> | Evaporator fan cut-out during defrosting                         |
| <b>FCo</b> | Evaporator fan operating mode                                    |
| <b>dt</b>  | Dripping duration.                                               |

## Cycle inversion (hot gas) defrost

When defrost is activated (**dt** = 1):

- The compressor remains active for the entire duration of the defrost
- the relay to which the solenoid valve is connected, configured as defrost regulator output, is activated

At the end of defrost the valve relay and the compressor relay are deactivated. The compressor relay is stopped for the entire duration of the dripping cycle, set via parameter **dt** (if a value other than zero). At the end of the dripping cycle, temperature control begins again as normal.

## End of defrost

Defrost ends in the following conditions:

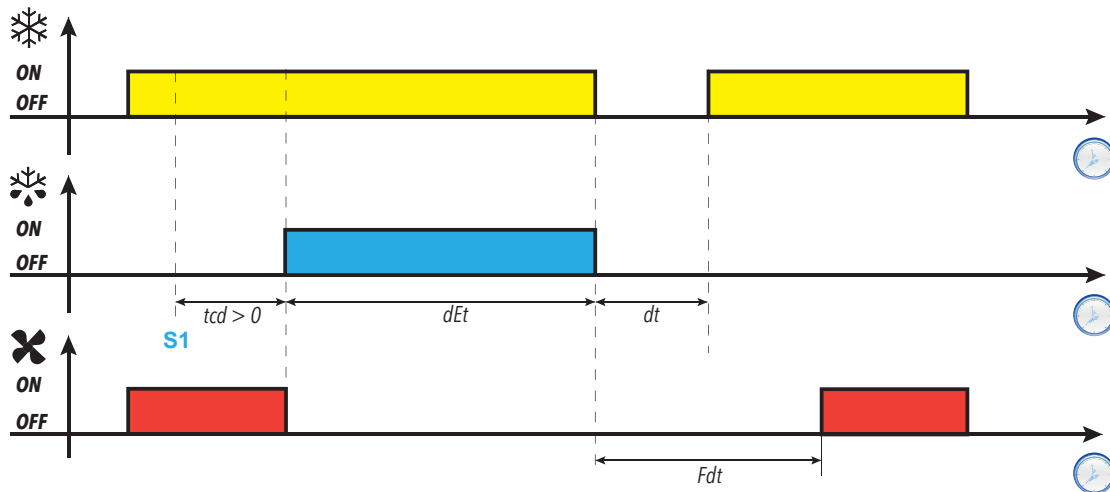
| Condition                                                                                                                                        | H42 value | Evaporator probe (Pb2) |
|--------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------|
| End of timeout period set using parameter <b>dEt</b>                                                                                             | 0         | Not managed            |
| Defrost end setpoint set using parameter <b>dS1</b> reached or due to timeout if the setpoint is not reached within the time period <b>dEt</b> . | 1         | Managed                |

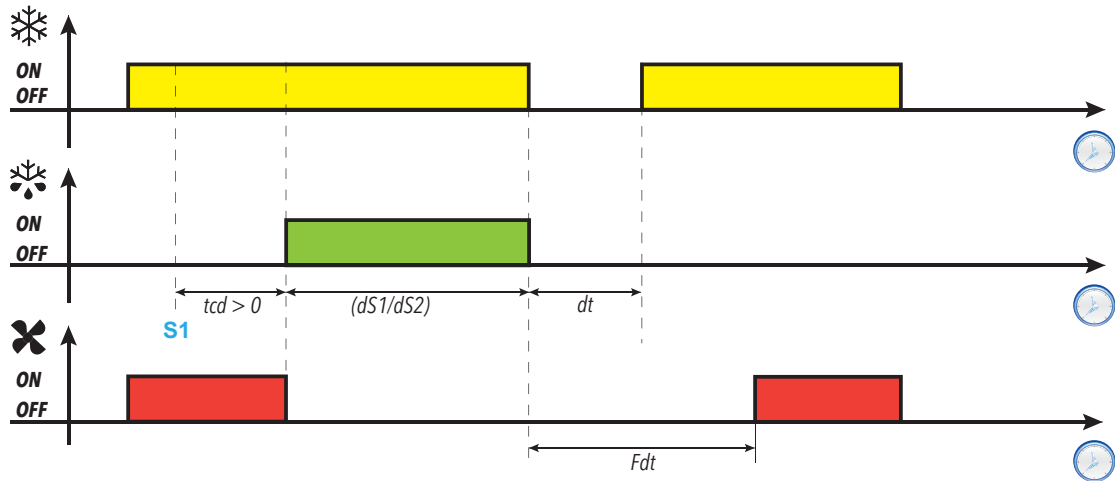
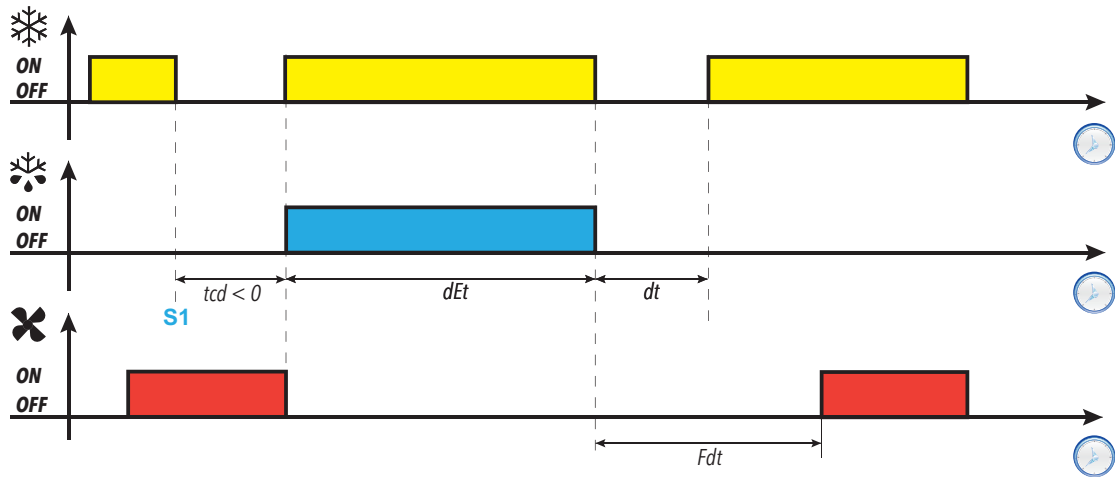
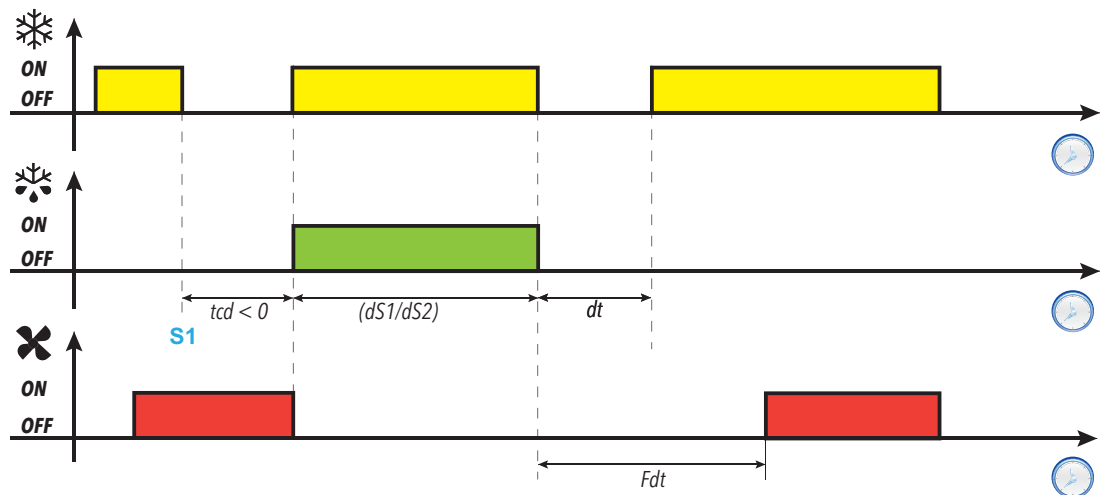
### Notes:

- To end defrost manually, switch the device off and on again or use the stand-by function.
- Temperature alarms are excluded during defrost
- The compressor safety timings (managed by parameters **don**, **doF** and **dbi**) take priority over defrost
- If **dS1** intervenes before **dEt**, dripping (managed by parameters **dt** and **Fdt**) is activated in correspondence with **dS1**
- If **Fdt** < **dt** **Fdt** = **dt** is set
- During the defrost the fans are off if **dFd** = y, otherwise they follow the other settings for the fan regulator
- The programmed defrost is carried out regardless of the status of Pb1
- Defrost and dripping are made regardless on the activation or not of the door switch.

## Regulation diagrams

End of hot gas defrost due to timeout, with  $tcd > 0$



End of hot gas defrost due to temperature, with  $tcd > 0$ End of hot gas defrost due to timeout, with  $tcd < 0$ End of hot gas defrost due to temperature, with  $tcd < 0$ 

Legend: S1 = Defrost request

## Parameters

| Parameter  | Description                                                                      |
|------------|----------------------------------------------------------------------------------|
| <b>don</b> | Compressor relay activation delay time from call.                                |
| <b>doF</b> | Delay time after compressor relay switch-off and the next switch-on.             |
| <b>dbi</b> | Delay time between two compressor switch-ons.                                    |
| <b>tcd</b> | Minimum compressor on or off time which must elapse before defrost is activated. |
| <b>dtY</b> | Type of defrost.                                                                 |
| <b>dEt</b> | Defrost timeout. Determines the maximum duration of the defrost.                 |
| <b>dS1</b> | Evaporator 1 defrost end temperature.                                            |
| <b>Fdt</b> | Fan activation delay after a defrost.                                            |
| <b>dFd</b> | Evaporator fan cut-out during defrosting                                         |
| <b>dt</b>  | Dripping duration.                                                               |

## Free defrost

When defrost is activated (**dt** = 2):

- The compressor remains under control of the compressor regulator for the duration of the defrost
- the relay to which the electric heaters are connected, configured as defrost regulator output, is activated

At the end of the defrost the heaters switch off.

During the dripping cycle the compressor continues to run.

## End of defrost

Defrost ends in the following conditions:

| Condition                                                                                                                                                                                                                                                                        | H42 value | Evaporator probe (Pb2) |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------------------------|
| End of timeout period set using parameter <b>dEt</b>                                                                                                                                                                                                                             | 0         | Not managed            |
| End of defrost temperature setpoint, set using parameter <b>dS1</b> , reached.<br><b>Note:</b> (only models that manage probe Pb2) If the setpoint is not reached within the time set using parameter <b>dEt</b> (defrost timeout), the defrost ends in any case due to timeout. | 1         | Managed                |

### Notes:

- To end defrost manually, switch the device off and on again or use the stand-by function.
- Temperature alarms are excluded during defrost
- If **dS1** intervenes before **dEt**, dripping (managed by parameters **dt** and **Fdt**) is nevertheless activated in correspondence with the end of interval **dS1**
- During the defrost the fans are off if **dFd** = y, otherwise they follow the other settings for the fan regulator
- The programmed defrost is carried out regardless of the status of Pb1
- Defrost and dripping are made regardless on the activation or not of the door switch.

## Parameters

| Parameter  | Description                                                      |
|------------|------------------------------------------------------------------|
| <b>dt</b>  | Type of defrost.                                                 |
| <b>dEt</b> | Defrost timeout. Determines the maximum duration of the defrost. |
| <b>dS1</b> | Evaporator 1 defrost end temperature.                            |
| <b>Fdt</b> | Fan activation delay after a defrost.                            |
| <b>dFd</b> | Evaporator fan cut-out during defrosting                         |
| <b>dt</b>  | Dripping duration.                                               |

## Dual evaporator defrost

### Introduction

To activate this function:

- Configure a relay output as a second evaporator using parameter **H2x** = 10
- Configure the type of dual defrost management using parameter **H45**
- Configure probe Pb3 as a second evaporator: **H11** = 0 and **H43** = 2EP.

**Note:** this function is only present in models that manage probes Pb2 and Pb3.

### Functioning conditions

Defrost in dual evaporator mode can be carried out in 3 different ways:

| H45 value | Description                                                                                                                                                                                                  |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 0         | Defrost on Evaporator 1 is active and ensures that the temperature read by probe Pb2 is lower than the defrost end temperature <b>dS1</b> .<br><b>Note:</b> The second evaporator is not taken into account. |
| 1         | Defrost is active and ensures that at least one of the temperatures read by probes Pb2 and Pb3 is lower than the defrost end temperature <b>dS1</b> for Evaporator 1 and <b>dS2</b> for Evaporator 2.        |
| 2         | Defrost is active and ensures that both of the temperatures read by probes Pb2 and Pb3 are lower than the respective defrost end temperatures <b>dS1</b> for Evaporator 1 and <b>dS2</b> for Evaporator 2.   |
| 3         | Defrost is activated on Evaporator 1 and Evaporator 2 alternately.                                                                                                                                           |

If one of the probes is in error, its temperature is considered as a trigger for the defrost function.

### End of defrost

The end of defrost occurs when the temperature read by both evaporator probes is above the end unlock temperature (**dS1** and **dS2**) or when a timeout takes place.

### General notes

- Defrost is not carried out if the conditions are not right to do so
- If **H45** = 3, the defrost sequence is always: Evaporator 1, Evaporator 2, Evaporator 1, and so on
- The end of defrost with Evaporator 1 only occurs when the probe measures a value that is equal to or greater than the defrost end temperature or when a timeout takes place
- Dripping begins when both defrosts have ended. If **H45** = 3, dripping will begin at the end of each defrost.
- If one or both probes are in error, the defrost will end due to timeout **dEt**
- If Pb3 is not configured as an Evaporator 2 probe (**H43** ≠ 2EP) or it is in error, the Evaporator 2 defrost can only be carried out if a digital output is configured as Evaporator 2 defrost (**H2x** = 10). In this case the temperature is not checked and the defrost ends due to timeout **dEt**
- Fan regulation follows normal operation in the same way as when a single evaporator is managed

## Operation

| Function                | Start of defrost                                                                                                                                                                                                                  | End of defrost                                                                                                                                                      |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Defrost on Evaporator 1 | <ul style="list-style-type: none"> <li>Pb2&lt;dS1 if H45=0</li> <li>Pb2&lt;dS1 if H45=1</li> <li>Pb2&lt;dS1 &amp; Pb3&lt;dS2* if H45=2</li> </ul>                                                                                 | <ul style="list-style-type: none"> <li>Pb2&gt;dS1 or</li> <li>Timeout if Pb2&lt;dS1 or</li> <li>Timeout if Pb2 in error</li> </ul>                                  |
| Defrost on Evaporator 2 | <ul style="list-style-type: none"> <li>Pb2&lt;dS1 if H45=0:</li> <li>Pb3&lt;dS2 if H45=1:</li> <li>Pb2&lt;dS1 &amp; Pb3&lt;dS2* if H45=2</li> </ul>                                                                               | <ul style="list-style-type: none"> <li>Pb3&gt;dS2 or</li> <li>Timeout if Pb3&lt;dS2 or</li> <li>Timeout if Pb3 in error or</li> <li>Timeout if H43 ≠ 2EP</li> </ul> |
| Function                | Start of dripping                                                                                                                                                                                                                 | End of dripping                                                                                                                                                     |
| Dripping                | <ul style="list-style-type: none"> <li>If H45 ≠ 3: it is activated when both evaporators have finished defrosting.</li> <li>If H45 = 3: it is activated on the evaporator that was active when it finishes defrosting.</li> </ul> | As for defrost with single evaporator                                                                                                                               |

(\*): If Pb3 is in error or H43 ≠ 2EP and a digital output is configured as Evaporator 2, the condition Pb3<dS2 will be considered as satisfied.

## Parameters

| Parameter  | Description                                                          |
|------------|----------------------------------------------------------------------|
| <b>don</b> | Compressor relay activation delay time from call.                    |
| <b>doF</b> | Delay time after compressor relay switch-off and the next switch-on. |
| <b>dbi</b> | Delay time between two compressor switch-ons.                        |
| <b>dtY</b> | Type of defrost.                                                     |
| <b>dEt</b> | Defrost timeout. Determines the maximum duration of the defrost.     |
| <b>dS1</b> | Evaporator 1 defrost end temperature.                                |
| <b>dS2</b> | Evaporator 2 defrost end temperature.                                |
| <b>Fdt</b> | Fan activation delay after a defrost.                                |
| <b>dt</b>  | Dripping duration.                                                   |

---

# Tools

---

## Contents

This section includes the following topics:

|                                            |    |
|--------------------------------------------|----|
| Door switch .....                          | 81 |
| Stand-by .....                             | 82 |
| Copy parameters (UNICARD) .....            | 83 |
| Reset TelevisAir diagnostic counters ..... | 84 |

## Door switch

### Description

By setting **H11** =  $\pm 4$  it is possible to connect a door switch to the digital input. When it is activated, the compressor and/or fans are deactivated instantly or after a time period set with parameter **dCo**.

By setting **H2x** = 5, an AUX relay output can be associated with the door switch regulator output.

### Operating mode

Device operation on opening of the door switch depends on parameters **dod**, **dAd** and **dCo**:

| <b>dod</b>                              | <b>dCo</b> | <b>Fans</b> | <b>Compressor</b>         |
|-----------------------------------------|------------|-------------|---------------------------|
| <b>0</b> = function disabled            | ---        | On          | On                        |
| <b>1</b> = fans disabled                | ---        | Off         | On                        |
| <b>2</b> = compressor disabled          | 0          | On          | Off                       |
|                                         | > 0        | On          | Off after <b>dCo</b> time |
| <b>3</b> = compressor and fans disabled | 0          | Off         | Off                       |
|                                         | > 0        | Off         | Off after <b>dCo</b> time |

**Note:** If the door is opened during a defrost cycle, the defrost continues normally.

### Parameters

| <b>Parameter</b> | <b>Description</b>                                                                   |
|------------------|--------------------------------------------------------------------------------------|
| dod              | Utilities switched off upon activation of the digital input set for the door switch. |
| dAd              | Digital input activation delay.                                                      |
| dCo              | Compressor switch-off delay from door switch.                                        |
| oAo              | Alarm signaling delay after deactivation of the digital input (door closure).        |
| tdo              | Delay time due to door open alarm.                                                   |
| AuP              | Association of an AUX output when the door is open.                                  |
| H11              | Digital input 1/polarity configuration.                                              |

## Stand-by

### Description

The stand-by function maintains the device power supply and, depending on the value of parameter **H08**:

- switches off the display or shows **oFF**
- deactivates all regulators (or not)
- excludes alarms (or not)

### Activation

The stand-by function can be activated in one of the following ways:

- press and hold a key with **H3x = 4**
- digital input (DI) (only if **H11 = ±6**)
- using a Supervisor, via Modbus command (serial)
- via APP (if the HACCP Module is fitted. See Accessories section)

**Note:** the digital input takes priority over the key. If both are configured, the key command will be excluded.

### Operation

When the stand-by function is activated, depending on the setting for **H08**, the following will occur:

- **H08 = 0**: display off, the regulators remain active and the device can activate the alarm icon  when an alarm occurs
- **H08 = 1**: display off, all relays are de-energized and the alarms deactivated
- **H08 = 2**: the display shows the text **oFF**, all relays are de-energized and the alarms deactivated

On exiting stand-by function, the temperature alarm is excluded for the time period set with parameter **PAo**; the outputs are deactivated for the time period set with parameter **odo**. These times are reset every time the device is switched off.

If the stand-by function was active when the device was switched off (due to black-out, opening of the main switch, etc.), it will remain active also the next time it is switched on again.

### Parameters

| Parameter | Description                                                                                            |
|-----------|--------------------------------------------------------------------------------------------------------|
| PAo       | Alarm exclusion at startup                                                                             |
| odo       | Output activation delay after startup                                                                  |
| H08       | Stand-by operating mode                                                                                |
| H11       | Digital input 1/polarity configuration.                                                                |
| H31       |  key configuration. |
| H32       |  key configuration. |
| H33       |  key configuration. |
| H34       |  key configuration. |
| H35       |  key configuration. |

# Copy parameters (UNICARD)

## Introduction

The UNICARD connects to the TTL serial port and allows uploading/downloading of a parameters map.

**Note:** Format the UNICARD the first time it is used.

The UNICARD:

- Can be connected directly to a computer by means of a USB port.
- If powered by a USB power supply device, it can power **IDNext -HC** during the upload/download phases.

## Formatting the UNICARD

1. Access the installer parameters, entering the **PA2** password if enabled
2. Scroll through the folders with **△** and **▽** until you find the folder **FPr**
3. Press **SET** to confirm
4. Scroll through the parameters using **△** and **▽** until you see parameter **Fr**
5. Press **SET** to confirm.

This command can be used to format the UNICARD (recommended the first time it is used).

**Note:** using the **Fr** parameter will delete all current data. This operation cannot be canceled.

## Uploading parameters from the device to the UNICARD

1. Access the installer parameters, entering the **PA2** password if enabled.
2. Scroll through the folders with **△** and **▽** until you find the folder **FPr**.
3. Press **SET** to confirm
4. Scroll through the parameters using **△** and **▽** until you see parameter **UL**
5. Press **SET** to confirm.
6. If the operation is completed, the display will show **yES**, otherwise it will show **no**.

## Downloading parameters from the UNICARD to the device

Connect the UNICARD when the device is switched off. When the device is switched on, the data is downloaded automatically from the UNICARD to the device. The display shows **dLy** if the operation was successful, otherwise it will show **dLn**.

**Note:** after downloading the data, the device will work with the settings for the loaded map straight away.

## Reset TelevisAir diagnostic counters

### Description

The device provides via TelevisAir a set of counters that can be used for diagnostic or maintenance functions.

### Counters list

| Label | Counter                    | Counter presence | RS       | RD        |
|-------|----------------------------|------------------|----------|-----------|
| tC1   | Compressor 1 working hours | Always           | 10 hours | 100 hours |
| nC1   | Compressor 1 activations   | Always           | 1        | 10        |
| tC2   | Compressor 2 working hours | If configured    | 10 hours | 100 hours |
| nC2   | Compressor 2 activations   | If configured    | 1        | 10        |
| td1   | Defrost 1 working hours    | If configured    | 1 minute | 1 hour    |
| nd1   | Defrost 1 activations      | If configured    | 1        | 10        |
| td2   | Defrost 2 working hours    | If configured    | 1 minute | 1 hour    |
| nd2   | Defrost 2 activations      | If configured    | 1        | 10        |
| tdo   | Door opening time          | If configured    | 1 minute | 1 hour    |
| ndo   | Door opening count         | If configured    | 1        | 10        |
| nP0   | Power ON counter           | Always           | 1        | 1         |
| rSt   | Reset all the counters     |                  |          |           |

#### Legend:

- **RS** = Multiplier factor to be applied to the counter when the value is read via the serial port.
- **RD** = Multiplier factor to be applied to the counter when the value is read on display

### Operating mode

To reset one or more counters, proceed as follows:

1. Access the Installer parameters entering the **PA2** password if enabled
2. Scroll through the folders with **△** and **▽** until you find the label **FnC**
3. Press **SET** to confirm
4. Scroll through the menu options with **△** and **▽** until you find the label **Cnt** and press **SET**
5. Scroll through the parameters with **△** and **▽** until you find the counter to reset
6. Press and hold **SET** for at least 5 seconds to confirm.

**Note:** Parameter **rSt** allows you to reset all the counters simultaneously.

# Regulators

## Contents

This section includes the following topics:

|                                                                       |     |
|-----------------------------------------------------------------------|-----|
| Heat/Cool .....                                                       | 86  |
| Compressor .....                                                      | 87  |
| Managing the compressor with the probe in error .....                 | 90  |
| Variable-speed compressor .....                                       | 91  |
| Activating the Auto-tuning function for the PID regulator (VSC) ..... | 93  |
| Dual compressor .....                                                 | 94  |
| Deep cooling cycle (DCC) .....                                        | 95  |
| Evaporator Fans .....                                                 | 96  |
| Condenser Fans .....                                                  | 99  |
| Pressure switch .....                                                 | 102 |
| Auxiliary Output .....                                                | 104 |
| Light output .....                                                    | 105 |
| Deadband .....                                                        | 106 |
| Night/Day .....                                                       | 107 |
| Energy Saving - Reduced Set .....                                     | 109 |

## Heat/Cool

### Description

The Heat/Cool regulator can work with an absolute or relative differential, both in Heat and Cool modes, and is driven by Pb1 probe.

### Operating conditions

Before activating the compressor, the regulator makes sure of the following conditions:

- The device is on or in stand-by (in the latter case, only applies if **H08** = 0)
- Regulation probe Pb1 is not in error (alarm **E1** is not present)
- From power-on the time set using parameter **odo** has elapsed (only if **odo** ≠ 0).
- There are no active defrosts (depending on the defrost type)

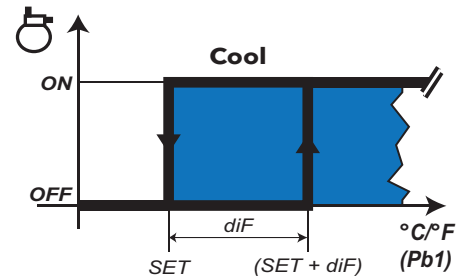
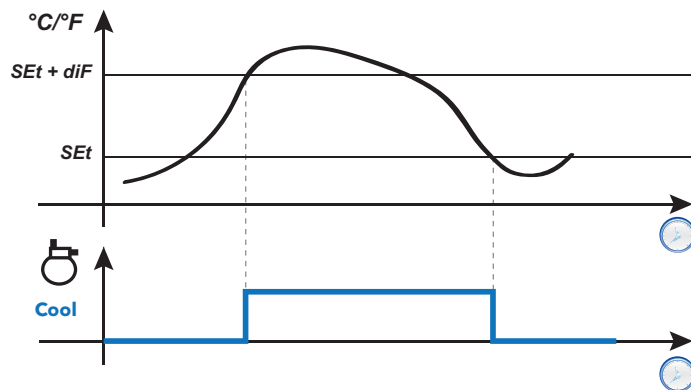
If an offset is activated on the setpoint (**oSP**) and on the differential (**odF**), then:

- **SEt** will be replaced by the value (**SEt + oSP**)
- **diF** will be replaced by the value (**diF + odF**)

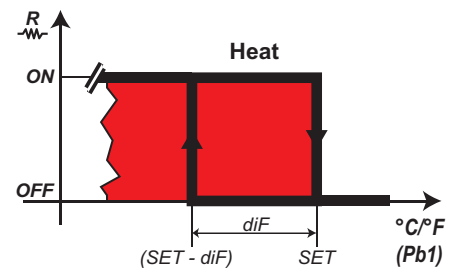
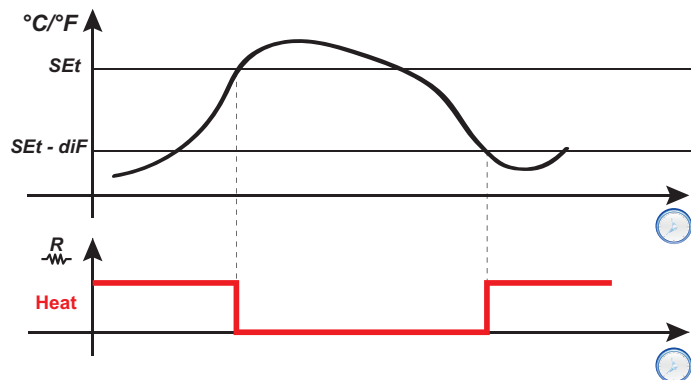
**Note:** **oSP** can assume both positive and negative values.

### Regulation diagrams

#### Cooling Regulation (HC = C)



#### Heating Regulation (HC = H)



**Legend:** Heat = Heating; Cool = Cooling.

### Parameters

| Parameter | Description                                                 |
|-----------|-------------------------------------------------------------|
| SEt       | Regulation setpoint                                         |
| diF       | Regulator activation differential                           |
| HC        | Select regulation mode ( <b>H</b> = Heat / <b>C</b> = Cool) |
| oSP       | Offset on setpoint                                          |
| odF       | Offset on differential in energy saving mode                |
| odo       | Output activation delay from startup                        |

# Compressor

## Description

The compressor is controlled by a device relay and switches on/off according to the following elements:

- the status of the temperatures detected by probe Pb1
- the temperature control functions set
- the defrost/dripping functions

For compressor-device wiring diagrams, refer to the "Electrical Connections" section.

**Note:** digital output **Out1** is set as "Compressor" by default.

## Functioning conditions

The regulator is activated if the following conditions occur:

- The device is on or in stand-by (in the latter case, only applies if **H08** = 0)
- Regulation probe Pb1 is not in error (alarm **E1** is not present)
- From power-on the time set using parameter **odo** has elapsed (only if **odo** ≠ 0).
- There are no active defrosts (depending on the defrost type)

The Compressor activation request at startup can be delayed by setting parameter **odo**. During this period, the compressor remains off and, if an activation request is made, the compressor icon  flashes.

Parameter **Cod** makes it possible to avoid regulator activation near a defrost cycle. Before activating the compressor, the device checks whether the next defrost is scheduled after a time period that is less than the value of parameter **Cod**.

| If the next defrost is scheduled after a time period... | Then the compressor...                                                                                                        |
|---------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------|
| less than the value of parameter <b>Cod</b>             | it is not activated and the icon  flashes. |
| greater than the value of parameter <b>Cod</b>          | it is activated.                                                                                                              |

There is a fixed interval of one second between the request and the actuation of the linked relay.

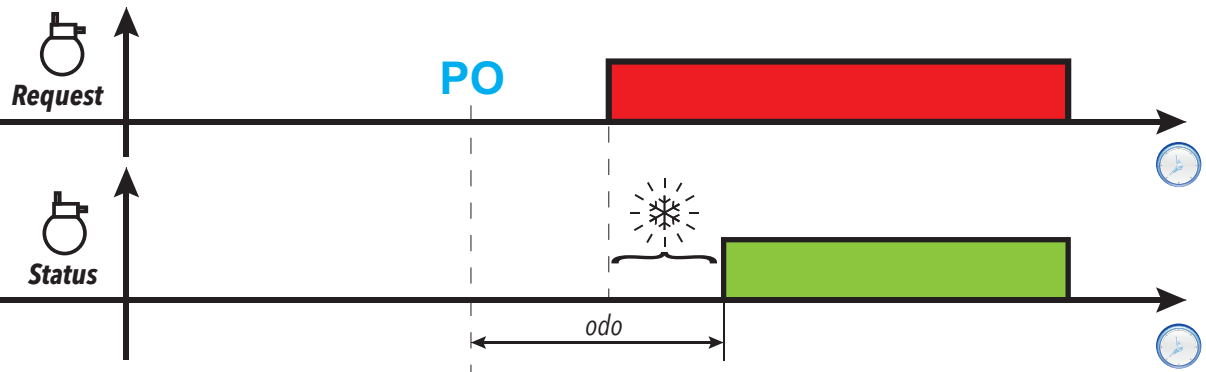
## Compressor protections

To avoid damaging the compressor, the following protections can be set up:

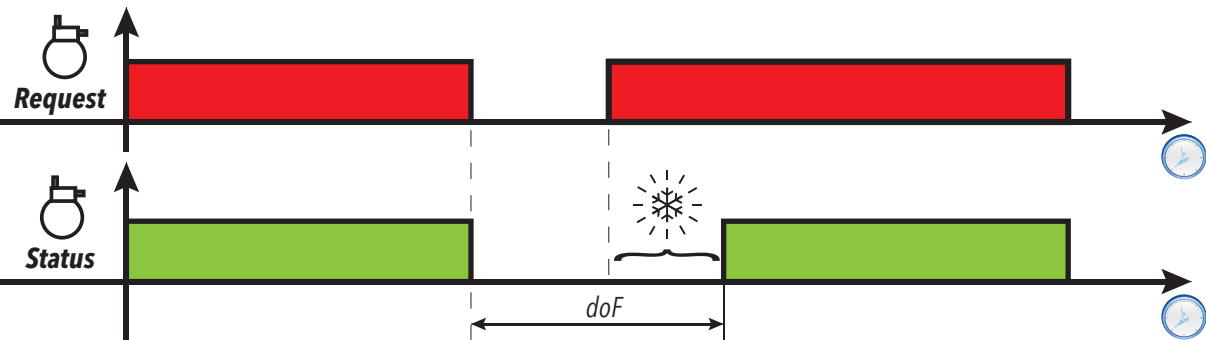
- a delay **doF** on reactivation of the compressor after the activation request ends. If a new activation request arises during the delay **doF**, the compressor icon will flash on the display.
- a delay **dbi** between one compressor startup and the next. The delay **dbi** is calculated from the previous compressor startup. If a request arises during the delay **dbi**, the compressor icon will flash on the display.
- a delay **don** for compressor startup after the request. During the delay **don**, the compressor icon will flash on the display
- a minimum delay **Cit** before the compressor switches off after the activation request ends.
- a maximum compressor running time **CAt**, even if the activation request has not ended and is normally associated with the delay **doF**. During the time period **doF** in which the compressor remains off, the compressor icon will flash on the display.

Regulation diagrams

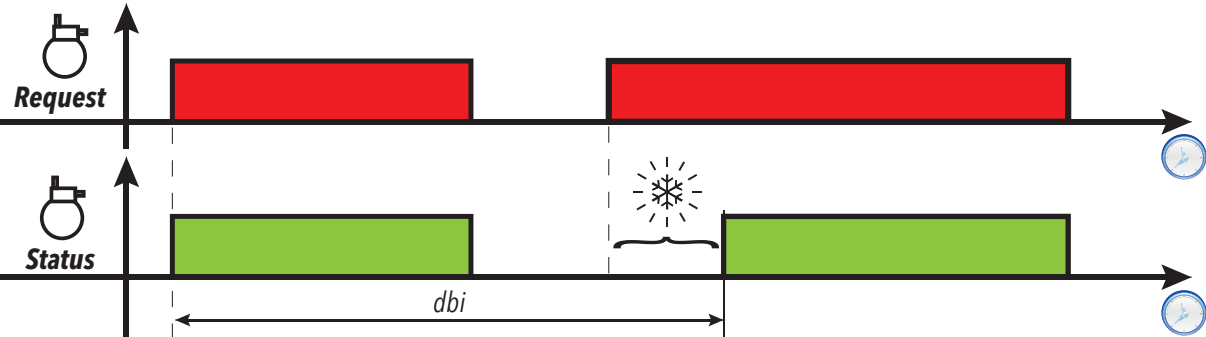
Compressor activation delay from request



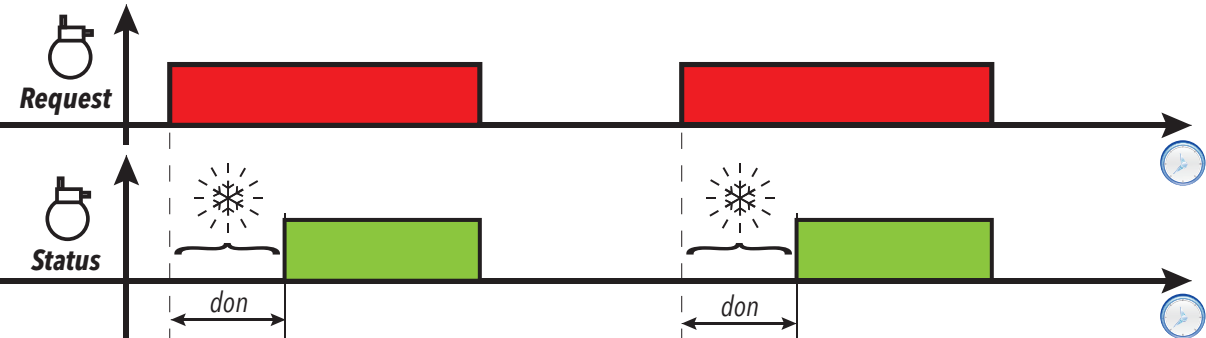
Compressor output activation delay from switch-off



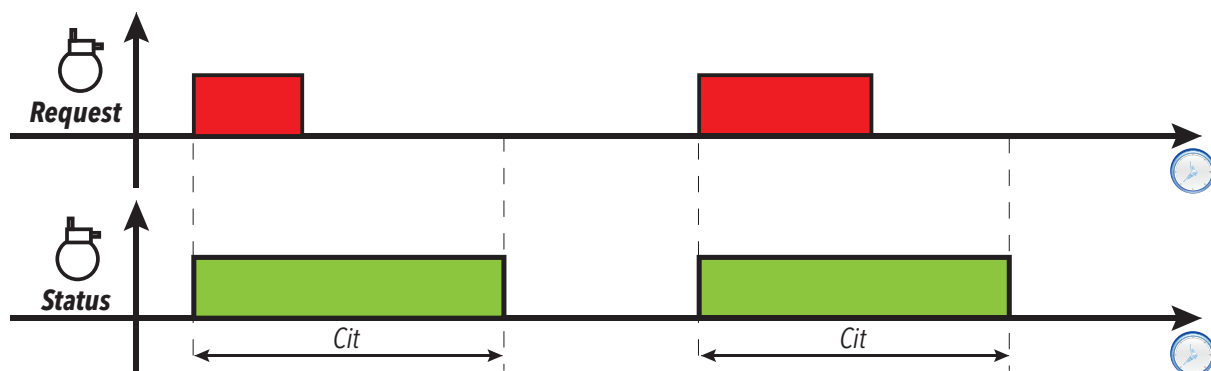
Delay between two consecutive compressor output activations



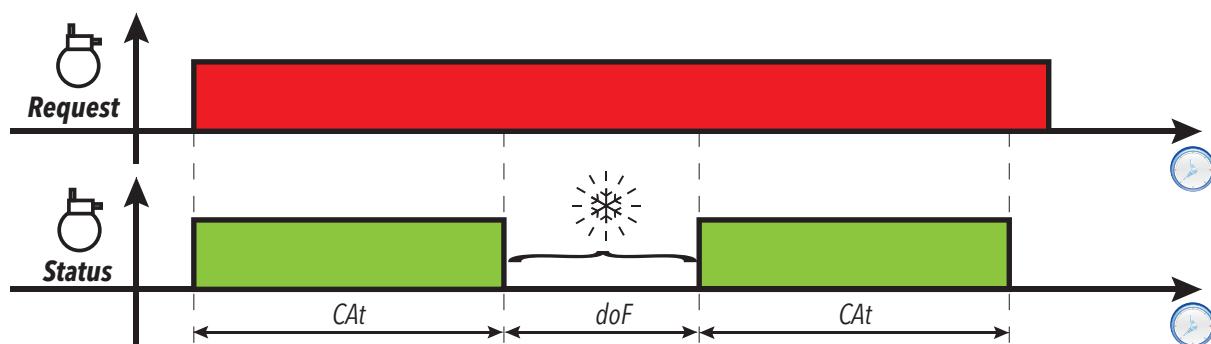
Compressor activation delay from request



## Minimum compressor output activation time



## Maximum compressor output activation time



**Legend:** PO = Device switch-on;  = Compressor icon flashing; **Request** = Compressor activation request; **Status** = Compressor status (ON/OFF).

## Parameters

| Parameter | Description                                                      |
|-----------|------------------------------------------------------------------|
| don       | Compressor relay activation delay from call                      |
| doF       | Delay between compressor relay switch-off and the next switch-on |
| dbi       | Delay between two subsequent compressor starts                   |
| Cit       | Minimum compressor activation time                               |
| CAt       | Maximum compressor activation time                               |
| odo       | Output activation delay from startup                             |
| Cod       | Time compressor remains off before a defrost                     |

## Managing the compressor with the probe in error

### Description

The compressor relay operates in Duty cycle mode (according to parameters **ont** and **oft**) if:

- the Pb1 probe is in error and the display shows **E1** (see Alarms and indications)

The first time to consider is always **ont**. If **ont** > 0 the compressor protections set using **don**, **doF**, **dbi**, **Cit** and **CA**t still apply.

**Note:** parameter **odo** inhibits activation of the relay outputs for its duration, with the exception of the alarm relay and the buzzer (if present).

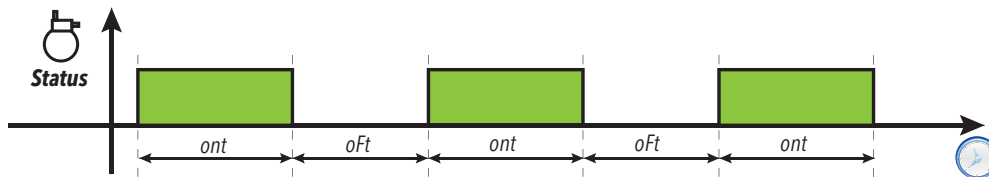
### Functioning conditions

| Ont | Oft | Compressor output                                                                                          |
|-----|-----|------------------------------------------------------------------------------------------------------------|
| 0   | 0   | off                                                                                                        |
| 0   | >0  | off                                                                                                        |
| >0  | 0   | active                                                                                                     |
| >0  | >0  | Duty cycle, regardless of the probe values (cold room probe not working) and requests from other utilities |

**Note:** if the Pb1 probe is functioning, Duty cycle mode is not active and conventional regulation is activated (see Compressor section).

**Note:** when the probe is restored (connected/replaced), normal regulation starts up again.

### Regulation diagram



### Parameters

| Parameter | Description                                                      |
|-----------|------------------------------------------------------------------|
| ont       | Compressor output ON time if probe Pb1 is not functioning        |
| oft       | Compressor output OFF time if probe Pb1 is not functioning       |
| don       | Compressor relay activation delay from call                      |
| doF       | Delay between compressor relay switch-off and the next switch-on |
| dbi       | Delay between two subsequent compressor starts                   |
| Cit       | Minimum compressor activation time                               |
| CAt       | Maximum compressor activation time                               |
| odo       | Output activation delay after startup                            |

## Variable-speed compressor

### Description

The VSC (Variable Speed Control) regulator can only be activated on models equipped with the output **OC1**, by setting parameter **H21** = 13.

This regulator can be used to manage a variable-speed compressor via the PFM (Pulse Frequency Modulation) Open Collector output. This output drives an inverter and can be used to regulate the ability of the compressor to cool a system (e.g. a refrigerated display unit, a room, etc.) while keeping the temperature close to the setpoint value **SEt**. The algorithm generates an outgoing value between 0.0...100% and converts it proportionally into **rpm**.

The maximum frequency **F\_1** and minimum frequency **F\_2** values can be set via parameter within the range 0...250 Hz; these values correspond to **rpm** compressor values (depending on the specific compressor characteristic).

The control algorithm is a PID algorithm that can be set using the auto-tuning function.

There are also special functions that can be customized for:

- "pull down" or "pull up" systems at startup or at the end of defrost
- requests relating to inverter compressors
- functions for managing overload conditions, etc.

**Note:** After the initial startup, and every time it becomes necessary, a new auto-tuning cycle can be started (see Manual auto-tuning).

**Note:** Whenever sudden load variations occur, a series of parameters speed up regulation around the setpoint during normal operating conditions ("pull-up" or "pull-down" procedures).

### Operating conditions

During startup / switch-off, the compressor is subjected to delays and protections that can be selected via parameters **don**, **doF**, **dbi**, **Cit**, **CAt** and **odo**. If the regulation probe is in error or is not configured, the set capacity is equal to **CEr** and the values of parameters **ont** and **oFt** are not taken into account.

At device startup and in general after a Stand-by/stop condition, a compressor capacity of **CSC** is set for a time period **CSd**. After the startup sequence, the compressor capacity will be set to 100% (pull-down) until the temperature **SEt** + **PdE** is reached.

At the end of a "pull-down" sequence, a capacity value of **CPd** (day mode) or **CPn** (night mode) should be set. The PID regulator begins regulating, starting from this value.

When the device is set to regulate cooling and the value read by Pb1 is greater than **SEt** + **PdS** or less than **SEt** + **PUS**, a countdown of **PUD** begins. When the time has elapsed, an optimized pull-up / pull-down procedure is started in line with the temperature value.

**Note:** If the temperature falls within the limits indicated above before the **PUD** time has elapsed, the timer is reloaded.

Pull-down/pull-up operation:

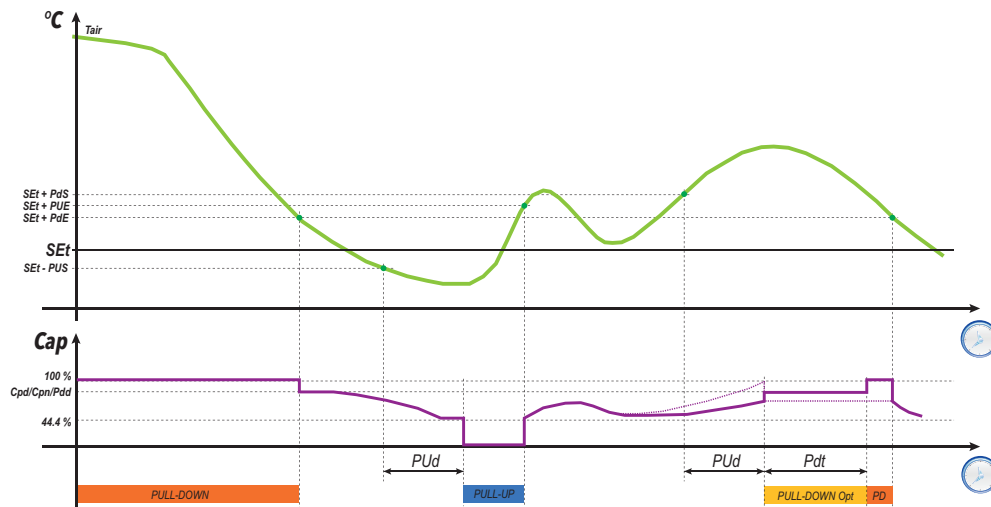
- **Pull-Down:** when an optimized pull-down is activated, the compressor capacity is forced to the value **Pdd** for a time period **Pdt**. When the time period **Pdt** has elapsed, the capacity should be forced to 100% until the temperature reaches the value (**SP1** + **PdE**).
- **Pull-Up:** when a pull-up is activated, the compressor is switched off until the temperature reaches the value **SP1** + **PUE**.

When the "pull-down"/"pull-up" cycle has ended, the device begins regulation again, setting a capacity equal to the last value set before the cycle was activated.

During normal regulation (for example, when the "pull-down"/"pull-up" cycles are not active), the compressor can be set to a fixed capacity value by setting **CAU** = 1 ("FiH") and setting the value using parameter **CdU** (%).

If **CAU** = 0 ("Aut"), **CdU** will represent the maximum capacity that the regulator can request. Also in this case, when the compressor is activated for a period of time equal to **CSd**, a compressor capacity of **CSC** will be set.

## Regulation diagram



**Legend:**  $T_{air}$  = Value read by regulation probe Pb1;  $Cap$  = Compressor capacity value; **Pull-Down Opt** = Optimized pull-down; **PD** = Pull-down cycle.

## Parameters

| Parameter  | Description                                                                                         |
|------------|-----------------------------------------------------------------------------------------------------|
| <b>don</b> | Compressor relay activation delay from call                                                         |
| <b>doF</b> | Delay between compressor relay switch-off and the next switch-on                                    |
| <b>dbi</b> | Delay between two subsequent compressor starts                                                      |
| <b>Cit</b> | Minimum compressor activation time                                                                  |
| <b>CAt</b> | Maximum compressor activation time                                                                  |
| <b>odo</b> | Output activation delay from startup                                                                |
| <b>CEr</b> | Controlled capacity value in the event of regulation probe error                                    |
| <b>PdS</b> | Differential for forced activation of a pull-down                                                   |
| <b>PUS</b> | Differential for forced activation of a pull-up                                                     |
| <b>PUd</b> | Temperature outside range timeout                                                                   |
| <b>PdE</b> | Pull-down end differential                                                                          |
| <b>PUE</b> | Pull-up end differential                                                                            |
| <b>Pdt</b> | Optimized pull-down timeout                                                                         |
| <b>Pdd</b> | Controlled capacity value, if a pull-down is activated, when the time period <b>PUd</b> has elapsed |
| <b>CPd</b> | Controlled capacity after a pull-down in day mode                                                   |
| <b>CPn</b> | Controlled capacity after a pull-down in night mode                                                 |
| <b>CPb</b> | PID regulator proportional band                                                                     |
| <b>Cti</b> | PID integral time                                                                                   |
| <b>Ctd</b> | PID derivative time                                                                                 |
| <b>CSd</b> | Duration of constant-speed compressor heating <b>CSC</b> on startup or after a stand-by             |
| <b>CSC</b> | Fixed compressor capacity for a time period <b>CSd</b> on startup or after a stand-by               |
| <b>CAU</b> | Select automatic or manual PID mode                                                                 |
| <b>CdU</b> | PID duty cycle in manual mode                                                                       |
| <b>F_1</b> | Maximum compressor operation frequency                                                              |
| <b>F_2</b> | Minimum compressor operation frequency                                                              |

## Activating the Auto-tuning function for the PID regulator (VSC)

### Description

Auto-tuning can be activated manually in 2 ways using the functions in the folder **FnC** for the table "Installer parameters":

- **nPL** = calculates the preliminary values to assign to the parameters in order to make the system run.
- **tun** = calculates the value of the parameters precisely.

### "nPL" procedure

When this procedure is activated, the preliminary values for managing the variable-speed compressor parameters. Typically this procedure is activated when the device remains off for a long period of time and the regulator probe therefore has a value that is very different from the Setpoint.

**Note:** In most cases, this procedure is enough to achieve good regulator configuration.

The device performs ON-OFF cycles, which it uses to determine the value of the parameters required for regulation.

### "tun" procedure

When this procedure is activated, the optimized values for the PID regulator parameters are calculated.

Typically this function is used following execution of the function **nPL**.

At the end of the procedure, the values of the PID regulator parameters are updated.

## Dual compressor

### Description

If a digital output is set as compressor 2, the device will manage 2 power steps. Activation of the second step is conditioned at the activation of the first step.

The first step follows all the rules of the main compressor regulator (delays, safety settings, behavior in the event of a probe error / missing probe).

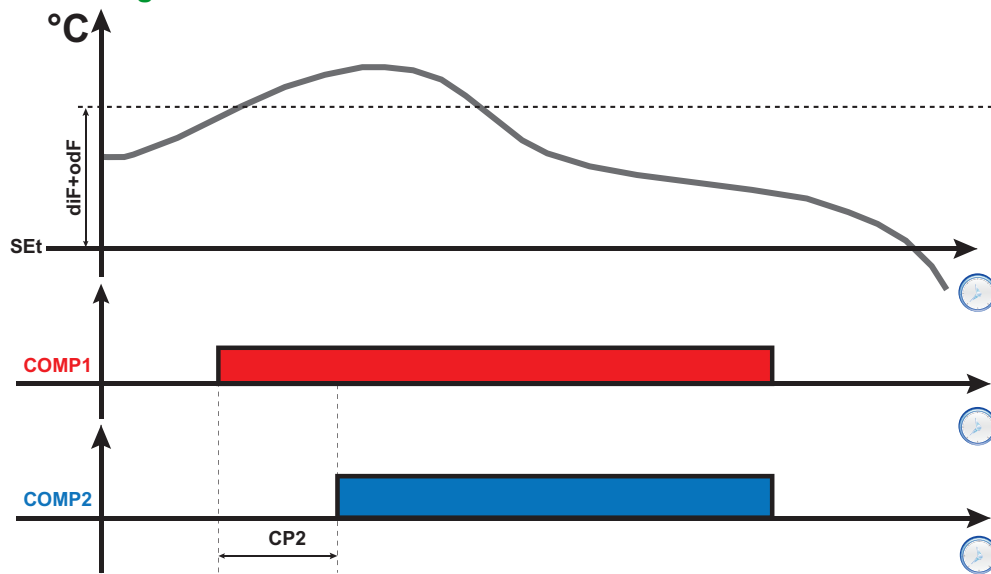
### Operating conditions

If activated, compressor 2 will use the same setpoint and differential as compressor 1.

Offsets, differentials, etc. relating to the first compressor also apply to the second compressor.

Compressor 2 will be activated once the delay **CP2** has elapsed.

### Regulation diagram



**Legend:** **COMP1** = Compressor 1 activation; **COMP2** = Compressor 2 activation.

## Deep cooling cycle (DCC)

### Description

During the deep cooling cycle, the compressor runs with a setpoint equal to **dCS** and differential equal to **diF** for a maximum time period **tdc**.

### Activation

A deep cooling cycle can be activated in one of the following ways:

- press and hold a key (configured with **H3x = 7**)
- digital input (**DI**) (only if **H11 = ±8**)
- using a Supervisor, via Modbus command (serial)
- via APP (if the BTLE Dongle is fitted. See Accessories section)

### Deep cooling cycle and defrost

When a deep cooling cycle is activated, defrosts are disabled.

At the end of the deep cooling cycle, after a delay of **dcc**, a defrost is forced and the count for interval **dit** begins again.

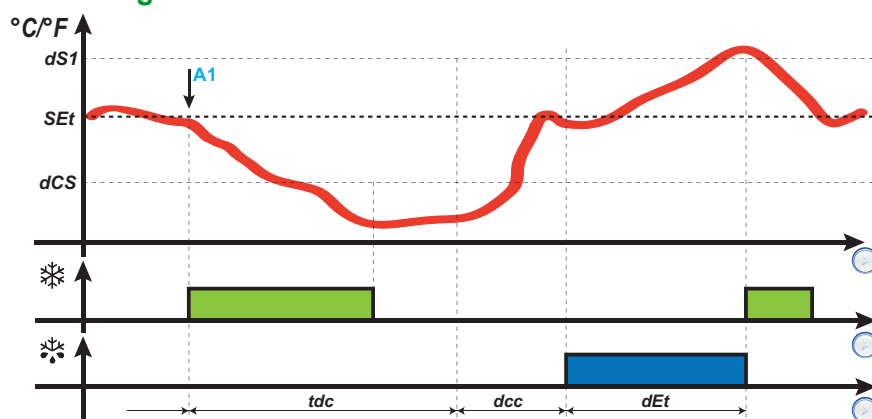
### Functioning conditions

The deep cooling cycle ends automatically and standard regulation is resumed if:

- There is a probe error (the display shows **E1**)
- A blackout occurs and the device switches off and on again.

If parameters **dCS**, **tdc** and **dcc** are changed during the deep cooling cycle, cycle operation should be recalculated for the new set values.

### Regulation diagram



Legend: A1 = DCC activation instant.

### Alarm operation during the deep cooling cycle

During the deep cooling cycle, the temperature alarms are disabled. Normal management is re-established at the end of the cycle.

### Parameters

| Parameter | Description                                                      |
|-----------|------------------------------------------------------------------|
| dS1       | End of defrost temperature (measured by probe Pb2).              |
| dit       | Interval between two consecutive defrosts                        |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost. |
| dCS       | Deep cooling cycle setpoint                                      |
| diF       | Setpoint differential                                            |
| tdc       | Deep cooling cycle duration                                      |
| dcc       | Defrost activation delay after a "Deep Cooling Cycle"            |
| H11       | Digital input 1/polarity configuration                           |
| H31       | △ key configuration.                                             |
| H32       | ▽ key configuration.                                             |
| H33       | ⏻ key configuration.                                             |
| H34       | ⚡ key configuration.                                             |
| H35       | ☆ key configuration.                                             |

## Evaporator Fans

### Operating conditions

The evaporator fan regulator is activated if the following conditions occur:

- From power-on the time set using parameter **odo** has elapsed (only if **odo** ≠ 0).
- The temperature read by the evaporator probe (Pb2) is lower than the value of parameter **FSt**.
- The fans regulator is not deactivated from parameter **dFd** during the defrost (**dFd** = y).
- Dripping is not active (**dt**).
- Fan delay after defrost is not active (**Fdt**).

**Note:** this regulator is only present in models that manage probe Pb2.

### Regulator activation

The request for fan activation or deactivation can take place in the following ways:

- from the compressor regulator, to assist in cooling (temperature control mode)
- from the defrost regulator, to control and/or limit the circulation of warm air.

### Fan operating modes

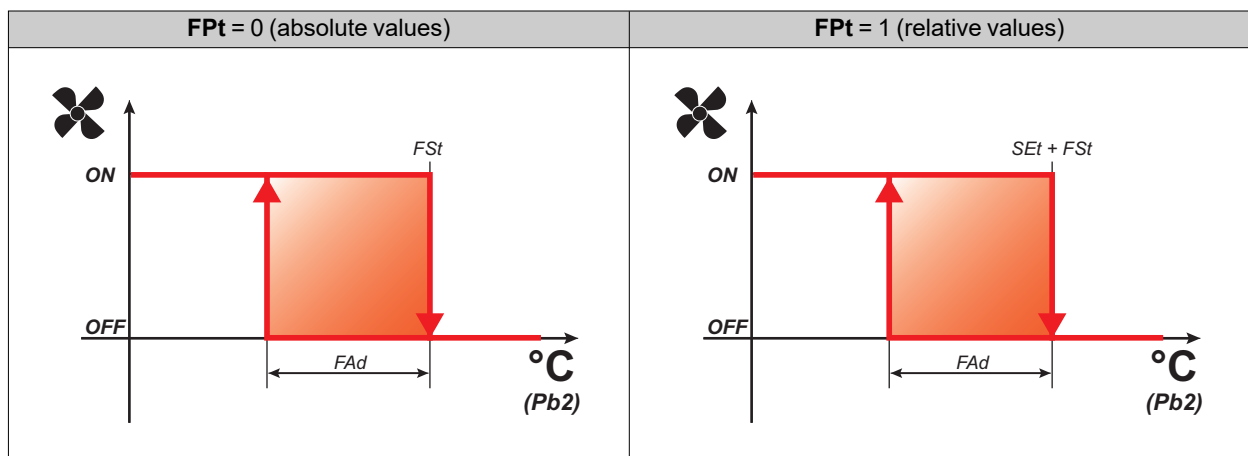
| Probe Pb2   | H42 | FCo | Day           |                | Night         |                  |
|-------------|-----|-----|---------------|----------------|---------------|------------------|
|             |     |     | Compressor ON | Compressor OFF | Compressor ON | Compressor OFF   |
| Present     | y   | 0   | Thermostated  | Off            | Thermostated  | Off              |
|             |     | 1   | Thermostated  | Thermostated   | Thermostated  | Thermostated     |
|             |     | 2   | Thermostated  | Day duty cycle | Thermostated  | Night duty cycle |
|             |     | 3   | Thermostated  | Day duty cycle | Thermostated  | Night duty cycle |
| In error E2 | y   | 0   | On            | Off            | On            | Off              |
|             |     | 1   | On            | On             | On            | On               |
|             |     | 2   | On            | Day duty cycle | On            | Night duty cycle |
|             |     | 3   | On            | Day duty cycle | On            | Night duty cycle |
| Absent      | n   | 0   | On            | Off            | On            | Off              |
|             |     | 1   | On            | On             | On            | On               |
|             |     | 2   | On            | Day duty cycle | On            | Night duty cycle |
|             |     | 3   | On            | Day duty cycle | On            | Night duty cycle |

### Fan operation in temperature control mode

During cooling, fan temperature control is carried out based on values **FSt** (fan disabling temperature) and **FAd** (fan differential). Parameter **FPt** can be used to select whether the set temperature values are absolute or relative to the setpoint.

**Note:** around the fan start temperature -50°C (-58°F), the differential will always be specified by **FAd** but with the sign inverted.

Regulation diagrams based on whether the values are absolute or relative are shown below:



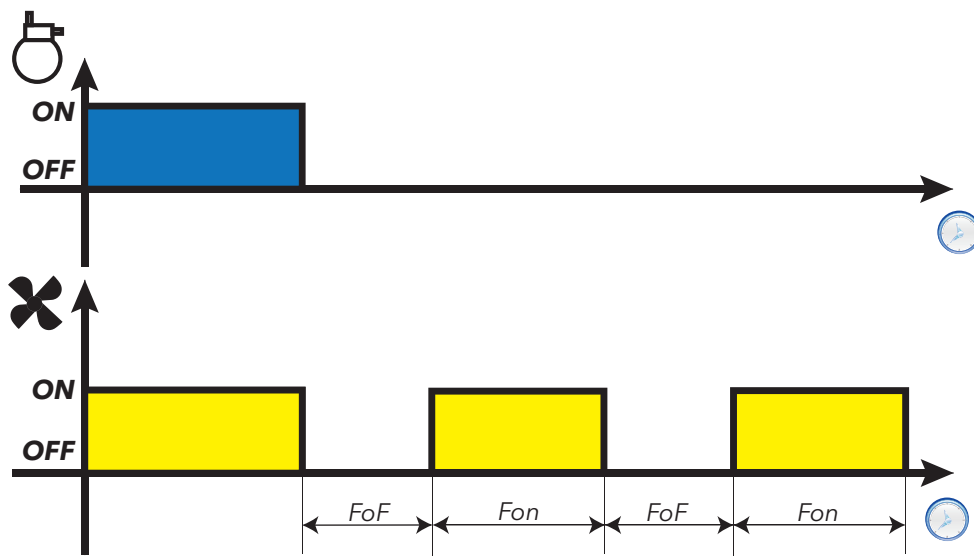
## Fan operation in duty cycle

The fans run in duty cycle mode when the compressor is off and this mode is specified by parameter **FCo**.

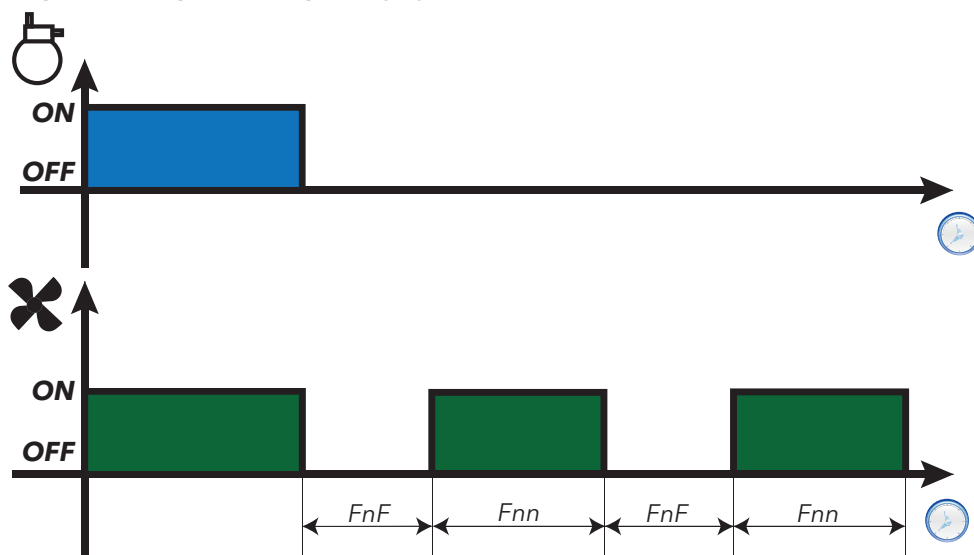
Depending on whether the device is in day or night mode, fan operation is based on parameters **Fon** and **FoF** (day) or **Fnn** and **FnF** (night):

| <b>Fon / Fnn</b> | <b>FoF / FnF</b> | <b>Fans</b> |
|------------------|------------------|-------------|
| 0                | 0                | Off         |
| 0                | ≠0               | Off         |
| ≠0               | 0                | On          |
| ≠0               | ≠0               | Duty cycle  |

Regulation diagram for Day duty cycle with compressor off



Regulation diagram for Night duty cycle with compressor off



## Fan operation in defrost mode

Operation depends on parameter **dFd**:

| <b>dFd</b> | <b>Fans</b>                       |
|------------|-----------------------------------|
| <b>y</b>   | Off                               |
| <b>n</b>   | Temperature control or duty cycle |

**Note:** to exclude the fans during a defrost, you must set **dFd** = y. Otherwise the compressor is stopped during defrost but the fans run normally.

## Fan operation in dripping mode

During dripping the fans remain stopped for the time set using parameter **dt**.

**Note:** if **Fdt** is greater than **dt** the fans remain off for the time set in **Fdt**.

## Parameters

| <b>Parameter</b> | <b>Description</b>                                                                                         |
|------------------|------------------------------------------------------------------------------------------------------------|
| odo              | Output activation delay from startup                                                                       |
| FpT              | Sets whether parameter <b>FSt</b> is expressed as an absolute value or as a value relative to the Setpoint |
| FSt              | Evaporator fan disabling temperature                                                                       |
| Fdt              | Evaporator fan activation delay time after a defrosting cycle                                              |
| dFd              | Evaporator fan exclusion during a defrost cycle                                                            |
| FCo              | Evaporator fan operating mode                                                                              |
| FAd              | Evaporator fan trigger differential                                                                        |
| dt               | Dripping time                                                                                              |
| Fon              | Evaporator fan ON time in day duty cycle mode                                                              |
| FoF              | Evaporator fan OFF time in day duty cycle mode                                                             |
| Fnn              | Evaporator fan ON time in night duty cycle mode                                                            |
| FnF              | Evaporator fan OFF time in night duty cycle mode                                                           |
| ESF              | Night mode activation                                                                                      |

## Condenser Fans

### Operating conditions

If the following conditions have arisen:

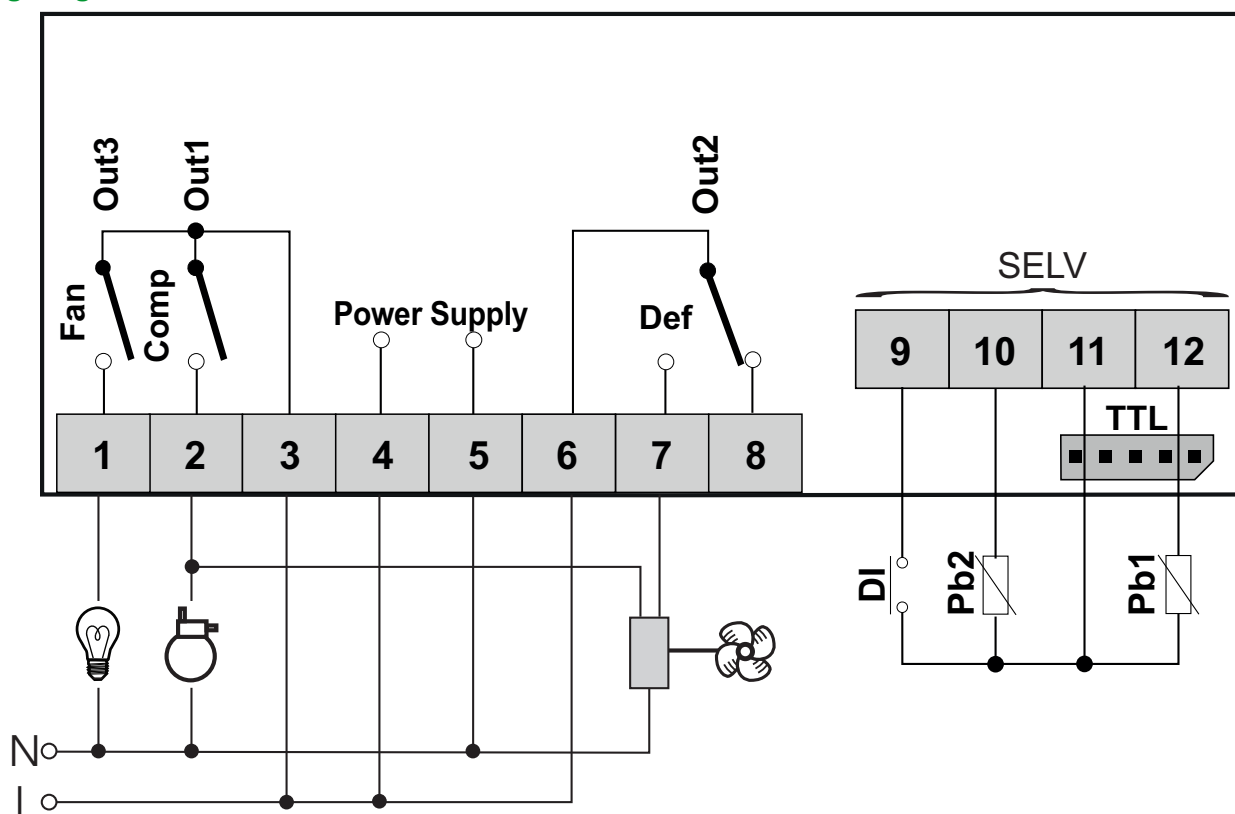
- A digital output is set as "Condenser fan inversion" (**H2x** = 11)
- Defrost is configured as "Defrost due to stoppage" (**dt**y = 0)

the condenser fan regulator is activated at the moment the compressor stops (daytime operation only).

**Note:** this regulator is only present in models that manage probe Pb2.

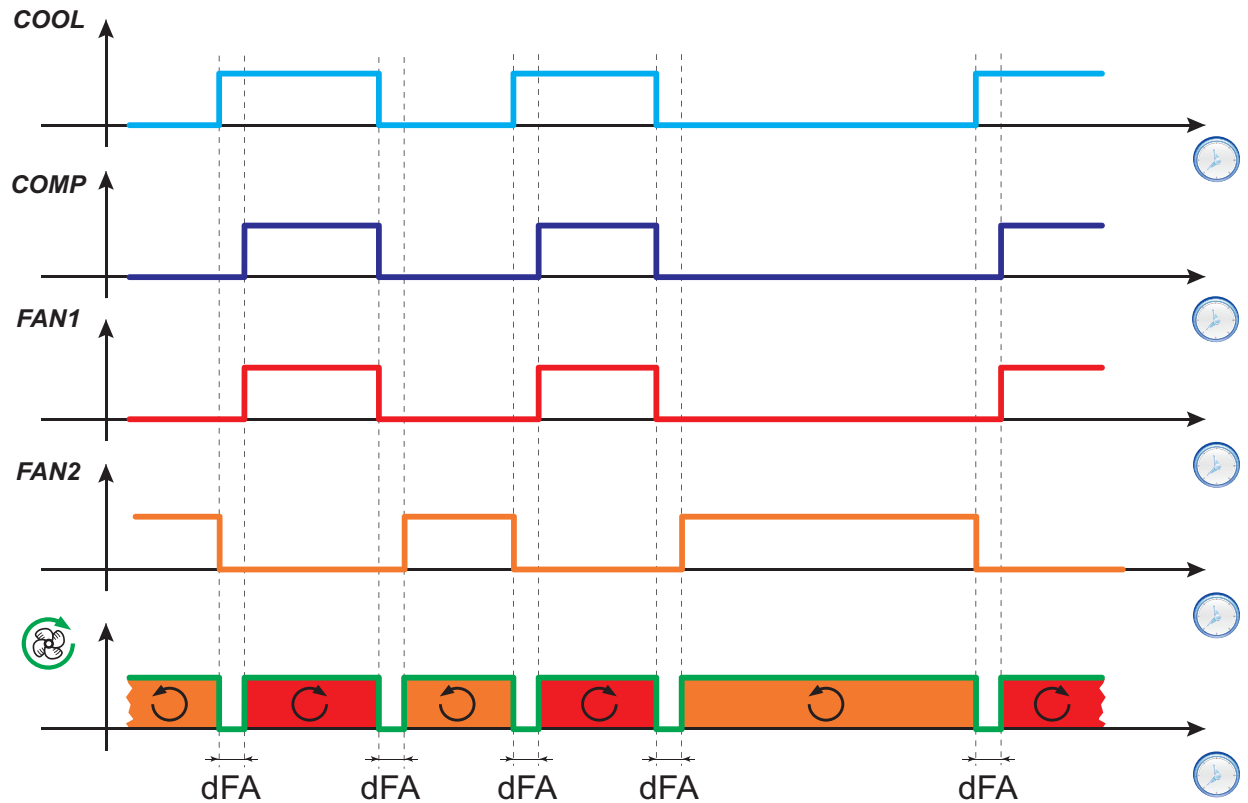
**Note:** If the compressor and condenser fan activation delay after the call (**dFA**) and the compressor relay activation delay time after the call (**dOn**) are both configured, the larger of the two parameters will be taken into account.

### Wiring diagram

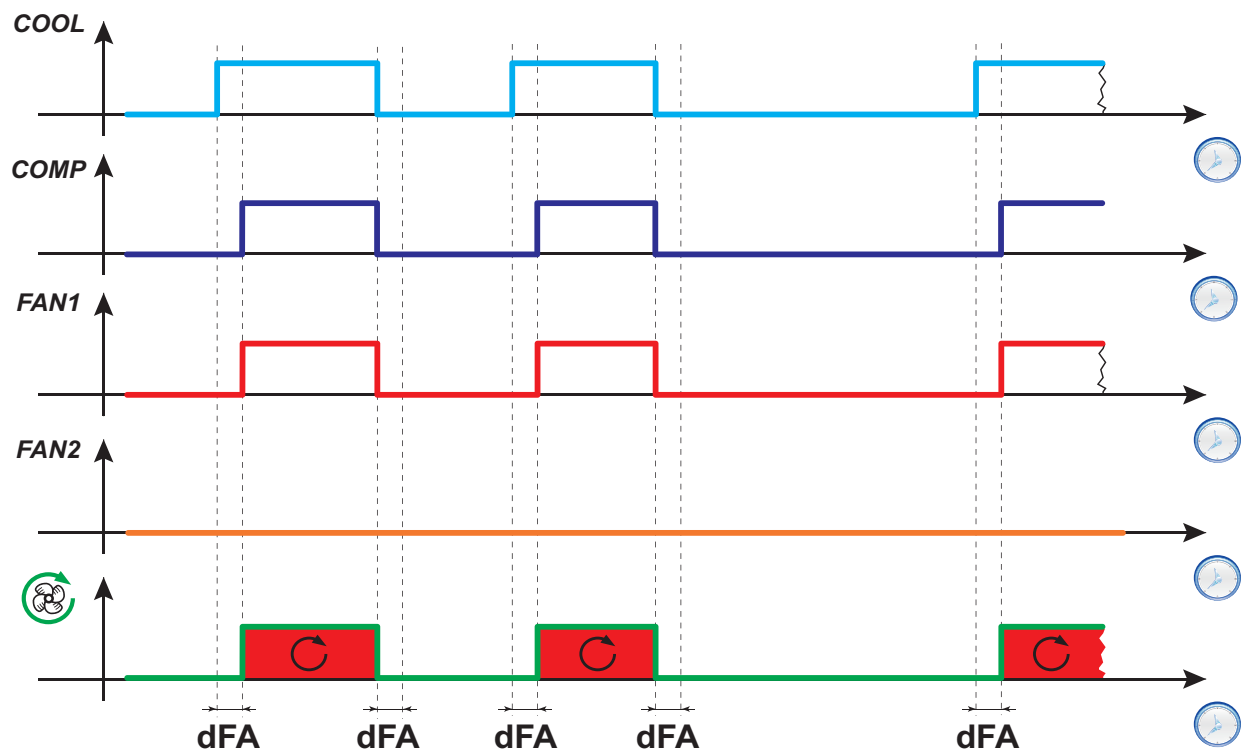


## Regulation diagrams

Regulation diagram in Day mode



Regulation diagram in Night mode



**Legend:** **COOL** = Cool request; **COMP** = Compressor status; **FAN1** = Condenser fan relay; **FAN2** = Condenser fan inversion relay;  = Towards rotation of condenser fans.

## Parameters

| Parameter | Description                                                                                                                       |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------|
| dFA       | Condenser fan and compressor activation delay from the call                                                                       |
| dtY       | Type of defrost. <b>0</b> = Electric defrost or due to stoppage; <b>1</b> = Cycle inversion defrost; <b>2</b> = Free mode defrost |
| H21       | Digital output 1 configuration                                                                                                    |
| H22       | Digital output 2 configuration                                                                                                    |
| H23       | Digital output 3 configuration                                                                                                    |
| H24       | Digital output 4 configuration                                                                                                    |

# Pressure switch

## Introduction

A pressure switch can be connected to a digital input on the device.

## Setting a digital input as a pressure switch

To set a digital input as a pressure switch:

- Set the digital input as a pressure switch (**H11** =  $\pm 7$ )
- Set the number of errors permitted per pressure switch, parameter **PEn**

**Note:** if **PEn** = 0, the function is disabled.

## Pressure switch activation effects

When the pressure switch is activated, the device carries out the following operations:

- It inhibits the compressor
- It adds the **nPA** alarm to the alarms folder **AL** with an indication of the number of pressure switch activations

The compressor can only be reactivated if the time set using parameter **Pet** has elapsed since the pressure switch was deactivated.

The alarm status is not stored permanently and is reset automatically when the pressure returns to a normal level.

## Effects of exceeding the maximum number of pressure switch activations

If the number of pressure switch activations exceeds the maximum number set using parameter **PEn** in a time period shorter than the value of parameter **PEI**, the device performs the following operations:

- It inhibits the compressor, fans and defrost.
- The alarm icon  $\Delta$  appears on the display.
- The label **PAL** is shown on the display.
- It adds the **PA** alarm to the alarms folder **AL** and removes the label **nPA** from the folder **AL**
- It activates the alarm relay, if configured.

To reset this alarm status, execute the **rAP** function in folder **FPr** or switch the device off and on again.

## Operating mode

The interval **PEI** is divided into 32 sub-intervals. If one or more activations are recorded within a sub-interval, the meter is increased by one unit.

The reference instant to calculate the **PEI** interval is the last recorded activation. The number of activations recorded in the 32 sub-intervals preceding the most recent activation are counted.

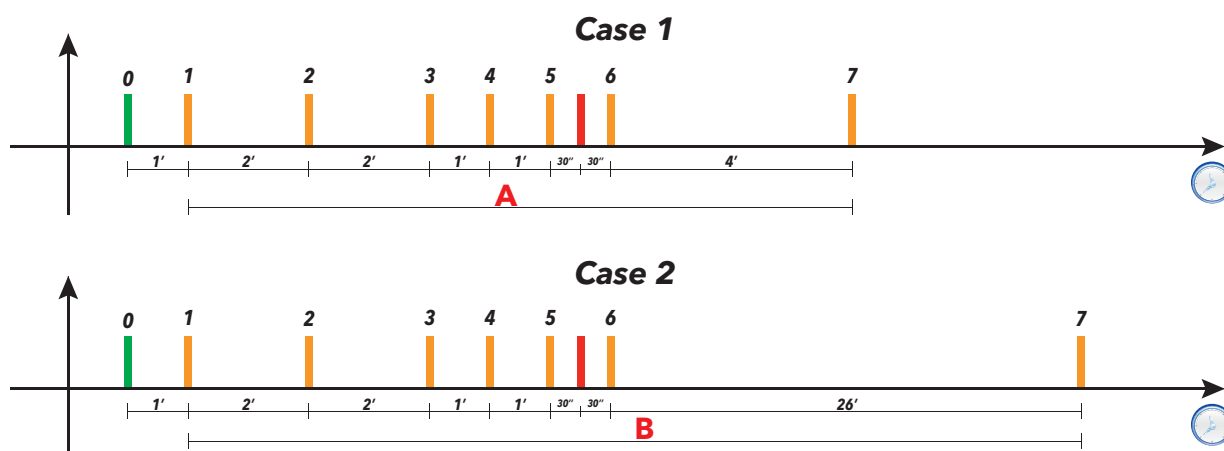
**Note:** in the pressure switch status activation period, the defrost interval count proceeds normally.

## Regulation diagrams

### Examples

PEI = 32 minutes (sub-interval =  $32/32 = 1$  minute)

PEn = 7



### Legend:

- **Case 1** = The time **A** between the 1st and the 7th activation is 11 minutes < PEI (32 minutes)
- **Case 2** = The time **B** between the 1st and the 7th activation is 33 minutes > PEI (32 minutes).

In case 1 the pressure switch alarm is triggered because in the 32 minutes preceding the most recent activation 7 pressure switch activations were counted (including the last one, to which the expiration of the 32-minute window refers).

In case 2 the alarm is not triggered because in the 32 minutes preceding the most recent activation at least 7 pressure switch activations were not counted (including the last one).

## Parameters

| Parameter | Description                                                               |
|-----------|---------------------------------------------------------------------------|
| PEn       | Number of permitted activations per minimum/maximum pressure switch input |
| PEI       | Minimum/maximum pressure switch activation count interval (in minutes)    |
| PEt       | Compressor activation delay after pressure switch deactivation            |

## Auxiliary Output

### Description

To set a relay as an auxiliary output **AUX**, set the corresponding parameter **H2x= 5**.

**Note:** The outputs may not be present, depending on the model.

During stand-by the regulator operates in accordance with parameter **H08**.

### Activation

The regulator can be activated in one of the following ways:

- key (only **H3x = 2**)
- digital input (only if **H11 = ±3**)
- using a Supervisor, via Modbus command (serial)
- via APP (if the BTLE Dongle is fitted. See Accessories section)
- RTC activation (models with RTC present only)

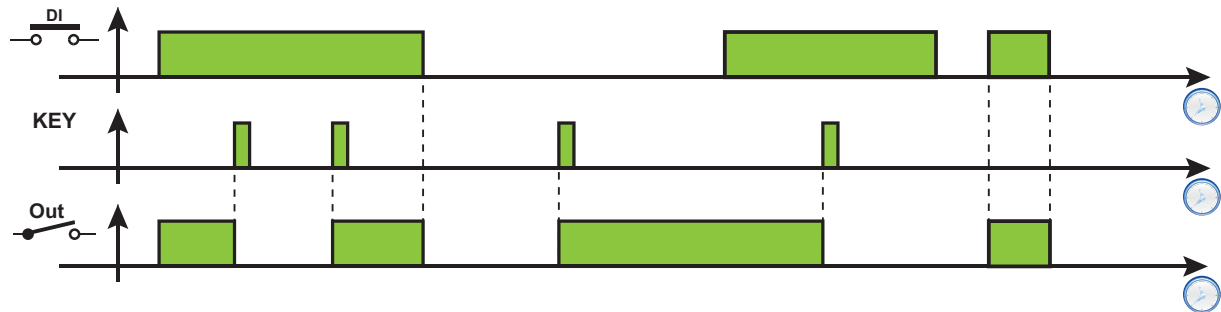
### Controlling the auxiliary output via key

To control the output (relay opening/closing) via key, set **H3x = 2**.

**Note:** depending on the model, some keys may not be present.

**Note:** the relay status is restored after a blackout.

### Regulation diagram



**Legend:** **DI** = Digital input; **KEY** = Key; **Out** = Digital output

### Parameters

| Parameter | Description                                                                              |
|-----------|------------------------------------------------------------------------------------------|
| H06       | Set whether the key or AUX/light digital input are active when the device is in stand-by |
| H08       | Operating mode in stand-by                                                               |
| H11       | Digital input 1/Polarity configuration                                                   |
| H21       | Digital output 1 configuration                                                           |
| H22       | Digital output 2 configuration                                                           |
| H23       | Digital output 3 configuration                                                           |
| H24       | Digital output 4 configuration                                                           |
| H31       | △ key configuration.                                                                     |
| H32       | ▽ key configuration.                                                                     |
| H33       | ⏻ key configuration.                                                                     |
| H34       | ⚡ key configuration.                                                                     |
| H35       | ☆ key configuration.                                                                     |

## Light output

### Description

To set a relay as an auxiliary output **AUX**, set the corresponding parameter **H2x= 7**.

**Note:** The outputs may not be present, depending on the model.

During stand-by the regulator operates in accordance with parameter **H08**.

### Activation

The regulator can be activated in one of the following ways:

- key (only if **H3x = 8**)
- digital input (only if **H11 = ±3**)
- using a Supervisor, via Modbus command (serial)
- via APP (if the BTLE Dongle is fitted. See Accessories section)
- RTC activation (models with RTC present only)

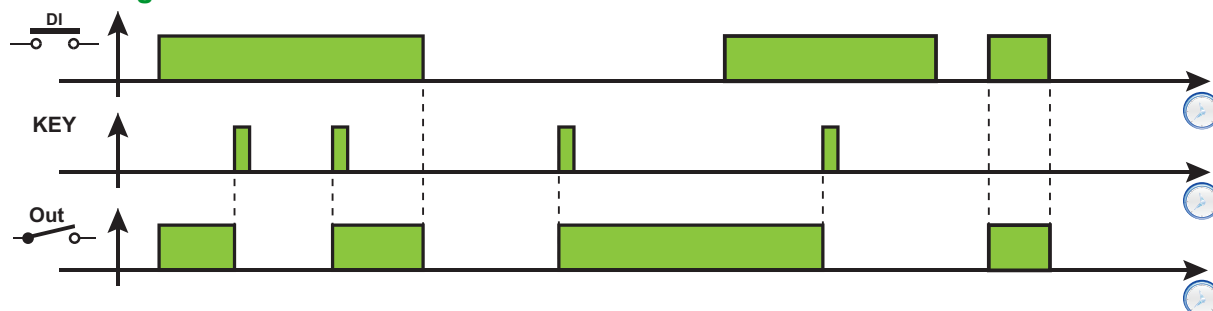
### Controlling the light output via key

To control the output (relay opening/closing) via key, set **H3x = 8**.

**Note:** depending on the model, some keys may not be present.

**Note:** the relay status is restored after a blackout.

### Regulation diagram



**Legend:** **DI** = Digital input; **KEY** = Key; **Out** = Digital output

### Parameters

| Parameter | Description                                                                              |
|-----------|------------------------------------------------------------------------------------------|
| H06       | Set whether the key or AUX/Light digital input are active when the device is in stand-by |
| H08       | Stand-by operating mode                                                                  |
| H11       | Digital input 1/Polarity configuration                                                   |
| H21       | Digital output 1 configuration                                                           |
| H22       | Digital output 2 configuration                                                           |
| H23       | Digital output 3 configuration                                                           |
| H24       | Digital output 4 configuration                                                           |
| H31       | △ key configuration.                                                                     |
| H32       | ▽ key configuration.                                                                     |
| H33       | ⏻ key configuration.                                                                     |
| H34       | ⚡ key configuration.                                                                     |
| H35       | ☆ key configuration.                                                                     |

# Deadband

## Description

The Deadband function can be used to set a temperature band with two differentials pertaining to the setpoint, executing temperature regulation within a reduced range.

## Activation

The Deadband zone can only be enabled if:

- at least one digital output is set to 12 (**H2x** = 12) and a heater is connected to that output
- parameter **HC** is set to Cool (**HC** = **C**)

## Operation

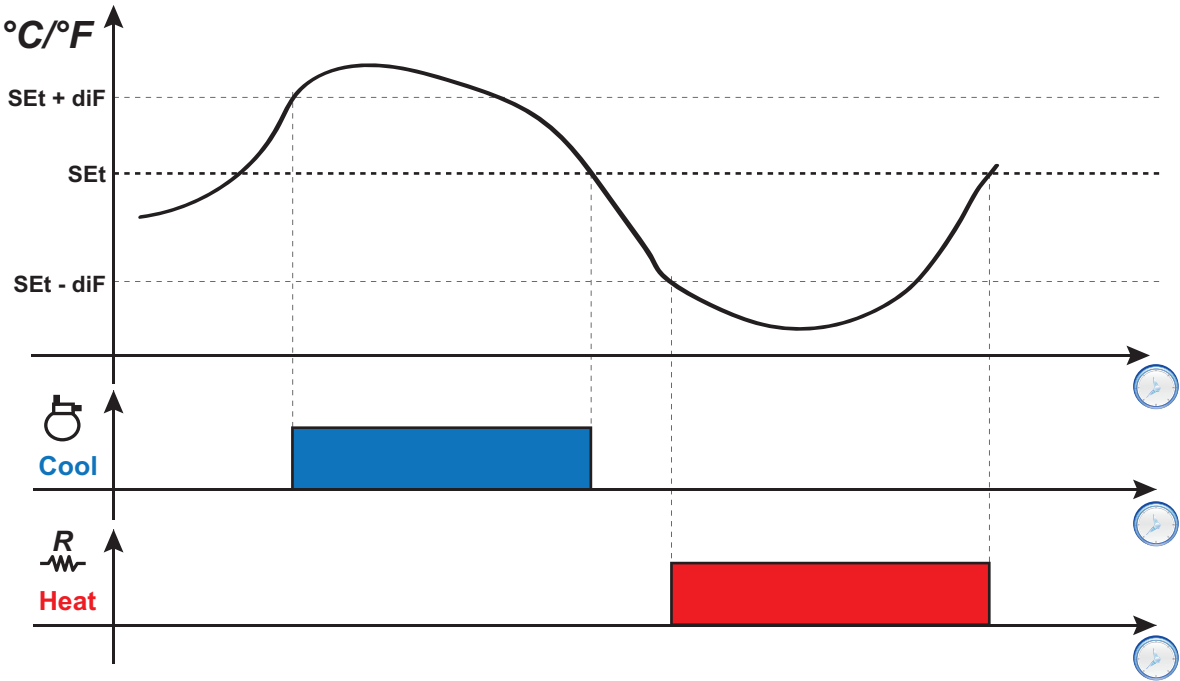
This function should be used when you want the controlled temperature to remain around the value of the setpoint **SEt**. To do so:

- the heating output is activated when the temperature measured by Pb1 drops below the threshold (**SEt-diF**)
- the cooling output is activated when the temperature measured by Pb1 exceeds the value (**SEt+diF**).

**Notes:**

- If a pressure alarm (which requires a manual reset) is activated, the device disables the outputs.
- If a defrost is active, the device disables the output set to Deadband (**H2x** = 12).

## Regulation diagram



**Legend:** Heat = Heating; Cool = Cooling.

## Parameters

| Parameter | Description                    |
|-----------|--------------------------------|
| HC        | Heat/cool operation            |
| H21       | Digital output 1 configuration |
| H22       | Digital output 2 configuration |
| H23       | Digital output 3 configuration |
| H24       | Digital output 4 configuration |

## Night/Day

### Description

The Night&Day regulator (Energy Saving) can be used to program 2 events.

### Functioning conditions

An occurrence can be linked to each of the two events by setting parameters **E10** (Event 1) and **E20** (Event 2):

- **0** = disabled
- **1** = event only active on Mondays
- **2** = event only active on Tuesdays
- **3** = event only active on Wednesdays
- **4** = event only active on Thursdays
- **5** = event only active on Fridays
- **6** = event only active on Saturdays
- **7** = event only active on Sundays
- **8** = event active from Monday to Friday
- **9** = event active from Monday to Saturday
- **10** = event only active on Saturdays and Sundays
- **11** = event active every day

The start and end time can be set for each event:

- **START: E11, E12** (Event 1) and **E21, E22** (Event 2)
- **END: E13, E14** (Event 1) and **E23, E24** (Event 2).

If the event end time follows the start time, the event will end on the same day, otherwise it will start on one day and end the next day.

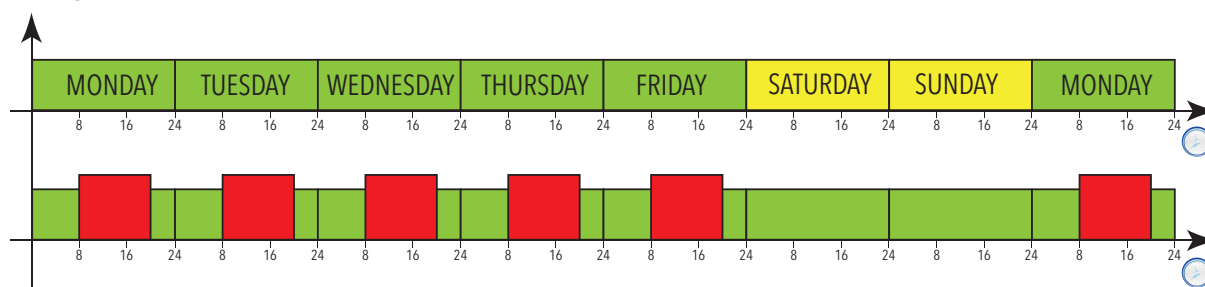
You can set the type of each of the two events using parameters **E15** (Event 1) and **E25** (Event 2):

- **0** = Energy saving
- **1** = AUX deactivated
- **2** = AUX activated
- **3** = Stand-by
- **4** = Light on
- **5** = Light off.

### Regulation diagrams

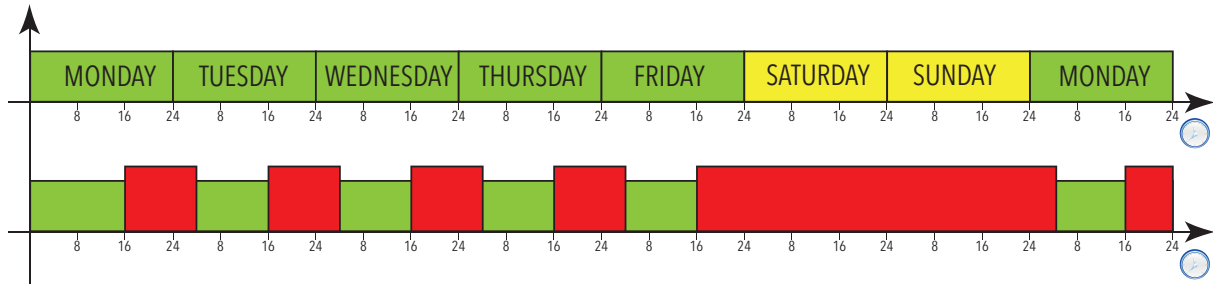
**Example 1: The event starts and ends on the same day ( $E11/E12 < E13/E14$ )**

Settings: **E10** = 8; **E11** = 8; **E12** = 0; **E13** = 20; **E14** = 0 and **E15** = 4.



**Example 2: The event starts on one day and ends the next day (E11/E12 > E13/E14)**

Settings: **E10** = 8; **E11** = 16; **E12** = 0; **E13** = 4; **E14** = 0 and **E15** = 0.



**Legenda:** **Monday** = Monday; **Tuesday** = Tuesday; **Wednesday** = Wednesday; **Thursday** = Thursday; **Friday** = Friday; **Saturday** = Saturday; **Sunday** = Sunday.

**Regulation during a blackout**

If a blackout occurs during a Night&Day (NaD), then:

- if a **NaD** event was active and the power supply is restored within the same period of activity as the event, the device will restart with the same status set by the event
- if a **NaD** event was active and the power supply is restored after the end of the same period but before the next event, the device will restart, ending the event
- if a **NaD** event was active and the power supply is restored not only after the end of the same period but after the start of one of the next events, the device will restart, setting the status associated with the new event
- external events (key press, activation of a digital input, serial command) always have priority over the status set by the **NaD** event until the next **NaD** event (activation or deactivation). These events are only acknowledged if the power supply is present
- If an external event inverts the status set by the **NaD** event during a status activation, and then there is a blackout and the power supply is restored within the same period, the device will restart with the status set by the external event. At the end of the **NaD** event, the status of the device will be restored to its initial condition
- If an external event inverts the status set by the **NaD** event during a status activation, and then there is a blackout and the power supply is restored after the end of the same period but during one of the next events, the device will restart with the status forced by the external event
- If an external event inverts the status set by a **NaD** event outside a **NaD** event status activation, and then there is a blackout and the power supply is restored with no **NaD** event active, the device will restart with the status forced by the external event
- If an external event inverts the status set by a **NaD** event outside a **NaD** event status activation, and then there is a blackout and the power supply is restored during a new **NaD** event, the device will restart with the status requested by the external **NaD** event

**Parameters**

| Parameter | Description                      |
|-----------|----------------------------------|
| E10       | Select Event 1 activation method |
| E11       | Event 1 start hour               |
| E12       | Event 1 start minute             |
| E13       | Event 1 end hour                 |
| E14       | Event 1 end minute               |
| E15       | Set Event 1 type                 |
| E20       | Select Event 2 activation method |
| E21       | Event 2 start hour               |
| E22       | Event 2 start minute             |
| E23       | Event 2 end hour                 |
| E24       | Event 2 end minute               |
| E25       | Set Event 2 type                 |

## Energy Saving - Reduced Set

### Reduced set operating conditions

The Reduced set function can be activated:

- by pressing and holding a key (configured with **H3x** = 3)
- by activating the digital input (**DI**) (only if **H11** =  $\pm 2$ )
- using a Supervisor, via Modbus command (serial)
- via APP (if the BTLE Dongle is fitted. See Accessories section)
- via the functions menu (reduced set only, if present)

When the "reduced set" is activated:

- the icon comes on 
- **SEt** will be replaced by the value (**SEt+oSP**)
- **diF** will be replaced by the value (**diF+odF**)

**Note:** for further details, see: "Heat/Cool".

### Energy Saving operating conditions

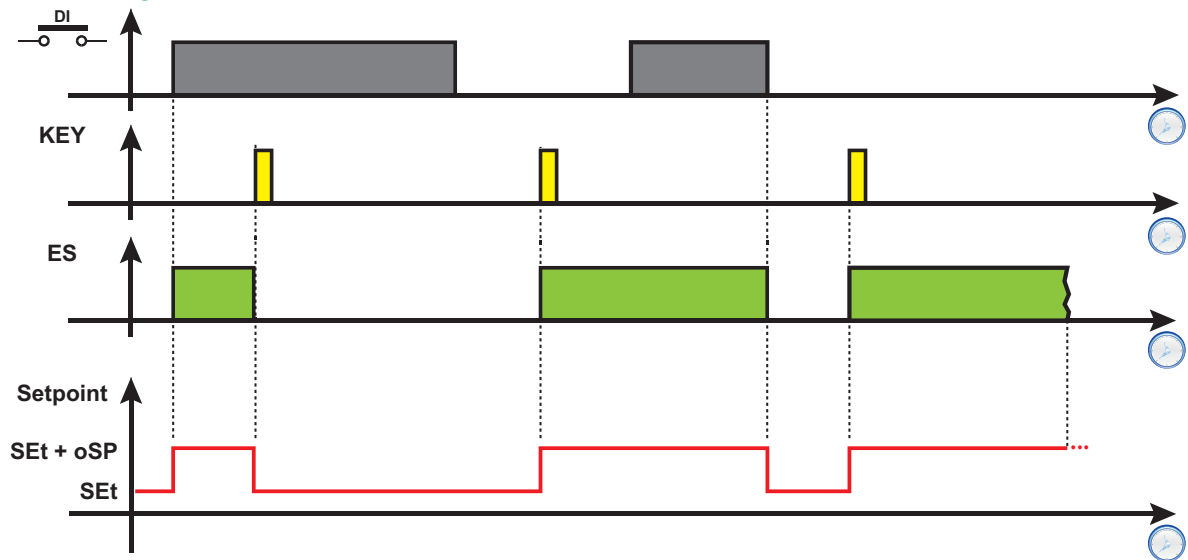
The Energy Saving function can be activated:

- by activating the digital input (**DI**) (only if **H11** =  $\pm 10$ )
- using a Supervisor, via Modbus command (serial)
- via APP (if the BTLE Dongle is fitted. See Accessories section)

When "Energy Saving" mode is activated:

- the icon comes on 
- **SEt** will be replaced by the value (**SEt+oSP**)
- **diF** will be replaced by the value (**diF+odF**)
- the outputs set as AUX and Light are deactivated

## Regulation diagrams



**Legend:** DI = Digital input; KEY = Key press; ES = Energy Saving; Setpoint = Setpoint value.

## Parameters

| Parameter | Description                                  |
|-----------|----------------------------------------------|
| SEt       | Regulation setpoint                          |
| diF       | Regulator activation differential            |
| oSP       | Offset on setpoint                           |
| odF       | Offset on differential in energy saving mode |
| H11       | Digital input 1/polarity configuration.      |
| H31       | △ key configuration.                         |
| H32       | ▽ key configuration.                         |
| H33       | ⏻ key configuration.                         |
| H34       | ⚡ key configuration.                         |
| H35       | ☆ key configuration.                         |

---

# Diagnostics

---

## Contents

This section includes the following topics:

|                                             |     |
|---------------------------------------------|-----|
| Alarms and indications .....                | 112 |
| Minimum and maximum temperature alarm ..... | 114 |

# Alarms and indications

## Introduction

All alarms are deactivated automatically when their cause is removed, except the permanent pressure switch alarm, which can be deactivated via the **rAP** function.

## Detecting an alarm condition

If there is an alarm condition, the alarm icon  comes on steadily. If present and enabled, the buzzer and alarm relay are also activated.

**Note:** If alarm exclusion timings are in progress, the alarm is not signaled.

All active alarms, except those relating to probe error, are listed in the **AL** folder within the "Machine status" menu.

## Silencing the buzzer

Press any key or use the menu function: the buzzer is silenced, the alarm icon  flashes and the alarm relay is de-energized.

## Alarms legend

| Code       | Description                                                          | Buzzer and alarm relays | Cause                                                                                                                                                                      | Effects                                                                                                                                                                                                                                                                                                                                                | Solutions                                                                                                                                      |
|------------|----------------------------------------------------------------------|-------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>E1</b>  | Probe Pb1 in error                                                   | Active                  | <ul style="list-style-type: none"> <li>Reading of values outside the operating interval</li> <li>Probe or corresponding wiring in short-circuit or open circuit</li> </ul> | <ul style="list-style-type: none"> <li><b>E1</b> shown</li> <li>Steady alarm icon </li> <li>Disabling of the maximum/minimum alarm regulator</li> <li>Compressor operation based on parameters <b>Ont</b> and <b>OFt</b></li> </ul>                                 | <ul style="list-style-type: none"> <li>Check the type of probe (default NTC)</li> <li>Check the probe wiring</li> <li>Replace probe</li> </ul> |
| <b>E2</b>  | Probe Pb2 in error<br><b>Note:</b> only models that manage probe Pb2 | Active                  | <ul style="list-style-type: none"> <li>Reading of values outside the operating interval</li> <li>Probe or corresponding wiring in short-circuit or open circuit</li> </ul> | <ul style="list-style-type: none"> <li><b>E2</b> shown</li> <li>Steady alarm icon </li> <li>Defrost ends due to timeout (<b>dEt</b>)</li> <li>The evaporator fans are: on (compressor ON), or run according to parameter <b>FCo</b>, (compressor OFF).</li> </ul> | <ul style="list-style-type: none"> <li>Check the type of probe (default NTC)</li> <li>Check the probe wiring</li> <li>Replace probe</li> </ul> |
| <b>E3</b>  | Probe Pb3 in error<br><b>Note:</b> only models that manage probe Pb3 | Active                  | <ul style="list-style-type: none"> <li>Reading of values outside the operating interval</li> <li>Probe or corresponding wiring in short-circuit or open circuit</li> </ul> | <ul style="list-style-type: none"> <li><b>E3</b> shown</li> <li>Steady alarm icon </li> <li>No effect on regulation</li> </ul>                                                                                                                                    | <ul style="list-style-type: none"> <li>Check the type of probe (default NTC)</li> <li>Check the probe wiring</li> <li>Replace probe</li> </ul> |
| <b>AH1</b> | Probe Pb1 high temperature alarm                                     | Active                  | Value read by Pb1 > <b>HAL</b> after time equal to <b>tAo</b> (see section "Minimum and maximum temperature alarm" a pagina 114)                                           | <ul style="list-style-type: none"> <li>Alarm <b>AH1</b> added to folder <b>AL</b></li> <li>No effect on regulation</li> </ul>                                                                                                                                                                                                                          | Wait for the temperature read by Pb1 to drop below the alarm threshold ( <b>HAL-AFd</b> )                                                      |
| <b>AL1</b> | Probe Pb1 low temperature alarm                                      | Active                  | Value read by Pb1 < <b>LAL</b> after time equal to <b>tAo</b> (see section "Minimum and maximum temperature alarm" a pagina 114)                                           | <ul style="list-style-type: none"> <li>Alarm <b>AL1</b> added to folder <b>AL</b></li> <li>No effect on regulation</li> </ul>                                                                                                                                                                                                                          | Wait for the temperature read by Pb1 to rise above the alarm threshold ( <b>LAL+AFd</b> )                                                      |
| <b>EA</b>  | External alarm                                                       | Active                  | Activation of the digital input ( <b>H11</b> = $\pm 5$ )                                                                                                                   | <ul style="list-style-type: none"> <li>Alarm <b>EA</b> added to folder <b>AL</b></li> <li>Steady alarm icon </li> <li>Regulation inhibited if <b>EAL</b> = y</li> </ul>                                                                                           | Check and remove the external cause that caused the alarm on the digital input                                                                 |
| <b>OPd</b> | Door open alarm                                                      | Active                  | Digital input activation ( <b>H11</b> = $\pm 4$ ) for a time greater than <b>tdo</b>                                                                                       | <ul style="list-style-type: none"> <li>Alarm <b>OPd</b> added to folder <b>AL</b></li> <li>Steady alarm icon </li> <li>Regulator inhibited, on the basis of parameter <b>dod</b></li> </ul>                                                                       | <ul style="list-style-type: none"> <li>Close the door</li> <li>Increase the value of parameter <b>oAo</b></li> </ul>                           |
| <b>Ad2</b> | Defrost due to timeout                                               | Not active              | End of defrost due to timeout, instead of the defrost end temperature being detected by Pb2                                                                                | <ul style="list-style-type: none"> <li>Alarm <b>Ad2</b> added to folder <b>AL</b></li> <li>Steady alarm icon </li> </ul>                                                                                                                                          | Wait for the next defrost for automatic deactivation                                                                                           |

| Code       | Description                                      | Buzzer and alarm relays | Cause                                                                                                      | Effects                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Solutions                                                                                                                                                                   |
|------------|--------------------------------------------------|-------------------------|------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>COH</b> | Overheating alarm                                | Active                  | Value set by parameter <b>SA3</b> exceeded                                                                 | <ul style="list-style-type: none"> <li>Alarm <b>COH</b> added to folder <b>AL</b></li> <li>Steady alarm icon </li> <li>Compressor regulation inhibited</li> </ul>                                                                                                                                                                                                                                       | Wait for the temperature read by Pb1 to drop below the alarm threshold ( <b>SA3-dA3</b> )                                                                                   |
| <b>E10</b> | Clock alarm<br><b>Note:</b> models with RTC only | Not active              | Clock alarm or battery low                                                                                 | <ul style="list-style-type: none"> <li>Alarm <b>E10</b> added to folder <b>AL</b></li> <li>Functions connected to the clock not present or not synchronized with the current timings</li> </ul>                                                                                                                                                                                                                                                                                            | Set the correct time. If the error persists, replace the device (RTC battery low)                                                                                           |
| <b>rFA</b> | Add refrigerant alarm                            | Not active              | When the compressor is on, the temperature progress does not fall within an interval set with <b>rFT</b> . | <ul style="list-style-type: none"> <li>Alarm <b>rFA</b> added to folder <b>AL</b></li> <li>Steady alarm icon </li> </ul>                                                                                                                                                                                                                                                                                | Switch the device off and on again (alarm deactivated if <b>rFT</b> = 0)                                                                                                    |
| <b>nPA</b> | Pressure switch alarm                            | Not active              | Pressure switch alarm activation caused by the external pressure switch                                    | <p>If the number <b>n</b> of pressure switch activations is lower than <b>PEn</b>:</p> <ul style="list-style-type: none"> <li>Alarm <b>nPA</b> is added to the folder <b>AL</b> with the number of pressure switch activations</li> <li>Compressor regulation inhibited</li> </ul>                                                                                                                                                                                                         | Check and remove the cause that triggered the alarm on the digital input (automatic reset)                                                                                  |
| <b>PAL</b> | Pressure switch alarm                            | Active                  | Pressure switch alarm activation caused by the external pressure switch                                    | <p>If the number <b>N</b> of pressure switch activations is <b>N = PEn</b> in a time period &lt; <b>PEi</b>:</p> <ul style="list-style-type: none"> <li><b>PAL</b> is shown</li> <li>Alarm <b>PA</b> is added to the folder <b>AL</b> and alarm <b>nPA</b> is removed from the folder <b>AL</b></li> <li>Steady alarm icon </li> <li>Compressor regulation, fans and defrost are inhibited</li> </ul> | <ul style="list-style-type: none"> <li>Switch the device off and on again</li> <li>Select <b>rAP</b> (manual reset) in the functions folder to reset the alarms.</li> </ul> |

## Minimum and maximum temperature alarm

### Introduction

High and low temperature alarms are excluded during a defrost. The triggering of these alarms does not have any effect on the regulation in progress.

### Description

The alarms operate according to the temperature read by regulation probe Pb1. The accepted temperature interval limits are set using parameters **HAL** and **LAL**.

### Alarm codes

| Code       | Description            |
|------------|------------------------|
| <b>AH1</b> | High temperature alarm |
| <b>AL1</b> | Low temperature alarm  |

### Absolute or relative temperature values

Depending on the value of parameter **Att**, the temperature is expressed as an absolute or relative value (differential in respect to the setpoint):

| Att value | Label     | Description                                                             |
|-----------|-----------|-------------------------------------------------------------------------|
| <b>0</b>  | <b>Ab</b> | Absolute values. The <b>HAL</b> and <b>LAL</b> values must have a sign. |
| <b>1</b>  | <b>rE</b> | Relative values. <b>HAL</b> > 0 and <b>LAL</b> < 0.                     |

### Alarm conditions

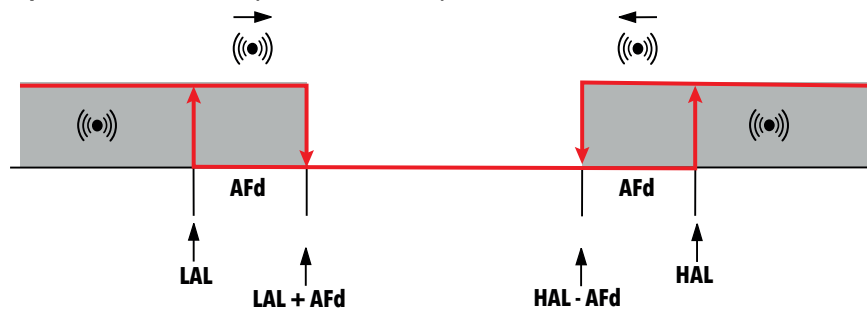
| Att value | Temperature read by Pb1          | Alarm generated     |
|-----------|----------------------------------|---------------------|
| <b>0</b>  | $\geq \text{HAL}$                | Maximum temperature |
|           | $\leq \text{LAL}$                | Minimum temperature |
| <b>1</b>  | $\geq (\text{SEt} + \text{HAL})$ | Maximum temperature |
|           | $\leq (\text{SEt} + \text{LAL})$ | Minimum temperature |

### Conditions for alarm deactivation

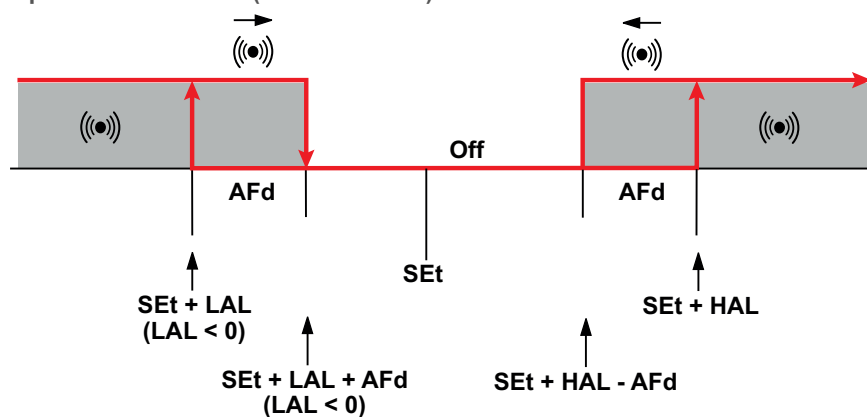
| Att value | Temperature read by Pb1                       | Alarm generated     |
|-----------|-----------------------------------------------|---------------------|
| <b>0</b>  | $\leq (\text{HAL} - \text{AFd})$              | Maximum temperature |
|           | $\geq (\text{LAL} + \text{AFd})$              | Minimum temperature |
| <b>1</b>  | $\leq (\text{SEt} + \text{HAL} - \text{AFd})$ | Maximum temperature |
|           | $\geq (\text{SEt} + \text{LAL} + \text{AFd})$ | Minimum temperature |

## Operating diagrams

Operation with Att=0 (absolute values)



Operation with Att=1 (relative values)



## Parameters

| Parameter | Description                                                                 |
|-----------|-----------------------------------------------------------------------------|
| Att       | Expression mode for <b>HAL</b> and <b>LAL</b> values (absolute or relative) |
| Afd       | Alarm activation differential                                               |
| HAL       | Maximum temperature limit                                                   |
| LAL       | Minimum temperature limit                                                   |
| PAO       | Temperature alarm exclusion time from startup                               |
| dAO       | Exclusion time for temperature alarms after a defrost cycle                 |
| OAO       | Exclusion time for temperature alarms after closing the door                |
| tAO       | Temperature alarm signaling delay time                                      |

---

# Parameters IDNext -HC

---

## Contents

This section includes the following topics:

|                                  |     |
|----------------------------------|-----|
| Parameters IDNext 902 P .....    | 117 |
| Parameters IDNext 961 P .....    | 124 |
| Parameters IDNext 971 P/B .....  | 131 |
| Parameters IDNext 974 P/B .....  | 139 |
| Parameters IDNext 974 P/C .....  | 147 |
| Parameters IDNext 974 P/CI ..... | 157 |
| Parameters IDNext 978 P/B .....  | 168 |
| Parameters IDNext 978 P/C .....  | 176 |
| Parameters IDNext 978 P/CI ..... | 186 |

## Parameters IDNext 902 P

### User parameters IDNext 902 P

| Parameter | Description                                                                                                                                                                                                                  | Range                     | MU    | Default                 | AP1   | AP2   | AP3   |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-------------------------|-------|-------|-------|
| SEt       | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0                     | 3.0   | 0.0   | 0.0   |
| diF       | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value. | 0.1...30.0                | °C/°F | 2.0                     | 2.0   | 2.0   | 2.0   |
| LSE       | Minimum setpoint value.                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0                   | -55.0 | -55.0 | -55.0 |
| HSE       | Maximum setpoint value.                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0                   | 140.0 | 140.0 | 140.0 |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                              | 1...250                   | min   | 30                      | 30    | 30    | 1     |
| dit       | Time interval between one defrost and the next                                                                                                                                                                               | 0...250                   | hours | 6                       | 6     | 6     | -     |
| HAL       | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                   | <b>LAL</b> ...302         | °C/°F | 150.0                   | 150.0 | 150.0 | 150.0 |
| LAL       | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                | -67.0... <b>HAL</b>       | °C/°F | -50.0                   | -50.0 | -50.0 | -50.0 |
| CA1 (!)   | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| PS1       | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                | 0...250                   | num   | 0                       | 0     | 0     | 0     |
| tAb       | Reserved: read-only parameter.                                                                                                                                                                                               | /                         | /     | / (not in applications) |       |       |       |

**Note:** the "User" menu parameters also include **PA2**, which allows access to the "Installer" menu.

**Note:** for the full list of parameters, see the section "**Installer parameters**".

## Installer parameters IDNext 902 P

| Parameter              | Description                                                                                                                                                                                                                                     | Range               | MU    | Default | AP1   | AP2   | AP3   |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|-------|---------|-------|-------|-------|
| <b>SEt</b>             | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                                                | <b>LSE...HSE</b>    | °C/°F | 3.0     | 3.0   | 0.0   | 0.0   |
| <b>CP (Compressor)</b> |                                                                                                                                                                                                                                                 |                     |       |         |       |       |       |
| <b>diF</b>             | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value.                    | 0.1...30.0          | °C/°F | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>LSE</b>             | Minimum setpoint value.                                                                                                                                                                                                                         | -67.0... <b>HSE</b> | °C/°F | -55.0   | -55.0 | -55.0 | -55.0 |
| <b>HSE</b>             | Maximum setpoint value.                                                                                                                                                                                                                         | <b>LSE</b> ...302   | °C/°F | 140.0   | 140.0 | 140.0 | 140.0 |
| <b>HC</b>              | The regulator implements either cold operation (set " <b>C</b> (0)") or for hot (set " <b>H</b> (1)").                                                                                                                                          | C/H                 | flag  | C       | C     | C     | H     |
| <b>ont</b>             | Regulator power-on time for a inoperable probe: <ul style="list-style-type: none"> <li>if <b>Ont</b> = 1 and <b>Oft</b> = 0 compressor is always on</li> <li>if <b>Ont</b> = 1 and <b>Oft</b> &gt; 0 compressor in duty cycle mode</li> </ul>   | 0...250             | min   | 15      | 15    | 15    | 15    |
| <b>oFt</b>             | Regulator power-off time for a inoperable probe: <ul style="list-style-type: none"> <li>if <b>Oft</b> = 1 and <b>Ont</b> = 0 compressor is always off</li> <li>if <b>Oft</b> = 1 and <b>Ont</b> &gt; 0 compressor in duty cycle mode</li> </ul> | 0...250             | min   | 15      | 15    | 15    | 15    |
| <b>don</b>             | Compressor relay activation delay time after request                                                                                                                                                                                            | 0...250             | s     | 0       | 0     | 0     | 0     |
| <b>doF</b>             | Delay time after power-off: the delay time indicated must elapse between deactivation of the compressor relay and the next power-on.                                                                                                            | 0...250             | min   | 0       | 0     | 0     | 0     |
| <b>dbi</b>             | Delay time between power-ons; the delay time indicated must elapse between two consecutive compressor power-ons.                                                                                                                                | 0...250             | min   | 0       | 0     | 0     | 0     |
| <b>Cit</b>             | Minimum compressor activation time before it can be deactivated. If <b>Cit</b> = 0 it is not active.                                                                                                                                            | 0...250             | min   | 0       | 0     | 0     | 0     |
| <b>CAt</b>             | Maximum compressor activation time before it can be deactivated. If <b>CAt</b> = 0 it is not active.                                                                                                                                            | 0...250             | min   | 0       | 0     | 0     | 0     |
| <b>odo</b>             | Delay in activating outputs after the device is powered on or after a power failure. <b>0</b> = not active.                                                                                                                                     | 0...250             | min   | 0       | 0     | 0     | 0     |
| <b>dcS</b>             | "Deep Cooling Cycle" setpoint                                                                                                                                                                                                                   | -67.0...302         | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |
| <b>tdC</b>             | "Deep Cooling Cycle" duration                                                                                                                                                                                                                   | 0...250             | min   | 0       | 0     | 0     | 0     |
| <b>dcc</b>             | Defrost activation delay after a "Deep Cooling Cycle"                                                                                                                                                                                           | 0...250             | min   | 0       | 0     | 0     | 0     |
| <b>dEF (Defrost)</b>   |                                                                                                                                                                                                                                                 |                     |       |         |       |       |       |
| <b>doH</b>             | Defrost cycle activation delay from the call                                                                                                                                                                                                    | 0...250             | min   | 0       | 0     | 0     | 0     |

| Parameter          | Description                                                                                                                                                                                                                                       | Range               | MU     | Default | AP1   | AP2   | AP3   |
|--------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|---------|-------|-------|-------|
| <b>dEt</b>         | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                                                   | 1...250             | min    | 30      | 30    | 30    | 1     |
| <b>dPo</b>         | Defrost activation request at power-on, if the temperature measured by Pb2 allows.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes.</li> </ul>                                                              | n/y                 | flag   | n       | n     | n     | n     |
| <b>tCd</b>         | Minimum period of time with the compressor ON or OFF before defrost is activated.                                                                                                                                                                 | -127...127          | min    | 0       | 0     | 0     | 0     |
| <b>Cod</b>         | Time with the compressor OFF before defrost is activated                                                                                                                                                                                          | 0...250             | min    | 0       | 0     | 0     | 0     |
| <b>dMr</b>         | Enables the defrost count reset in the case of manual defrosting.<br><ul style="list-style-type: none"> <li><b>n</b> = count reset does not take place</li> <li><b>y</b> = count reset takes place</li> </ul>                                     | n/y                 | flag   | n       | n     | n     | n     |
| <b>d00</b>         | Compressor running time before defrost is activated                                                                                                                                                                                               | 0...250             | hours  | 0       | 0     | 0     | -     |
| <b>d01</b>         | <b>d00</b> unit of measure.<br><ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                        | 0/1/2               | num    | 0       | 0     | 0     | -     |
| <b>dit</b>         | Time interval between one defrost and the next                                                                                                                                                                                                    | 0...250             | hours  | 6       | 6     | 6     | 0     |
| <b>d11</b>         | <b>dit</b> unit of measure.<br><ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                        | 0/1/2               | num    | 0       | 0     | 0     | -     |
| <b>d20</b>         | Can be used to activate the defrost when the compressor is off.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost is not activated.</li> <li><b>1</b> = enabled. Defrost is activated when the compressor is off.</li> </ul> | 0/1                 | flag   | 0       | 0     | 0     | -     |
| <b>AL (Alarms)</b> |                                                                                                                                                                                                                                                   |                     |        |         |       |       |       |
| <b>Att</b>         | Sets the absolute or relative value for parameters <b>HAL</b> and <b>LAL</b> .<br><ul style="list-style-type: none"> <li><b>0</b> = absolute value</li> <li><b>1</b> = relative value</li> </ul>                                                  | 0/1                 | flag   | 0       | 0     | 0     | 0     |
| <b>AFd</b>         | Alarm differential.                                                                                                                                                                                                                               | 0,1...25,0          | °C/°F  | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>HAL</b>         | Maximum temperature alarm. Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                                           | <b>LAL</b> ...302   | °C/°F  | 150.0   | 150.0 | 150.0 | 150.0 |
| <b>LAL</b>         | Minimum temperature alarm. Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                                        | -67,0... <b>HAL</b> | °C/°F  | -50.0   | -50.0 | -50.0 | -50.0 |
| <b>PAo</b>         | Alarm exclusion time when switching on the device, after a power failure.                                                                                                                                                                         | 0...10              | min*10 | 0       | 0     | 0     | 0     |
| <b>dAo</b>         | Temperature alarm exclusion time after defrosting.                                                                                                                                                                                                | 0...999             | min    | 0       | 0     | 0     | 0     |

| Parameter                              | Description                                                                                                                                                                                                                                             | Range        | MU    | Default                    | AP1 | AP2 | AP3 |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|----------------------------|-----|-----|-----|
| <b>oAo</b>                             | Alarm signaling delay after deactivation of the digital input (door closure). Alarm refers to high and low temperature alarms.                                                                                                                          | 0...10       | hours | 0                          | 0   | 0   | 0   |
| <b>tdo</b>                             | Door open alarm activation delay time.                                                                                                                                                                                                                  | 0...250      | min   | 0                          | 0   | 0   | 0   |
| <b>tAo</b>                             | Temperature alarm signaling delay time.                                                                                                                                                                                                                 | 0...250      | min   | 0                          | 0   | 0   | 0   |
| <b>dAt</b>                             | Defrost ended due to timeout alarm indication.<br><ul style="list-style-type: none"><li><b>n</b>(0) = alarm not activated</li><li><b>y</b>(1) = alarm activated.</li></ul>                                                                              | n/y          | flag  | n                          | n   | n   | -   |
| <b>EAL</b>                             | An external alarm inhibits the regulators.<br><ul style="list-style-type: none"><li><b>0</b> = does not inhibit the regulators</li><li><b>1</b> = compressor and defrost inhibited</li><li><b>2</b> = fans, compressor and defrost inhibited;</li></ul> | 0/1/2        | flag  | 0                          | 0   | 0   | 0   |
| <b>SA3</b>                             | Probe 3 alarm setpoint.                                                                                                                                                                                                                                 | -67,0...302  | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| <b>dA3</b>                             | Probe 3 alarm differential.                                                                                                                                                                                                                             | 0.1...30.0   | °C/°F | 1.0                        | 1.0 | 1.0 | 1.0 |
| <b>rFt</b>                             | Low refrigerant alarm signaling delay.                                                                                                                                                                                                                  | 0...250      | min   | 0 (non nelle applicazioni) |     |     |     |
| <b>Lit (Lights and digital inputs)</b> |                                                                                                                                                                                                                                                         |              |       |                            |     |     |     |
| <b>dOd</b>                             | Digital input shuts off utilities.<br><ul style="list-style-type: none"><li><b>0</b> = disabled</li><li><b>1</b> = disables fans</li><li><b>2</b> = disables compressor</li><li><b>3</b> = disables fans and compressor.</li></ul>                      | 0...3        | num   | 0                          | 0   | 0   | -   |
| <b>dAd</b>                             | Digital input activation delay                                                                                                                                                                                                                          | 0...250      | min   | 0                          | 0   | 0   | -   |
| <b>dCo</b>                             | Compressor switch-off delay from door opening.                                                                                                                                                                                                          | 0...250      | min   | 1                          | 1   | 1   | -   |
| <b>PrE (Pressure switch)</b>           |                                                                                                                                                                                                                                                         |              |       |                            |     |     |     |
| <b>PEn</b>                             | Number of errors permitted per minimum/maximum pressure switch input                                                                                                                                                                                    | 0...15       | num   | 0                          | 0   | 0   | -   |
| <b>PEi</b>                             | Minimum/maximum pressure switch error count interval                                                                                                                                                                                                    | 1...99       | min   | 1                          | 1   | 1   | -   |
| <b>PEt</b>                             | Compressor activation delay after pressure switch deactivation                                                                                                                                                                                          | 0...255      | min   | 0                          | 0   | 0   | -   |
| <b>EnS (Energy Saving)</b>             |                                                                                                                                                                                                                                                         |              |       |                            |     |     |     |
| <b>oSP</b>                             | Temperature value to be added to the setpoint in the case of an enabled reduced set (Economy function).                                                                                                                                                 | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| <b>odF</b>                             | Differential offset during an energy saving cycle or reduced set.                                                                                                                                                                                       | 0.1...30.0   | °C/°F | 2.0                        | 2.0 | 2.0 | 2.0 |
| <b>Add (Communication)</b>             |                                                                                                                                                                                                                                                         |              |       |                            |     |     |     |
| <b>Adr</b>                             | Modbus protocol device address.                                                                                                                                                                                                                         | 1...247      | num   | 1 (not in applications)    |     |     |     |
| <b>bAU</b>                             | Modbus Baudrate selection.<br><ul style="list-style-type: none"><li><b>96</b> (0) = 9600 baud</li><li><b>192</b> (1) = 19200 baud</li><li><b>384</b> (2) = 38400 baud</li></ul>                                                                         | 96/192/384   | num   | 96 (not in applications)   |     |     |     |

| Parameter     | Description                                                                                                                                                                                                                                                                                                                                            | Range        | MU    | Default                 | AP1 | AP2 | AP3 |
|---------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|-------------------------|-----|-----|-----|
| Pty           | Modbus parity bit.<br><ul style="list-style-type: none"><li>n(0) = none</li><li>E(1) = even</li><li>o(2) = odd.</li></ul>                                                                                                                                                                                                                              | n/E/o        | num   | E (not in applications) |     |     |     |
| diS (Display) |                                                                                                                                                                                                                                                                                                                                                        |              |       |                         |     |     |     |
| dro           | Selects the unit of measure used when displaying the temperature read by the probes. (0 = °C, 1 = °F).<br><b>Note:</b> changing from °C to °F or vice-versa does NOT change the <b>SEt</b> , <b>diF</b> values, etc. (example: <b>SEt</b> = 10°C becomes 10°F).                                                                                        | 0/1          | flag  | 0                       | 0   | 0   | 0   |
| CA1 (!)       | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                                                                                                                                                | -30.0...30.0 | °C/°F | 0.0                     | 0.0 | 0.0 | 0.0 |
| CA3 (!)       | Positive or negative temperature value to be added to the value of Pb3.                                                                                                                                                                                                                                                                                | -30.0...30.0 | °C/°F | 0.0                     | 0.0 | 0.0 | 0.0 |
| CAi           | Activation of the calibration value.<br><ul style="list-style-type: none"><li>0 = Adds the value to the temperature value displayed</li><li>1 = Adds the value to the temperature used by the regulators and not to the one displayed</li><li>2 = Adds the value to the temperature used by the regulators and to the temperature displayed.</li></ul> | 0/1/2        | num   | 2                       | 2   | 2   | 2   |
| LoC           | Keypad lock.<br><ul style="list-style-type: none"><li>n(0) = Keypad lock disabled</li><li>y(1) = Keypad lock enabled (on startup or when 30 seconds have passed since the last action carried out on the user interface)</li></ul>                                                                                                                     | n/y          | flag  | y                       | y   | y   | y   |
| ddd           | Selects the type of value to show on the display.<br><ul style="list-style-type: none"><li>0 = setpoint</li><li>1 = Pb1 probe</li><li>2 = Pb2 probe</li><li>3 = Pb3 probe.</li></ul>                                                                                                                                                                   | 0...3        | num   | 1                       | 1   | 1   | 1   |
| ddL           | Display mode during defrosting.<br><ul style="list-style-type: none"><li>0 = display the temperature read by Pb1</li><li>1 = inhibits reading on the value of Pb1 at the start of defrost and until the setpoint is reached</li><li>2 = displays label <b>dEF</b> during defrost until the setpoint is reached.</li></ul>                              | 0/1/2        | num   | 0                       | 0   | 0   | 0   |
| Ldd           | Display unlock timeout value - label <b>dEF</b>                                                                                                                                                                                                                                                                                                        | 0...250      | min   | 30                      | 30  | 30  | 30  |
| ndt           | Display with decimal point.<br><ul style="list-style-type: none"><li>n(0) = no</li><li>y(1) = yes.</li></ul>                                                                                                                                                                                                                                           | n/y          | flag  | y                       | y   | y   | y   |

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Range       | MU    | Default | AP1 | AP2 | AP3 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>FSE</b>                 | Sets the value used by the low-pass filter to calculate the temperature value to be displayed. <ul style="list-style-type: none"> <li><b>0</b> = disabled</li> <li><b>1</b> = 200 (quicker response)</li> <li><b>2</b> = 100</li> <li><b>3</b> = 50</li> <li><b>4</b> = 25</li> <li><b>5</b> = 12</li> <li><b>6</b> = 6</li> <li><b>7</b> = 3 (slower response).</li> </ul>                                                                                                                                                                                                                                                                                                                     | 0...7       | num   | 0       | 0   | 0   | 0   |
| <b>FdS</b>                 | Filter disabling threshold.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>Ftt</b>                 | Time that has passed beyond the value of <b>FdS</b> before the filter is disabled.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>FHt</b>                 | Filter sampling interval.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 1...250     | s     | 1       | 1   | 1   | 1   |
| <b>PS1</b>                 | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0...250     | num   | 0       | 0   | 0   | 0   |
| <b>PS2</b>                 | When enabled ( <b>PS2</b> ≠0) this is the access key for the installer parameters.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0...250     | num   | 15      | 15  | 15  | 15  |
| <b>CnF (Configuration)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |             |       |         |     |     |     |
| <b>H00</b>                 | Selects the probe type. <ul style="list-style-type: none"> <li><b>0</b> = PTC</li> <li><b>1</b> = NTC</li> <li><b>2</b> = Pt1000.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0/1/2       | flag  | 1       | 1   | 1   | 1   |
| <b>H08</b>                 | Stand-by operating mode. <ul style="list-style-type: none"> <li><b>0</b> = display off; the regulators are active and the device signals possible alarms by reactivating the display</li> <li><b>1</b> = display off; the regulators and the alarms are blocked</li> <li><b>2</b> = the display shows the label "OFF"; the regulators and alarms are inhibited.</li> </ul>                                                                                                                                                                                                                                                                                                                      | 0/1/2       | num   | 2       | 2   | 2   | 2   |
| <b>H11</b>                 | Configuration of digital input 1 ( <b>DI</b> )/ polarity. <ul style="list-style-type: none"> <li><b>0</b> = disabled</li> <li><b>±1</b> = defrost</li> <li><b>±2</b> = reduced set</li> <li><b>±3</b> = auxiliary</li> <li><b>±4</b> = door switch</li> <li><b>±5</b> = external alarm</li> <li><b>±6</b> = stand-by</li> <li><b>±7</b> = pressure switch</li> <li><b>±8</b> = deep cooling</li> <li><b>±9</b> = light</li> <li><b>±10</b> = energy saving</li> </ul> <b>Note:</b> <ul style="list-style-type: none"> <li>the '+' sign indicates that the input is active if the contact is closed.</li> <li>the '-' sign indicates that the input is active if the contact is open.</li> </ul> | -10...+10   | num   | 0       | 0   | 0   | 0   |

| Parameter       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Range   | MU   | Default                 | AP1 | AP2 | AP3 |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|------|-------------------------|-----|-----|-----|
| H21             | Configuration of digital output 1 ( <b>Out1</b> ). <ul style="list-style-type: none"><li>• <b>0</b> = disabled</li><li>• <b>1</b> = compressor</li><li>• <b>2</b> = defrost</li><li>• <b>3</b> = evaporator fans</li><li>• <b>4</b> = alarm</li><li>• <b>5</b> = auxiliary</li><li>• <b>6</b> = stand-by</li><li>• <b>7</b> = light</li><li>• <b>8</b> = reserved</li><li>• <b>9</b> = compressor 2</li><li>• <b>10</b> = reserved</li><li>• <b>11</b> = condenser fans</li><li>• <b>12</b> = heater deadband control</li><li>• <b>13</b> = reserved</li></ul> | 0...13  | num  | 1                       | 1   | 1   | 1   |
| H31             | Configuration of $\Delta$ key. <ul style="list-style-type: none"><li>• <b>0</b> = disabled</li><li>• <b>1</b> = defrost</li><li>• <b>2</b> = auxiliary</li><li>• <b>3</b> = reduced set</li><li>• <b>4</b> = stand-by</li><li>• <b>5</b> = reserved</li><li>• <b>6</b> = reserved</li><li>• <b>7</b> = deep cooling</li><li>• <b>8</b> = light.</li></ul>                                                                                                                                                                                                      | 0...8   | num  | 1                       | 1   | 1   | 0   |
| H32             | Configuration of $\nabla$ key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0...8   | num  | 0                       | 0   | 0   | 0   |
| H33             | Configuration of $\phi$ key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0...8   | num  | 4                       | 4   | 4   | 4   |
| H43             | Probe Pb3 present. <ul style="list-style-type: none"><li>• <b>n</b>(0) = not present</li><li>• <b>y</b>(1) = present</li><li>• <b>2EP</b>(2) = second evaporator.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                    | n/y/2EP | flag | n                       | n   | n   | n   |
| H60             | Display selected application.<br><b>0</b> = disabled; <b>1</b> = AP1; <b>2</b> = AP2; <b>3</b> = AP3.                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...3   | num  | 1 (not in applications) |     |     |     |
| tAb             | Reserved: read-only parameter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | /       | /    | / (not in applications) |     |     |     |
| FPr (UNICARD)   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |      |                         |     |     |     |
| UL              | Transfer of the programming parameters from the device to the UNICARD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | /       | /    | - (not in applications) |     |     |     |
| Fr              | UNICARD formatting. Deletes all data on the UNICARD.<br><b>Note:</b> the use of parameter <b>Fr</b> results in the loss of all data entered. This operation cannot be reversed.                                                                                                                                                                                                                                                                                                                                                                                | /       | /    | - (not in applications) |     |     |     |
| FnC (Functions) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |         |      |                         |     |     |     |
| tAL             | Force alarm acknowledgment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | /       | /    | - (not in applications) |     |     |     |
| rAP             | Reset pressure switch alarms                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | /       | /    | - (not in applications) |     |     |     |
| Cnt             | Reset TelevisAir diagnostic counters (see Reset TelevisAir diagnostic counters)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | /       | /    | - (not in applications) |     |     |     |

**Note:** if one or more parameters in folder **CnF** or marked with (!) are changed, the device must be switched off and then on again to make sure it works properly.

## Parameters IDNext 961 P

### User parameters IDNext 961 P

| Parameter | Description                                                                                                                                                                                                                  | Range                     | MU    | Default                 | AP1   | AP2   | AP3   |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-------------------------|-------|-------|-------|
| SEt       | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0                     | 3.0   | 0.0   | 0.0   |
| diF       | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value. | 0.1...30.0                | °C/°F | 2.0                     | 2.0   | 2.0   | 2.0   |
| LSE       | Minimum setpoint value.                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0                   | -55.0 | -55.0 | -55.0 |
| HSE       | Maximum setpoint value.                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0                   | 140.0 | 140.0 | 140.0 |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                              | 1...250                   | min   | 30                      | 30    | 30    | 1     |
| dit       | Time interval between one defrost and the next                                                                                                                                                                               | 0...250                   | hours | 6                       | 6     | 6     | -     |
| HAL       | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                   | <b>LAL</b> ...302         | °C/°F | 150.0                   | 150.0 | 150.0 | 150.0 |
| LAL       | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                | -67.0... <b>HAL</b>       | °C/°F | -50.0                   | -50.0 | -50.0 | -50.0 |
| CA1 (!)   | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| PS1       | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                | 0...250                   | num   | 0                       | 0     | 0     | 0     |
| tAb       | Reserved: read-only parameter.                                                                                                                                                                                               | /                         | /     | / (not in applications) |       |       |       |

**Note:** the "User" menu parameters also include **PA2**, which allows access to the "Installer" menu.

**Note:** for the full list of parameters, see the section "**Installer parameters**".

## Installer parameters IDNext 961 P

| Parameter              | Description                                                                                                                                                                                                                                        | Range                     | MU    | Default | AP1   | AP2   | AP3   |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|---------|-------|-------|-------|
| <b>SEt</b>             | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                                                   | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0     | 3.0   | 0.0   | 0.0   |
| <b>CP (Compressor)</b> |                                                                                                                                                                                                                                                    |                           |       |         |       |       |       |
| <b>diF</b>             | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value.                       | 0.1...30.0                | °C/°F | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>LSE</b>             | Minimum setpoint value.                                                                                                                                                                                                                            | -67.0... <b>HSE</b>       | °C/°F | -55.0   | -55.0 | -55.0 | -55.0 |
| <b>HSE</b>             | Maximum setpoint value.                                                                                                                                                                                                                            | <b>LSE</b> ...302         | °C/°F | 140.0   | 140.0 | 140.0 | 140.0 |
| <b>HC</b>              | The regulator implements either cold operation (set " <b>C</b> (0)") or for hot (set " <b>H</b> (1)").                                                                                                                                             | C/H                       | flag  | C       | C     | C     | H     |
| <b>ont</b>             | Regulator power-on time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Ont</b> = 1 and <b>OFt</b> = 0 compressor is always on</li> <li>if <b>Ont</b> = 1 and <b>OFt</b> &gt; 0 compressor in duty cycle mode</li> </ul>   | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>oFt</b>             | Regulator power-off time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>OFt</b> = 1 and <b>Ont</b> = 0 compressor is always off</li> <li>if <b>OFt</b> = 1 and <b>Ont</b> &gt; 0 compressor in duty cycle mode</li> </ul> | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>don</b>             | Compressor relay activation delay time after request                                                                                                                                                                                               | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>doF</b>             | Delay time after power-off: the delay time indicated must elapse between deactivation of the compressor relay and the next power-on.                                                                                                               | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dbi</b>             | Delay time between power-ons; the delay time indicated must elapse between two consecutive compressor power-ons.                                                                                                                                   | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>Cit</b>             | Minimum compressor activation time before it can be deactivated. If <b>Cit</b> = 0 it is not active.                                                                                                                                               | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CAt</b>             | Maximum compressor activation time before it can be deactivated. If <b>CAt</b> = 0 it is not active.                                                                                                                                               | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>odo</b>             | Delay in activating outputs after the device is powered on or after a power failure. <b>0</b> = not active.                                                                                                                                        | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcS</b>             | "Deep Cooling Cycle" setpoint                                                                                                                                                                                                                      | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |
| <b>tdC</b>             | "Deep Cooling Cycle" duration                                                                                                                                                                                                                      | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcc</b>             | Defrost activation delay after a "Deep Cooling Cycle"                                                                                                                                                                                              | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dEF (Defrost)</b>   |                                                                                                                                                                                                                                                    |                           |       |         |       |       |       |
| <b>doH</b>             | Defrost cycle activation delay from the call                                                                                                                                                                                                       | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dEt</b>             | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                                                    | 1...250                   | min   | 30      | 30    | 30    | 1     |
| <b>dPo</b>             | Defrost activation request at power-on, if the temperature measured by Pb2 allows.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes.</li> </ul>                                                               | n/y                       | flag  | n       | n     | n     | n     |
| <b>tCd</b>             | Minimum period of time with the compressor ON or OFF before defrost is activated.                                                                                                                                                                  | -127...127                | min   | 0       | 0     | 0     | 0     |
| <b>Cod</b>             | Time with the compressor OFF before defrost is activated                                                                                                                                                                                           | 0...250                   | min   | 0       | 0     | 0     | 0     |

| Parameter                       | Description                                                                                                                                                                                                                                          | Range               | MU     | Default                    | AP1   | AP2   | AP3   |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|----------------------------|-------|-------|-------|
| dMr                             | Enables the defrost count reset in the case of manual defrosting. <ul style="list-style-type: none"><li><b>n</b> = count reset does not take place</li><li><b>y</b> = count reset takes place</li></ul>                                              | n/y                 | flag   | n                          | n     | n     | n     |
| d00                             | Compressor running time before defrost is activated                                                                                                                                                                                                  | 0...250             | hours  | 0                          | 0     | 0     | -     |
| d01                             | <b>d00</b> unit of measure. <ul style="list-style-type: none"><li><b>0</b> = hours</li><li><b>1</b> = minutes</li><li><b>2</b> = seconds.</li></ul>                                                                                                  | 0/1/2               | num    | 0                          | 0     | 0     | -     |
| dit                             | Time interval between one defrost and the next                                                                                                                                                                                                       | 0...250             | hours  | 6                          | 6     | 6     | 0     |
| d11                             | <b>dit</b> unit of measure. <ul style="list-style-type: none"><li><b>0</b> = hours</li><li><b>1</b> = minutes</li><li><b>2</b> = seconds.</li></ul>                                                                                                  | 0/1/2               | num    | 0                          | 0     | 0     | -     |
| d20                             | Can be used to activate the defrost when the compressor is off. <ul style="list-style-type: none"><li><b>0</b> = disabled. Defrost is not activated.</li><li><b>1</b> = enabled. Defrost is activated when the compressor is off.</li></ul>          | 0/1                 | flag   | 0                          | 0     | 0     | -     |
| AL (Alarms)                     |                                                                                                                                                                                                                                                      |                     |        |                            |       |       |       |
| Att                             | Sets the absolute or relative value for parameters <b>HAL</b> and <b>LAL</b> . <ul style="list-style-type: none"><li><b>0</b> = absolute value</li><li><b>1</b> = relative value</li></ul>                                                           | 0/1                 | flag   | 0                          | 0     | 0     | 0     |
| AFd                             | Alarm differential.                                                                                                                                                                                                                                  | 0,1...25,0          | °C/°F  | 2.0                        | 2.0   | 2.0   | 2.0   |
| HAL                             | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                                           | <b>LAL</b> ...302   | °C/°F  | 150.0                      | 150.0 | 150.0 | 150.0 |
| LAL                             | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                                        | -67,0... <b>HAL</b> | °C/°F  | -50.0                      | -50.0 | -50.0 | -50.0 |
| PAo                             | Alarm exclusion time when switching on the device, after a power failure.                                                                                                                                                                            | 0...10              | min*10 | 0                          | 0     | 0     | 0     |
| dAo                             | Temperature alarm exclusion time after defrosting.                                                                                                                                                                                                   | 0...999             | min    | 0                          | 0     | 0     | 0     |
| oAo                             | Alarm signaling delay after deactivation of the digital input (door closure). Alarm refers to high and low temperature alarms.                                                                                                                       | 0...10              | hours  | 0                          | 0     | 0     | 0     |
| tdo                             | Door open alarm activation delay time.                                                                                                                                                                                                               | 0...250             | min    | 0                          | 0     | 0     | 0     |
| tAo                             | Temperature alarm signaling delay time.                                                                                                                                                                                                              | 0...250             | min    | 0                          | 0     | 0     | 0     |
| dAt                             | Defrost ended due to timeout alarm indication. <ul style="list-style-type: none"><li><b>n(0)</b> = alarm not activated</li><li><b>y(1)</b> = alarm activated.</li></ul>                                                                              | n/y                 | flag   | n                          | n     | n     | -     |
| EAL                             | An external alarm inhibits the regulators. <ul style="list-style-type: none"><li><b>0</b> = does not inhibit the regulators</li><li><b>1</b> = compressor and defrost inhibited</li><li><b>2</b> = fans, compressor and defrost inhibited;</li></ul> | 0/1/2               | flag   | 0                          | 0     | 0     | 0     |
| SA3                             | Probe 3 alarm setpoint.                                                                                                                                                                                                                              | -67,0...302         | °C/°F  | 0.0                        | 0.0   | 0.0   | 0.0   |
| dA3                             | Probe 3 alarm differential.                                                                                                                                                                                                                          | 0.1...30.0          | °C/°F  | 1.0                        | 1.0   | 1.0   | 1.0   |
| rFt                             | Low refrigerant alarm signaling delay.                                                                                                                                                                                                               | 0...250             | min    | 0 (non nelle applicazioni) |       |       |       |
| Lit (Lights and digital inputs) |                                                                                                                                                                                                                                                      |                     |        |                            |       |       |       |

| Parameter             | Description                                                                                                                                                                                                                                                                                                                                         | Range        | MU    | Default                  | AP1 | AP2 | AP3 |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|--------------------------|-----|-----|-----|
| dOd                   | Digital input shuts off utilities. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = disables fans</li><li>2 = disables compressor</li><li>3 = disables fans and compressor.</li></ul>                                                                                                                                                 | 0...3        | num   | 0                        | 0   | 0   | -   |
| dAd                   | Digital input activation delay                                                                                                                                                                                                                                                                                                                      | 0...250      | min   | 0                        | 0   | 0   | -   |
| dCo                   | Compressor switch-off delay from door opening.                                                                                                                                                                                                                                                                                                      | 0...250      | min   | 1                        | 1   | 1   | -   |
| PrE (Pressure switch) |                                                                                                                                                                                                                                                                                                                                                     |              |       |                          |     |     |     |
| PEn                   | Number of errors permitted per minimum/maximum pressure switch input                                                                                                                                                                                                                                                                                | 0...15       | num   | 0                        | 0   | 0   | -   |
| PEi                   | Minimum/maximum pressure switch error count interval                                                                                                                                                                                                                                                                                                | 1...99       | min   | 1                        | 1   | 1   | -   |
| PEt                   | Compressor activation delay after pressure switch deactivation                                                                                                                                                                                                                                                                                      | 0...255      | min   | 0                        | 0   | 0   | -   |
| EnS (Energy Saving)   |                                                                                                                                                                                                                                                                                                                                                     |              |       |                          |     |     |     |
| oSP                   | Temperature value to be added to the setpoint in the case of an enabled reduced set (Economy function).                                                                                                                                                                                                                                             | -30.0...30.0 | °C/°F | 0.0                      | 0.0 | 0.0 | 0.0 |
| odF                   | Differential offset during an energy saving cycle or reduced set.                                                                                                                                                                                                                                                                                   | 0.1...30.0   | °C/°F | 2.0                      | 2.0 | 2.0 | 2.0 |
| Add (Communication)   |                                                                                                                                                                                                                                                                                                                                                     |              |       |                          |     |     |     |
| Adr                   | Modbus protocol device address.                                                                                                                                                                                                                                                                                                                     | 1...247      | num   | 1 (not in applications)  |     |     |     |
| bAU                   | Modbus Baudrate selection. <ul style="list-style-type: none"><li>96 (0) = 9600 baud</li><li>192 (1) = 19200 baud</li><li>384 (2) = 38400 baud</li></ul>                                                                                                                                                                                             | 96/192/384   | num   | 96 (not in applications) |     |     |     |
| Pty                   | Modbus parity bit. <ul style="list-style-type: none"><li>n(0) = none</li><li>E(1) = even</li><li>o(2) = odd.</li></ul>                                                                                                                                                                                                                              | n/E/o        | num   | E (not in applications)  |     |     |     |
| diS (Display)         |                                                                                                                                                                                                                                                                                                                                                     |              |       |                          |     |     |     |
| dro                   | Selects the unit of measure used when displaying the temperature read by the probes. (0 = °C, 1 = °F).<br><b>Note:</b> changing from °C to °F or vice-versa does NOT change the <b>SEt</b> , <b>diF</b> values, etc. (example: <b>SEt</b> = 10°C becomes 10°F).                                                                                     | 0/1          | flag  | 0                        | 0   | 0   | 0   |
| CA1 (!)               | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                                                                                                                                             | -30.0...30.0 | °C/°F | 0.0                      | 0.0 | 0.0 | 0.0 |
| CA3 (!)               | Positive or negative temperature value to be added to the value of Pb3.                                                                                                                                                                                                                                                                             | -30.0...30.0 | °C/°F | 0.0                      | 0.0 | 0.0 | 0.0 |
| CAi                   | Activation of the calibration value. <ul style="list-style-type: none"><li>0 = Adds the value to the temperature value displayed</li><li>1 = Adds the value to the temperature used by the regulators and not to the one displayed</li><li>2 = Adds the value to the temperature used by the regulators and to the temperature displayed.</li></ul> | 0/1/2        | num   | 2                        | 2   | 2   | 2   |
| LoC                   | Keypad lock. <ul style="list-style-type: none"><li>n(0) = Keypad lock disabled</li><li>y(1) = Keypad lock enabled (on startup or when 30 seconds have passed since the last action carried out on the user interface)</li></ul>                                                                                                                     | n/y          | flag  | y                        | y   | y   | y   |

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                    | Range       | MU    | Default | AP1 | AP2 | AP3 |
|----------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>ddd</b>                 | Selects the type of value to show on the display.<br><ul style="list-style-type: none"> <li><b>0</b> = setpoint</li> <li><b>1</b> = Pb1 probe</li> <li><b>2</b> = Pb2 probe</li> <li><b>3</b> = Pb3 probe.</li> </ul>                                                                                                                                                          | 0...3       | num   | 1       | 1   | 1   | 1   |
| <b>ddL</b>                 | Display mode during defrosting.<br><ul style="list-style-type: none"> <li><b>0</b> = display the temperature read by Pb1</li> <li><b>1</b> = inhibits reading on the value of Pb1 at the start of defrost and until the setpoint is reached</li> <li><b>2</b> = displays label <b>dEF</b> during defrost until the setpoint is reached.</li> </ul>                             | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>Ldd</b>                 | Display unlock timeout value - label <b>dEF</b>                                                                                                                                                                                                                                                                                                                                | 0...250     | min   | 30      | 30  | 30  | 30  |
| <b>ndt</b>                 | Display with decimal point.<br><ul style="list-style-type: none"> <li><b>n(0)</b> = no</li> <li><b>y(1)</b> = yes.</li> </ul>                                                                                                                                                                                                                                                  | n/y         | flag  | y       | y   | y   | y   |
| <b>FSE</b>                 | Sets the value used by the low-pass filter to calculate the temperature value to be displayed.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled</li> <li><b>1</b> = 200 (quicker response)</li> <li><b>2</b> = 100</li> <li><b>3</b> = 50</li> <li><b>4</b> = 25</li> <li><b>5</b> = 12</li> <li><b>6</b> = 6</li> <li><b>7</b> = 3 (slower response).</li> </ul> | 0...7       | num   | 0       | 0   | 0   | 0   |
| <b>FdS</b>                 | Filter disabling threshold.                                                                                                                                                                                                                                                                                                                                                    | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>Ftt</b>                 | Time that has passed beyond the value of <b>FdS</b> before the filter is disabled.                                                                                                                                                                                                                                                                                             | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>FHt</b>                 | Filter sampling interval.                                                                                                                                                                                                                                                                                                                                                      | 1...250     | s     | 1       | 1   | 1   | 1   |
| <b>PS1</b>                 | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                                                                                                                                                                  | 0...250     | num   | 0       | 0   | 0   | 0   |
| <b>PS2</b>                 | When enabled ( <b>PS2</b> ≠0) this is the access key for the installer parameters.                                                                                                                                                                                                                                                                                             | 0...250     | num   | 15      | 15  | 15  | 15  |
| <b>CnF (Configuration)</b> |                                                                                                                                                                                                                                                                                                                                                                                |             |       |         |     |     |     |
| <b>H00</b>                 | Selects the probe type.<br><ul style="list-style-type: none"> <li><b>0</b> = PTC</li> <li><b>1</b> = NTC</li> <li><b>2</b> = Pt1000.</li> </ul>                                                                                                                                                                                                                                | 0/1/2       | flag  | 1       | 1   | 1   | 1   |
| <b>H08</b>                 | Stand-by operating mode.<br><ul style="list-style-type: none"> <li><b>0</b> = display off; the regulators are active and the device signals possible alarms by reactivating the display</li> <li><b>1</b> = display off; the regulators and the alarms are blocked</li> <li><b>2</b> = the display shows the label "OFF"; the regulators and alarms are inhibited.</li> </ul>  | 0/1/2       | num   | 2       | 2   | 2   | 2   |

| Parameter       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Range     | MU   | Default                 | AP1 | AP2 | AP3 |
|-----------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|-------------------------|-----|-----|-----|
| H11             | Configuration of digital input 1 ( <b>DI</b> )/ polarity. <ul style="list-style-type: none"><li>• <b>0</b> = disabled</li><li>• <b>±1</b> = defrost</li><li>• <b>±2</b> = reduced set</li><li>• <b>±3</b> = auxiliary</li><li>• <b>±4</b> = door switch</li><li>• <b>±5</b> = external alarm</li><li>• <b>±6</b> = stand-by</li><li>• <b>±7</b> = pressure switch</li><li>• <b>±8</b> = deep cooling</li><li>• <b>±9</b> = light</li><li>• <b>±10</b> = energy saving</li></ul> <b>Note:</b> <ul style="list-style-type: none"><li>• the '+' sign indicates that the input is active if the contact is closed.</li><li>• the '-' sign indicates that the input is active if the contact is open.</li></ul> | -10...+10 | num  | 0                       | 0   | 0   | 0   |
| H21             | Configuration of digital output 1 ( <b>Out1</b> ). <ul style="list-style-type: none"><li>• <b>0</b> = disabled</li><li>• <b>1</b> = compressor</li><li>• <b>2</b> = defrost</li><li>• <b>3</b> = evaporator fans</li><li>• <b>4</b> = alarm</li><li>• <b>5</b> = auxiliary</li><li>• <b>6</b> = stand-by</li><li>• <b>7</b> = light</li><li>• <b>8</b> = reserved</li><li>• <b>9</b> = compressor 2</li><li>• <b>10</b> = reserved</li><li>• <b>11</b> = condenser fans</li><li>• <b>12</b> = heater deadband control</li><li>• <b>13</b> = reserved</li></ul>                                                                                                                                             | 0...13    | num  | 1                       | 1   | 1   | 1   |
| H31             | Configuration of $\Delta$ key. <ul style="list-style-type: none"><li>• <b>0</b> = disabled</li><li>• <b>1</b> = defrost</li><li>• <b>2</b> = auxiliary</li><li>• <b>3</b> = reduced set</li><li>• <b>4</b> = stand-by</li><li>• <b>5</b> = reserved</li><li>• <b>6</b> = reserved</li><li>• <b>7</b> = deep cooling</li><li>• <b>8</b> = light.</li></ul>                                                                                                                                                                                                                                                                                                                                                  | 0...8     | num  | 1                       | 1   | 1   | 0   |
| H32             | Configuration of $\nabla$ key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0...8     | num  | 0                       | 0   | 0   | 0   |
| H33             | Configuration of $\odot$ key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0...8     | num  | 4                       | 4   | 4   | 4   |
| H43             | Probe Pb3 present. <ul style="list-style-type: none"><li>• <b>n(0)</b> = not present</li><li>• <b>y(1)</b> = present</li><li>• <b>2EP(2)</b> = second evaporator.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | n/y/2EP   | flag | n                       | n   | n   | n   |
| H60             | Display selected application.<br><b>0</b> = disabled; <b>1</b> = AP1; <b>2</b> = AP2; <b>3</b> = AP3.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0...3     | num  | 1 (not in applications) |     |     |     |
| tAb             | Reserved: read-only parameter.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | /         | /    | / (not in applications) |     |     |     |
| FPr (UNICARD)   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |      |                         |     |     |     |
| UL              | Transfer of the programming parameters from the device to the UNICARD.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | /         | /    | - (not in applications) |     |     |     |
| Fr              | UNICARD formatting. Deletes all data on the UNICARD.<br><b>Note:</b> the use of parameter <b>Fr</b> results in the loss of all data entered. This operation cannot be reversed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | /         | /    | - (not in applications) |     |     |     |
| FnC (Functions) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |           |      |                         |     |     |     |
| tAL             | Force alarm acknowledgment                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | /         | /    | - (not in applications) |     |     |     |

| Parameter  | Description                                                                     | Range | MU | Default                 | AP1 | AP2 | AP3 |
|------------|---------------------------------------------------------------------------------|-------|----|-------------------------|-----|-----|-----|
| <b>rAP</b> | Reset pressure switch alarms                                                    | /     | /  | - (not in applications) |     |     |     |
| <b>Cnt</b> | Reset TelevisAir diagnostic counters (see Reset TelevisAir diagnostic counters) | /     | /  | - (not in applications) |     |     |     |

**Note:** if one or more parameters in folder **CnF** or marked with (!) are changed, the device must be switched off and then on again to make sure it works properly.

# Parameters IDNext 971 P/B

## User parameters IDNext 971 P/B

| Parameter | Description                                                                                                                                                                                                                  | Range                     | MU    | Default                 | AP1   | AP2   | AP3   |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-------------------------|-------|-------|-------|
| SEt       | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0                     | 3.0   | 0.0   | -18.0 |
| diF       | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value. | 0.1...30.0                | °C/°F | 2.0                     | 2.0   | 2.0   | 2.0   |
| LSE       | Minimum setpoint value.                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0                   | -55.0 | -55.0 | -55.0 |
| HSE       | Maximum setpoint value.                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0                   | 140.0 | 140.0 | 140.0 |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                              | 1...250                   | min   | 30                      | 30    | 30    | 30    |
| dS1       | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                 | -67.0...302               | °C/°F | 8.0                     | 8.0   | 8.0   | 0.0   |
| dit       | Time interval between one defrost and the next                                                                                                                                                                               | 0...250                   | hours | 6                       | 6     | 6     | 6     |
| FSt       | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                            | -67.0...320               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| Fdt       | Fan activation delay time after a defrost.                                                                                                                                                                                   | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dt        | Dripping time.                                                                                                                                                                                                               | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dFd       | Used to select or deselect the exclusion of the evaporator fans during defrosting.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes (fan excluded - off).</li> </ul>                    | n/y                       | flag  | y                       | y     | y     | y     |
| HAL       | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                   | <b>LAL</b> ...302         | °C/°F | 150.0                   | 150.0 | 150.0 | 150.0 |
| LAL       | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                | -67.0... <b>HAL</b>       | °C/°F | -50.0                   | -50.0 | -50.0 | -50.0 |
| CA1 (!)   | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| CA2 (!)   | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| PS1       | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                | 0...250                   | num   | 0                       | 0     | 0     | 0     |
| H42       | Probe Pb2 present.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = not present</li> <li><b>y</b>(1) = present.</li> </ul>                                                                                            | n/y                       | flag  | y                       | y     | y     | y     |
| tAb       | Reserved: read-only parameter.                                                                                                                                                                                               | /                         | /     | / (not in applications) |       |       |       |

**Note:** the "User" menu parameters also include **PA2**, which allows access to the "Installer" menu.

**Note:** for the full list of parameters, see the section "**Installer parameters**".

## Installer parameters IDNext 971 P/B

| Parameter              | Description                                                                                                                                                                                                                                                                                          | Range                     | MU    | Default | AP1   | AP2   | AP3   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|---------|-------|-------|-------|
| <b>SEt</b>             | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                                                                                                     | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0     | 3.0   | 0.0   | -18.0 |
| <b>CP (Compressor)</b> |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>diF</b>             | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value.                                                                         | 0.1...30.0                | °C/°F | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>LSE</b>             | Minimum setpoint value.                                                                                                                                                                                                                                                                              | -67.0... <b>HSE</b>       | °C/°F | -55.0   | -55.0 | -55.0 | -55.0 |
| <b>HSE</b>             | Maximum setpoint value.                                                                                                                                                                                                                                                                              | <b>LSE</b> ...302         | °C/°F | 140.0   | 140.0 | 140.0 | 140.0 |
| <b>HC</b>              | The regulator implements either cold operation (set "C(0)") or for hot (set "H(1)").                                                                                                                                                                                                                 | C/H                       | flag  | 0       | 0     | 0     | 0     |
| <b>ont</b>             | Regulator power-on time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Ont</b> = 1 and <b>Oft</b> = 0 compressor is always on</li> <li>if <b>Ont</b> = 1 and <b>Oft</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                     | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>oFt</b>             | Regulator power-off time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Oft</b> = 1 and <b>Ont</b> = 0 compressor is always off</li> <li>if <b>Oft</b> = 1 and <b>Ont</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                   | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>don</b>             | Compressor relay activation delay time after request                                                                                                                                                                                                                                                 | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>doF</b>             | Delay time after power-off: the delay time indicated must elapse between deactivation of the compressor relay and the next power-on.                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dbi</b>             | Delay time between power-ons; the delay time indicated must elapse between two consecutive compressor power-ons.                                                                                                                                                                                     | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>Cit</b>             | Minimum compressor activation time before it can be deactivated. If <b>Cit</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CAt</b>             | Maximum compressor activation time before it can be deactivated. If <b>CAt</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>odo</b>             | Delay in activating outputs after the device is powered on or after a power failure. 0 = not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcS</b>             | "Deep Cooling Cycle" setpoint                                                                                                                                                                                                                                                                        | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |
| <b>tdC</b>             | "Deep Cooling Cycle" duration                                                                                                                                                                                                                                                                        | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcc</b>             | Defrost activation delay after a "Deep Cooling Cycle"                                                                                                                                                                                                                                                | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dEF (Defrost)</b>   |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>dty</b>             | Type of defrost.<br><ul style="list-style-type: none"> <li>0 = electric defrost or due to stoppage - compressor OFF during defrost</li> <li>1 = cycle inversion (hot gas) defrost; compressor on during defrost</li> <li>2 = defrost with "Free" mode; defrost independent of compressor.</li> </ul> | 0/1/2                     | num   | 0       | 0     | 0     | 0     |
| <b>doH</b>             | Defrost cycle activation delay from the call                                                                                                                                                                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dEt</b>             | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                                                                                                      | 1...250                   | min   | 30      | 30    | 30    | 30    |
| <b>dS1</b>             | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                                                                                         | -67.0...302               | °C/°F | 8.0     | 8.0   | 8.0   | 0.0   |
| <b>dPo</b>             | Defrost activation request at power-on, if the temperature measured by Pb2 allows.<br><ul style="list-style-type: none"> <li>n(0) = no</li> <li>y(1) = yes.</li> </ul>                                                                                                                               | n/y                       | flag  | n       | n     | n     | n     |
| <b>tCd</b>             | Minimum period of time with the compressor ON or OFF before defrost is activated.                                                                                                                                                                                                                    | -127...127                | min   | 0       | 0     | 0     | 0     |

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Range       | MU    | Default | AP1 | AP2 | AP3 |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>Cod</b>        | Time with the compressor OFF before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>dMr</b>        | Enables the defrost count reset in the case of manual defrosting. <ul style="list-style-type: none"> <li><b>n</b> = count reset does not take place</li> <li><b>y</b> = count reset takes place</li> </ul>                                                                                                                                                                                                                                                                                                                                                        | n/y         | flag  | n       | n   | n   | n   |
| <b>d00</b>        | Compressor running time before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0...250     | hours | 0       | 0   | 0   | 0   |
| <b>d01</b>        | <b>d00</b> unit of measure. <ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>dit</b>        | Time interval between one defrost and the next                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...250     | hours | 6       | 6   | 6   | 6   |
| <b>d11</b>        | <b>dit</b> unit of measure. <ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>d20</b>        | Can be used to activate the defrost when the compressor is off. <ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost is not activated.</li> <li><b>1</b> = enabled. Defrost is activated when the compressor is off.</li> </ul>                                                                                                                                                                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d40</b>        | Enables/disables use of probe Pb2. <ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost does not take Pb2 into account</li> <li><b>1</b> = enabled. Defrost runs according to the value read by Pb2 (only refers to defrost with threshold)</li> </ul>                                                                                                                                                                                                                                                                                             | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d41</b>        | Sets the defrost activation threshold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>d42</b>        | Sets the maximum time for which the evaporator can remain under the threshold <b>d41</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>d43</b>        | Sets the type of time count in which the evaporator temperature remains under the threshold value. <ul style="list-style-type: none"> <li><b>0</b> = count independent of the compressor status</li> <li><b>1</b> = count with compressor on (when the compressor is off the count begins again)</li> <li><b>2</b> = count independent of the compressor status. The count stops when the temperature rises above the threshold <b>d41</b></li> <li><b>3</b> = count with compressor on and until the temperature rises above the threshold <b>d41</b></li> </ul> | 0...3       | num   | 0       | 0   | 0   | 0   |
| <b>d44</b>        | Sets the threshold management mode. <ul style="list-style-type: none"> <li><b>0</b> = absolute value (for example: <b>d41</b> = -25°C means that the threshold temperature is exactly -25°C)</li> <li><b>1</b> = relative value (negative offset, relative to the value measured by the defrost probe Pb2 (if <b>d40</b> = 1) at the end of the first cooling cycle or on power-on)</li> </ul>                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>Fan (Fans)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |       |         |     |     |     |
| <b>FPt</b>        | Sets whether parameter <b>FSt</b> is expressed as an absolute temperature value or as a value relative to the Setpoint. <ul style="list-style-type: none"> <li><b>0</b> = absolute</li> <li><b>1</b> = relative.</li> </ul>                                                                                                                                                                                                                                                                                                                                       | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>FSt</b>        | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -67.0...320 | °C/°F | 8.0     | 8.0 | 8.0 | 8.0 |
| <b>FAd</b>        | Evaporator fan trigger differential.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0.1...25.0  | °C/°F | 2.0     | 2.0 | 2.0 | 2.0 |
| <b>Fdt</b>        | Fan activation delay time after a defrost.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>dt</b>         | Dripping time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...250     | min   | 0       | 0   | 0   | 0   |

| Parameter   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Range               | MU     | Default | AP1   | AP2   | AP3   |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|---------|-------|-------|-------|-------|----|----|----|----|----|---|---|---|-----|---|-----|---|---|---|---|---|---|---|-----|---|-----|---|---|-----|---|-----|----|---|---|----|-----|----|-----|---|----|----|----|----|---|----|-----|----|-----|---|----|-----|----|-----|----|---|---|----|-----|----|-----|---|----|----|----|----|---|----|-----|----|-----|---|----|-----|----|-----|-------|-----|---|---|---|---|
| dFd         | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"><li>n(0) = no</li><li>y(1) = yes (fan excluded - off).</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | n/y                 | flag   | y       | y     | y     | y     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| FCo         | Evaporator fan operating mode. <table><tr><th rowspan="2">Pb2</th><th rowspan="2">H42</th><th rowspan="2">FCo</th><th colspan="2">day</th><th colspan="2">night</th></tr><tr><th>Cn</th><th>Cf</th><th>Cn</th><th>Cf</th></tr><tr><td rowspan="4">ok</td><td rowspan="4">y</td><td>0</td><td>T</td><td>Off</td><td>T</td><td>Off</td></tr><tr><td>1</td><td>T</td><td>T</td><td>T</td><td>T</td></tr><tr><td>2</td><td>T</td><td>DCd</td><td>T</td><td>DCn</td></tr><tr><td>3</td><td>T</td><td>DCd</td><td>T</td><td>DCn</td></tr><tr><td rowspan="4">ko</td><td rowspan="4">y</td><td>0</td><td>On</td><td>Off</td><td>On</td><td>Off</td></tr><tr><td>1</td><td>On</td><td>On</td><td>On</td><td>On</td></tr><tr><td>2</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr><tr><td>3</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr><tr><td rowspan="4">no</td><td rowspan="4">n</td><td>0</td><td>On</td><td>Off</td><td>On</td><td>Off</td></tr><tr><td>1</td><td>On</td><td>On</td><td>On</td><td>On</td></tr><tr><td>2</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr><tr><td>3</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr></table> <p><b>Headings legend:</b><br/><b>Pb2</b> = probe Pb2 status (<b>ok</b> = present; <b>ko</b> = in E2 error and <b>no</b> = absent); <b>day</b> = day mode; <b>night</b> = night mode; <b>Cn</b> = compressor on; <b>Cf</b> = compressor off.</p> <p><b>Status legend:</b><br/><b>T</b> = thermostat controlled fans; <b>On</b> = fans on; <b>Off</b>= fans off; <b>DCd</b> = Day duty cycle or <b>DCn</b> = Night duty cycle.</p> | Pb2                 | H42    | FCo     | day   |       | night |       | Cn | Cf | Cn | Cf | ok | y | 0 | T | Off | T | Off | 1 | T | T | T | T | 2 | T | DCd | T | DCn | 3 | T | DCd | T | DCn | ko | y | 0 | On | Off | On | Off | 1 | On | On | On | On | 2 | On | DCd | On | DCd | 3 | On | DCd | On | DCd | no | n | 0 | On | Off | On | Off | 1 | On | On | On | On | 2 | On | DCd | On | DCd | 3 | On | DCd | On | DCd | 0...3 | num | 1 | 1 | 1 | 1 |
| Pb2         | H42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     |        |         | FCo   | day   |       | night |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Cn                  | Cf     | Cn      |       | Cf    |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| ok          | y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                   | T      | Off     | T     | Off   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                   | T      | T       | T     | T     |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2                   | T      | DCd     | T     | DCn   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3                   | T      | DCd     | T     | DCn   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| ko          | y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                   | On     | Off     | On    | Off   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                   | On     | On      | On    | On    |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2                   | On     | DCd     | On    | DCd   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3                   | On     | DCd     | On    | DCd   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| no          | n                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0                   | On     | Off     | On    | Off   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1                   | On     | On      | On    | On    |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2                   | On     | DCd     | On    | DCd   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3                   | On     | DCd     | On    | DCd   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| Fon         | Day duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250             | min    | 0       | 0     | 0     | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| FoF         | Day duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0...250             | min    | 0       | 0     | 0     | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| Fnn         | Night duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0...250             | min    | 0       | 0     | 0     | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| FnF         | Night duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0...250             | min    | 0       | 0     | 0     | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| ESF         | "Night" mode activation. <ul style="list-style-type: none"><li>n(0) = no</li><li>y(1) = yes.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | n/y                 | flag   | n       | n     | n     | n     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| AL (Alarms) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |                     |        |         |       |       |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| Att         | Sets the absolute or relative value for parameters <b>HAL</b> and <b>LAL</b> . <ul style="list-style-type: none"><li>0 = absolute value</li><li>1 = relative value</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | 0/1                 | flag   | 0       | 0     | 0     | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| AFd         | Alarm differential.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,1...25,0          | °C/°F  | 2.0     | 2.0   | 2.0   | 2.0   |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| HAL         | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | <b>LAL</b> ...302   | °C/°F  | 150.0   | 150.0 | 150.0 | 150.0 |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| LAL         | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | -67,0... <b>HAL</b> | °C/°F  | -50.0   | -50.0 | -50.0 | -50.0 |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| PAo         | Alarm exclusion time when switching on the device, after a power failure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0...10              | min*10 | 0       | 0     | 0     | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| dAo         | Temperature alarm exclusion time after defrosting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...999             | min    | 0       | 0     | 0     | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |

| Parameter                              | Description                                                                                                                                                                                                                                                                    | Range        | MU    | Default                    | AP1 | AP2 | AP3 |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|----------------------------|-----|-----|-----|
| <b>oAo</b>                             | Alarm signaling delay after deactivation of the digital input (door closure). Alarm refers to high and low temperature alarms.                                                                                                                                                 | 0...10       | hours | 0                          | 0   | 0   | 0   |
| <b>tdo</b>                             | Door open alarm activation delay time.                                                                                                                                                                                                                                         | 0...250      | min   | 0                          | 0   | 0   | 0   |
| <b>tAo</b>                             | Temperature alarm signaling delay time.                                                                                                                                                                                                                                        | 0...250      | min   | 0                          | 0   | 0   | 0   |
| <b>dAt</b>                             | Defrost ended due to timeout alarm indication. <ul style="list-style-type: none"><li><b>n</b>(0) = alarm not activated</li><li><b>y</b>(1) = alarm activated.</li></ul>                                                                                                        | n/y          | flag  | 0                          | 0   | 0   | 0   |
| <b>EAL</b>                             | An external alarm inhibits the regulators. <ul style="list-style-type: none"><li><b>0</b> = does not inhibit the regulators</li><li><b>1</b> = compressor and defrost inhibited</li><li><b>2</b> = fans, compressor and defrost inhibited;</li></ul>                           | 0/1/2        | flag  | n                          | n   | n   | n   |
| <b>rFt</b>                             | Low refrigerant alarm signaling delay.                                                                                                                                                                                                                                         | 0...250      | min   | 0 (non nelle applicazioni) |     |     |     |
| <b>Lit (Lights and digital inputs)</b> |                                                                                                                                                                                                                                                                                |              |       |                            |     |     |     |
| <b>dOd</b>                             | Digital input shuts off utilities. <ul style="list-style-type: none"><li><b>0</b> = disabled</li><li><b>1</b> = disables fans</li><li><b>2</b> = disables compressor</li><li><b>3</b> = disables fans and compressor.</li></ul>                                                | 0...3        | num   | 0                          | 0   | 0   | 0   |
| <b>dAd</b>                             | Digital input activation delay                                                                                                                                                                                                                                                 | 0...250      | min   | 0                          | 0   | 0   | 0   |
| <b>dCo</b>                             | Compressor switch-off delay from door opening.                                                                                                                                                                                                                                 | 0...250      | min   | 1                          | 1   | 1   | 1   |
| <b>PrE (Pressure switch)</b>           |                                                                                                                                                                                                                                                                                |              |       |                            |     |     |     |
| <b>PEn</b>                             | Number of errors permitted per minimum/maximum pressure switch input                                                                                                                                                                                                           | 0...15       | num   | 0                          | 0   | 0   | 0   |
| <b>PEi</b>                             | Minimum/maximum pressure switch error count interval                                                                                                                                                                                                                           | 1...99       | min   | 1                          | 1   | 1   | 1   |
| <b>PEt</b>                             | Compressor activation delay after pressure switch deactivation                                                                                                                                                                                                                 | 0...255      | min   | 0                          | 0   | 0   | 0   |
| <b>EnS (Energy Saving)</b>             |                                                                                                                                                                                                                                                                                |              |       |                            |     |     |     |
| <b>oSP</b>                             | Temperature value to be added to the setpoint in the case of an enabled reduced set (Economy function).                                                                                                                                                                        | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| <b>odF</b>                             | Differential offset during an energy saving cycle or reduced set.                                                                                                                                                                                                              | 0.1...30.0   | °C/°F | 2.0                        | 2.0 | 2.0 | 2.0 |
| <b>Add (Communication)</b>             |                                                                                                                                                                                                                                                                                |              |       |                            |     |     |     |
| <b>Adr</b>                             | Modbus protocol device address.                                                                                                                                                                                                                                                | 1...247      | num   | 1 (not in applications)    |     |     |     |
| <b>bAU</b>                             | Modbus Baudrate selection. <ul style="list-style-type: none"><li><b>96</b> (0) = 9600 baud</li><li><b>192</b> (1) = 19200 baud</li><li><b>384</b> (2) = 38400 baud</li></ul>                                                                                                   | 96/192/384   | num   | 96 (not in applications)   |     |     |     |
| <b>Pty</b>                             | Modbus parity bit. <ul style="list-style-type: none"><li><b>n</b>(0) = none</li><li><b>E</b>(1) = even</li><li><b>o</b>(2) = odd.</li></ul>                                                                                                                                    | n/E/o        | num   | E (not in applications)    |     |     |     |
| <b>diS (Display)</b>                   |                                                                                                                                                                                                                                                                                |              |       |                            |     |     |     |
| <b>dro</b>                             | Selects the unit of measure used when displaying the temperature read by the probes. ( <b>0</b> = °C, <b>1</b> = °F).<br><b>Note:</b> changing from °C to °F or vice-versa does NOT change the <b>SEt</b> , <b>diF</b> values, etc. (example: <b>SEt</b> = 10°C becomes 10°F). | 0/1          | flag  | 0                          | 0   | 0   | 0   |
| <b>CA1 (!)</b>                         | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                                                                        | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| <b>CA2 (!)</b>                         | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                                                                        | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                  | Range       | MU    | Default | AP1 | AP2 | AP3 |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>CAi</b>                 | Activation of the calibration value. <ul style="list-style-type: none"> <li><b>0</b> = Adds the value to the temperature value displayed</li> <li><b>1</b> = Adds the value to the temperature used by the regulators and not to the one displayed</li> <li><b>2</b> = Adds the value to the temperature used by the regulators and to the temperature displayed.</li> </ul> | 0/1/2       | num   | 2       | 2   | 2   | 2   |
| <b>LoC</b>                 | Keypad lock. <ul style="list-style-type: none"> <li><b>n(0)</b> = Keypad lock disabled</li> <li><b>y(1)</b> = Keypad lock enabled (on startup or when 30 seconds have passed since the last action carried out on the user interface)</li> </ul>                                                                                                                             | n/y         | flag  | y       | y   | y   | y   |
| <b>ddd</b>                 | Selects the type of value to show on the display. <ul style="list-style-type: none"> <li><b>0</b> = setpoint</li> <li><b>1</b> = Pb1 probe</li> <li><b>2</b> = Pb2 probe</li> <li><b>3</b> = Pb3 probe.</li> </ul>                                                                                                                                                           | 0...3       | num   | 1       | 1   | 1   | 1   |
| <b>ddL</b>                 | Display mode during defrosting. <ul style="list-style-type: none"> <li><b>0</b> = display the temperature read by Pb1</li> <li><b>1</b> = inhibits reading on the value of Pb1 at the start of defrost and until the setpoint is reached</li> <li><b>2</b> = displays label <b>dEF</b> during defrost until the setpoint is reached.</li> </ul>                              | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>Ldd</b>                 | Display unlock timeout value - label <b>dEF</b>                                                                                                                                                                                                                                                                                                                              | 0...250     | min   | 30      | 30  | 30  | 30  |
| <b>ndt</b>                 | Display with decimal point. <ul style="list-style-type: none"> <li><b>n(0)</b> = no</li> <li><b>y(1)</b> = yes.</li> </ul>                                                                                                                                                                                                                                                   | n/y         | flag  | y       | y   | y   | y   |
| <b>FSE</b>                 | Sets the value used by the low-pass filter to calculate the temperature value to be displayed. <ul style="list-style-type: none"> <li><b>0</b> = disabled</li> <li><b>1</b> = 200 (quicker response)</li> <li><b>2</b> = 100</li> <li><b>3</b> = 50</li> <li><b>4</b> = 25</li> <li><b>5</b> = 12</li> <li><b>6</b> = 6</li> <li><b>7</b> = 3 (slower response).</li> </ul>  | 0...7       | num   | 0       | 0   | 0   | 0   |
| <b>FdS</b>                 | Filter disabling threshold.                                                                                                                                                                                                                                                                                                                                                  | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>Ftt</b>                 | Time that has passed beyond the value of <b>FdS</b> before the filter is disabled.                                                                                                                                                                                                                                                                                           | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>FHt</b>                 | Filter sampling interval.                                                                                                                                                                                                                                                                                                                                                    | 1...250     | s     | 1       | 1   | 1   | 1   |
| <b>PS1</b>                 | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                                                                                                                                                                | 0...250     | num   | 0       | 0   | 0   | 0   |
| <b>PS2</b>                 | When enabled ( <b>PS2</b> ≠0) this is the access key for the installer parameters.                                                                                                                                                                                                                                                                                           | 0...250     | num   | 15      | 15  | 15  | 15  |
| <b>CnF (Configuration)</b> |                                                                                                                                                                                                                                                                                                                                                                              |             |       |         |     |     |     |
| <b>H00</b>                 | Selects the probe type. <ul style="list-style-type: none"> <li><b>0</b> = PTC</li> <li><b>1</b> = NTC</li> <li><b>2</b> = Pt1000.</li> </ul>                                                                                                                                                                                                                                 | 0/1/2       | flag  | 1       | 1   | 1   | 1   |
| <b>H08</b>                 | Stand-by operating mode. <ul style="list-style-type: none"> <li><b>0</b> = display off; the regulators are active and the device signals possible alarms by reactivating the display</li> <li><b>1</b> = display off; the regulators and the alarms are blocked</li> <li><b>2</b> = the display shows the label "OFF"; the regulators and alarms are inhibited.</li> </ul>   | 0/1/2       | num   | 2       | 2   | 2   | 2   |

| Parameter | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Range     | MU   | Default | AP1 | AP2 | AP3 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|---------|-----|-----|-----|
| H11       | Configuration of digital input 1 ( <b>DI</b> )/ polarity. <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>±1</b> = defrost</li> <li>• <b>±2</b> = reduced set</li> <li>• <b>±3</b> = auxiliary</li> <li>• <b>±4</b> = door switch</li> <li>• <b>±5</b> = external alarm</li> <li>• <b>±6</b> = stand-by</li> <li>• <b>±7</b> = pressure switch</li> <li>• <b>±8</b> = deep cooling</li> <li>• <b>±9</b> = light</li> <li>• <b>±10</b> = energy saving</li> </ul> <b>Note:</b> <ul style="list-style-type: none"> <li>• the '+' sign indicates that the input is active if the contact is closed.</li> <li>• the '-' sign indicates that the input is active if the contact is open.</li> </ul> | -10...+10 | num  | 0       | 0   | 0   | 0   |
| H21       | Configuration of digital output 1 ( <b>Out1</b> ). <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = compressor</li> <li>• <b>2</b> = defrost</li> <li>• <b>3</b> = evaporator fans</li> <li>• <b>4</b> = alarm</li> <li>• <b>5</b> = auxiliary</li> <li>• <b>6</b> = stand-by</li> <li>• <b>7</b> = light</li> <li>• <b>8</b> = buzzer</li> <li>• <b>9</b> = compressor 2</li> <li>• <b>10</b> = reserved</li> <li>• <b>11</b> = condenser fans</li> <li>• <b>12</b> = heater deadband control</li> <li>• <b>13</b> = reserved</li> </ul>                                                                                                                                               | 0...13    | num  | 1       | 1   | 1   | 1   |
| H22       | Configuration of digital output 2 ( <b>Out2</b> ). <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = compressor</li> <li>• <b>2</b> = defrost</li> <li>• <b>3</b> = evaporator fans</li> <li>• <b>4</b> = alarm</li> <li>• <b>5</b> = auxiliary</li> <li>• <b>6</b> = stand-by</li> <li>• <b>7</b> = light</li> <li>• <b>8</b> = buzzer</li> <li>• <b>9</b> = compressor 2</li> <li>• <b>10</b> = reserved</li> <li>• <b>11</b> = condenser fans</li> <li>• <b>12</b> = heater deadband control.</li> </ul>                                                                                                                                                                              | 0...12    | num  | 2       | 2   | 2   | 2   |
| H25       | Enables/disables the buzzer. <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = enabled.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0/1       | flag | 1       | 1   | 1   | 1   |
| H31       | Configuration of  key. <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = defrost</li> <li>• <b>2</b> = auxiliary</li> <li>• <b>3</b> = reduced set</li> <li>• <b>4</b> = stand-by</li> <li>• <b>5</b> = reserved</li> <li>• <b>6</b> = reserved</li> <li>• <b>7</b> = deep cooling</li> <li>• <b>8</b> = light.</li> </ul>                                                                                                                                                                                                                                                                            | 0...8     | num  | 1       | 1   | 1   | 1   |
| H32       | Configuration of  key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0...8     | num  | 0       | 0   | 0   | 0   |
| H33       | Configuration of  key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0...8     | num  | 4       | 4   | 4   | 4   |
| H34       | Configuration of  key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0...8     | num  | 0       | 0   | 0   | 0   |
| H35       | Configuration of  key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0...8     | num  | 0       | 0   | 0   | 0   |

| Parameter       | Description                                                                                                                                                                     | Range | MU   | Default                 | AP1 | AP2 | AP3 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|-------------------------|-----|-----|-----|
| H42             | Probe Pb2 present. <ul style="list-style-type: none"><li>n(0) = not present</li><li>y(1) = present.</li></ul>                                                                   | n/y   | flag | y                       | y   | y   | y   |
| H60             | Display selected application.<br>0 = disabled; 1 = AP1; 2 = AP2; 3 = AP3.                                                                                                       | 0...3 | num  | 1 (not in applications) |     |     |     |
| tAb             | Reserved: read-only parameter.                                                                                                                                                  | /     | /    | / (not in applications) |     |     |     |
| FPr (UNICARD)   |                                                                                                                                                                                 |       |      |                         |     |     |     |
| UL              | Transfer of the programming parameters from the device to the UNICARD.                                                                                                          | /     | /    | - (not in applications) |     |     |     |
| Fr              | UNICARD formatting. Deletes all data on the UNICARD.<br><b>Note:</b> the use of parameter <b>Fr</b> results in the loss of all data entered. This operation cannot be reversed. | /     | /    | - (not in applications) |     |     |     |
| FnC (Functions) |                                                                                                                                                                                 |       |      |                         |     |     |     |
| tAL             | Force alarm acknowledgment                                                                                                                                                      | /     | /    | - (not in applications) |     |     |     |
| rAP             | Reset pressure switch alarms                                                                                                                                                    | /     | /    | - (not in applications) |     |     |     |
| Cnt             | Reset TelevisAir diagnostic counters (see Reset TelevisAir diagnostic counters)                                                                                                 | /     | /    | - (not in applications) |     |     |     |

**Note:** if one or more parameters in folder **CnF** or marked with (!) are changed, the device must be switched off and then on again to make sure it works properly.

# Parameters IDNext 974 P/B

## User parameters IDNext 974 P/B

| Parameter | Description                                                                                                                                                                                                                  | Range                     | MU    | Default                 | AP1   | AP2   | AP3   |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-------------------------|-------|-------|-------|
| SEt       | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0                     | 3.0   | 0.0   | -18.0 |
| diF       | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value. | 0.1...30.0                | °C/°F | 2.0                     | 2.0   | 2.0   | 2.0   |
| LSE       | Minimum setpoint value.                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0                   | -55.0 | -55.0 | -55.0 |
| HSE       | Maximum setpoint value.                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0                   | 140.0 | 140.0 | 140.0 |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                              | 1...250                   | min   | 30                      | 30    | 30    | 30    |
| dS1       | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                 | -67.0...302               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| dit       | Time interval between one defrost and the next                                                                                                                                                                               | 0...250                   | hours | 6                       | 6     | 6     | 6     |
| FSt       | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                            | -67.0...320               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| Fdt       | Fan activation delay time after a defrost.                                                                                                                                                                                   | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dt        | Dripping time.                                                                                                                                                                                                               | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dFd       | Used to select or deselect the exclusion of the evaporator fans during defrosting.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes (fan excluded - off).</li> </ul>                    | n/y                       | flag  | y                       | y     | y     | y     |
| HAL       | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                   | <b>LAL</b> ...302         | °C/°F | 150.0                   | 150.0 | 150.0 | 150.0 |
| LAL       | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                | -67.0... <b>HAL</b>       | °C/°F | -50.0                   | -50.0 | -50.0 | -50.0 |
| CA1 (!)   | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| CA2 (!)   | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| PS1       | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                | 0...250                   | num   | 0                       | 0     | 0     | 0     |
| H42       | Probe Pb2 present.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = not present</li> <li><b>y</b>(1) = present.</li> </ul>                                                                                            | n/y                       | flag  | y                       | y     | y     | y     |
| tAb       | Reserved: read-only parameter.                                                                                                                                                                                               | /                         | /     | / (not in applications) |       |       |       |

**Note:** the "User" menu parameters also include **PA2**, which allows access to the "Installer" menu.

**Note:** for the full list of parameters, see the section "**Installer parameters**".

## Installer parameters IDNext 974 P/B

| Parameter              | Description                                                                                                                                                                                                                                                                                          | Range                     | MU    | Default | AP1   | AP2   | AP3   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|---------|-------|-------|-------|
| <b>SEt</b>             | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                                                                                                     | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0     | 3.0   | 0.0   | -18.0 |
| <b>CP (Compressor)</b> |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>diF</b>             | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value.                                                                         | 0.1...30.0                | °C/°F | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>LSE</b>             | Minimum setpoint value.                                                                                                                                                                                                                                                                              | -67.0... <b>HSE</b>       | °C/°F | -55.0   | -55.0 | -55.0 | -55.0 |
| <b>HSE</b>             | Maximum setpoint value.                                                                                                                                                                                                                                                                              | <b>LSE</b> ...302         | °C/°F | 140.0   | 140.0 | 140.0 | 140.0 |
| <b>HC</b>              | The regulator implements either cold operation (set "C(0)") or for hot (set "H(1)").                                                                                                                                                                                                                 | C/H                       | flag  | 0       | 0     | 0     | 0     |
| <b>ont</b>             | Regulator power-on time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Ont</b> = 1 and <b>Oft</b> = 0 compressor is always on</li> <li>if <b>Ont</b> = 1 and <b>Oft</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                     | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>oFt</b>             | Regulator power-off time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Oft</b> = 1 and <b>Ont</b> = 0 compressor is always off</li> <li>if <b>Oft</b> = 1 and <b>Ont</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                   | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>don</b>             | Compressor relay activation delay time after request                                                                                                                                                                                                                                                 | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>doF</b>             | Delay time after power-off: the delay time indicated must elapse between deactivation of the compressor relay and the next power-on.                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dbi</b>             | Delay time between power-ons; the delay time indicated must elapse between two consecutive compressor power-ons.                                                                                                                                                                                     | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>Cit</b>             | Minimum compressor activation time before it can be deactivated. If <b>Cit</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CAt</b>             | Maximum compressor activation time before it can be deactivated. If <b>CAt</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>odo</b>             | Delay in activating outputs after the device is powered on or after a power failure. 0 = not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcS</b>             | "Deep Cooling Cycle" setpoint                                                                                                                                                                                                                                                                        | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |
| <b>tdC</b>             | "Deep Cooling Cycle" duration                                                                                                                                                                                                                                                                        | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcc</b>             | Defrost activation delay after a "Deep Cooling Cycle"                                                                                                                                                                                                                                                | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CP2</b>             | Compressor 2 activation delay.                                                                                                                                                                                                                                                                       | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dFA</b>             | Condenser fan and compressor activation delay from the request.                                                                                                                                                                                                                                      | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>dEF (Defrost)</b>   |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>dtY</b>             | Type of defrost.<br><ul style="list-style-type: none"> <li>0 = electric defrost or due to stoppage - compressor OFF during defrost</li> <li>1 = cycle inversion (hot gas) defrost; compressor on during defrost</li> <li>2 = defrost with "Free" mode; defrost independent of compressor.</li> </ul> | 0/1/2                     | num   | 0       | 0     | 0     | 0     |
| <b>doH</b>             | Defrost cycle activation delay from the call                                                                                                                                                                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dEt</b>             | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                                                                                                      | 1...250                   | min   | 30      | 30    | 30    | 30    |
| <b>dS1</b>             | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                                                                                         | -67.0...302               | °C/°F | 8.0     | 8.0   | 8.0   | 8.0   |

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Range       | MU    | Default | AP1 | AP2 | AP3 |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>dPo</b>        | Defrost activation request at power-on, if the temperature measured by Pb2 allows.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                 | n/y         | flag  | n       | n   | n   | n   |
| <b>tCd</b>        | Minimum period of time with the compressor ON or OFF before defrost is activated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -127...127  | min   | 0       | 0   | 0   | 0   |
| <b>Cod</b>        | Time with the compressor OFF before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>dMr</b>        | Enables the defrost count reset in the case of manual defrosting.<br><ul style="list-style-type: none"> <li><b>n</b> = count reset does not take place</li> <li><b>y</b> = count reset takes place</li> </ul>                                                                                                                                                                                                                                                                                                                                                        | n/y         | flag  | n       | n   | n   | n   |
| <b>d00</b>        | Compressor running time before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0...250     | hours | 0       | 0   | 0   | 0   |
| <b>d01</b>        | <b>d00</b> unit of measure.<br><ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>dit</b>        | Time interval between one defrost and the next                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0...250     | hours | 6       | 6   | 6   | 6   |
| <b>d11</b>        | <b>dit</b> unit of measure.<br><ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>d20</b>        | Can be used to activate the defrost when the compressor is off.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost is not activated.</li> <li><b>1</b> = enabled. Defrost is activated when the compressor is off.</li> </ul>                                                                                                                                                                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d40</b>        | Enables/disables use of probe Pb2.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost does not take Pb2 into account</li> <li><b>1</b> = enabled. Defrost runs according to the value read by Pb2 (only refers to defrost with threshold)</li> </ul>                                                                                                                                                                                                                                                                                             | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d41</b>        | Sets the defrost activation threshold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>d42</b>        | Sets the maximum time for which the evaporator can remain under the threshold <b>d41</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>d43</b>        | Sets the type of time count in which the evaporator temperature remains under the threshold value.<br><ul style="list-style-type: none"> <li><b>0</b> = count independent of the compressor status</li> <li><b>1</b> = count with compressor on (when the compressor is off the count begins again)</li> <li><b>2</b> = count independent of the compressor status. The count stops when the temperature rises above the threshold <b>d41</b></li> <li><b>3</b> = count with compressor on and until the temperature rises above the threshold <b>d41</b></li> </ul> | 0...3       | num   | 0       | 0   | 0   | 0   |
| <b>d44</b>        | Sets the threshold management mode.<br><ul style="list-style-type: none"> <li><b>0</b> = absolute value (for example: <b>d41</b> = -25°C means that the threshold temperature is exactly -25°C)</li> <li><b>1</b> = relative value (negative offset, relative to the value measured by the defrost probe Pb2 (if <b>d40</b> = 1) at the end of the first cooling cycle or on power-on)</li> </ul>                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>Fan (Fans)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |             |       |         |     |     |     |

| Parameter          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Range       | MU    | Default | AP1 | AP2 | AP3   |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|--------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-------|-------|----|----|----|----|----|---|---|---|-----|---|-----|---|---|---|---|---|---|---|-----|---|-----|---|---|-----|---|-----|----|---|---|----|-----|----|-----|---|----|----|----|----|---|----|-----|----|-----|---|----|-----|----|-----|----|---|---|----|-----|----|-----|---|----|----|----|----|---|----|-----|----|-----|---|----|-----|----|-----|-------|-----|---|---|---|---|
| <b>FPt</b>         | Sets whether parameter <b>FSt</b> is expressed as an absolute temperature value or as a value relative to the Setpoint.<br><ul style="list-style-type: none"><li><b>0</b> = absolute</li><li><b>1</b> = relative.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0/1         | flag  | 0       | 0   | 0   | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>FSt</b>         | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | -67.0...320 | °C/°F | 8.0     | 8.0 | 8.0 | 8.0   |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>FAd</b>         | Evaporator fan trigger differential.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0.1...25.0  | °C/°F | 2.0     | 2.0 | 2.0 | 2.0   |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>Fdt</b>         | Fan activation delay time after a defrost.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0...250     | min   | 0       | 0   | 0   | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>dt</b>          | Dripping time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 0...250     | min   | 0       | 0   | 0   | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>dFd</b>         | Used to select or deselect the exclusion of the evaporator fans during defrosting.<br><ul style="list-style-type: none"><li><b>n(0)</b> = no</li><li><b>y(1)</b> = yes (fan excluded - off).</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | n/y         | flag  | y       | y   | y   | y     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>FCo</b>         | Evaporator fan operating mode. <table><tr><th rowspan="2">Pb2</th><th rowspan="2">H42</th><th rowspan="2">FCo</th><th colspan="2">day</th><th colspan="2">night</th></tr><tr><th>Cn</th><th>Cf</th><th>Cn</th><th>Cf</th></tr><tr><td rowspan="4">ok</td><td rowspan="4">y</td><td>0</td><td>T</td><td>Off</td><td>T</td><td>Off</td></tr><tr><td>1</td><td>T</td><td>T</td><td>T</td><td>T</td></tr><tr><td>2</td><td>T</td><td>DCd</td><td>T</td><td>DCn</td></tr><tr><td>3</td><td>T</td><td>DCd</td><td>T</td><td>DCn</td></tr><tr><td rowspan="4">ko</td><td rowspan="4">y</td><td>0</td><td>On</td><td>Off</td><td>On</td><td>Off</td></tr><tr><td>1</td><td>On</td><td>On</td><td>On</td><td>On</td></tr><tr><td>2</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr><tr><td>3</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr><tr><td rowspan="4">no</td><td rowspan="4">n</td><td>0</td><td>On</td><td>Off</td><td>On</td><td>Off</td></tr><tr><td>1</td><td>On</td><td>On</td><td>On</td><td>On</td></tr><tr><td>2</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr><tr><td>3</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr></table> <p><b>Headings legend:</b><br/><b>Pb2</b> = probe Pb2 status (<b>ok</b> = present; <b>ko</b> = in E2 error and <b>no</b> = absent); <b>day</b> = day mode; <b>night</b> = night mode; <b>Cn</b> = compressor on; <b>Cf</b> = compressor off.</p> <p><b>Status legend:</b><br/><b>T</b> = thermostat controlled fans; <b>On</b> = fans on; <b>Off</b>= fans off; <b>DCd</b> = Day duty cycle or <b>DCn</b> = Night duty cycle.</p> | Pb2         | H42   | FCo     | day |     | night |       | Cn | Cf | Cn | Cf | ok | y | 0 | T | Off | T | Off | 1 | T | T | T | T | 2 | T | DCd | T | DCn | 3 | T | DCd | T | DCn | ko | y | 0 | On | Off | On | Off | 1 | On | On | On | On | 2 | On | DCd | On | DCd | 3 | On | DCd | On | DCd | no | n | 0 | On | Off | On | Off | 1 | On | On | On | On | 2 | On | DCd | On | DCd | 3 | On | DCd | On | DCd | 0...3 | num | 1 | 1 | 1 | 1 |
| Pb2                | H42                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |             |       |         | FCo | day |       | night |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Cn          | Cf    | Cn      |     | Cf  |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| ok                 | y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0           | T     | Off     | T   | Off |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1           | T     | T       | T   | T   |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2           | T     | DCd     | T   | DCn |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3           | T     | DCd     | T   | DCn |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| ko                 | y                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0           | On    | Off     | On  | Off |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1           | On    | On      | On  | On  |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2           | On    | DCd     | On  | DCd |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3           | On    | DCd     | On  | DCd |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| no                 | n                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0           | On    | Off     | On  | Off |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 1           | On    | On      | On  | On  |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 2           | On    | DCd     | On  | DCd |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
|                    |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3           | On    | DCd     | On  | DCd |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>Fon</b>         | Day duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250     | min   | 0       | 0   | 0   | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>FoF</b>         | Day duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0...250     | min   | 0       | 0   | 0   | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>Fnn</b>         | Night duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0...250     | min   | 0       | 0   | 0   | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>FnF</b>         | Night duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0...250     | min   | 0       | 0   | 0   | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>ESF</b>         | "Night" mode activation.<br><ul style="list-style-type: none"><li><b>n(0)</b> = no</li><li><b>y(1)</b> = yes.</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | n/y         | flag  | n       | n   | n   | n     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>AL (Alarms)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |             |       |         |     |     |       |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>Att</b>         | Sets the absolute or relative value for parameters <b>HAL</b> and <b>LAL</b> .<br><ul style="list-style-type: none"><li><b>0</b> = absolute value</li><li><b>1</b> = relative value</li></ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0/1         | flag  | 0       | 0   | 0   | 0     |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |
| <b>AFd</b>         | Alarm differential.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0,1...25,0  | °C/°F | 2.0     | 2.0 | 2.0 | 2.0   |       |    |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |       |     |   |   |   |   |

| Parameter                       | Description                                                                                                                                                                                                                        | Range        | MU     | Default                    | AP1   | AP2   | AP3   |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|----------------------------|-------|-------|-------|
| HAL                             | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                         | LAL...302    | °C/°F  | 150.0                      | 150.0 | 150.0 | 150.0 |
| LAL                             | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                      | -67,0...HAL  | °C/°F  | -50.0                      | -50.0 | -50.0 | -50.0 |
| PAo                             | Alarm exclusion time when switching on the device, after a power failure.                                                                                                                                                          | 0...10       | min*10 | 0                          | 0     | 0     | 0     |
| dAo                             | Temperature alarm exclusion time after defrosting.                                                                                                                                                                                 | 0...999      | min    | 0                          | 0     | 0     | 0     |
| oAo                             | Alarm signaling delay after deactivation of the digital input (door closure). Alarm refers to high and low temperature alarms.                                                                                                     | 0...10       | hours  | 0                          | 0     | 0     | 0     |
| tdo                             | Door open alarm activation delay time.                                                                                                                                                                                             | 0...250      | min    | 0                          | 0     | 0     | 0     |
| tAo                             | Temperature alarm signaling delay time.                                                                                                                                                                                            | 0...250      | min    | 0                          | 0     | 0     | 0     |
| dAt                             | Defrost ended due to timeout alarm indication.<br><ul style="list-style-type: none"><li>n(0) = alarm not activated</li><li>y(1) = alarm activated.</li></ul>                                                                       | n/y          | flag   | 0                          | 0     | 0     | 0     |
| EAL                             | An external alarm inhibits the regulators.<br><ul style="list-style-type: none"><li>0 = does not inhibit the regulators</li><li>1 = compressor and defrost inhibited</li><li>2 = fans, compressor and defrost inhibited;</li></ul> | 0/1/2        | flag   | n                          | n     | n     | n     |
| AoP                             | Alarm output polarity.<br><ul style="list-style-type: none"><li>0 = NO (Normally open)</li><li>1 = NC (Normally closed).</li></ul>                                                                                                 | 0/1          | flag   | 1                          | 1     | 1     | 1     |
| rFt                             | Low refrigerant alarm signaling delay.                                                                                                                                                                                             | 0...250      | min    | 0 (non nelle applicazioni) |       |       |       |
| Lit (Lights and digital inputs) |                                                                                                                                                                                                                                    |              |        |                            |       |       |       |
| dOd                             | Digital input shuts off utilities.<br><ul style="list-style-type: none"><li>0 = disabled</li><li>1 = disables fans</li><li>2 = disables compressor</li><li>3 = disables fans and compressor.</li></ul>                             | 0...3        | num    | 0                          | 0     | 0     | 0     |
| dAd                             | Digital input activation delay                                                                                                                                                                                                     | 0...250      | min    | 0                          | 0     | 0     | 0     |
| dCo                             | Compressor switch-off delay from door opening.                                                                                                                                                                                     | 0...250      | min    | 0                          | 0     | 0     | 0     |
| AUP                             | Auxiliary (AUX) output activation when the door is opened.<br><ul style="list-style-type: none"><li>n(0) = disabled</li><li>y(1) = AUX output activation</li></ul>                                                                 | n/y          | flag   | n                          | n     | y     | n     |
| PrE (Pressure switch)           |                                                                                                                                                                                                                                    |              |        |                            |       |       |       |
| PEn                             | Number of errors permitted per minimum/maximum pressure switch input                                                                                                                                                               | 0...15       | num    | 0                          | 0     | 0     | 0     |
| PEi                             | Minimum/maximum pressure switch error count interval                                                                                                                                                                               | 1...99       | min    | 1                          | 1     | 1     | 1     |
| PEt                             | Compressor activation delay after pressure switch deactivation                                                                                                                                                                     | 0...255      | min    | 0                          | 0     | 0     | 0     |
| EnS (Energy Saving)             |                                                                                                                                                                                                                                    |              |        |                            |       |       |       |
| oSP                             | Temperature value to be added to the setpoint in the case of an enabled reduced set (Economy function).                                                                                                                            | -30.0...30.0 | °C/°F  | 0.0                        | 0.0   | 0.0   | 0.0   |
| odF                             | Differential offset during an energy saving cycle or reduced set.                                                                                                                                                                  | 0.1...30.0   | °C/°F  | 2.0                        | 2.0   | 2.0   | 2.0   |
| Add (Communication)             |                                                                                                                                                                                                                                    |              |        |                            |       |       |       |
| Adr                             | Modbus protocol device address.                                                                                                                                                                                                    | 1...247      | num    | 1 (not in applications)    |       |       |       |
| bAU                             | Modbus Baudrate selection.<br><ul style="list-style-type: none"><li>96 (0) = 9600 baud</li><li>192 (1) = 19200 baud</li><li>384 (2) = 38400 baud</li></ul>                                                                         | 96/192/384   | num    | 96 (not in applications)   |       |       |       |

| Parameter     | Description                                                                                                                                                                                                                                                                                                                                         | Range        | MU    | Default                 | AP1 | AP2 | AP3 |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|-------------------------|-----|-----|-----|
| Pty           | Modbus parity bit. <ul style="list-style-type: none"><li>n(0) = none</li><li>E(1) = even</li><li>o(2) = odd.</li></ul>                                                                                                                                                                                                                              | n/E/o        | num   | E (not in applications) |     |     |     |
| diS (Display) |                                                                                                                                                                                                                                                                                                                                                     |              |       |                         |     |     |     |
| dro           | Selects the unit of measure used when displaying the temperature read by the probes. (0 = °C, 1 = °F).<br><b>Note:</b> changing from °C to °F or vice-versa does NOT change the <b>SEt</b> , <b>diF</b> values, etc. (example: <b>SEt</b> = 10°C becomes 10°F).                                                                                     | 0/1          | flag  | 0                       | 0   | 0   | 0   |
| CA1 (!)       | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                                                                                                                                             | -30.0...30.0 | °C/°F | 0.0                     | 0.0 | 0.0 | 0.0 |
| CA2 (!)       | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                                                                                                                                             | -30.0...30.0 | °C/°F | 0.0                     | 0.0 | 0.0 | 0.0 |
| CAi           | Activation of the calibration value. <ul style="list-style-type: none"><li>0 = Adds the value to the temperature value displayed</li><li>1 = Adds the value to the temperature used by the regulators and not to the one displayed</li><li>2 = Adds the value to the temperature used by the regulators and to the temperature displayed.</li></ul> | 0/1/2        | num   | 2                       | 2   | 2   | 2   |
| LoC           | Keypad lock. <ul style="list-style-type: none"><li>n(0) = Keypad lock disabled</li><li>y(1) = Keypad lock enabled (on startup or when 30 seconds have passed since the last action carried out on the user interface)</li></ul>                                                                                                                     | n/y          | flag  | y                       | y   | y   | y   |
| ddd           | Selects the type of value to show on the display. <ul style="list-style-type: none"><li>0 = setpoint</li><li>1 = Pb1 probe</li><li>2 = Pb2 probe</li><li>3 = Pb3 probe.</li></ul>                                                                                                                                                                   | 0...3        | num   | 1                       | 1   | 1   | 1   |
| ddL           | Display mode during defrosting. <ul style="list-style-type: none"><li>0 = display the temperature read by Pb1</li><li>1 = inhibits reading on the value of Pb1 at the start of defrost and until the setpoint is reached</li><li>2 = displays label <b>dEF</b> during defrost until the setpoint is reached.</li></ul>                              | 0/1/2        | num   | 0                       | 0   | 0   | 0   |
| Ldd           | Display unlock timeout value - label <b>dEF</b>                                                                                                                                                                                                                                                                                                     | 0...250      | min   | 30                      | 30  | 30  | 30  |
| ndt           | Display with decimal point. <ul style="list-style-type: none"><li>n(0) = no</li><li>y(1) = yes.</li></ul>                                                                                                                                                                                                                                           | n/y          | flag  | y                       | y   | y   | y   |
| FSE           | Sets the value used by the low-pass filter to calculate the temperature value to be displayed. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = 200 (quicker response)</li><li>2 = 100</li><li>3 = 50</li><li>4 = 25</li><li>5 = 12</li><li>6 = 6</li><li>7 = 3 (slower response).</li></ul>                                          | 0...7        | num   | 0                       | 0   | 0   | 0   |
| FdS           | Filter disabling threshold.                                                                                                                                                                                                                                                                                                                         | -67.0...302  | °C/°F | 0.0                     | 0.0 | 0.0 | 0.0 |
| Ftt           | Time that has passed beyond the value of <b>FdS</b> before the filter is disabled.                                                                                                                                                                                                                                                                  | 0...250      | min   | 0                       | 0   | 0   | 0   |
| FHt           | Filter sampling interval.                                                                                                                                                                                                                                                                                                                           | 1...250      | s     | 1                       | 1   | 1   | 1   |
| PS1           | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                                                                                                                                       | 0...250      | num   | 0                       | 0   | 0   | 0   |
| PS2           | When enabled ( <b>PS2</b> ≠0) this is the access key for the installer parameters.                                                                                                                                                                                                                                                                  | 0...250      | num   | 15                      | 15  | 15  | 15  |

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Range     | MU   | Default | AP1 | AP2 | AP3 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|---------|-----|-----|-----|
| <b>CnF (Configuration)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |           |      |         |     |     |     |
| <b>H00</b>                 | Selects the probe type. <ul style="list-style-type: none"> <li>• <b>0</b> = PTC</li> <li>• <b>1</b> = NTC</li> <li>• <b>2</b> = Pt1000.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0/1/2     | flag | 1       | 1   | 1   | 1   |
| <b>H08</b>                 | Stand-by operating mode. <ul style="list-style-type: none"> <li>• <b>0</b> = display off; the regulators are active and the device signals possible alarms by reactivating the display</li> <li>• <b>1</b> = display off; the regulators and the alarms are blocked</li> <li>• <b>2</b> = the display shows the label "OFF"; the regulators and alarms are inhibited.</li> </ul>                                                                                                                                                                                                                                                                                                                                          | 0/1/2     | num  | 2       | 2   | 2   | 2   |
| <b>H11</b>                 | Configuration of digital input 1 ( <b>DI</b> )/ polarity. <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>±1</b> = defrost</li> <li>• <b>±2</b> = reduced set</li> <li>• <b>±3</b> = auxiliary</li> <li>• <b>±4</b> = door switch</li> <li>• <b>±5</b> = external alarm</li> <li>• <b>±6</b> = stand-by</li> <li>• <b>±7</b> = pressure switch</li> <li>• <b>±8</b> = deep cooling</li> <li>• <b>±9</b> = light</li> <li>• <b>±10</b> = energy saving</li> </ul> <b>Note:</b> <ul style="list-style-type: none"> <li>• the '+' sign indicates that the input is active if the contact is closed.</li> <li>• the '-' sign indicates that the input is active if the contact is open.</li> </ul> | -10...+10 | num  | 0       | 0   | 0   | 0   |
| <b>H21</b>                 | Configuration of digital output 1 ( <b>Out1</b> ). <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = compressor</li> <li>• <b>2</b> = defrost</li> <li>• <b>3</b> = evaporator fans</li> <li>• <b>4</b> = alarm</li> <li>• <b>5</b> = auxiliary</li> <li>• <b>6</b> = stand-by</li> <li>• <b>7</b> = light</li> <li>• <b>8</b> = buzzer</li> <li>• <b>9</b> = compressor 2</li> <li>• <b>10</b> = reserved</li> <li>• <b>11</b> = condenser fans</li> <li>• <b>12</b> = heater deadband control</li> <li>• <b>13</b> = reserved</li> </ul>                                                                                                                                               | 0...13    | num  | 1       | 1   | 1   | 1   |
| <b>H22</b>                 | Configuration of digital output 2 ( <b>Out2</b> ). <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = compressor</li> <li>• <b>2</b> = defrost</li> <li>• <b>3</b> = evaporator fans</li> <li>• <b>4</b> = alarm</li> <li>• <b>5</b> = auxiliary</li> <li>• <b>6</b> = stand-by</li> <li>• <b>7</b> = light</li> <li>• <b>8</b> = buzzer</li> <li>• <b>9</b> = compressor 2</li> <li>• <b>10</b> = reserved</li> <li>• <b>11</b> = condenser fans</li> <li>• <b>12</b> = heater deadband control.</li> </ul>                                                                                                                                                                              | 0...12    | num  | 2       | 2   | 2   | 2   |
| <b>H23</b>                 | Configuration of digital output 3 ( <b>Out3</b> ). Same as <b>H22</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | 0...12    | num  | 3       | 3   | 3   | 3   |

| Parameter       | Description                                                                                                                                                                                                                                                       | Range | MU   | Default                 | AP1 | AP2 | AP3 |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|-------------------------|-----|-----|-----|
| H25             | Enables/disables the buzzer. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = enabled.</li></ul>                                                                                                                                                    | 0/1   | flag | 1                       | 1   | 1   | 1   |
| H31             | Configuration of ⚠ key. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = defrost</li><li>2 = auxiliary</li><li>3 = reduced set</li><li>4 = stand-by</li><li>5 = reserved</li><li>6 = reserved</li><li>7 = deep cooling</li><li>8 = light.</li></ul> | 0...8 | num  | 1                       | 1   | 1   | 1   |
| H32             | Configuration of ⚡ key. Same as H31.                                                                                                                                                                                                                              | 0...8 | num  | 0                       | 0   | 0   | 0   |
| H33             | Configuration of ⚡ key. Same as H31.                                                                                                                                                                                                                              | 0...8 | num  | 4                       | 4   | 4   | 4   |
| H34             | Configuration of ⚡ key. Same as H31.                                                                                                                                                                                                                              | 0...8 | num  | 0                       | 0   | 0   | 0   |
| H35             | Configuration of ⚡ key. Same as H31.                                                                                                                                                                                                                              | 0...8 | num  | 0                       | 0   | 0   | 0   |
| H42             | Probe Pb2 present. <ul style="list-style-type: none"><li>n(0) = not present</li><li>y(1) = present.</li></ul>                                                                                                                                                     | n/y   | flag | y                       | y   | y   | y   |
| H60             | Display selected application.<br>0 = disabled; 1 = AP1; 2 = AP2; 3 = AP3.                                                                                                                                                                                         | 0...3 | num  | 1 (not in applications) |     |     |     |
| tAb             | Reserved: read-only parameter.                                                                                                                                                                                                                                    | /     | /    | / (not in applications) |     |     |     |
| FPr (UNICARD)   |                                                                                                                                                                                                                                                                   |       |      |                         |     |     |     |
| UL              | Transfer of the programming parameters from the device to the UNICARD.                                                                                                                                                                                            | /     | /    | - (not in applications) |     |     |     |
| Fr              | UNICARD formatting. Deletes all data on the UNICARD.<br><b>Note:</b> the use of parameter Fr results in the loss of all data entered. This operation cannot be reversed.                                                                                          | /     | /    | - (not in applications) |     |     |     |
| FnC (Functions) |                                                                                                                                                                                                                                                                   |       |      |                         |     |     |     |
| tAL             | Force alarm acknowledgment                                                                                                                                                                                                                                        | /     | /    | - (not in applications) |     |     |     |
| rAP             | Reset pressure switch alarms                                                                                                                                                                                                                                      | /     | /    | - (not in applications) |     |     |     |
| Cnt             | Reset TelevisAir diagnostic counters (see Reset TelevisAir diagnostic counters)                                                                                                                                                                                   | /     | /    | - (not in applications) |     |     |     |

**Note:** if one or more parameters in folder **CnF** or marked with (!) are changed, the device must be switched off and then on again to make sure it works properly.

# Parameters IDNext 974 P/C

## User parameters IDNext 974 P/C

| Parameter | Description                                                                                                                                                                                                                  | Range                     | MU    | Default                 | AP1   | AP2   | AP3   |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-------------------------|-------|-------|-------|
| SEt       | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0                     | 3.0   | 0.0   | -18.0 |
| diF       | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value. | 0.1...30.0                | °C/°F | 2.0                     | 2.0   | 2.0   | 2.0   |
| LSE       | Minimum setpoint value.                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0                   | -55.0 | -55.0 | -55.0 |
| HSE       | Maximum setpoint value.                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0                   | 140.0 | 140.0 | 140.0 |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                              | 1...250                   | min   | 30                      | 30    | 30    | 30    |
| dS1       | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                 | -67.0...302               | °C/°F | 8.0                     | 8.0   | 8.0   | 0.0   |
| dS2       | Evaporator 2 defrost end temperature (measured by Pb3 if <b>H43</b> = 2EP)                                                                                                                                                   | -67.0...302               | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| dit       | Time interval between one defrost and the next                                                                                                                                                                               | 0...250                   | hours | 6                       | 6     | 6     | 6     |
| FSt       | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                            | -67.0...320               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| Fdt       | Fan activation delay time after a defrost.                                                                                                                                                                                   | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dt        | Dripping time.                                                                                                                                                                                                               | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dFd       | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes (fan excluded - off).</li> </ul>                       | n/y                       | flag  | y                       | y     | y     | y     |
| HAL       | Maximum temperature alarm. Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                      | <b>LAL</b> ...302         | °C/°F | 150.0                   | 150.0 | 150.0 | 150.0 |
| LAL       | Minimum temperature alarm. Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                   | -67.0... <b>HAL</b>       | °C/°F | -50.0                   | -50.0 | -50.0 | -50.0 |
| CA1 (!)   | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| CA2 (!)   | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| PS1       | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                | 0...250                   | num   | 0                       | 0     | 0     | 0     |
| H42       | Probe Pb2 present. <ul style="list-style-type: none"> <li><b>n</b>(0) = not present</li> <li><b>y</b>(1) = present.</li> </ul>                                                                                               | n/y                       | flag  | y                       | y     | y     | y     |
| tAb       | Reserved: read-only parameter.                                                                                                                                                                                               | /                         | /     | / (not in applications) |       |       |       |

**Note:** the "User" menu parameters also include **PA2**, which allows access to the "Installer" menu.

**Note:** for the full list of parameters, see the section "**Installer parameters**".

## Installer parameters IDNext 974 P/C

| Parameter              | Description                                                                                                                                                                                                                                                                                          | Range                     | MU    | Default | AP1   | AP2   | AP3   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|---------|-------|-------|-------|
| <b>SEt</b>             | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                                                                                                     | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0     | 3.0   | 0.0   | -18.0 |
| <b>CP (Compressor)</b> |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>diF</b>             | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value.                                                                         | 0.1...30.0                | °C/°F | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>LSE</b>             | Minimum setpoint value.                                                                                                                                                                                                                                                                              | -67.0... <b>HSE</b>       | °C/°F | -55.0   | -55.0 | -55.0 | -55.0 |
| <b>HSE</b>             | Maximum setpoint value.                                                                                                                                                                                                                                                                              | <b>LSE</b> ...302         | °C/°F | 140.0   | 140.0 | 140.0 | 140.0 |
| <b>HC</b>              | The regulator implements either cold operation (set "C(0)") or for hot (set "H(1)").                                                                                                                                                                                                                 | C/H                       | flag  | 0       | 0     | 0     | 0     |
| <b>ont</b>             | Regulator power-on time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Ont</b> = 1 and <b>Oft</b> = 0 compressor is always on</li> <li>if <b>Ont</b> = 1 and <b>Oft</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                     | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>oFt</b>             | Regulator power-off time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Oft</b> = 1 and <b>Ont</b> = 0 compressor is always off</li> <li>if <b>Oft</b> = 1 and <b>Ont</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                   | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>don</b>             | Compressor relay activation delay time after request                                                                                                                                                                                                                                                 | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>doF</b>             | Delay time after power-off: the delay time indicated must elapse between deactivation of the compressor relay and the next power-on.                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dbi</b>             | Delay time between power-ons; the delay time indicated must elapse between two consecutive compressor power-ons.                                                                                                                                                                                     | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>Cit</b>             | Minimum compressor activation time before it can be deactivated. If <b>Cit</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CAt</b>             | Maximum compressor activation time before it can be deactivated. If <b>CAt</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>odo</b>             | Delay in activating outputs after the device is powered on or after a power failure. 0 = not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcS</b>             | "Deep Cooling Cycle" setpoint                                                                                                                                                                                                                                                                        | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |
| <b>tdC</b>             | "Deep Cooling Cycle" duration                                                                                                                                                                                                                                                                        | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcc</b>             | Defrost activation delay after a "Deep Cooling Cycle"                                                                                                                                                                                                                                                | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CP2</b>             | Compressor 2 activation delay.                                                                                                                                                                                                                                                                       | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dFA</b>             | Condenser fan and compressor activation delay from the request.                                                                                                                                                                                                                                      | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>dEF (Defrost)</b>   |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>dtY</b>             | Type of defrost.<br><ul style="list-style-type: none"> <li>0 = electric defrost or due to stoppage - compressor OFF during defrost</li> <li>1 = cycle inversion (hot gas) defrost; compressor on during defrost</li> <li>2 = defrost with "Free" mode; defrost independent of compressor.</li> </ul> | 0/1/2                     | num   | 0       | 0     | 0     | 0     |
| <b>doH</b>             | Defrost cycle activation delay from the call                                                                                                                                                                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dEt</b>             | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                                                                                                      | 1...250                   | min   | 30      | 30    | 30    | 30    |
| <b>dS1</b>             | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                                                                                         | -67.0...302               | °C/°F | 8.0     | 8.0   | 8.0   | 0.0   |
| <b>dS2</b>             | Evaporator 2 defrost end temperature (measured by Pb3 if <b>H43</b> = 2EP)                                                                                                                                                                                                                           | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |

| Parameter  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Range       | MU    | Default | AP1 | AP2 | AP3 |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>dPo</b> | Defrost activation request at power-on, if the temperature measured by Pb2 allows.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                 | n/y         | flag  | n       | n   | n   | n   |
| <b>tCd</b> | Minimum period of time with the compressor ON or OFF before defrost is activated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -127...127  | min   | 0       | 0   | 0   | 0   |
| <b>Cod</b> | Time with the compressor OFF before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>dMr</b> | Enables the defrost count reset in the case of manual defrosting.<br><ul style="list-style-type: none"> <li><b>n</b> = count reset does not take place</li> <li><b>y</b> = count reset takes place</li> </ul>                                                                                                                                                                                                                                                                                                                                                        | n/y         | flag  | n       | n   | n   | n   |
| <b>d00</b> | Compressor running time before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0...250     | hours | 0       | 0   | 0   | 0   |
| <b>d01</b> | <b>d00</b> unit of measure.<br><ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>dit</b> | Time interval between one defrost and the next                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0...250     | hours | 6       | 6   | 6   | 6   |
| <b>d11</b> | <b>dit</b> unit of measure.<br><ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>d20</b> | Can be used to activate the defrost when the compressor is off.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost is not activated.</li> <li><b>1</b> = enabled. Defrost is activated when the compressor is off.</li> </ul>                                                                                                                                                                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d40</b> | Enables/disables use of probe Pb2.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost does not take Pb2 into account</li> <li><b>1</b> = enabled. Defrost runs according to the value read by Pb2 (only refers to defrost with threshold)</li> </ul>                                                                                                                                                                                                                                                                                             | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d41</b> | Sets the defrost activation threshold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>d42</b> | Sets the maximum time for which the evaporator can remain under the threshold <b>d41</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>d43</b> | Sets the type of time count in which the evaporator temperature remains under the threshold value.<br><ul style="list-style-type: none"> <li><b>0</b> = count independent of the compressor status</li> <li><b>1</b> = count with compressor on (when the compressor is off the count begins again)</li> <li><b>2</b> = count independent of the compressor status. The count stops when the temperature rises above the threshold <b>d41</b></li> <li><b>3</b> = count with compressor on and until the temperature rises above the threshold <b>d41</b></li> </ul> | 0...3       | num   | 0       | 0   | 0   | 0   |
| <b>d44</b> | Sets the threshold management mode.<br><ul style="list-style-type: none"> <li><b>0</b> = absolute value (for example: <b>d41</b> = -25°C means that the threshold temperature is exactly -25°C)</li> <li><b>1</b> = relative value (negative offset, relative to the value measured by the defrost probe Pb2 (if <b>d40</b> = 1) at the end of the first cooling cycle or on power-on)</li> </ul>                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d90</b> | Sets the defrost mode with RTC.<br><ul style="list-style-type: none"> <li><b>0</b> = RTC disabled</li> <li><b>1</b> = Reserved</li> <li><b>2</b> = RTC at fixed intervals (<b>d91</b>)</li> <li><b>3</b> = Regular RTC (<b>d94</b>)</li> </ul>                                                                                                                                                                                                                                                                                                                       | 0...3       | num   | -       | -   | -   | -   |

| Parameter  | Description                                                                                                                                                                                                                                   | Range       | MU    | Default                 | AP1 | AP2 | AP3 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|-------------------------|-----|-----|-----|
| d91        | Sets the number of daily defrosts (only if d90=2)                                                                                                                                                                                             | 0...255     | num   | -                       | -   | -   | -   |
| d92        | Sets the first weekend/holiday day. <ul style="list-style-type: none"><li>0 = Sunday</li><li>1 = Monday</li><li>2 = Tuesday</li><li>3 = Wednesday</li><li>4 = Thursday</li><li>5 = Friday</li><li>6 = Saturday</li><li>7 = Disabled</li></ul> | 0...7       | num   | -                       | -   | -   | -   |
| d93        | Sets the second weekend/holiday day. Same as d92.                                                                                                                                                                                             | 0...7       | num   | -                       | -   | -   | -   |
| d94        | Sets the duration of the regular defrost in days (only if d90=3).                                                                                                                                                                             | 1...7       | num   | -                       | -   | -   | -   |
| d1H        | 1st weekday defrost start hour. <ul style="list-style-type: none"><li>0...23 = start hour</li><li>24 = disabled</li></ul>                                                                                                                     | 0...24      | hours | 0 (not in applications) |     |     |     |
| d1n        | 1st weekday defrost start minutes.                                                                                                                                                                                                            | 0...59      | min   | 0 (not in applications) |     |     |     |
| F1H        | 1st weekend/holiday defrost start hour. <ul style="list-style-type: none"><li>0...23 = start hour</li><li>24 = disabled</li></ul>                                                                                                             | 0...24      | hours | 0 (not in applications) |     |     |     |
| F1n        | 1st weekend/holiday defrost start minutes.                                                                                                                                                                                                    | 0...59      | min   | 0 (not in applications) |     |     |     |
| Fan (Fans) |                                                                                                                                                                                                                                               |             |       |                         |     |     |     |
| FPt        | Sets whether parameter FSt is expressed as an absolute temperature value or as a value relative to the Setpoint. <ul style="list-style-type: none"><li>0 = absolute</li><li>1 = relative.</li></ul>                                           | 0/1         | flag  | 0                       | 0   | 0   | 0   |
| FSt        | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                                             | -67.0...320 | °C/°F | 8.0                     | 8.0 | 8.0 | 8.0 |
| FAd        | Evaporator fan trigger differential.                                                                                                                                                                                                          | 0.1...25.0  | °C/°F | 2.0                     | 2.0 | 2.0 | 2.0 |
| Fdt        | Fan activation delay time after a defrost.                                                                                                                                                                                                    | 0...250     | min   | 0                       | 0   | 0   | 0   |
| dt         | Dripping time.                                                                                                                                                                                                                                | 0...250     | min   | 0                       | 0   | 0   | 0   |
| dFd        | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"><li>n(0) = no</li><li>y(1) = yes (fan excluded - off).</li></ul>                                                         | n/y         | flag  | y                       | y   | y   | y   |

| Parameter   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Range               | MU     | Default | AP1   | AP2   | AP3   |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|--------|---------|-------|-------|-------|-----|-----|-----|-----|-----|-------|--|-------|----|----|----|----|---|---|---|-----|---|-----|---|---|---|---|---|---|---|-----|---|-----|---|---|-----|---|-----|----|---|---|----|-----|----|-----|---|----|----|----|----|---|----|-----|----|-----|---|----|-----|----|-----|----|---|---|----|-----|----|-----|---|----|----|----|----|---|----|-----|----|-----|---|----|-----|----|-----|
| FCo         | Evaporator fan operating mode.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0...3               | num    | 1       | 1     | 1     | 1     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             | <table><tr><th rowspan="2">Pb2</th><th rowspan="2">H42</th><th rowspan="2">FCo</th><th colspan="2">day</th><th colspan="2">night</th></tr><tr><th>Cn</th><th>Cf</th><th>Cn</th><th>Cf</th></tr><tr><td rowspan="4">ok</td><td rowspan="4">y</td><td>0</td><td>T</td><td>Off</td><td>T</td><td>Off</td></tr><tr><td>1</td><td>T</td><td>T</td><td>T</td><td>T</td></tr><tr><td>2</td><td>T</td><td>DCd</td><td>T</td><td>DCn</td></tr><tr><td>3</td><td>T</td><td>DCd</td><td>T</td><td>DCn</td></tr><tr><td rowspan="4">ko</td><td rowspan="4">y</td><td>0</td><td>On</td><td>Off</td><td>On</td><td>Off</td></tr><tr><td>1</td><td>On</td><td>On</td><td>On</td><td>On</td></tr><tr><td>2</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr><tr><td>3</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr><tr><td rowspan="4">no</td><td rowspan="4">n</td><td>0</td><td>On</td><td>Off</td><td>On</td><td>Off</td></tr><tr><td>1</td><td>On</td><td>On</td><td>On</td><td>On</td></tr><tr><td>2</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr><tr><td>3</td><td>On</td><td>DCd</td><td>On</td><td>DCd</td></tr></table> |                     |        |         |       |       |       | Pb2 | H42 | FCo | day |     | night |  | Cn    | Cf | Cn | Cf | ok | y | 0 | T | Off | T | Off | 1 | T | T | T | T | 2 | T | DCd | T | DCn | 3 | T | DCd | T | DCn | ko | y | 0 | On | Off | On | Off | 1 | On | On | On | On | 2 | On | DCd | On | DCd | 3 | On | DCd | On | DCd | no | n | 0 | On | Off | On | Off | 1 | On | On | On | On | 2 | On | DCd | On | DCd | 3 | On | DCd | On | DCd |
|             | Pb2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                     |        |         |       |       |       |     |     |     | H42 | FCo | day   |  | night |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       | Cn  | Cf  | Cn  |     |     | Cf    |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             | ok                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     |        |         |       |       |       | y   | 0   | T   | Off | T   | Off   |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     | 1   | T   | T   | T   | T     |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     | 2   | T   | DCd | T   | DCn   |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     | 3   | T   | DCd | T   | DCn   |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             | ko                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     |        |         |       |       |       | y   | 0   | On  | Off | On  | Off   |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     | 1   | On  | On  | On  | On    |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     | 2   | On  | DCd | On  | DCd   |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     | 3   | On  | DCd | On  | DCd   |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             | no                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                     |        |         |       |       |       | n   | 0   | On  | Off | On  | Off   |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     | 1   | On  | On  | On  | On    |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     | 2   | On  | DCd | On  | DCd   |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     | 3   | On  | DCd | On  | DCd   |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
|             | <b>Headings legend:</b><br><b>Pb2</b> = probe Pb2 status ( <b>ok</b> = present; <b>ko</b> = in E2 error and <b>no</b> = absent); <b>day</b> = day mode; <b>night</b> = night mode; <b>Cn</b> = compressor on; <b>Cf</b> = compressor off.<br><br><b>Status legend:</b><br><b>T</b> = thermostat controlled fans; <b>On</b> = fans on; <b>Off</b> = fans off; <b>DCd</b> = Day duty cycle or <b>DCn</b> = Night duty cycle.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                     |        |         |       |       |       |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| Fon         | Day duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0...250             | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| FoF         | Day duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0...250             | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| Fnn         | Night duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0...250             | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| FnF         | Night duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | 0...250             | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| ESF         | "Night" mode activation.<br>• n(0) = no<br>• y(1) = yes.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | n/y                 | flag   | n       | n     | n     | n     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| AL (Alarms) |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                     |        |         |       |       |       |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| Att         | Sets the absolute or relative value for parameters <b>HAL</b> and <b>LAL</b> .<br>• 0 = absolute value<br>• 1 = relative value                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0/1                 | flag   | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| AFd         | Alarm differential.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | 0,1...25,0          | °C/°F  | 2.0     | 2.0   | 2.0   | 2.0   |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| HAL         | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>LAL</b> ...302   | °C/°F  | 150.0   | 150.0 | 150.0 | 150.0 |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| LAL         | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | -67,0... <b>HAL</b> | °C/°F  | -50.0   | -50.0 | -50.0 | -50.0 |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| PAo         | Alarm exclusion time when switching on the device, after a power failure.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0...10              | min*10 | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| dAo         | Temperature alarm exclusion time after defrosting.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | 0...999             | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| oAo         | Alarm signaling delay after deactivation of the digital input (door closure). Alarm refers to high and low temperature alarms.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0...10              | hours  | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| tdo         | Door open alarm activation delay time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0...250             | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |
| tAo         | Temperature alarm signaling delay time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...250             | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |    |   |   |   |     |   |     |   |   |   |   |   |   |   |     |   |     |   |   |     |   |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |    |   |   |    |     |    |     |   |    |    |    |    |   |    |     |    |     |   |    |     |    |     |

| Parameter                       | Description                                                                                                                                                                                                                                                     | Range        | MU    | Default                    | AP1 | AP2 | AP3 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|----------------------------|-----|-----|-----|
| dAt                             | Defrost ended due to timeout alarm indication. <ul style="list-style-type: none"><li>n(0) = alarm not activated</li><li>y(1) = alarm activated.</li></ul>                                                                                                       | n/y          | flag  | 0                          | 0   | 0   | 0   |
| EAL                             | An external alarm inhibits the regulators. <ul style="list-style-type: none"><li>0 = does not inhibit the regulators</li><li>1 = compressor and defrost inhibited</li><li>2 = fans, compressor and defrost inhibited;</li></ul>                                 | 0/1/2        | flag  | n                          | n   | n   | n   |
| AoP                             | Alarm output polarity. <ul style="list-style-type: none"><li>0 = NO (Normally open)</li><li>1 = NC (Normally closed).</li></ul>                                                                                                                                 | 0/1          | flag  | 1                          | 1   | 1   | 1   |
| SA3                             | Probe 3 alarm setpoint.                                                                                                                                                                                                                                         | -67,0...302  | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| dA3                             | Probe 3 alarm differential.                                                                                                                                                                                                                                     | 0.1...30.0   | °C/°F | 1.0                        | 1.0 | 1.0 | 1.0 |
| rFt                             | Low refrigerant alarm signaling delay.                                                                                                                                                                                                                          | 0...250      | min   | 0 (non nelle applicazioni) |     |     |     |
| Lit (Lights and digital inputs) |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| dOd                             | Digital input shuts off utilities. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = disables fans</li><li>2 = disables compressor</li><li>3 = disables fans and compressor.</li></ul>                                                             | 0...3        | num   | 0                          | 0   | 0   | 0   |
| dAd                             | Digital input activation delay                                                                                                                                                                                                                                  | 0...250      | min   | 0                          | 0   | 0   | 0   |
| dCo                             | Compressor switch-off delay from door opening.                                                                                                                                                                                                                  | 0...250      | min   | 0                          | 0   | 0   | 0   |
| AUP                             | Auxiliary (AUX) output activation when the door is opened. <ul style="list-style-type: none"><li>n(0) = disabled</li><li>y(1) = AUX output activation</li></ul>                                                                                                 | n/y          | flag  | n                          | n   | n   | n   |
| PrE (Pressure switch)           |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| PEn                             | Number of errors permitted per minimum/maximum pressure switch input                                                                                                                                                                                            | 0...15       | num   | 0                          | 0   | 0   | 0   |
| PEi                             | Minimum/maximum pressure switch error count interval                                                                                                                                                                                                            | 1...99       | min   | 1                          | 1   | 1   | 1   |
| PEt                             | Compressor activation delay after pressure switch deactivation                                                                                                                                                                                                  | 0...255      | min   | 0                          | 0   | 0   | 0   |
| EnS (Energy Saving)             |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| oSP                             | Temperature value to be added to the setpoint in the case of an enabled reduced set (Economy function).                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| odF                             | Differential offset during an energy saving cycle or reduced set.                                                                                                                                                                                               | 0.1...30.0   | °C/°F | 2.0                        | 2.0 | 2.0 | 2.0 |
| Add (Communication)             |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| Adr                             | Modbus protocol device address.                                                                                                                                                                                                                                 | 1...247      | num   | 1 (not in applications)    |     |     |     |
| bAU                             | Modbus Baudrate selection. <ul style="list-style-type: none"><li>96 (0) = 9600 baud</li><li>192 (1) = 19200 baud</li><li>384 (2) = 38400 baud</li></ul>                                                                                                         | 96/192/384   | num   | 96 (not in applications)   |     |     |     |
| Pty                             | Modbus parity bit. <ul style="list-style-type: none"><li>n(0) = none</li><li>E(1) = even</li><li>o(2) = odd.</li></ul>                                                                                                                                          | n/E/o        | num   | E (not in applications)    |     |     |     |
| diS (Display)                   |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| dro                             | Selects the unit of measure used when displaying the temperature read by the probes. (0 = °C, 1 = °F).<br><b>Note:</b> changing from °C to °F or vice-versa does NOT change the <b>SEt</b> , <b>diF</b> values, etc. (example: <b>SEt</b> = 10°C becomes 10°F). | 0/1          | flag  | 0                          | 0   | 0   | 0   |
| CA1 (!)                         | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                     | Range        | MU    | Default | AP1 | AP2 | AP3 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|---------|-----|-----|-----|
| <b>CA2 (!)</b>             | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>CA3 (!)</b>             | Positive or negative temperature value to be added to the value of Pb3.                                                                                                                                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>CAi</b>                 | Activation of the calibration value.<br><ul style="list-style-type: none"> <li><b>0</b> = Adds the value to the temperature value displayed</li> <li><b>1</b> = Adds the value to the temperature used by the regulators and not to the one displayed</li> <li><b>2</b> = Adds the value to the temperature used by the regulators and to the temperature displayed.</li> </ul> | 0/1/2        | num   | 2       | 2   | 2   | 2   |
| <b>LoC</b>                 | Keypad lock.<br><ul style="list-style-type: none"> <li><b>n(0)</b> = Keypad lock disabled</li> <li><b>y(1)</b> = Keypad lock enabled (on startup or when 30 seconds have passed since the last action carried out on the user interface)</li> </ul>                                                                                                                             | n/y          | flag  | y       | y   | y   | y   |
| <b>ddd</b>                 | Selects the type of value to show on the display.<br><ul style="list-style-type: none"> <li><b>0</b> = setpoint</li> <li><b>1</b> = Pb1 probe</li> <li><b>2</b> = Pb2 probe</li> <li><b>3</b> = Pb3 probe.</li> </ul>                                                                                                                                                           | 0...3        | num   | 1       | 1   | 1   | 1   |
| <b>ddL</b>                 | Display mode during defrosting.<br><ul style="list-style-type: none"> <li><b>0</b> = display the temperature read by Pb1</li> <li><b>1</b> = inhibits reading on the value of Pb1 at the start of defrost and until the setpoint is reached</li> <li><b>2</b> = displays label <b>dEF</b> during defrost until the setpoint is reached.</li> </ul>                              | 0/1/2        | num   | 0       | 0   | 0   | 0   |
| <b>Ldd</b>                 | Display unlock timeout value - label <b>dEF</b>                                                                                                                                                                                                                                                                                                                                 | 0...250      | min   | 30      | 30  | 30  | 30  |
| <b>ndt</b>                 | Display with decimal point.<br><ul style="list-style-type: none"> <li><b>n(0)</b> = no</li> <li><b>y(1)</b> = yes.</li> </ul>                                                                                                                                                                                                                                                   | n/y          | flag  | y       | y   | y   | y   |
| <b>FSE</b>                 | Sets the value used by the low-pass filter to calculate the temperature value to be displayed.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled</li> <li><b>1</b> = 200 (quicker response)</li> <li><b>2</b> = 100</li> <li><b>3</b> = 50</li> <li><b>4</b> = 25</li> <li><b>5</b> = 12</li> <li><b>6</b> = 6</li> <li><b>7</b> = 3 (slower response).</li> </ul>  | 0...7        | num   | 0       | 0   | 0   | 0   |
| <b>FdS</b>                 | Filter disabling threshold.                                                                                                                                                                                                                                                                                                                                                     | -67.0...302  | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>Ftt</b>                 | Time that has passed beyond the value of <b>FdS</b> before the filter is disabled.                                                                                                                                                                                                                                                                                              | 0...250      | min   | 0       | 0   | 0   | 0   |
| <b>FHt</b>                 | Filter sampling interval.                                                                                                                                                                                                                                                                                                                                                       | 1...250      | s     | 1       | 1   | 1   | 1   |
| <b>PS1</b>                 | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                                                                                                                                                                   | 0...250      | num   | 0       | 0   | 0   | 0   |
| <b>PS2</b>                 | When enabled ( <b>PS2</b> ≠0) this is the access key for the installer parameters.                                                                                                                                                                                                                                                                                              | 0...250      | num   | 15      | 15  | 15  | 15  |
| <b>CnF (Configuration)</b> |                                                                                                                                                                                                                                                                                                                                                                                 |              |       |         |     |     |     |
| <b>H00</b>                 | Selects the probe type.<br><ul style="list-style-type: none"> <li><b>0</b> = PTC</li> <li><b>1</b> = NTC</li> <li><b>2</b> = Pt1000.</li> </ul>                                                                                                                                                                                                                                 | 0/1/2        | flag  | 1       | 1   | 1   | 1   |

| Parameter | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Range     | MU  | Default | AP1 | AP2 | AP3 |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|---------|-----|-----|-----|
| H08       | Stand-by operating mode. <ul style="list-style-type: none"> <li>0 = display off; the regulators are active and the device signals possible alarms by reactivating the display</li> <li>1 = display off; the regulators and the alarms are blocked</li> <li>2 = the display shows the label "OFF"; the regulators and alarms are inhibited.</li> </ul>                                                                                                                                                                                                                                                              | 0/1/2     | num | 2       | 2   | 2   | 2   |
| H11       | Configuration of digital input 1 ( <b>DI</b> )/ polarity. <ul style="list-style-type: none"> <li>0 = disabled</li> <li>±1 = defrost</li> <li>±2 = reduced set</li> <li>±3 = auxiliary</li> <li>±4 = door switch</li> <li>±5 = external alarm</li> <li>±6 = stand-by</li> <li>±7 = pressure switch</li> <li>±8 = deep cooling</li> <li>±9 = light</li> <li>±10 = energy saving</li> </ul> <b>Note:</b> <ul style="list-style-type: none"> <li>the '+' sign indicates that the input is active if the contact is closed.</li> <li>the '-' sign indicates that the input is active if the contact is open.</li> </ul> | -10...+10 | num | 0       | 0   | 0   | 0   |
| H21       | Configuration of digital output 1 ( <b>Out1</b> ). <ul style="list-style-type: none"> <li>0 = disabled</li> <li>1 = compressor</li> <li>2 = defrost</li> <li>3 = evaporator fans</li> <li>4 = alarm</li> <li>5 = auxiliary</li> <li>6 = stand-by</li> <li>7 = light</li> <li>8 = reserved</li> <li>9 = compressor 2</li> <li>10 = evaporator 2 defrost</li> <li>11 = condenser fans</li> <li>12 = heater deadband control</li> <li>13 = reserved</li> </ul>                                                                                                                                                        | 0...13    | num | 1       | 1   | 1   | 1   |
| H22       | Configuration of digital output 2 ( <b>Out2</b> ). <ul style="list-style-type: none"> <li>0 = disabled</li> <li>1 = compressor</li> <li>2 = defrost</li> <li>3 = evaporator fans</li> <li>4 = alarm</li> <li>5 = auxiliary</li> <li>6 = stand-by</li> <li>7 = light</li> <li>8 = reserved</li> <li>9 = compressor 2</li> <li>10 = evaporator 2 defrost</li> <li>11 = condenser fans</li> <li>12 = heater deadband control.</li> </ul>                                                                                                                                                                              | 0...12    | num | 2       | 2   | 2   | 2   |
| H23       | Configuration of digital output 3 ( <b>Out3</b> ). Same as H22.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...12    | num | 3       | 3   | 3   | 3   |

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                       | Range   | MU    | Default                 | AP1 | AP2 | AP3 |
|---------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|-------------------------|-----|-----|-----|
| H31                 | Configuration of  key. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = defrost</li><li>2 = auxiliary</li><li>3 = reduced set</li><li>4 = stand-by</li><li>5 = reserved</li><li>6 = reserved</li><li>7 = deep cooling</li><li>8 = light.</li></ul> | 0...8   | num   | 1                       | 1   | 1   | 1   |
| H32                 | Configuration of  key. Same as H31.                                                                                                                                                                                                                              | 0...8   | num   | 0                       | 0   | 0   | 0   |
| H33                 | Configuration of  key. Same as H31.                                                                                                                                                                                                                              | 0...8   | num   | 4                       | 4   | 4   | 4   |
| H34                 | Configuration of  key. Same as H31.                                                                                                                                                                                                                              | 0...8   | num   | 0                       | 0   | 0   | 0   |
| H35                 | Configuration of  key. Same as H31.                                                                                                                                                                                                                              | 0...8   | num   | 0                       | 0   | 0   | 0   |
| H42                 | Probe Pb2 present. <ul style="list-style-type: none"><li>n(0) = not present</li><li>y(1) = present.</li></ul>                                                                                                                                                                                                                                     | n/y     | flag  | y                       | y   | y   | y   |
| H43                 | Probe Pb3 present. <ul style="list-style-type: none"><li>n(0) = not present</li><li>y(1) = present</li><li>2EP(2) = second evaporator.</li></ul>                                                                                                                                                                                                  | n/y/2EP | flag  | n                       | n   | n   | n   |
| H48                 | RTC (Real Time Clock) present. <ul style="list-style-type: none"><li>0 = no RTC</li><li>1 = RTC present.</li></ul>                                                                                                                                                                                                                                | 0/1     | flag  | 0                       | 0   | 0   | 0   |
| H60                 | Display selected application.<br>0 = disabled; 1 = AP1; 2 = AP2; 3 = AP3.                                                                                                                                                                                                                                                                         | 0...3   | num   | 1 (not in applications) |     |     |     |
| tAb                 | Reserved: read-only parameter.                                                                                                                                                                                                                                                                                                                    | /       | /     | / (not in applications) |     |     |     |
| FPr (UNICARD)       |                                                                                                                                                                                                                                                                                                                                                   |         |       |                         |     |     |     |
| UL                  | Transfer of the programming parameters from the device to the UNICARD.                                                                                                                                                                                                                                                                            | /       | /     | - (not in applications) |     |     |     |
| Fr                  | UNICARD formatting. Deletes all data on the UNICARD.<br><b>Note:</b> the use of parameter <b>Fr</b> results in the loss of all data entered. This operation cannot be reversed.                                                                                                                                                                   | /       | /     | - (not in applications) |     |     |     |
| FnC (Functions)     |                                                                                                                                                                                                                                                                                                                                                   |         |       |                         |     |     |     |
| tAL                 | Force alarm acknowledgment                                                                                                                                                                                                                                                                                                                        | /       | /     | - (not in applications) |     |     |     |
| rAP                 | Reset pressure switch alarms                                                                                                                                                                                                                                                                                                                      | /       | /     | - (not in applications) |     |     |     |
| Cnt                 | Reset TelevisAir diagnostic counters (see Reset TelevisAir diagnostic counters)                                                                                                                                                                                                                                                                   | /       | /     | - (not in applications) |     |     |     |
| nAd (Night and Day) |                                                                                                                                                                                                                                                                                                                                                   |         |       |                         |     |     |     |
| E10                 | Selects Event 1 activation mode.<br>0 = disabled; 1 = Monday; 2 = Tuesday; 3 = Wednesday; 4 = Thursday; 5 = Friday; 6 = Saturday; 7 = Sunday; 8 = Monday to Friday; 9 = Monday to Saturday; 10 = Saturday and Sunday; 11 = every day.                                                                                                             | 0...11  | num   | 0 (not in applications) |     |     |     |
| E11                 | Event 1 start hour.                                                                                                                                                                                                                                                                                                                               | 0...23  | hours | 0 (not in applications) |     |     |     |
| E12                 | Event 1 start minute.                                                                                                                                                                                                                                                                                                                             | 0...59  | min   | 0 (not in applications) |     |     |     |
| E13                 | Event 1 end hour.                                                                                                                                                                                                                                                                                                                                 | 0...23  | hours | 0 (not in applications) |     |     |     |
| E14                 | Event 1 end minute.                                                                                                                                                                                                                                                                                                                               | 0...59  | min   | 0 (not in applications) |     |     |     |
| E15                 | Sets Event 1 type.<br>0 = Energy Saving; 1 = AUX deactivated; 2 = AUX activated; 3 = Stand-by; 4 = Light on; 5 = Light off.                                                                                                                                                                                                                       | 0...5   | num   | 0 (not in applications) |     |     |     |
| E20                 | Selects Event 2 activation mode. Same as E10.                                                                                                                                                                                                                                                                                                     | 0...11  | num   | 0 (not in applications) |     |     |     |
| E21                 | Event 2 start hour.                                                                                                                                                                                                                                                                                                                               | 0...23  | hours | 0 (not in applications) |     |     |     |
| E22                 | Event 2 start minute.                                                                                                                                                                                                                                                                                                                             | 0...59  | min   | 0 (not in applications) |     |     |     |
| E23                 | Event 2 end hour.                                                                                                                                                                                                                                                                                                                                 | 0...23  | hours | 0 (not in applications) |     |     |     |

| Parameter  | Description                             | Range  | MU  | Default                 | AP1 | AP2 | AP3 |
|------------|-----------------------------------------|--------|-----|-------------------------|-----|-----|-----|
| <b>E24</b> | Event 2 end minute.                     | 0...59 | min | 0 (not in applications) |     |     |     |
| <b>E25</b> | Sets Event 2 type. Same as <b>E15</b> . | 0...5  | num | 0 (not in applications) |     |     |     |

**Note:** if one or more parameters in folder **CnF** or marked with (!) are changed, the device must be switched off and then on again to make sure it works properly.

# Parameters IDNext 974 P/CI

## User parameters IDNext 974 P/CI

| Parameter | Description                                                                                                                                                                                                                  | Range                     | MU    | Default                 | AP1   | AP2   | AP3   |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-------------------------|-------|-------|-------|
| SEt       | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0                     | 3.0   | 0.0   | -18.0 |
| diF       | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value. | 0.1...30.0                | °C/°F | 2.0                     | 2.0   | 2.0   | 2.0   |
| LSE       | Minimum setpoint value.                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0                   | -55.0 | -55.0 | -55.0 |
| HSE       | Maximum setpoint value.                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0                   | 140.0 | 140.0 | 140.0 |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                              | 1...250                   | min   | 30                      | 30    | 30    | 30    |
| dS1       | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                 | -67.0...302               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| dS2       | Evaporator 2 defrost end temperature (measured by Pb3 if <b>H43</b> = 2EP)                                                                                                                                                   | -67.0...302               | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| dit       | Time interval between one defrost and the next                                                                                                                                                                               | 0...250                   | hours | 6                       | 6     | 6     | 6     |
| FSt       | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                            | -67.0...320               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| Fdt       | Fan activation delay time after a defrost.                                                                                                                                                                                   | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dt        | Dripping time.                                                                                                                                                                                                               | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dFd       | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes (fan excluded - off).</li> </ul>                       | n/y                       | flag  | y                       | y     | y     | y     |
| HAL       | Maximum temperature alarm. Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                      | <b>LAL</b> ...302         | °C/°F | 150.0                   | 150.0 | 150.0 | 150.0 |
| LAL       | Minimum temperature alarm. Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                   | -67.0... <b>HAL</b>       | °C/°F | -50.0                   | -50.0 | -50.0 | -50.0 |
| CA1 (!)   | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| CA2 (!)   | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| PS1       | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                | 0...250                   | num   | 0                       | 0     | 0     | 0     |
| H42       | Probe Pb2 present. <ul style="list-style-type: none"> <li><b>n</b>(0) = not present</li> <li><b>y</b>(1) = present.</li> </ul>                                                                                               | n/y                       | flag  | y                       | y     | y     | y     |
| tAb       | Reserved: read-only parameter.                                                                                                                                                                                               | /                         | /     | / (not in applications) |       |       |       |

**Note:** the "User" menu parameters also include **PA2**, which allows access to the "Installer" menu.

**Note:** for the full list of parameters, see the section "**Installer parameters**".

## Installer parameters IDNext 974 P/CI

| Parameter              | Description                                                                                                                                                                                                                                                                                          | Range                     | MU    | Default | AP1   | AP2   | AP3   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|---------|-------|-------|-------|
| <b>SEt</b>             | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                                                                                                     | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0     | 3.0   | 0.0   | -18.0 |
| <b>CP (Compressor)</b> |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>diF</b>             | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value.                                                                         | 0.1...30.0                | °C/°F | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>LSE</b>             | Minimum setpoint value.                                                                                                                                                                                                                                                                              | -67.0... <b>HSE</b>       | °C/°F | -55.0   | -55.0 | -55.0 | -55.0 |
| <b>HSE</b>             | Maximum setpoint value.                                                                                                                                                                                                                                                                              | <b>LSE</b> ...302         | °C/°F | 140.0   | 140.0 | 140.0 | 140.0 |
| <b>HC</b>              | The regulator implements either cold operation (set "C(0)") or for hot (set "H(1)").                                                                                                                                                                                                                 | C/H                       | flag  | 0       | 0     | 0     | 0     |
| <b>ont</b>             | Regulator power-on time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Ont</b> = 1 and <b>Oft</b> = 0 compressor is always on</li> <li>if <b>Ont</b> = 1 and <b>Oft</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                     | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>oFt</b>             | Regulator power-off time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Oft</b> = 1 and <b>Ont</b> = 0 compressor is always off</li> <li>if <b>Oft</b> = 1 and <b>Ont</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                   | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>don</b>             | Compressor relay activation delay time after request                                                                                                                                                                                                                                                 | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>doF</b>             | Delay time after power-off: the delay time indicated must elapse between deactivation of the compressor relay and the next power-on.                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dbi</b>             | Delay time between power-ons; the delay time indicated must elapse between two consecutive compressor power-ons.                                                                                                                                                                                     | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>Cit</b>             | Minimum compressor activation time before it can be deactivated. If <b>Cit</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CAt</b>             | Maximum compressor activation time before it can be deactivated. If <b>CAt</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>odo</b>             | Delay in activating outputs after the device is powered on or after a power failure. 0 = not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcS</b>             | "Deep Cooling Cycle" setpoint                                                                                                                                                                                                                                                                        | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |
| <b>tdC</b>             | "Deep Cooling Cycle" duration                                                                                                                                                                                                                                                                        | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcc</b>             | Defrost activation delay after a "Deep Cooling Cycle"                                                                                                                                                                                                                                                | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CP2</b>             | Compressor 2 activation delay.                                                                                                                                                                                                                                                                       | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dFA</b>             | Condenser fan and compressor activation delay from the request.                                                                                                                                                                                                                                      | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>dEF (Defrost)</b>   |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>dtY</b>             | Type of defrost.<br><ul style="list-style-type: none"> <li>0 = electric defrost or due to stoppage - compressor OFF during defrost</li> <li>1 = cycle inversion (hot gas) defrost; compressor on during defrost</li> <li>2 = defrost with "Free" mode; defrost independent of compressor.</li> </ul> | 0/1/2                     | num   | 0       | 0     | 0     | 0     |
| <b>doH</b>             | Defrost cycle activation delay from the call                                                                                                                                                                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dEt</b>             | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                                                                                                      | 1...250                   | min   | 30      | 30    | 30    | 30    |
| <b>dS1</b>             | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                                                                                         | -67.0...302               | °C/°F | 8.0     | 8.0   | 8.0   | 8.0   |
| <b>dS2</b>             | Evaporator 2 defrost end temperature (measured by Pb3 if <b>H43</b> = 2EP)                                                                                                                                                                                                                           | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |

| Parameter  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Range       | MU    | Default | AP1 | AP2 | AP3 |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>dPo</b> | Defrost activation request at power-on, if the temperature measured by Pb2 allows.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                 | n/y         | flag  | n       | n   | n   | n   |
| <b>tCd</b> | Minimum period of time with the compressor ON or OFF before defrost is activated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | -127...127  | min   | 0       | 0   | 0   | 0   |
| <b>Cod</b> | Time with the compressor OFF before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>dMr</b> | Enables the defrost count reset in the case of manual defrosting.<br><ul style="list-style-type: none"> <li><b>n</b> = count reset does not take place</li> <li><b>y</b> = count reset takes place</li> </ul>                                                                                                                                                                                                                                                                                                                                                        | n/y         | flag  | n       | n   | n   | n   |
| <b>d00</b> | Compressor running time before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | 0...250     | hours | 0       | 0   | 0   | 0   |
| <b>d01</b> | <b>d00</b> unit of measure.<br><ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>dit</b> | Time interval between one defrost and the next                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | 0...250     | hours | 6       | 6   | 6   | 6   |
| <b>d11</b> | <b>dit</b> unit of measure.<br><ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>d20</b> | Can be used to activate the defrost when the compressor is off.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost is not activated.</li> <li><b>1</b> = enabled. Defrost is activated when the compressor is off.</li> </ul>                                                                                                                                                                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d40</b> | Enables/disables use of probe Pb2.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost does not take Pb2 into account</li> <li><b>1</b> = enabled. Defrost runs according to the value read by Pb2 (only refers to defrost with threshold)</li> </ul>                                                                                                                                                                                                                                                                                             | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d41</b> | Sets the defrost activation threshold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>d42</b> | Sets the maximum time for which the evaporator can remain under the threshold <b>d41</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>d43</b> | Sets the type of time count in which the evaporator temperature remains under the threshold value.<br><ul style="list-style-type: none"> <li><b>0</b> = count independent of the compressor status</li> <li><b>1</b> = count with compressor on (when the compressor is off the count begins again)</li> <li><b>2</b> = count independent of the compressor status. The count stops when the temperature rises above the threshold <b>d41</b></li> <li><b>3</b> = count with compressor on and until the temperature rises above the threshold <b>d41</b></li> </ul> | 0...3       | num   | 0       | 0   | 0   | 0   |
| <b>d44</b> | Sets the threshold management mode.<br><ul style="list-style-type: none"> <li><b>0</b> = absolute value (for example: <b>d41</b> = -25°C means that the threshold temperature is exactly -25°C)</li> <li><b>1</b> = relative value (negative offset, relative to the value measured by the defrost probe Pb2 (if <b>d40</b> = 1) at the end of the first cooling cycle or on power-on)</li> </ul>                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d90</b> | Sets the defrost mode with RTC.<br><ul style="list-style-type: none"> <li><b>0</b> = RTC disabled</li> <li><b>1</b> = Reserved</li> <li><b>2</b> = RTC at fixed intervals (<b>d91</b>)</li> <li><b>3</b> = Regular RTC (<b>d94</b>)</li> </ul>                                                                                                                                                                                                                                                                                                                       | 0...3       | num   | -       | -   | -   | -   |

| Parameter  | Description                                                                                                                                                                                                                                   | Range       | MU    | Default                 | AP1 | AP2 | AP3 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|-------------------------|-----|-----|-----|
| d91        | Sets the number of daily defrosts (only if d90=2)                                                                                                                                                                                             | 0...255     | num   | -                       | -   | -   | -   |
| d92        | Sets the first weekend/holiday day. <ul style="list-style-type: none"><li>0 = Sunday</li><li>1 = Monday</li><li>2 = Tuesday</li><li>3 = Wednesday</li><li>4 = Thursday</li><li>5 = Friday</li><li>6 = Saturday</li><li>7 = Disabled</li></ul> | 0...7       | num   | -                       | -   | -   | -   |
| d93        | Sets the second weekend/holiday day. Same as d92.                                                                                                                                                                                             | 0...7       | num   | -                       | -   | -   | -   |
| d94        | Sets the duration of the regular defrost in days (only if d90=3).                                                                                                                                                                             | 1...7       | num   | -                       | -   | -   | -   |
| d1H        | 1st weekday defrost start hour. <ul style="list-style-type: none"><li>0...23 = start hour</li><li>24 = disabled</li></ul>                                                                                                                     | 0...24      | hours | 0 (not in applications) |     |     |     |
| d1n        | 1st weekday defrost start minutes.                                                                                                                                                                                                            | 0...59      | min   | 0 (not in applications) |     |     |     |
| F1H        | 1st weekend/holiday defrost start hour. <ul style="list-style-type: none"><li>0...23 = start hour</li><li>24 = disabled</li></ul>                                                                                                             | 0...24      | hours | 0 (not in applications) |     |     |     |
| F1n        | 1st weekend/holiday defrost start minutes.                                                                                                                                                                                                    | 0...59      | min   | 0 (not in applications) |     |     |     |
| Fan (Fans) |                                                                                                                                                                                                                                               |             |       |                         |     |     |     |
| FPt        | Sets whether parameter FSt is expressed as an absolute temperature value or as a value relative to the Setpoint. <ul style="list-style-type: none"><li>0 = absolute</li><li>1 = relative.</li></ul>                                           | 0/1         | flag  | 0                       | 0   | 0   | 0   |
| FSt        | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                                             | -67.0...320 | °C/°F | 8.0                     | 8.0 | 8.0 | 8.0 |
| FAd        | Evaporator fan trigger differential.                                                                                                                                                                                                          | 0.1...25.0  | °C/°F | 2.0                     | 2.0 | 2.0 | 2.0 |
| Fdt        | Fan activation delay time after a defrost.                                                                                                                                                                                                    | 0...250     | min   | 0                       | 0   | 0   | 0   |
| dt         | Dripping time.                                                                                                                                                                                                                                | 0...250     | min   | 0                       | 0   | 0   | 0   |
| dFd        | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"><li>n(0) = no</li><li>y(1) = yes (fan excluded - off).</li></ul>                                                         | n/y         | flag  | y                       | y   | y   | y   |

| Parameter   | Description                                                                                                                                                                                                                                                                                                                                                                                                                |     |     |     |     |       | Range       | MU     | Default | AP1   | AP2   | AP3   |     |
|-------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----|-----|-----|-----|-------|-------------|--------|---------|-------|-------|-------|-----|
| FCo         | Evaporator fan operating mode.                                                                                                                                                                                                                                                                                                                                                                                             |     |     |     |     |       | 0...3       | num    | 1       | 1     | 1     | 1     |     |
|             | Pb2                                                                                                                                                                                                                                                                                                                                                                                                                        | H42 | FCo | day |     | night |             |        |         |       |       |       |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     |     | Cn  | Cf  | Cn    |             |        |         |       |       |       | Cf  |
|             | ok                                                                                                                                                                                                                                                                                                                                                                                                                         | y   | 0   | T   | Off | T     |             |        |         |       |       |       | Off |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 1   | T   | T   | T     |             |        |         |       |       |       | T   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 2   | T   | DCd | T     |             |        |         |       |       |       | DCn |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 3   | T   | DCd | T     |             |        |         |       |       |       | DCn |
|             | ko                                                                                                                                                                                                                                                                                                                                                                                                                         | y   | 0   | On  | Off | On    |             |        |         |       |       |       | Off |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 1   | On  | On  | On    |             |        |         |       |       |       | On  |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 2   | On  | DCd | On    |             |        |         |       |       |       | DCd |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 3   | On  | DCd | On    |             |        |         |       |       |       | DCd |
|             | no                                                                                                                                                                                                                                                                                                                                                                                                                         | n   | 0   | On  | Off | On    |             |        |         |       |       |       | Off |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 1   | On  | On  | On    |             |        |         |       |       |       | On  |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 2   | On  | DCd | On    |             |        |         |       |       |       | DCd |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                            |     | 3   | On  | DCd | On    |             |        |         |       |       |       | DCd |
|             | <b>Headings legend:</b><br><b>Pb2</b> = probe Pb2 status ( <b>ok</b> = present; <b>ko</b> = in E2 error and <b>no</b> = absent); <b>day</b> = day mode; <b>night</b> = night mode; <b>Cn</b> = compressor on; <b>Cf</b> = compressor off.<br><br><b>Status legend:</b><br><b>T</b> = thermostat controlled fans; <b>On</b> = fans on; <b>Off</b> = fans off; <b>DCd</b> = Day duty cycle or <b>DCn</b> = Night duty cycle. |     |     |     |     |       |             |        |         |       |       |       |     |
| Fon         | Day duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                         |     |     |     |     |       | 0...250     | min    | 0       | 0     | 0     | 0     |     |
| FoF         | Day duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                        |     |     |     |     |       | 0...250     | min    | 0       | 0     | 0     | 0     |     |
| Fnn         | Night duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                       |     |     |     |     |       | 0...250     | min    | 0       | 0     | 0     | 0     |     |
| FnF         | Night duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                      |     |     |     |     |       | 0...250     | min    | 0       | 0     | 0     | 0     |     |
| ESF         | "Night" mode activation.<br>• n(0) = no<br>• y(1) = yes.                                                                                                                                                                                                                                                                                                                                                                   |     |     |     |     |       | n/y         | flag   | n       | n     | n     | n     |     |
| AL (Alarms) |                                                                                                                                                                                                                                                                                                                                                                                                                            |     |     |     |     |       |             |        |         |       |       |       |     |
| Att         | Sets the absolute or relative value for parameters <b>HAL</b> and <b>LAL</b> .<br>• 0 = absolute value<br>• 1 = relative value                                                                                                                                                                                                                                                                                             |     |     |     |     |       | 0/1         | flag   | 0       | 0     | 0     | 0     |     |
| AFd         | Alarm differential.                                                                                                                                                                                                                                                                                                                                                                                                        |     |     |     |     |       | 0,1...25,0  | °C/°F  | 2.0     | 2.0   | 2.0   | 2.0   |     |
| HAL         | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                                                                                                                                                                                                                 |     |     |     |     |       | LAL...302   | °C/°F  | 150.0   | 150.0 | 150.0 | 150.0 |     |
| LAL         | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                                                                                                                                                                                                              |     |     |     |     |       | -67,0...HAL | °C/°F  | -50.0   | -50.0 | -50.0 | -50.0 |     |
| PAo         | Alarm exclusion time when switching on the device, after a power failure.                                                                                                                                                                                                                                                                                                                                                  |     |     |     |     |       | 0...10      | min*10 | 0       | 0     | 0     | 0     |     |
| dAo         | Temperature alarm exclusion time after defrosting.                                                                                                                                                                                                                                                                                                                                                                         |     |     |     |     |       | 0...999     | min    | 0       | 0     | 0     | 0     |     |
| oAo         | Alarm signaling delay after deactivation of the digital input (door closure). Alarm refers to high and low temperature alarms.                                                                                                                                                                                                                                                                                             |     |     |     |     |       | 0...10      | hours  | 0       | 0     | 0     | 0     |     |
| tdo         | Door open alarm activation delay time.                                                                                                                                                                                                                                                                                                                                                                                     |     |     |     |     |       | 0...250     | min    | 0       | 0     | 0     | 0     |     |
| tAo         | Temperature alarm signaling delay time.                                                                                                                                                                                                                                                                                                                                                                                    |     |     |     |     |       | 0...250     | min    | 0       | 0     | 0     | 0     |     |

| Parameter                       | Description                                                                                                                                                                                                                                                     | Range        | MU    | Default                    | AP1 | AP2 | AP3 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|----------------------------|-----|-----|-----|
| dAt                             | Defrost ended due to timeout alarm indication. <ul style="list-style-type: none"><li>n(0) = alarm not activated</li><li>y(1) = alarm activated.</li></ul>                                                                                                       | n/y          | flag  | 0                          | 0   | 0   | 0   |
| EAL                             | An external alarm inhibits the regulators. <ul style="list-style-type: none"><li>0 = does not inhibit the regulators</li><li>1 = compressor and defrost inhibited</li><li>2 = fans, compressor and defrost inhibited;</li></ul>                                 | 0/1/2        | flag  | n                          | n   | n   | n   |
| AoP                             | Alarm output polarity. <ul style="list-style-type: none"><li>0 = NO (Normally open)</li><li>1 = NC (Normally closed).</li></ul>                                                                                                                                 | 0/1          | flag  | 1                          | 1   | 1   | 1   |
| SA3                             | Probe 3 alarm setpoint.                                                                                                                                                                                                                                         | -67,0...302  | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| dA3                             | Probe 3 alarm differential.                                                                                                                                                                                                                                     | 0.1...30.0   | °C/°F | 1.0                        | 1.0 | 1.0 | 1.0 |
| rFt                             | Low refrigerant alarm signaling delay.                                                                                                                                                                                                                          | 0...250      | min   | 0 (non nelle applicazioni) |     |     |     |
| Lit (Lights and digital inputs) |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| dOd                             | Digital input shuts off utilities. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = disables fans</li><li>2 = disables compressor</li><li>3 = disables fans and compressor.</li></ul>                                                             | 0...3        | num   | 0                          | 0   | 0   | 0   |
| dAd                             | Digital input activation delay                                                                                                                                                                                                                                  | 0...250      | min   | 0                          | 0   | 0   | 0   |
| dCo                             | Compressor switch-off delay from door opening.                                                                                                                                                                                                                  | 0...250      | min   | 0                          | 0   | 0   | 0   |
| AUP                             | Auxiliary (AUX) output activation when the door is opened. <ul style="list-style-type: none"><li>n(0) = disabled</li><li>y(1) = AUX output activation</li></ul>                                                                                                 | n/y          | flag  | n                          | n   | n   | n   |
| PrE (Pressure switch)           |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| PEn                             | Number of errors permitted per minimum/maximum pressure switch input                                                                                                                                                                                            | 0...15       | num   | 0                          | 0   | 0   | 0   |
| PEi                             | Minimum/maximum pressure switch error count interval                                                                                                                                                                                                            | 1...99       | min   | 1                          | 1   | 1   | 1   |
| PEt                             | Compressor activation delay after pressure switch deactivation                                                                                                                                                                                                  | 0...255      | min   | 0                          | 0   | 0   | 0   |
| EnS (Energy Saving)             |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| oSP                             | Temperature value to be added to the setpoint in the case of an enabled reduced set (Economy function).                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| odF                             | Differential offset during an energy saving cycle or reduced set.                                                                                                                                                                                               | 0.1...30.0   | °C/°F | 2.0                        | 2.0 | 2.0 | 2.0 |
| Add (Communication)             |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| Adr                             | Modbus protocol device address.                                                                                                                                                                                                                                 | 1...247      | num   | 1 (not in applications)    |     |     |     |
| bAU                             | Modbus Baudrate selection. <ul style="list-style-type: none"><li>96 (0) = 9600 baud</li><li>192 (1) = 19200 baud</li><li>384 (2) = 38400 baud</li></ul>                                                                                                         | 96/192/384   | num   | 96 (not in applications)   |     |     |     |
| Pty                             | Modbus parity bit. <ul style="list-style-type: none"><li>n(0) = none</li><li>E(1) = even</li><li>o(2) = odd.</li></ul>                                                                                                                                          | n/E/o        | num   | E (not in applications)    |     |     |     |
| diS (Display)                   |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| dro                             | Selects the unit of measure used when displaying the temperature read by the probes. (0 = °C, 1 = °F).<br><b>Note:</b> changing from °C to °F or vice-versa does NOT change the <b>SEt</b> , <b>diF</b> values, etc. (example: <b>SEt</b> = 10°C becomes 10°F). | 0/1          | flag  | 0                          | 0   | 0   | 0   |
| CA1 (!)                         | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |

| Parameter                              | Description                                                                                                                                                                                                                                                                                                                                                                     | Range        | MU    | Default | AP1  | AP2  | AP3  |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|---------|------|------|------|
| <b>CA2 (!)</b>                         | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0     | 0.0  | 0.0  | 0.0  |
| <b>CA3 (!)</b>                         | Positive or negative temperature value to be added to the value of Pb3.                                                                                                                                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0     | 0.0  | 0.0  | 0.0  |
| <b>CAi</b>                             | Activation of the calibration value.<br><ul style="list-style-type: none"> <li><b>0</b> = Adds the value to the temperature value displayed</li> <li><b>1</b> = Adds the value to the temperature used by the regulators and not to the one displayed</li> <li><b>2</b> = Adds the value to the temperature used by the regulators and to the temperature displayed.</li> </ul> | 0/1/2        | num   | 2       | 2    | 2    | 2    |
| <b>LoC</b>                             | Keypad lock.<br><ul style="list-style-type: none"> <li><b>n(0)</b> = Keypad lock disabled</li> <li><b>y(1)</b> = Keypad lock enabled (on startup or when 30 seconds have passed since the last action carried out on the user interface)</li> </ul>                                                                                                                             | n/y          | flag  | y       | y    | y    | y    |
| <b>ddd</b>                             | Selects the type of value to show on the display.<br><ul style="list-style-type: none"> <li><b>0</b> = setpoint</li> <li><b>1</b> = Pb1 probe</li> <li><b>2</b> = Pb2 probe</li> <li><b>3</b> = Pb3 probe.</li> </ul>                                                                                                                                                           | 0...3        | num   | 1       | 1    | 1    | 1    |
| <b>ddL</b>                             | Display mode during defrosting.<br><ul style="list-style-type: none"> <li><b>0</b> = display the temperature read by Pb1</li> <li><b>1</b> = inhibits reading on the value of Pb1 at the start of defrost and until the setpoint is reached</li> <li><b>2</b> = displays label <b>dEF</b> during defrost until the setpoint is reached.</li> </ul>                              | 0/1/2        | num   | 0       | 0    | 0    | 0    |
| <b>Ldd</b>                             | Display unlock timeout value - label <b>dEF</b>                                                                                                                                                                                                                                                                                                                                 | 0...250      | min   | 30      | 30   | 30   | 30   |
| <b>ndt</b>                             | Display with decimal point.<br><ul style="list-style-type: none"> <li><b>n(0)</b> = no</li> <li><b>y(1)</b> = yes.</li> </ul>                                                                                                                                                                                                                                                   | n/y          | flag  | y       | y    | y    | y    |
| <b>FSE</b>                             | Sets the value used by the low-pass filter to calculate the temperature value to be displayed.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled</li> <li><b>1</b> = 200 (quicker response)</li> <li><b>2</b> = 100</li> <li><b>3</b> = 50</li> <li><b>4</b> = 25</li> <li><b>5</b> = 12</li> <li><b>6</b> = 6</li> <li><b>7</b> = 3 (slower response).</li> </ul>  | 0...7        | num   | 0       | 0    | 0    | 0    |
| <b>FdS</b>                             | Filter disabling threshold.                                                                                                                                                                                                                                                                                                                                                     | -67.0...302  | °C/°F | 0.0     | 0.0  | 0.0  | 0.0  |
| <b>Ftt</b>                             | Time that has passed beyond the value of <b>FdS</b> before the filter is disabled.                                                                                                                                                                                                                                                                                              | 0...250      | min   | 0       | 0    | 0    | 0    |
| <b>FHt</b>                             | Filter sampling interval.                                                                                                                                                                                                                                                                                                                                                       | 1...250      | s     | 1       | 1    | 1    | 1    |
| <b>PS1</b>                             | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                                                                                                                                                                   | 0...250      | num   | 0       | 0    | 0    | 0    |
| <b>PS2</b>                             | When enabled ( <b>PS2</b> ≠0) this is the access key for the installer parameters.                                                                                                                                                                                                                                                                                              | 0...250      | num   | 15      | 15   | 15   | 15   |
| <b>VSC (Variable-speed compressor)</b> |                                                                                                                                                                                                                                                                                                                                                                                 |              |       |         |      |      |      |
| <b>CEr</b>                             | Controlled capacity value in the event of regulation probe error.                                                                                                                                                                                                                                                                                                               | 0.0...100    | %     | 50.0    | 50.0 | 50.0 | 5.0  |
| <b>PdS</b>                             | Differential for forced activation of a pull-down.                                                                                                                                                                                                                                                                                                                              | -50.0...50.0 | K/°R  | 3.0     | 3.0  | 3.0  | 0.3  |
| <b>PUS</b>                             | Differential for forced activation of a pull-up.                                                                                                                                                                                                                                                                                                                                | -50.0...50.0 | K/°R  | -3.0    | -3.0 | -3.0 | -0.3 |

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                                                       | Range        | MU   | Default | AP1  | AP2  | AP3 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|---------|------|------|-----|
| <b>PUd</b>                 | Temperature outside range timeout. The timer is activated when the regulation probe reaches a value greater than <b>SEt+PdS</b> (for Pull Down) or less than <b>SEt+PuS</b> (for Pull Up). When the timer runs out, a Pull Down or Pull Up procedure will be started depending on the zone in which the probe is located. If the temperature recovers before the end of this timed period, the timer is reloaded. | 0...1000     | min  | 4       | 4    | 4    | 4   |
| <b>PdE</b>                 | Pull-down end differential.                                                                                                                                                                                                                                                                                                                                                                                       | -50.0...50.0 | K/°R | 0.0     | 0.0  | 0.0  | 0.0 |
| <b>PUE</b>                 | Pull-up end differential. If a pull-up is activated when the timer <b>PUd</b> runs out, the compressor is stopped until <b>SEt+PUE</b> is reached.                                                                                                                                                                                                                                                                | -50.0...50.0 | K/°R | 0.0     | 0.0  | 0.0  | 0.0 |
| <b>Pdt</b>                 | Optimized pull-down timeout.                                                                                                                                                                                                                                                                                                                                                                                      | 0...1000     | min  | 10      | 10   | 10   | 10  |
| <b>Pdd</b>                 | Controlled capacity value, if a pull-down is activated, when the time period <b>PUd</b> has elapsed, that will be maintained: <ul style="list-style-type: none"> <li>for a time period <b>Pdt</b> at the end of which the capacity will be forced to 100% until <b>SEt+PdE</b> is reached.</li> <li>until the temperature <b>SEt+PdE</b> is reached (if the time &lt; <b>Pdt</b>).</li> </ul>                     | 0.0...100    | %    | 60.0    | 60.0 | 60.0 | 6.0 |
| <b>CPd</b>                 | Controlled capacity after a pull-down in day operating mode.                                                                                                                                                                                                                                                                                                                                                      | 0.0...100    | %    | 60.0    | 60.0 | 60.0 | 6.0 |
| <b>CPn</b>                 | Controlled capacity after a pull-down in night operating mode.                                                                                                                                                                                                                                                                                                                                                    | 0.0...100    | %    | 50.0    | 50.0 | 50.0 | 5.0 |
| <b>CPb</b>                 | PID regulator proportional band.                                                                                                                                                                                                                                                                                                                                                                                  | 0.1...3200   | K/°R | 3.0     | 3.0  | 3.0  | 0.3 |
| <b>Cti</b>                 | PID integral time.                                                                                                                                                                                                                                                                                                                                                                                                | 0...65535    | s    | 60      | 60   | 60   | 60  |
| <b>Ctd</b>                 | PID derivative time.                                                                                                                                                                                                                                                                                                                                                                                              | 0...65535    | s    | 0       | 0    | 0    | 0   |
| <b>CSd</b>                 | Duration of constant-speed compressor heating (set by <b>CSC</b> ) on startup or after a stand-by.                                                                                                                                                                                                                                                                                                                | 0...900      | s    | 120     | 120  | 120  | 120 |
| <b>CSC</b>                 | Fixed compressor capacity for a time period equal to <b>CSd</b> on startup or after a stand-by.                                                                                                                                                                                                                                                                                                                   | 44.4...100   | %    | 80.0    | 80.0 | 80.0 | 8.0 |
| <b>CAU</b>                 | Selects automatic or manual PID mode. <ul style="list-style-type: none"> <li>0 = automatic</li> <li>1 = manual.</li> </ul>                                                                                                                                                                                                                                                                                        | 0/1          | flag | 0       | 0    | 0    | 0   |
| <b>CdU</b>                 | PID duty cycle in manual mode. If <b>CAU</b> = <b>AU</b> , <b>CdU</b> will function as a maximum controlled capacity limiter (%). If <b>CAU</b> = <b>FiH</b> , <b>CdU</b> will force controlled capacity of the compressor (%).                                                                                                                                                                                   | 0.0...100    | %    | 100     | 100  | 100  | 10  |
| <b>F_1</b>                 | Maximum compressor operating frequency.                                                                                                                                                                                                                                                                                                                                                                           | 0.0...250    | Hz   | 150     | 150  | 150  | 150 |
| <b>F_2</b>                 | Minimum compressor operating frequency.                                                                                                                                                                                                                                                                                                                                                                           | 0.0...250    | Hz   | 67      | 67   | 67   | 67  |
| <b>CnF (Configuration)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                   |              |      |         |      |      |     |
| <b>H00</b>                 | Selects the probe type. <ul style="list-style-type: none"> <li>0 = PTC</li> <li>1 = NTC</li> <li>2 = Pt1000.</li> </ul>                                                                                                                                                                                                                                                                                           | 0/1/2        | flag | 1       | 1    | 1    | 1   |
| <b>H08</b>                 | Stand-by operating mode. <ul style="list-style-type: none"> <li>0 = display off; the regulators are active and the device signals possible alarms by reactivating the display</li> <li>1 = display off; the regulators and the alarms are blocked</li> <li>2 = the display shows the label "OFF"; the regulators and alarms are inhibited.</li> </ul>                                                             | 0/1/2        | num  | 2       | 2    | 2    | 2   |

| Parameter | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Range     | MU  | Default | AP1 | AP2 | AP3 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|---------|-----|-----|-----|
| H11       | Configuration of digital input 1 ( <b>DI</b> )/ polarity. <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>±1</b> = defrost</li> <li>• <b>±2</b> = reduced set</li> <li>• <b>±3</b> = auxiliary</li> <li>• <b>±4</b> = door switch</li> <li>• <b>±5</b> = external alarm</li> <li>• <b>±6</b> = stand-by</li> <li>• <b>±7</b> = pressure switch</li> <li>• <b>±8</b> = deep cooling</li> <li>• <b>±9</b> = light</li> <li>• <b>±10</b> = energy saving</li> </ul> <b>Note:</b> <ul style="list-style-type: none"> <li>• the '+' sign indicates that the input is active if the contact is closed.</li> <li>• the '-' sign indicates that the input is active if the contact is open.</li> </ul> | -10...+10 | num | 0       | 0   | 0   | 0   |
| H21       | Configuration of digital output 1 ( <b>OC1</b> ). <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = compressor</li> <li>• <b>2</b> = defrost</li> <li>• <b>3</b> = evaporator fans</li> <li>• <b>4</b> = alarm</li> <li>• <b>5</b> = auxiliary</li> <li>• <b>6</b> = stand-by</li> <li>• <b>7</b> = light</li> <li>• <b>8</b> = reserved</li> <li>• <b>9</b> = compressor 2</li> <li>• <b>10</b> = evaporator 2 defrost</li> <li>• <b>11</b> = condenser fans</li> <li>• <b>12</b> = heater deadband control</li> <li>• <b>13</b> = variable-speed compressor (VSC).</li> </ul>                                                                                                          | 0...13    | num | 13      | 13  | 13  | 13  |
| H22       | Configuration of digital output 2 ( <b>Out2</b> ). <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = compressor</li> <li>• <b>2</b> = defrost</li> <li>• <b>3</b> = evaporator fans</li> <li>• <b>4</b> = alarm</li> <li>• <b>5</b> = auxiliary</li> <li>• <b>6</b> = stand-by</li> <li>• <b>7</b> = light</li> <li>• <b>8</b> = reserved</li> <li>• <b>9</b> = compressor 2</li> <li>• <b>10</b> = evaporator 2 defrost</li> <li>• <b>11</b> = condenser fans</li> <li>• <b>12</b> = heater deadband control.</li> </ul>                                                                                                                                                                | 0...12    | num | 2       | 2   | 2   | 2   |
| H24       | Configuration of digital output 4 ( <b>Out4</b> ). Same as H22.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0...12    | num | 3       | 3   | 3   | 3   |
| H31       | Configuration of  key. <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = defrost</li> <li>• <b>2</b> = auxiliary</li> <li>• <b>3</b> = reduced set</li> <li>• <b>4</b> = stand-by</li> <li>• <b>5</b> = Autotuning procedure <b>nPL</b></li> <li>• <b>6</b> = Autotuning procedure <b>tun</b></li> <li>• <b>7</b> = deep cooling</li> <li>• <b>8</b> = light.</li> </ul>                                                                                                                                                                                                                              | 0...8     | num | 1       | 1   | 1   | 1   |
| H32       | Configuration of  key. Same as H31.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...8     | num | 0       | 0   | 0   | 0   |
| H33       | Configuration of  key. Same as H31.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...8     | num | 4       | 4   | 4   | 4   |
| H34       | Configuration of  key. Same as H31.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...8     | num | 0       | 0   | 0   | 0   |
| H35       | Configuration of  key. Same as H31.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...8     | num | 0       | 0   | 0   | 0   |

| Parameter           | Description                                                                                                                                                                                                                                                                                                                             | Range   | MU    | Default                 | AP1 | AP2 | AP3 |
|---------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|-------------------------|-----|-----|-----|
| H42                 | Probe Pb2 present.<br><ul style="list-style-type: none"><li><b>n</b>(0) = not present</li><li><b>y</b>(1) = present.</li></ul>                                                                                                                                                                                                          | n/y     | flag  | y                       | y   | y   | y   |
| H43                 | Probe Pb3 present.<br><ul style="list-style-type: none"><li><b>n</b>(0) = not present</li><li><b>y</b>(1) = present</li><li><b>2EP</b>(2) = second evaporator.</li></ul>                                                                                                                                                                | n/y/2EP | flag  | n                       | n   | n   | n   |
| H45                 | Defrost input mode for applications with dual evaporator.<br><b>0</b> = first evaporator only;<br><b>1</b> = if at least one of the evaporators is below its defrost end temperature;<br><b>2</b> = only if both evaporators are under the respective defrost end temperature;<br><b>3</b> = evaporator 1 and evaporator 2 alternately. | 0...3   | num   | 0                       | 0   | 0   | 0   |
| H48                 | RTC (Real Time Clock) present.<br><ul style="list-style-type: none"><li><b>0</b> = no RTC</li><li><b>1</b> = RTC present.</li></ul>                                                                                                                                                                                                     | 0/1     | flag  | 0                       | 0   | 0   | 0   |
| H60                 | Display selected application.<br><b>0</b> = disabled; <b>1</b> = AP1; <b>2</b> = AP2; <b>3</b> = AP3.                                                                                                                                                                                                                                   | 0...3   | num   | 1 (not in applications) |     |     |     |
| tAb                 | Reserved: read-only parameter.                                                                                                                                                                                                                                                                                                          | /       | /     | / (not in applications) |     |     |     |
| FPr (UNICARD)       |                                                                                                                                                                                                                                                                                                                                         |         |       |                         |     |     |     |
| UL                  | Transfer of the programming parameters from the device to the UNICARD.                                                                                                                                                                                                                                                                  | /       | /     | - (not in applications) |     |     |     |
| Fr                  | UNICARD formatting. Deletes all data on the UNICARD.<br><b>Note:</b> the use of parameter <b>Fr</b> results in the loss of all data entered. This operation cannot be reversed.                                                                                                                                                         | /       | /     | - (not in applications) |     |     |     |
| FnC (Functions)     |                                                                                                                                                                                                                                                                                                                                         |         |       |                         |     |     |     |
| tAL                 | Force alarm acknowledgment                                                                                                                                                                                                                                                                                                              | /       | /     | - (not in applications) |     |     |     |
| rAP                 | Reset pressure switch alarms                                                                                                                                                                                                                                                                                                            | /       | /     | - (not in applications) |     |     |     |
| tun                 | Autotuning activation/deactivation                                                                                                                                                                                                                                                                                                      | /       | /     | - (not in applications) |     |     |     |
| nPL                 | Preliminary Autotuning procedure activation/deactivation.                                                                                                                                                                                                                                                                               | /       | /     | - (not in applications) |     |     |     |
| Cnt                 | Reset TelevisAir diagnostic counters (see Reset TelevisAir diagnostic counters)                                                                                                                                                                                                                                                         | /       | /     | - (not in applications) |     |     |     |
| nAd (Night and Day) |                                                                                                                                                                                                                                                                                                                                         |         |       |                         |     |     |     |
| E10                 | Selects Event 1 activation mode.<br><b>0</b> = disabled; <b>1</b> = Monday; <b>2</b> = Tuesday; <b>3</b> = Wednesday; <b>4</b> = Thursday; <b>5</b> = Friday; <b>6</b> = Saturday; <b>7</b> = Sunday; <b>8</b> = Monday to Friday; <b>9</b> = Monday to Saturday; <b>10</b> = Saturday and Sunday; <b>11</b> = every day.               | 0...11  | num   | 0 (not in applications) |     |     |     |
| E11                 | Event 1 start hour.                                                                                                                                                                                                                                                                                                                     | 0...23  | hours | 0 (not in applications) |     |     |     |
| E12                 | Event 1 start minute.                                                                                                                                                                                                                                                                                                                   | 0...59  | min   | 0 (not in applications) |     |     |     |
| E13                 | Event 1 end hour.                                                                                                                                                                                                                                                                                                                       | 0...23  | hours | 0 (not in applications) |     |     |     |
| E14                 | Event 1 end minute.                                                                                                                                                                                                                                                                                                                     | 0...59  | min   | 0 (not in applications) |     |     |     |
| E15                 | Sets Event 1 type.<br><b>0</b> = Energy Saving; <b>1</b> = AUX deactivated; <b>2</b> = AUX activated; <b>3</b> = Stand-by; <b>4</b> = Light on; <b>5</b> = Light off.                                                                                                                                                                   | 0...5   | num   | 0 (not in applications) |     |     |     |
| E20                 | Selects Event 2 activation mode. Same as <b>E10</b> .                                                                                                                                                                                                                                                                                   | 0...11  | num   | 0 (not in applications) |     |     |     |
| E21                 | Event 2 start hour.                                                                                                                                                                                                                                                                                                                     | 0...23  | hours | 0 (not in applications) |     |     |     |
| E22                 | Event 2 start minute.                                                                                                                                                                                                                                                                                                                   | 0...59  | min   | 0 (not in applications) |     |     |     |
| E23                 | Event 2 end hour.                                                                                                                                                                                                                                                                                                                       | 0...23  | hours | 0 (not in applications) |     |     |     |
| E24                 | Event 2 end minute.                                                                                                                                                                                                                                                                                                                     | 0...59  | min   | 0 (not in applications) |     |     |     |
| E25                 | Sets Event 2 type. Same as <b>E15</b> .                                                                                                                                                                                                                                                                                                 | 0...5   | num   | 0 (not in applications) |     |     |     |

**Note:** if one or more parameters in folder **CnF** or marked with (!) are changed, the device must be switched off and then on again to make sure it works properly.



## Parameters IDNext 978 P/B

### User parameters IDNext 978 P/B

| Parameter | Description                                                                                                                                                                                                                  | Range                     | MU    | Default                 | AP1   | AP2   | AP3   |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-------------------------|-------|-------|-------|
| SEt       | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0                     | 3.0   | 0.0   | -18.0 |
| diF       | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value. | 0.1...30.0                | °C/°F | 2.0                     | 2.0   | 2.0   | 2.0   |
| LSE       | Minimum setpoint value.                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0                   | -55.0 | -55.0 | -55.0 |
| HSE       | Maximum setpoint value.                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0                   | 140.0 | 140.0 | 140.0 |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                              | 1...250                   | min   | 30                      | 30    | 30    | 30    |
| dS1       | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                 | -67.0...302               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| dit       | Time interval between one defrost and the next                                                                                                                                                                               | 0...250                   | hours | 6                       | 6     | 6     | 6     |
| FSt       | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                            | -67.0...320               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| Fdt       | Fan activation delay time after a defrost.                                                                                                                                                                                   | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dt        | Dripping time.                                                                                                                                                                                                               | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dFd       | Used to select or deselect the exclusion of the evaporator fans during defrosting.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes (fan excluded - off).</li> </ul>                    | n/y                       | flag  | y                       | y     | y     | y     |
| HAL       | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                   | <b>LAL</b> ...302         | °C/°F | 150.0                   | 150.0 | 150.0 | 150.0 |
| LAL       | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                | -67.0... <b>HAL</b>       | °C/°F | -50.0                   | -50.0 | -50.0 | -50.0 |
| CA1 (!)   | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| CA2 (!)   | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| PS1       | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                | 0...250                   | num   | 0                       | 0     | 0     | 0     |
| H42       | Probe Pb2 present.<br><ul style="list-style-type: none"> <li><b>n</b>(0) = not present</li> <li><b>y</b>(1) = present.</li> </ul>                                                                                            | n/y                       | flag  | y                       | y     | y     | y     |
| tAb       | Reserved: read-only parameter.                                                                                                                                                                                               | /                         | /     | / (not in applications) |       |       |       |

**Note:** the "User" menu parameters also include **PA2**, which allows access to the "Installer" menu.

**Note:** for the full list of parameters, see the section "**Installer parameters**".

## Parametri installatore IDNext 978 P/B

| Parameter              | Description                                                                                                                                                                                                                                                                                          | Range                     | MU    | Default | AP1   | AP2   | AP3   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|---------|-------|-------|-------|
| <b>SEt</b>             | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                                                                                                     | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0     | 3.0   | 0.0   | -18.0 |
| <b>CP (Compressor)</b> |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>diF</b>             | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value.                                                                         | 0.1...30.0                | °C/°F | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>LSE</b>             | Minimum setpoint value.                                                                                                                                                                                                                                                                              | -67.0... <b>HSE</b>       | °C/°F | -55.0   | -55.0 | -55.0 | -55.0 |
| <b>HSE</b>             | Maximum setpoint value.                                                                                                                                                                                                                                                                              | <b>LSE</b> ...302         | °C/°F | 140.0   | 140.0 | 140.0 | 140.0 |
| <b>HC</b>              | The regulator implements either cold operation (set "C(0)") or for hot (set "H(1)").                                                                                                                                                                                                                 | C/H                       | flag  | 0       | 0     | 0     | 0     |
| <b>ont</b>             | Regulator power-on time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Ont</b> = 1 and <b>Oft</b> = 0 compressor is always on</li> <li>if <b>Ont</b> = 1 and <b>Oft</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                     | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>oFt</b>             | Regulator power-off time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Oft</b> = 1 and <b>Ont</b> = 0 compressor is always off</li> <li>if <b>Oft</b> = 1 and <b>Ont</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                   | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>don</b>             | Compressor relay activation delay time after request                                                                                                                                                                                                                                                 | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>doF</b>             | Delay time after power-off: the delay time indicated must elapse between deactivation of the compressor relay and the next power-on.                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dbi</b>             | Delay time between power-ons; the delay time indicated must elapse between two consecutive compressor power-ons.                                                                                                                                                                                     | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>Cit</b>             | Minimum compressor activation time before it can be deactivated. If <b>Cit</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CAt</b>             | Maximum compressor activation time before it can be deactivated. If <b>CAt</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>odo</b>             | Delay in activating outputs after the device is powered on or after a power failure. 0 = not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcS</b>             | "Deep Cooling Cycle" setpoint                                                                                                                                                                                                                                                                        | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |
| <b>tdC</b>             | "Deep Cooling Cycle" duration                                                                                                                                                                                                                                                                        | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcc</b>             | Defrost activation delay after a "Deep Cooling Cycle"                                                                                                                                                                                                                                                | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CP2</b>             | Compressor 2 activation delay.                                                                                                                                                                                                                                                                       | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dFA</b>             | Condenser fan and compressor activation delay from the request.                                                                                                                                                                                                                                      | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>dEF (Defrost)</b>   |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>dtY</b>             | Type of defrost.<br><ul style="list-style-type: none"> <li>0 = electric defrost or due to stoppage - compressor OFF during defrost</li> <li>1 = cycle inversion (hot gas) defrost; compressor on during defrost</li> <li>2 = defrost with "Free" mode; defrost independent of compressor.</li> </ul> | 0/1/2                     | num   | 0       | 0     | 0     | 0     |
| <b>doH</b>             | Defrost cycle activation delay from the call                                                                                                                                                                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dt2</b>             | Unit of measure for defrost duration ( <b>dEt</b> parameter).<br><ul style="list-style-type: none"> <li>0 = hours</li> <li>1 = minutes</li> <li>2 = seconds.</li> </ul>                                                                                                                              | 0/1/2                     | num   | 1       | 1     | 1     | 1     |
| <b>dEt</b>             | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                                                                                                      | 1...250                   | min   | 30      | 30    | 30    | 30    |

| Parameter         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Range       | MU    | Default | AP1 | AP2 | AP3 |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>dS1</b>        | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -67.0...302 | °C/°F | 8.0     | 8.0 | 8.0 | 8.0 |
| <b>dPo</b>        | Defrost activation request at power-on, if the temperature measured by Pb2 allows. <ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                 | n/y         | flag  | n       | n   | n   | n   |
| <b>tCd</b>        | Minimum period of time with the compressor ON or OFF before defrost is activated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -127...127  | min   | 0       | 0   | 0   | 0   |
| <b>Cod</b>        | Time with the compressor OFF before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>dMr</b>        | Enables the defrost count reset in the case of manual defrosting. <ul style="list-style-type: none"> <li><b>n</b> = count reset does not take place</li> <li><b>y</b> = count reset takes place</li> </ul>                                                                                                                                                                                                                                                                                                                                                        | n/y         | flag  | n       | n   | n   | n   |
| <b>d00</b>        | Compressor running time before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0...250     | hours | 0       | 0   | 0   | 0   |
| <b>d01</b>        | <b>d00</b> unit of measure. <ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>dit</b>        | Time interval between one defrost and the next                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...250     | hours | 6       | 6   | 6   | 6   |
| <b>d11</b>        | <b>dit</b> unit of measure. <ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>d20</b>        | Can be used to activate the defrost when the compressor is off. <ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost is not activated.</li> <li><b>1</b> = enabled. Defrost is activated when the compressor is off.</li> </ul>                                                                                                                                                                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d40</b>        | Enables/disables use of probe Pb2. <ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost does not take Pb2 into account</li> <li><b>1</b> = enabled. Defrost runs according to the value read by Pb2 (only refers to defrost with threshold)</li> </ul>                                                                                                                                                                                                                                                                                             | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d41</b>        | Sets the defrost activation threshold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>d42</b>        | Sets the maximum time for which the evaporator can remain under the threshold <b>d41</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>d43</b>        | Sets the type of time count in which the evaporator temperature remains under the threshold value. <ul style="list-style-type: none"> <li><b>0</b> = count independent of the compressor status</li> <li><b>1</b> = count with compressor on (when the compressor is off the count begins again)</li> <li><b>2</b> = count independent of the compressor status. The count stops when the temperature rises above the threshold <b>d41</b></li> <li><b>3</b> = count with compressor on and until the temperature rises above the threshold <b>d41</b></li> </ul> | 0...3       | num   | 0       | 0   | 0   | 0   |
| <b>d44</b>        | Sets the threshold management mode. <ul style="list-style-type: none"> <li><b>0</b> = absolute value (for example: <b>d41</b> = -25°C means that the threshold temperature is exactly -25°C)</li> <li><b>1</b> = relative value (negative offset, relative to the value measured by the defrost probe Pb2 (if <b>d40</b> = 1) at the end of the first cooling cycle or on power-on)</li> </ul>                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>Fan (Fans)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |             |       |         |     |     |     |

| Parameter   | Description                                                                                                                                                                                                                                                                                                                                                                                                            | Range       | MU    | Default | AP1 | AP2   | AP3 |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-------|-----|
| FPt         | Sets whether parameter <b>FSt</b> is expressed as an absolute temperature value or as a value relative to the Setpoint. <ul style="list-style-type: none"><li><b>0</b> = absolute</li><li><b>1</b> = relative.</li></ul>                                                                                                                                                                                               | 0/1         | flag  | 0       | 0   | 0     | 0   |
| FSt         | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                                                                                                                                                                                                                      | -67.0...320 | °C/°F | 8.0     | 8.0 | 8.0   | 8.0 |
| FAd         | Evaporator fan trigger differential.                                                                                                                                                                                                                                                                                                                                                                                   | 0.1...25.0  | °C/°F | 2.0     | 2.0 | 2.0   | 2.0 |
| Fdt         | Fan activation delay time after a defrost.                                                                                                                                                                                                                                                                                                                                                                             | 0...250     | min   | 0       | 0   | 0     | 0   |
| dt          | Dripping time.                                                                                                                                                                                                                                                                                                                                                                                                         | 0...250     | min   | 0       | 0   | 0     | 0   |
| dFd         | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"><li><b>n(0)</b> = no</li><li><b>y(1)</b> = yes (fan excluded - off).</li></ul>                                                                                                                                                                                                                    | n/y         | flag  | y       | y   | y     | y   |
| FCo         | Evaporator fan operating mode.                                                                                                                                                                                                                                                                                                                                                                                         |             |       |         |     |       |     |
|             | Pb2                                                                                                                                                                                                                                                                                                                                                                                                                    | H42         | FCo   | day     |     | night |     |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             |       | Cn      | Cf  | Cn    | Cf  |
|             | ok                                                                                                                                                                                                                                                                                                                                                                                                                     | y           | 0     | T       | Off | T     | Off |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 1     | T       | T   | T     | T   |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 2     | T       | DCd | T     | DCn |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 3     | T       | DCd | T     | DCn |
|             | ko                                                                                                                                                                                                                                                                                                                                                                                                                     | y           | 0     | On      | Off | On    | Off |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 1     | On      | On  | On    | On  |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 2     | On      | DCd | On    | DCd |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 3     | On      | DCd | On    | DCd |
|             | no                                                                                                                                                                                                                                                                                                                                                                                                                     | n           | 0     | On      | Off | On    | Off |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 1     | On      | On  | On    | On  |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 2     | On      | DCd | On    | DCd |
|             |                                                                                                                                                                                                                                                                                                                                                                                                                        |             | 3     | On      | DCd | On    | DCd |
|             | <b>Headings legend:</b><br><b>Pb2</b> = probe Pb2 status ( <b>ok</b> = present; <b>ko</b> = in E2 error and <b>no</b> = absent); <b>day</b> = day mode; <b>night</b> = night mode; <b>Cn</b> = compressor on; <b>Cf</b> = compressor off.<br><b>Status legend:</b><br><b>T</b> = thermostat controlled fans; <b>On</b> = fans on; <b>Off</b> = fans off; <b>DCd</b> = Day duty cycle or <b>DCn</b> = Night duty cycle. |             |       |         |     |       |     |
|             | 0...3                                                                                                                                                                                                                                                                                                                                                                                                                  | num         | 1     | 1       | 1   | 1     |     |
| Fon         | Day duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                     | 0...250     | min   | 0       | 0   | 0     | 0   |
| FoF         | Day duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                    | 0...250     | min   | 0       | 0   | 0     | 0   |
| Fnn         | Night duty cycle: time with fans on.                                                                                                                                                                                                                                                                                                                                                                                   | 0...250     | min   | 0       | 0   | 0     | 0   |
| FnF         | Night duty cycle: time with fans off.                                                                                                                                                                                                                                                                                                                                                                                  | 0...250     | min   | 0       | 0   | 0     | 0   |
| ESF         | "Night" mode activation. <ul style="list-style-type: none"><li><b>n(0)</b> = no</li><li><b>y(1)</b> = yes.</li></ul>                                                                                                                                                                                                                                                                                                   | n/y         | flag  | n       | n   | n     | n   |
| AL (Alarms) |                                                                                                                                                                                                                                                                                                                                                                                                                        |             |       |         |     |       |     |
| Att         | Sets the absolute or relative value for parameters <b>HAL</b> and <b>LAL</b> . <ul style="list-style-type: none"><li><b>0</b> = absolute value</li><li><b>1</b> = relative value</li></ul>                                                                                                                                                                                                                             | 0/1         | flag  | 0       | 0   | 0     | 0   |
| AFd         | Alarm differential.                                                                                                                                                                                                                                                                                                                                                                                                    | 0,1...25,0  | °C/°F | 2.0     | 2.0 | 2.0   | 2.0 |

| Parameter                       | Description                                                                                                                                                                                                                     | Range        | MU     | Default                    | AP1   | AP2   | AP3   |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------|----------------------------|-------|-------|-------|
| HAL                             | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                      | LAL...302    | °C/°F  | 150.0                      | 150.0 | 150.0 | 150.0 |
| LAL                             | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                   | -67,0...HAL  | °C/°F  | -50.0                      | -50.0 | -50.0 | -50.0 |
| PAo                             | Alarm exclusion time when switching on the device, after a power failure.                                                                                                                                                       | 0...10       | min*10 | 0                          | 0     | 0     | 0     |
| dAo                             | Temperature alarm exclusion time after defrosting.                                                                                                                                                                              | 0...999      | min    | 0                          | 0     | 0     | 0     |
| oAo                             | Alarm signaling delay after deactivation of the digital input (door closure). Alarm refers to high and low temperature alarms.                                                                                                  | 0...10       | hours  | 0                          | 0     | 0     | 0     |
| tdo                             | Door open alarm activation delay time.                                                                                                                                                                                          | 0...250      | min    | 0                          | 0     | 0     | 0     |
| tAo                             | Temperature alarm signaling delay time.                                                                                                                                                                                         | 0...250      | min    | 0                          | 0     | 0     | 0     |
| dAt                             | Defrost ended due to timeout alarm indication. <ul style="list-style-type: none"><li>n(0) = alarm not activated</li><li>y(1) = alarm activated.</li></ul>                                                                       | n/y          | flag   | 0                          | 0     | 0     | 0     |
| EAL                             | An external alarm inhibits the regulators. <ul style="list-style-type: none"><li>0 = does not inhibit the regulators</li><li>1 = compressor and defrost inhibited</li><li>2 = fans, compressor and defrost inhibited;</li></ul> | 0/1/2        | flag   | n                          | n     | n     | n     |
| AoP                             | Alarm output polarity. <ul style="list-style-type: none"><li>0 = NO (Normally open)</li><li>1 = NC (Normally closed).</li></ul>                                                                                                 | 0/1          | flag   | 1                          | 1     | 1     | 1     |
| rFt                             | Low refrigerant alarm signaling delay.                                                                                                                                                                                          | 0...250      | min    | 0 (non nelle applicazioni) |       |       |       |
| Lit (Lights and digital inputs) |                                                                                                                                                                                                                                 |              |        |                            |       |       |       |
| dOd                             | Digital input shuts off utilities. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = disables fans</li><li>2 = disables compressor</li><li>3 = disables fans and compressor.</li></ul>                             | 0...3        | num    | 0                          | 0     | 3     | 3     |
| dAd                             | Digital input activation delay                                                                                                                                                                                                  | 0...250      | min    | 0                          | 0     | 0     | 0     |
| dCo                             | Compressor switch-off delay from door opening.                                                                                                                                                                                  | 0...250      | min    | 0                          | 0     | 1     | 0     |
| AUP                             | Auxiliary (AUX) output activation when the door is opened. <ul style="list-style-type: none"><li>n(0) = disabled</li><li>y(1) = AUX output activation</li></ul>                                                                 | n/y          | flag   | n                          | n     | y     | n     |
| PrE (Pressure switch)           |                                                                                                                                                                                                                                 |              |        |                            |       |       |       |
| PEn                             | Number of errors permitted per minimum/maximum pressure switch input                                                                                                                                                            | 0...15       | num    | 0                          | 0     | 0     | 0     |
| PEi                             | Minimum/maximum pressure switch error count interval                                                                                                                                                                            | 1...99       | min    | 1                          | 1     | 1     | 1     |
| PEt                             | Compressor activation delay after pressure switch deactivation                                                                                                                                                                  | 0...255      | min    | 0                          | 0     | 0     | 0     |
| EnS (Energy Saving)             |                                                                                                                                                                                                                                 |              |        |                            |       |       |       |
| oSP                             | Temperature value to be added to the setpoint in the case of an enabled reduced set (Economy function).                                                                                                                         | -30.0...30.0 | °C/°F  | 0.0                        | 0.0   | 0.0   | 0.0   |
| odF                             | Differential offset during an energy saving cycle or reduced set.                                                                                                                                                               | 0.1...30.0   | °C/°F  | 2.0                        | 2.0   | 2.0   | 2.0   |
| Add (Communication)             |                                                                                                                                                                                                                                 |              |        |                            |       |       |       |
| Adr                             | Modbus protocol device address.                                                                                                                                                                                                 | 1...247      | num    | 1 (not in applications)    |       |       |       |
| bAU                             | Modbus Baudrate selection. <ul style="list-style-type: none"><li>96 (0) = 9600 baud</li><li>192 (1) = 19200 baud</li><li>384 (2) = 38400 baud</li></ul>                                                                         | 96/192/384   | num    | 96 (not in applications)   |       |       |       |

| Parameter     | Description                                                                                                                                                                                                                                                                                                                                         | Range        | MU    | Default                 | AP1 | AP2 | AP3 |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|-------------------------|-----|-----|-----|
| Pty           | Modbus parity bit. <ul style="list-style-type: none"><li>n(0) = none</li><li>E(1) = even</li><li>o(2) = odd.</li></ul>                                                                                                                                                                                                                              | n/E/o        | num   | E (not in applications) |     |     |     |
| diS (Display) |                                                                                                                                                                                                                                                                                                                                                     |              |       |                         |     |     |     |
| dro           | Selects the unit of measure used when displaying the temperature read by the probes. (0 = °C, 1 = °F).<br><b>Note:</b> changing from °C to °F or vice-versa does NOT change the <b>SEt</b> , <b>diF</b> values, etc. (example: <b>SEt</b> = 10°C becomes 10°F).                                                                                     | 0/1          | flag  | 0                       | 0   | 0   | 0   |
| CA1 (!)       | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                                                                                                                                             | -30.0...30.0 | °C/°F | 0.0                     | 0.0 | 0.0 | 0.0 |
| CA2 (!)       | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                                                                                                                                             | -30.0...30.0 | °C/°F | 0.0                     | 0.0 | 0.0 | 0.0 |
| CAi           | Activation of the calibration value. <ul style="list-style-type: none"><li>0 = Adds the value to the temperature value displayed</li><li>1 = Adds the value to the temperature used by the regulators and not to the one displayed</li><li>2 = Adds the value to the temperature used by the regulators and to the temperature displayed.</li></ul> | 0/1/2        | num   | 2                       | 2   | 2   | 2   |
| LoC           | Keypad lock. <ul style="list-style-type: none"><li>n(0) = Keypad lock disabled</li><li>y(1) = Keypad lock enabled (on startup or when 30 seconds have passed since the last action carried out on the user interface)</li></ul>                                                                                                                     | n/y          | flag  | y                       | y   | y   | y   |
| ddd           | Selects the type of value to show on the display. <ul style="list-style-type: none"><li>0 = setpoint</li><li>1 = Pb1 probe</li><li>2 = Pb2 probe</li><li>3 = Pb3 probe.</li></ul>                                                                                                                                                                   | 0...3        | num   | 1                       | 1   | 1   | 1   |
| ddL           | Display mode during defrosting. <ul style="list-style-type: none"><li>0 = display the temperature read by Pb1</li><li>1 = inhibits reading on the value of Pb1 at the start of defrost and until the setpoint is reached</li><li>2 = displays label <b>dEF</b> during defrost until the setpoint is reached.</li></ul>                              | 0/1/2        | num   | 0                       | 0   | 0   | 0   |
| Ldd           | Display unlock timeout value - label <b>dEF</b>                                                                                                                                                                                                                                                                                                     | 0...250      | min   | 30                      | 30  | 30  | 30  |
| ndt           | Display with decimal point. <ul style="list-style-type: none"><li>n(0) = no</li><li>y(1) = yes.</li></ul>                                                                                                                                                                                                                                           | n/y          | flag  | y                       | y   | y   | y   |
| FSE           | Sets the value used by the low-pass filter to calculate the temperature value to be displayed. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = 200 (quicker response)</li><li>2 = 100</li><li>3 = 50</li><li>4 = 25</li><li>5 = 12</li><li>6 = 6</li><li>7 = 3 (slower response).</li></ul>                                          | 0...7        | num   | 0                       | 0   | 0   | 0   |
| FdS           | Filter disabling threshold.                                                                                                                                                                                                                                                                                                                         | -67.0...302  | °C/°F | 0.0                     | 0.0 | 0.0 | 0.0 |
| Ftt           | Time that has passed beyond the value of <b>FdS</b> before the filter is disabled.                                                                                                                                                                                                                                                                  | 0...250      | min   | 0                       | 0   | 0   | 0   |
| FHt           | Filter sampling interval.                                                                                                                                                                                                                                                                                                                           | 1...250      | s     | 1                       | 1   | 1   | 1   |
| PS1           | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                                                                                                                                       | 0...250      | num   | 0                       | 0   | 0   | 0   |
| PS2           | When enabled ( <b>PS2</b> ≠0) this is the access key for the installer parameters.                                                                                                                                                                                                                                                                  | 0...250      | num   | 15                      | 15  | 15  | 15  |

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Range     | MU   | Default | AP1 | AP2 | AP3 |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|------|---------|-----|-----|-----|
| <b>CnF (Configuration)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |           |      |         |     |     |     |
| <b>H00</b>                 | Selects the probe type.<br><ul style="list-style-type: none"> <li>0 = PTC</li> <li>1 = NTC</li> <li>2 = Pt1000.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | 0/1/2     | flag | 1       | 1   | 1   | 1   |
| <b>H08</b>                 | Stand-by operating mode.<br><ul style="list-style-type: none"> <li>0 = display off; the regulators are active and the device signals possible alarms by reactivating the display</li> <li>1 = display off; the regulators and the alarms are blocked</li> <li>2 = the display shows the label "OFF"; the regulators and alarms are inhibited.</li> </ul>                                                                                                                                                                                                                                                              | 0/1/2     | num  | 2       | 2   | 2   | 2   |
| <b>H11</b>                 | Configuration of digital input 1 ( <b>DI</b> )/ polarity.<br><ul style="list-style-type: none"> <li>0 = disabled</li> <li>±1 = defrost</li> <li>±2 = reduced set</li> <li>±3 = auxiliary</li> <li>±4 = door switch</li> <li>±5 = external alarm</li> <li>±6 = stand-by</li> <li>±7 = pressure switch</li> <li>±8 = deep cooling</li> <li>±9 = light</li> <li>±10 = energy saving</li> </ul> <b>Note:</b> <ul style="list-style-type: none"> <li>the '+' sign indicates that the input is active if the contact is closed.</li> <li>the '-' sign indicates that the input is active if the contact is open.</li> </ul> | -10...+10 | num  | 0       | 0   | -4  | -4  |
| <b>H21</b>                 | Configuration of digital output 1 ( <b>Out1</b> ).<br><ul style="list-style-type: none"> <li>0 = disabled</li> <li>1 = compressor</li> <li>2 = defrost</li> <li>3 = evaporator fans</li> <li>4 = alarm</li> <li>5 = auxiliary</li> <li>6 = stand-by</li> <li>7 = light</li> <li>8 = buzzer</li> <li>9 = compressor 2</li> <li>10 = reserved</li> <li>11 = condenser fans</li> <li>12 = heater deadband control</li> <li>13 = reserved</li> </ul>                                                                                                                                                                      | 0...13    | num  | 1       | 1   | 1   | 1   |
| <b>H22</b>                 | Configuration of digital output 2 ( <b>Out2</b> ).<br><ul style="list-style-type: none"> <li>0 = disabled</li> <li>1 = compressor</li> <li>2 = defrost</li> <li>3 = evaporator fans</li> <li>4 = alarm</li> <li>5 = auxiliary</li> <li>6 = stand-by</li> <li>7 = light</li> <li>8 = buzzer</li> <li>9 = compressor 2</li> <li>10 = reserved</li> <li>11 = condenser fans</li> <li>12 = heater deadband control.</li> </ul>                                                                                                                                                                                            | 0...12    | num  | 2       | 2   | 2   | 2   |
| <b>H23</b>                 | Configuration of digital output 3 ( <b>Out3</b> ). Same as <b>H22</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0...12    | num  | 3       | 3   | 3   | 3   |
| <b>H24</b>                 | Configuration of digital output 4 ( <b>Out4</b> ). Same as <b>H22</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0...12    | num  | 4       | 4   | 7   | 7   |

| Parameter       | Description                                                                                                                                                                                                                                                                                                                                       | Range | MU   | Default                 | AP1 | AP2 | AP3 |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|------|-------------------------|-----|-----|-----|
| H25             | Enables/disables the buzzer. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = enabled.</li></ul>                                                                                                                                                                                                                                    | 0/1   | flag | 1                       | 1   | 1   | 1   |
| H31             | Configuration of  key. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = defrost</li><li>2 = auxiliary</li><li>3 = reduced set</li><li>4 = stand-by</li><li>5 = reserved</li><li>6 = reserved</li><li>7 = deep cooling</li><li>8 = light.</li></ul> | 0...8 | num  | 1                       | 1   | 1   | 1   |
| H32             | Configuration of  key. Same as H31.                                                                                                                                                                                                                              | 0...8 | num  | 0                       | 0   | 0   | 0   |
| H33             | Configuration of  key. Same as H31.                                                                                                                                                                                                                              | 0...8 | num  | 4                       | 4   | 4   | 4   |
| H34             | Configuration of  key. Same as H31.                                                                                                                                                                                                                              | 0...8 | num  | 0                       | 0   | 0   | 0   |
| H35             | Configuration of  key. Same as H31.                                                                                                                                                                                                                              | 0...8 | num  | 0                       | 0   | 0   | 0   |
| H42             | Probe Pb2 present. <ul style="list-style-type: none"><li>n(0) = not present</li><li>y(1) = present.</li></ul>                                                                                                                                                                                                                                     | n/y   | flag | y                       | y   | y   | y   |
| H60             | Display selected application.<br>0 = disabled; 1 = AP1; 2 = AP2; 3 = AP3.                                                                                                                                                                                                                                                                         | 0...3 | num  | 1 (not in applications) |     |     |     |
| tAb             | Reserved: read-only parameter.                                                                                                                                                                                                                                                                                                                    | /     | /    | / (not in applications) |     |     |     |
| FPr (UNICARD)   |                                                                                                                                                                                                                                                                                                                                                   |       |      |                         |     |     |     |
| UL              | Transfer of the programming parameters from the device to the UNICARD.                                                                                                                                                                                                                                                                            | /     | /    | - (not in applications) |     |     |     |
| Fr              | UNICARD formatting. Deletes all data on the UNICARD.<br><b>Note:</b> the use of parameter <b>Fr</b> results in the loss of all data entered. This operation cannot be reversed.                                                                                                                                                                   | /     | /    | - (not in applications) |     |     |     |
| FnC (Functions) |                                                                                                                                                                                                                                                                                                                                                   |       |      |                         |     |     |     |
| tAL             | Force alarm acknowledgment                                                                                                                                                                                                                                                                                                                        | /     | /    | - (not in applications) |     |     |     |
| rAP             | Reset pressure switch alarms                                                                                                                                                                                                                                                                                                                      | /     | /    | - (not in applications) |     |     |     |
| Cnt             | Reset TelevisAir diagnostic counters (see Reset TelevisAir diagnostic counters)                                                                                                                                                                                                                                                                   | /     | /    | - (not in applications) |     |     |     |

**Note:** if one or more parameters in folder **CnF** or marked with (!) are changed, the device must be switched off and then on again to make sure it works properly.

## Parameters IDNext 978 P/C

### User parameters IDNext 978 P/C

| Parameter | Description                                                                                                                                                                                                                  | Range                     | MU    | Default                 | AP1   | AP2   | AP3   |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-------------------------|-------|-------|-------|
| SEt       | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0                     | 3.0   | 0.0   | -18.0 |
| diF       | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value. | 0.1...30.0                | °C/°F | 2.0                     | 2.0   | 2.0   | 2.0   |
| LSE       | Minimum setpoint value.                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0                   | -55.0 | -55.0 | -55.0 |
| HSE       | Maximum setpoint value.                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0                   | 140.0 | 140.0 | 140.0 |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                              | 1...250                   | min   | 30                      | 30    | 30    | 30    |
| dS1       | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                 | -67.0...302               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| dS2       | Evaporator 2 defrost end temperature (measured by Pb3 if <b>H43</b> = 2EP)                                                                                                                                                   | -67.0...302               | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| dit       | Time interval between one defrost and the next                                                                                                                                                                               | 0...250                   | hours | 6                       | 6     | 6     | 6     |
| FSt       | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                            | -67.0...320               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| Fdt       | Fan activation delay time after a defrost.                                                                                                                                                                                   | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dt        | Dripping time.                                                                                                                                                                                                               | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dFd       | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes (fan excluded - off).</li> </ul>                       | n/y                       | flag  | y                       | y     | y     | y     |
| HAL       | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                   | <b>LAL</b> ...302         | °C/°F | 150.0                   | 150.0 | 150.0 | 150.0 |
| LAL       | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                | -67.0... <b>HAL</b>       | °C/°F | -50.0                   | -50.0 | -50.0 | -50.0 |
| CA1 (!)   | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| CA2 (!)   | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| PS1       | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                | 0...250                   | num   | 0                       | 0     | 0     | 0     |
| H42       | Probe Pb2 present. <ul style="list-style-type: none"> <li><b>n</b>(0) = not present</li> <li><b>y</b>(1) = present.</li> </ul>                                                                                               | n/y                       | flag  | y                       | y     | y     | y     |
| tAb       | Reserved: read-only parameter.                                                                                                                                                                                               | /                         | /     | / (not in applications) |       |       |       |

**Note:** the "User" menu parameters also include **PA2**, which allows access to the "Installer" menu.

**Note:** for the full list of parameters, see the section "**Installer parameters**".

## Installer parameters IDNext 978 P/C

| Parameter              | Description                                                                                                                                                                                                                                                                                          | Range                     | MU    | Default | AP1   | AP2   | AP3   |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|---------|-------|-------|-------|
| <b>SEt</b>             | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                                                                                                     | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0     | 3.0   | 0.0   | -18.0 |
| <b>CP (Compressor)</b> |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>diF</b>             | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value.                                                                         | 0.1...30.0                | °C/°F | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>LSE</b>             | Minimum setpoint value.                                                                                                                                                                                                                                                                              | -67.0... <b>HSE</b>       | °C/°F | -55.0   | -55.0 | -55.0 | -55.0 |
| <b>HSE</b>             | Maximum setpoint value.                                                                                                                                                                                                                                                                              | <b>LSE</b> ...302         | °C/°F | 140.0   | 140.0 | 140.0 | 140.0 |
| <b>HC</b>              | The regulator implements either cold operation (set "C(0)") or for hot (set "H(1)").                                                                                                                                                                                                                 | C/H                       | flag  | 0       | 0     | 0     | 0     |
| <b>ont</b>             | Regulator power-on time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Ont</b> = 1 and <b>Oft</b> = 0 compressor is always on</li> <li>if <b>Ont</b> = 1 and <b>Oft</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                     | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>oFt</b>             | Regulator power-off time for a inoperable probe:<br><ul style="list-style-type: none"> <li>if <b>Oft</b> = 1 and <b>Ont</b> = 0 compressor is always off</li> <li>if <b>Oft</b> = 1 and <b>Ont</b> &gt; 0 compressor in duty cycle mode</li> </ul>                                                   | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>don</b>             | Compressor relay activation delay time after request                                                                                                                                                                                                                                                 | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>doF</b>             | Delay time after power-off: the delay time indicated must elapse between deactivation of the compressor relay and the next power-on.                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dbi</b>             | Delay time between power-ons; the delay time indicated must elapse between two consecutive compressor power-ons.                                                                                                                                                                                     | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>Cit</b>             | Minimum compressor activation time before it can be deactivated. If <b>Cit</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CAt</b>             | Maximum compressor activation time before it can be deactivated. If <b>CAt</b> = 0 it is not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>odo</b>             | Delay in activating outputs after the device is powered on or after a power failure. 0 = not active.                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcS</b>             | "Deep Cooling Cycle" setpoint                                                                                                                                                                                                                                                                        | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |
| <b>tdC</b>             | "Deep Cooling Cycle" duration                                                                                                                                                                                                                                                                        | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcc</b>             | Defrost activation delay after a "Deep Cooling Cycle"                                                                                                                                                                                                                                                | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CP2</b>             | Compressor 2 activation delay.                                                                                                                                                                                                                                                                       | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dFA</b>             | Condenser fan and compressor activation delay from the request.                                                                                                                                                                                                                                      | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>dEF (Defrost)</b>   |                                                                                                                                                                                                                                                                                                      |                           |       |         |       |       |       |
| <b>dtY</b>             | Type of defrost.<br><ul style="list-style-type: none"> <li>0 = electric defrost or due to stoppage - compressor OFF during defrost</li> <li>1 = cycle inversion (hot gas) defrost; compressor on during defrost</li> <li>2 = defrost with "Free" mode; defrost independent of compressor.</li> </ul> | 0/1/2                     | num   | 0       | 0     | 0     | 0     |
| <b>doH</b>             | Defrost cycle activation delay from the call                                                                                                                                                                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dt2</b>             | Unit of measure for defrost duration ( <b>dEt</b> parameter).<br><ul style="list-style-type: none"> <li>0 = hours</li> <li>1 = minutes</li> <li>2 = seconds.</li> </ul>                                                                                                                              | 0/1/2                     | num   | 1       | 1     | 1     | 1     |
| <b>dEt</b>             | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                                                                                                      | 1...250                   | min   | 30      | 30    | 30    | 30    |

| Parameter  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Range       | MU    | Default | AP1 | AP2 | AP3 |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>dS1</b> | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -67.0...302 | °C/°F | 8.0     | 8.0 | 8.0 | 8.0 |
| <b>dS2</b> | Evaporator 2 defrost end temperature (measured by Pb3 if <b>H43</b> = 2EP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>dPo</b> | Defrost activation request at power-on, if the temperature measured by Pb2 allows. <ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                 | n/y         | flag  | n       | n   | n   | n   |
| <b>tCd</b> | Minimum period of time with the compressor ON or OFF before defrost is activated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -127...127  | min   | 0       | 0   | 0   | 0   |
| <b>Cod</b> | Time with the compressor OFF before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>dMr</b> | Enables the defrost count reset in the case of manual defrosting. <ul style="list-style-type: none"> <li><b>n</b> = count reset does not take place</li> <li><b>y</b> = count reset takes place</li> </ul>                                                                                                                                                                                                                                                                                                                                                        | n/y         | flag  | n       | n   | n   | n   |
| <b>d00</b> | Compressor running time before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0...250     | hours | 0       | 0   | 0   | 0   |
| <b>d01</b> | <b>d00</b> unit of measure. <ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>dit</b> | Time interval between one defrost and the next                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...250     | hours | 6       | 6   | 6   | 6   |
| <b>d11</b> | <b>dit</b> unit of measure. <ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>d20</b> | Can be used to activate the defrost when the compressor is off. <ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost is not activated.</li> <li><b>1</b> = enabled. Defrost is activated when the compressor is off.</li> </ul>                                                                                                                                                                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d40</b> | Enables/disables use of probe Pb2. <ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost does not take Pb2 into account</li> <li><b>1</b> = enabled. Defrost runs according to the value read by Pb2 (only refers to defrost with threshold)</li> </ul>                                                                                                                                                                                                                                                                                             | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d41</b> | Sets the defrost activation threshold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>d42</b> | Sets the maximum time for which the evaporator can remain under the threshold <b>d41</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>d43</b> | Sets the type of time count in which the evaporator temperature remains under the threshold value. <ul style="list-style-type: none"> <li><b>0</b> = count independent of the compressor status</li> <li><b>1</b> = count with compressor on (when the compressor is off the count begins again)</li> <li><b>2</b> = count independent of the compressor status. The count stops when the temperature rises above the threshold <b>d41</b></li> <li><b>3</b> = count with compressor on and until the temperature rises above the threshold <b>d41</b></li> </ul> | 0...3       | num   | 0       | 0   | 0   | 0   |
| <b>d44</b> | Sets the threshold management mode. <ul style="list-style-type: none"> <li><b>0</b> = absolute value (for example: <b>d41</b> = -25°C means that the threshold temperature is exactly -25°C)</li> <li><b>1</b> = relative value (negative offset, relative to the value measured by the defrost probe Pb2 (if <b>d40</b> = 1) at the end of the first cooling cycle or on power-on)</li> </ul>                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |

| Parameter  | Description                                                                                                                                                                                                                                   | Range       | MU    | Default                 | AP1 | AP2 | AP3 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|-------------------------|-----|-----|-----|
| d90        | Sets the defrost mode with RTC. <ul style="list-style-type: none"><li>0 = RTC disabled</li><li>1 = Reserved</li><li>2 = RTC at fixed intervals (d91)</li><li>3 = Regular RTC (d94)</li></ul>                                                  | 0...3       | num   | 0                       | 0   | 0   | 0   |
| d91        | Sets the number of daily defrosts (only if d90=2)                                                                                                                                                                                             | 0...255     | num   | 0                       | 0   | 0   | 0   |
| d92        | Sets the first weekend/holiday day. <ul style="list-style-type: none"><li>0 = Sunday</li><li>1 = Monday</li><li>2 = Tuesday</li><li>3 = Wednesday</li><li>4 = Thursday</li><li>5 = Friday</li><li>6 = Saturday</li><li>7 = Disabled</li></ul> | 0...7       | num   | 0                       | 0   | 0   | 0   |
| d93        | Sets the second weekend/holiday day. Same as d92.                                                                                                                                                                                             | 0...7       | num   | 0                       | 0   | 0   | 0   |
| d94        | Sets the duration of the regular defrost in days (only if d90=3).                                                                                                                                                                             | 1...7       | num   | 1                       | 1   | 1   | 1   |
| d1H        | 1st weekday defrost start hour. <ul style="list-style-type: none"><li>0...23 = start hour</li><li>24 = disabled</li></ul>                                                                                                                     | 0...24      | hours | 0 (not in applications) |     |     |     |
| d1n        | 1st weekday defrost start minutes.                                                                                                                                                                                                            | 0...59      | min   | 0 (not in applications) |     |     |     |
| F1H        | 1st weekend/holiday defrost start hour. <ul style="list-style-type: none"><li>0...23 = start hour</li><li>24 = disabled</li></ul>                                                                                                             | 0...24      | hours | 0 (not in applications) |     |     |     |
| F1n        | 1st weekend/holiday defrost start minutes.                                                                                                                                                                                                    | 0...59      | min   | 0 (not in applications) |     |     |     |
| Fan (Fans) |                                                                                                                                                                                                                                               |             |       |                         |     |     |     |
| FPt        | Sets whether parameter FSt is expressed as an absolute temperature value or as a value relative to the Setpoint. <ul style="list-style-type: none"><li>0 = absolute</li><li>1 = relative.</li></ul>                                           | 0/1         | flag  | 0                       | 0   | 0   | 0   |
| FSt        | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                                             | -67.0...320 | °C/°F | 8.0                     | 8.0 | 8.0 | 8.0 |
| FAd        | Evaporator fan trigger differential.                                                                                                                                                                                                          | 0.1...25.0  | °C/°F | 2.0                     | 2.0 | 2.0 | 2.0 |
| Fdt        | Fan activation delay time after a defrost.                                                                                                                                                                                                    | 0...250     | min   | 0                       | 0   | 0   | 0   |
| dt         | Dripping time.                                                                                                                                                                                                                                | 0...250     | min   | 0                       | 0   | 0   | 0   |
| dFd        | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"><li>n(0) = no</li><li>y(1) = yes (fan excluded - off).</li></ul>                                                         | n/y         | flag  | y                       | y   | y   | y   |

| Parameter   | Description                                                                                                                                                                                                                                                                                                     |                                       |     |     |     |       | Range       | MU     | Default | AP1   | AP2   | AP3   |         |     |   |   |   |   |  |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------|-----|-----|-----|-------|-------------|--------|---------|-------|-------|-------|---------|-----|---|---|---|---|--|
| FCo         | Evaporator fan operating mode.                                                                                                                                                                                                                                                                                  |                                       |     |     |     |       | 0...3       | num    | 1       | 1     | 1     | 1     |         |     |   |   |   |   |  |
|             | Pb2                                                                                                                                                                                                                                                                                                             | H42                                   | FCo | day |     | night |             |        |         |       |       |       |         |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       |     | Cn  | Cf  | Cn    |             |        |         |       |       |       | Cf      |     |   |   |   |   |  |
|             | ok                                                                                                                                                                                                                                                                                                              | y                                     | 0   | T   | Off | T     |             |        |         |       |       |       | Off     |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       | 1   | T   | T   | T     |             |        |         |       |       |       | T       |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       | 2   | T   | DCd | T     |             |        |         |       |       |       | DCn     |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       | 3   | T   | DCd | T     |             |        |         |       |       |       | DCn     |     |   |   |   |   |  |
|             | ko                                                                                                                                                                                                                                                                                                              | y                                     | 0   | On  | Off | On    |             |        |         |       |       |       | Off     |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       | 1   | On  | On  | On    |             |        |         |       |       |       | On      |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       | 2   | On  | DCd | On    |             |        |         |       |       |       | DCd     |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       | 3   | On  | DCd | On    |             |        |         |       |       |       | DCd     |     |   |   |   |   |  |
|             | no                                                                                                                                                                                                                                                                                                              | n                                     | 0   | On  | Off | On    |             |        |         |       |       |       | Off     |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       | 1   | On  | On  | On    |             |        |         |       |       |       | On      |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       | 2   | On  | DCd | On    |             |        |         |       |       |       | DCd     |     |   |   |   |   |  |
|             |                                                                                                                                                                                                                                                                                                                 |                                       | 3   | On  | DCd | On    |             |        |         |       |       |       | DCd     |     |   |   |   |   |  |
|             | Headings legend:<br>Pb2 = probe Pb2 status (ok = present; ko = in E2 error and no = absent); day = day mode; night = night mode; Cn = compressor on; Cf = compressor off.<br><br>Status legend:<br>T = thermostat controlled fans; On = fans on; Off= fans off; DCd = Day duty cycle or DCn = Night duty cycle. |                                       |     |     |     |       |             |        |         |       |       |       |         |     |   |   |   |   |  |
|             | Fon                                                                                                                                                                                                                                                                                                             | Day duty cycle: time with fans on.    |     |     |     |       |             |        |         |       |       |       | 0...250 | min | 0 | 0 | 0 | 0 |  |
|             | FoF                                                                                                                                                                                                                                                                                                             | Day duty cycle: time with fans off.   |     |     |     |       |             |        |         |       |       |       | 0...250 | min | 0 | 0 | 0 | 0 |  |
|             | Fnn                                                                                                                                                                                                                                                                                                             | Night duty cycle: time with fans on.  |     |     |     |       |             |        |         |       |       |       | 0...250 | min | 0 | 0 | 0 | 0 |  |
|             | FnF                                                                                                                                                                                                                                                                                                             | Night duty cycle: time with fans off. |     |     |     |       |             |        |         |       |       |       | 0...250 | min | 0 | 0 | 0 | 0 |  |
| ESF         | "Night" mode activation.<br>• n(0) = no<br>• y(1) = yes.                                                                                                                                                                                                                                                        |                                       |     |     |     |       | n/y         | flag   | n       | n     | n     | n     |         |     |   |   |   |   |  |
| AL (Alarms) |                                                                                                                                                                                                                                                                                                                 |                                       |     |     |     |       |             |        |         |       |       |       |         |     |   |   |   |   |  |
| Att         | Sets the absolute or relative value for parameters HAL and LAL.<br>• 0 = absolute value<br>• 1 = relative value                                                                                                                                                                                                 |                                       |     |     |     |       | 0/1         | flag   | 0       | 0     | 0     | 0     |         |     |   |   |   |   |  |
| AFd         | Alarm differential.                                                                                                                                                                                                                                                                                             |                                       |     |     |     |       | 0,1...25,0  | °C/°F  | 2.0     | 2.0   | 2.0   | 2.0   |         |     |   |   |   |   |  |
| HAL         | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see Att) which, when exceeded, will lead to the activation of alarm signaling.                                                                                                                                              |                                       |     |     |     |       | LAL...302   | °C/°F  | 150.0   | 150.0 | 150.0 | 150.0 |         |     |   |   |   |   |  |
| LAL         | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see Att) which, when not reached, will lead to the activation of alarm signaling.                                                                                                                                           |                                       |     |     |     |       | -67,0...HAL | °C/°F  | -50.0   | -50.0 | -50.0 | -50.0 |         |     |   |   |   |   |  |
| PAo         | Alarm exclusion time when switching on the device, after a power failure.                                                                                                                                                                                                                                       |                                       |     |     |     |       | 0...10      | min*10 | 0       | 0     | 0     | 0     |         |     |   |   |   |   |  |
| dAo         | Temperature alarm exclusion time after defrosting.                                                                                                                                                                                                                                                              |                                       |     |     |     |       | 0...999     | min    | 0       | 0     | 0     | 0     |         |     |   |   |   |   |  |
| oAo         | Alarm signaling delay after deactivation of the digital input (door closure). Alarm refers to high and low temperature alarms.                                                                                                                                                                                  |                                       |     |     |     |       | 0...10      | hours  | 0       | 0     | 0     | 0     |         |     |   |   |   |   |  |
| tdo         | Door open alarm activation delay time.                                                                                                                                                                                                                                                                          |                                       |     |     |     |       | 0...250     | min    | 0       | 0     | 0     | 0     |         |     |   |   |   |   |  |
| tAo         | Temperature alarm signaling delay time.                                                                                                                                                                                                                                                                         |                                       |     |     |     |       | 0...250     | min    | 0       | 0     | 0     | 0     |         |     |   |   |   |   |  |

| Parameter                       | Description                                                                                                                                                                                                                                                     | Range        | MU    | Default                    | AP1 | AP2 | AP3 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|----------------------------|-----|-----|-----|
| dAt                             | Defrost ended due to timeout alarm indication. <ul style="list-style-type: none"><li>n(0) = alarm not activated</li><li>y(1) = alarm activated.</li></ul>                                                                                                       | n/y          | flag  | 0                          | 0   | 0   | 0   |
| EAL                             | An external alarm inhibits the regulators. <ul style="list-style-type: none"><li>0 = does not inhibit the regulators</li><li>1 = compressor and defrost inhibited</li><li>2 = fans, compressor and defrost inhibited;</li></ul>                                 | 0/1/2        | flag  | n                          | n   | n   | n   |
| AoP                             | Alarm output polarity. <ul style="list-style-type: none"><li>0 = NO (Normally open)</li><li>1 = NC (Normally closed).</li></ul>                                                                                                                                 | 0/1          | flag  | 1                          | 1   | 1   | 1   |
| SA3                             | Probe 3 alarm setpoint.                                                                                                                                                                                                                                         | -67,0...302  | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| dA3                             | Probe 3 alarm differential.                                                                                                                                                                                                                                     | 0.1...30.0   | °C/°F | 1.0                        | 1.0 | 1.0 | 1.0 |
| rFt                             | Low refrigerant alarm signaling delay.                                                                                                                                                                                                                          | 0...250      | min   | 0 (non nelle applicazioni) |     |     |     |
| Lit (Lights and digital inputs) |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| dOd                             | Digital input shuts off utilities. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = disables fans</li><li>2 = disables compressor</li><li>3 = disables fans and compressor.</li></ul>                                                             | 0...3        | num   | 0                          | 0   | 3   | 3   |
| dAd                             | Digital input activation delay                                                                                                                                                                                                                                  | 0...250      | min   | 0                          | 0   | 0   | 0   |
| dCo                             | Compressor switch-off delay from door opening.                                                                                                                                                                                                                  | 0...250      | min   | 0                          | 0   | 1   | 0   |
| AUP                             | Auxiliary (AUX) output activation when the door is opened. <ul style="list-style-type: none"><li>n(0) = disabled</li><li>y(1) = AUX output activation</li></ul>                                                                                                 | n/y          | flag  | n                          | n   | n   | n   |
| PrE (Pressure switch)           |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| PEn                             | Number of errors permitted per minimum/maximum pressure switch input                                                                                                                                                                                            | 0...15       | num   | 0                          | 0   | 0   | 0   |
| PEi                             | Minimum/maximum pressure switch error count interval                                                                                                                                                                                                            | 1...99       | min   | 1                          | 1   | 1   | 1   |
| PEt                             | Compressor activation delay after pressure switch deactivation                                                                                                                                                                                                  | 0...255      | min   | 0                          | 0   | 0   | 0   |
| EnS (Energy Saving)             |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| oSP                             | Temperature value to be added to the setpoint in the case of an enabled reduced set (Economy function).                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| odF                             | Differential offset during an energy saving cycle or reduced set.                                                                                                                                                                                               | 0.1...30.0   | °C/°F | 2.0                        | 2.0 | 2.0 | 2.0 |
| Add (Communication)             |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| Adr                             | Modbus protocol device address.                                                                                                                                                                                                                                 | 1...247      | num   | 1 (not in applications)    |     |     |     |
| bAU                             | Modbus Baudrate selection. <ul style="list-style-type: none"><li>96 (0) = 9600 baud</li><li>192 (1) = 19200 baud</li><li>384 (2) = 38400 baud</li></ul>                                                                                                         | 96/192/384   | num   | 96 (not in applications)   |     |     |     |
| Pty                             | Modbus parity bit. <ul style="list-style-type: none"><li>n(0) = none</li><li>E(1) = even</li><li>o(2) = odd.</li></ul>                                                                                                                                          | n/E/o        | num   | E (not in applications)    |     |     |     |
| diS (Display)                   |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| dro                             | Selects the unit of measure used when displaying the temperature read by the probes. (0 = °C, 1 = °F).<br><b>Note:</b> changing from °C to °F or vice-versa does NOT change the <b>SEt</b> , <b>diF</b> values, etc. (example: <b>SEt</b> = 10°C becomes 10°F). | 0/1          | flag  | 0                          | 0   | 0   | 0   |
| CA1 (!)                         | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                     | Range        | MU    | Default | AP1 | AP2 | AP3 |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|---------|-----|-----|-----|
| <b>CA2 (!)</b>             | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>CA3 (!)</b>             | Positive or negative temperature value to be added to the value of Pb3.                                                                                                                                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>CAi</b>                 | Activation of the calibration value.<br><ul style="list-style-type: none"> <li><b>0</b> = Adds the value to the temperature value displayed</li> <li><b>1</b> = Adds the value to the temperature used by the regulators and not to the one displayed</li> <li><b>2</b> = Adds the value to the temperature used by the regulators and to the temperature displayed.</li> </ul> | 0/1/2        | num   | 2       | 2   | 2   | 2   |
| <b>LoC</b>                 | Keypad lock.<br><ul style="list-style-type: none"> <li><b>n(0)</b> = Keypad lock disabled</li> <li><b>y(1)</b> = Keypad lock enabled (on startup or when 30 seconds have passed since the last action carried out on the user interface)</li> </ul>                                                                                                                             | n/y          | flag  | y       | y   | y   | y   |
| <b>ddd</b>                 | Selects the type of value to show on the display.<br><ul style="list-style-type: none"> <li><b>0</b> = setpoint</li> <li><b>1</b> = Pb1 probe</li> <li><b>2</b> = Pb2 probe</li> <li><b>3</b> = Pb3 probe.</li> </ul>                                                                                                                                                           | 0...3        | num   | 1       | 1   | 1   | 1   |
| <b>ddL</b>                 | Display mode during defrosting.<br><ul style="list-style-type: none"> <li><b>0</b> = display the temperature read by Pb1</li> <li><b>1</b> = inhibits reading on the value of Pb1 at the start of defrost and until the setpoint is reached</li> <li><b>2</b> = displays label <b>dEF</b> during defrost until the setpoint is reached.</li> </ul>                              | 0/1/2        | num   | 0       | 0   | 0   | 0   |
| <b>Ldd</b>                 | Display unlock timeout value - label <b>dEF</b>                                                                                                                                                                                                                                                                                                                                 | 0...250      | min   | 30      | 30  | 30  | 30  |
| <b>ndt</b>                 | Display with decimal point.<br><ul style="list-style-type: none"> <li><b>n(0)</b> = no</li> <li><b>y(1)</b> = yes.</li> </ul>                                                                                                                                                                                                                                                   | n/y          | flag  | y       | y   | y   | y   |
| <b>FSE</b>                 | Sets the value used by the low-pass filter to calculate the temperature value to be displayed.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled</li> <li><b>1</b> = 200 (quicker response)</li> <li><b>2</b> = 100</li> <li><b>3</b> = 50</li> <li><b>4</b> = 25</li> <li><b>5</b> = 12</li> <li><b>6</b> = 6</li> <li><b>7</b> = 3 (slower response).</li> </ul>  | 0...7        | num   | 0       | 0   | 0   | 0   |
| <b>FdS</b>                 | Filter disabling threshold.                                                                                                                                                                                                                                                                                                                                                     | -67.0...302  | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>Ftt</b>                 | Time that has passed beyond the value of <b>FdS</b> before the filter is disabled.                                                                                                                                                                                                                                                                                              | 0...250      | min   | 0       | 0   | 0   | 0   |
| <b>FHt</b>                 | Filter sampling interval.                                                                                                                                                                                                                                                                                                                                                       | 1...250      | s     | 1       | 1   | 1   | 1   |
| <b>PS1</b>                 | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                                                                                                                                                                   | 0...250      | num   | 0       | 0   | 0   | 0   |
| <b>PS2</b>                 | When enabled ( <b>PS2</b> ≠0) this is the access key for the installer parameters.                                                                                                                                                                                                                                                                                              | 0...250      | num   | 15      | 15  | 15  | 15  |
| <b>CnF (Configuration)</b> |                                                                                                                                                                                                                                                                                                                                                                                 |              |       |         |     |     |     |
| <b>H00</b>                 | Selects the probe type.<br><ul style="list-style-type: none"> <li><b>0</b> = PTC</li> <li><b>1</b> = NTC</li> <li><b>2</b> = Pt1000.</li> </ul>                                                                                                                                                                                                                                 | 0/1/2        | flag  | 1       | 1   | 1   | 1   |

| Parameter | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Range     | MU  | Default | AP1 | AP2 | AP3 |
|-----------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|---------|-----|-----|-----|
| H08       | Stand-by operating mode. <ul style="list-style-type: none"> <li>0 = display off; the regulators are active and the device signals possible alarms by reactivating the display</li> <li>1 = display off; the regulators and the alarms are blocked</li> <li>2 = the display shows the label "OFF"; the regulators and alarms are inhibited.</li> </ul>                                                                                                                                                                                                                                                              | 0/1/2     | num | 2       | 2   | 2   | 2   |
| H11       | Configuration of digital input 1 ( <b>DI</b> )/ polarity. <ul style="list-style-type: none"> <li>0 = disabled</li> <li>±1 = defrost</li> <li>±2 = reduced set</li> <li>±3 = auxiliary</li> <li>±4 = door switch</li> <li>±5 = external alarm</li> <li>±6 = stand-by</li> <li>±7 = pressure switch</li> <li>±8 = deep cooling</li> <li>±9 = light</li> <li>±10 = energy saving</li> </ul> <b>Note:</b> <ul style="list-style-type: none"> <li>the '+' sign indicates that the input is active if the contact is closed.</li> <li>the '-' sign indicates that the input is active if the contact is open.</li> </ul> | -10...+10 | num | 0       | 0   | -4  | -4  |
| H21       | Configuration of digital output 1 ( <b>Out1</b> ). <ul style="list-style-type: none"> <li>0 = disabled</li> <li>1 = compressor</li> <li>2 = defrost</li> <li>3 = evaporator fans</li> <li>4 = alarm</li> <li>5 = auxiliary</li> <li>6 = stand-by</li> <li>7 = light</li> <li>8 = reserved</li> <li>9 = compressor 2</li> <li>10 = evaporator 2 defrost</li> <li>11 = condenser fans</li> <li>12 = heater deadband control</li> <li>13 = reserved</li> </ul>                                                                                                                                                        | 0...13    | num | 1       | 1   | 1   | 1   |
| H22       | Configuration of digital output 2 ( <b>Out2</b> ). <ul style="list-style-type: none"> <li>0 = disabled</li> <li>1 = compressor</li> <li>2 = defrost</li> <li>3 = evaporator fans</li> <li>4 = alarm</li> <li>5 = auxiliary</li> <li>6 = stand-by</li> <li>7 = light</li> <li>8 = reserved</li> <li>9 = compressor 2</li> <li>10 = evaporator 2 defrost</li> <li>11 = condenser fans</li> <li>12 = heater deadband control.</li> </ul>                                                                                                                                                                              | 0...12    | num | 2       | 2   | 2   | 2   |
| H23       | Configuration of digital output 3 ( <b>Out3</b> ). Same as H22.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...12    | num | 3       | 3   | 3   | 3   |
| H24       | Configuration of digital output 4 ( <b>Out4</b> ). Same as H22.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...12    | num | 4       | 4   | 7   | 7   |

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                      | Range   | MU    | Default                 | AP1 | AP2 | AP3 |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|-------------------------|-----|-----|-----|
| H31                 | Configuration of  key. <ul style="list-style-type: none"><li><b>0</b> = disabled</li><li><b>1</b> = defrost</li><li><b>2</b> = auxiliary</li><li><b>3</b> = reduced set</li><li><b>4</b> = stand-by</li><li><b>5</b> = reserved</li><li><b>6</b> = reserved</li><li><b>7</b> = deep cooling</li><li><b>8</b> = light.</li></ul> | 0...8   | num   | 1                       | 1   | 1   | 1   |
| H32                 | Configuration of  key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                     | 0...8   | num   | 0                       | 0   | 0   | 0   |
| H33                 | Configuration of  key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                     | 0...8   | num   | 4                       | 4   | 4   | 4   |
| H34                 | Configuration of  key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                     | 0...8   | num   | 0                       | 0   | 0   | 0   |
| H35                 | Configuration of  key. Same as <b>H31</b> .                                                                                                                                                                                                                                                                                     | 0...8   | num   | 0                       | 0   | 0   | 0   |
| H42                 | Probe Pb2 present. <ul style="list-style-type: none"><li><b>n(0)</b> = not present</li><li><b>y(1)</b> = present.</li></ul>                                                                                                                                                                                                                                                                                      | n/y     | flag  | y                       | y   | y   | y   |
| H43                 | Probe Pb3 present. <ul style="list-style-type: none"><li><b>n(0)</b> = not present</li><li><b>y(1)</b> = present</li><li><b>2EP(2)</b> = second evaporator.</li></ul>                                                                                                                                                                                                                                            | n/y/2EP | flag  | n                       | n   | n   | n   |
| H45                 | Defrost input mode for applications with dual evaporator.<br><b>0</b> = first evaporator only;<br><b>1</b> = if at least one of the evaporators is below its defrost end temperature;<br><b>2</b> = only if both evaporators are under the respective defrost end temperature;<br><b>3</b> = evaporator 1 and evaporator 2 alternately.                                                                          | 0...3   | num   | 0                       | 0   | 0   | 0   |
| H48                 | RTC (Real Time Clock) present. <ul style="list-style-type: none"><li><b>0</b> = no RTC</li><li><b>1</b> = RTC present.</li></ul>                                                                                                                                                                                                                                                                                 | 0/1     | flag  | 0                       | 0   | 0   | 0   |
| H60                 | Display selected application.<br><b>0</b> = disabled; <b>1</b> = AP1; <b>2</b> = AP2; <b>3</b> = AP3.                                                                                                                                                                                                                                                                                                            | 0...3   | num   | 1 (not in applications) |     |     |     |
| tAb                 | Reserved: read-only parameter.                                                                                                                                                                                                                                                                                                                                                                                   | /       | /     | / (not in applications) |     |     |     |
| FPr (UNICARD)       |                                                                                                                                                                                                                                                                                                                                                                                                                  |         |       |                         |     |     |     |
| UL                  | Transfer of the programming parameters from the device to the UNICARD.                                                                                                                                                                                                                                                                                                                                           | /       | /     | - (not in applications) |     |     |     |
| Fr                  | UNICARD formatting. Deletes all data on the UNICARD.<br><b>Note:</b> the use of parameter <b>Fr</b> results in the loss of all data entered. This operation cannot be reversed.                                                                                                                                                                                                                                  | /       | /     | - (not in applications) |     |     |     |
| FnC (Functions)     |                                                                                                                                                                                                                                                                                                                                                                                                                  |         |       |                         |     |     |     |
| tAL                 | Force alarm acknowledgment                                                                                                                                                                                                                                                                                                                                                                                       | /       | /     | - (not in applications) |     |     |     |
| rAP                 | Reset pressure switch alarms                                                                                                                                                                                                                                                                                                                                                                                     | /       | /     | - (not in applications) |     |     |     |
| Cnt                 | Reset TelevisAir diagnostic counters (see Reset TelevisAir diagnostic counters)                                                                                                                                                                                                                                                                                                                                  | /       | /     | - (not in applications) |     |     |     |
| nAd (Night and Day) |                                                                                                                                                                                                                                                                                                                                                                                                                  |         |       |                         |     |     |     |
| E10                 | Selects Event 1 activation mode.<br><b>0</b> = disabled; <b>1</b> = Monday; <b>2</b> = Tuesday; <b>3</b> = Wednesday; <b>4</b> = Thursday; <b>5</b> = Friday; <b>6</b> = Saturday; <b>7</b> = Sunday; <b>8</b> = Monday to Friday; <b>9</b> = Monday to Saturday; <b>10</b> = Saturday and Sunday; <b>11</b> = every day.                                                                                        | 0...11  | num   | 0 (not in applications) |     |     |     |
| E11                 | Event 1 start hour.                                                                                                                                                                                                                                                                                                                                                                                              | 0...23  | hours | 0 (not in applications) |     |     |     |
| E12                 | Event 1 start minute.                                                                                                                                                                                                                                                                                                                                                                                            | 0...59  | min   | 0 (not in applications) |     |     |     |
| E13                 | Event 1 end hour.                                                                                                                                                                                                                                                                                                                                                                                                | 0...23  | hours | 0 (not in applications) |     |     |     |
| E14                 | Event 1 end minute.                                                                                                                                                                                                                                                                                                                                                                                              | 0...59  | min   | 0 (not in applications) |     |     |     |

| Parameter  | Description                                                                                                                                                           | Range  | MU    | Default                 | AP1 | AP2 | AP3 |
|------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|-------|-------------------------|-----|-----|-----|
| <b>E15</b> | Sets Event 1 type.<br><b>0</b> = Energy Saving; <b>1</b> = AUX deactivated; <b>2</b> = AUX activated; <b>3</b> = Stand-by; <b>4</b> = Light on; <b>5</b> = Light off. | 0...5  | num   | 0 (not in applications) |     |     |     |
| <b>E20</b> | Selects Event 2 activation mode. Same as <b>E10</b> .                                                                                                                 | 0...11 | num   | 0 (not in applications) |     |     |     |
| <b>E21</b> | Event 2 start hour.                                                                                                                                                   | 0...23 | hours | 0 (not in applications) |     |     |     |
| <b>E22</b> | Event 2 start minute.                                                                                                                                                 | 0...59 | min   | 0 (not in applications) |     |     |     |
| <b>E23</b> | Event 2 end hour.                                                                                                                                                     | 0...23 | hours | 0 (not in applications) |     |     |     |
| <b>E24</b> | Event 2 end minute.                                                                                                                                                   | 0...59 | min   | 0 (not in applications) |     |     |     |
| <b>E25</b> | Sets Event 2 type. Same as <b>E15</b> .                                                                                                                               | 0...5  | num   | 0 (not in applications) |     |     |     |

**Note:** if one or more parameters in folder **CnF** or marked with (!) are changed, the device must be switched off and then on again to make sure it works properly.

## Parameters IDNext 978 P/CI

### User parameters IDNext 978 P/CI

| Parameter | Description                                                                                                                                                                                                                  | Range                     | MU    | Default                 | AP1   | AP2   | AP3   |
|-----------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|-------------------------|-------|-------|-------|
| SEt       | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0                     | 3.0   | 0.0   | -18.0 |
| diF       | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value. | 0.1...30.0                | °C/°F | 2.0                     | 2.0   | 2.0   | 2.0   |
| LSE       | Minimum setpoint value.                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0                   | -55.0 | -55.0 | -55.0 |
| HSE       | Maximum setpoint value.                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0                   | 140.0 | 140.0 | 140.0 |
| dEt       | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                              | 1...250                   | min   | 30                      | 30    | 30    | 30    |
| dS1       | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                 | -67.0...302               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| dS2       | Evaporator 2 defrost end temperature (measured by Pb3 if <b>H43</b> = 2EP)                                                                                                                                                   | -67.0...302               | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| dit       | Time interval between one defrost and the next                                                                                                                                                                               | 0...250                   | hours | 6                       | 6     | 6     | 6     |
| FSt       | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                            | -67.0...320               | °C/°F | 8.0                     | 8.0   | 8.0   | 8.0   |
| Fdt       | Fan activation delay time after a defrost.                                                                                                                                                                                   | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dt        | Dripping time.                                                                                                                                                                                                               | 0...250                   | min   | 0                       | 0     | 0     | 0     |
| dFd       | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes (fan excluded - off).</li> </ul>                       | n/y                       | flag  | y                       | y     | y     | y     |
| HAL       | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when exceeded, will lead to the activation of alarm signaling.                                                   | <b>LAL</b> ...302         | °C/°F | 150.0                   | 150.0 | 150.0 | 150.0 |
| LAL       | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see <b>Att</b> ) which, when not reached, will lead to the activation of alarm signaling.                                                | -67.0... <b>HAL</b>       | °C/°F | -50.0                   | -50.0 | -50.0 | -50.0 |
| CA1 (!)   | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| CA2 (!)   | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                      | -30.0...30.0              | °C/°F | 0.0                     | 0.0   | 0.0   | 0.0   |
| PS1       | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                | 0...250                   | num   | 0                       | 0     | 0     | 0     |
| H42       | Probe Pb2 present. <ul style="list-style-type: none"> <li><b>n</b>(0) = not present</li> <li><b>y</b>(1) = present.</li> </ul>                                                                                               | n/y                       | flag  | y                       | y     | y     | y     |
| tAb       | Reserved: read-only parameter.                                                                                                                                                                                               | /                         | /     | / (not in applications) |       |       |       |

**Note:** the "User" menu parameters also include **PA2**, which allows access to the "Installer" menu.

**Note:** for the full list of parameters, see the section "**Installer parameters**".

## Installer parameters IDNext 978 P/CI

| Parameter              | Description                                                                                                                                                                                                                                  | Range                     | MU    | Default | AP1   | AP2   | AP3   |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|-------|---------|-------|-------|-------|
| <b>SEt</b>             | Control setpoint with range between the minimum <b>LSE</b> setpoint and the maximum <b>HSE</b> setpoint. The setpoint value is set in the 'Machine Status' menu.                                                                             | <b>LSE</b> ... <b>HSE</b> | °C/°F | 3.0     | 3.0   | 0.0   | -18.0 |
| <b>CP (Compressor)</b> |                                                                                                                                                                                                                                              |                           |       |         |       |       |       |
| <b>diF</b>             | Compressor relay activation differential; the compressor stops when the setpoint value is reached (as indicated by the control probe) and restarts at a temperature value equal to the setpoint plus the differential value.                 | 0.1...30.0                | °C/°F | 2.0     | 2.0   | 2.0   | 2.0   |
| <b>LSE</b>             | Minimum setpoint value.                                                                                                                                                                                                                      | -67.0... <b>HSE</b>       | °C/°F | -55.0   | -55.0 | -55.0 | -55.0 |
| <b>HSE</b>             | Maximum setpoint value.                                                                                                                                                                                                                      | <b>LSE</b> ...302         | °C/°F | 140.0   | 140.0 | 140.0 | 140.0 |
| <b>HC</b>              | The regulator implements either cold operation (set "C(0)") or for hot (set "H(1)").                                                                                                                                                         | C/H                       | flag  | 0       | 0     | 0     | 0     |
| <b>ont</b>             | Regulator power-on time for a inoperable probe:<br>• if <b>Ont</b> = 1 and <b>Oft</b> = 0 compressor is always on<br>• if <b>Ont</b> = 1 and <b>Oft</b> > 0 compressor in duty cycle mode                                                    | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>oFt</b>             | Regulator power-off time for a inoperable probe:<br>• if <b>Oft</b> = 1 and <b>Ont</b> = 0 compressor is always off<br>• if <b>Oft</b> = 1 and <b>Ont</b> > 0 compressor in duty cycle mode                                                  | 0...250                   | min   | 15      | 15    | 15    | 15    |
| <b>don</b>             | Compressor relay activation delay time after request                                                                                                                                                                                         | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>doF</b>             | Delay time after power-off: the delay time indicated must elapse between deactivation of the compressor relay and the next power-on.                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dbi</b>             | Delay time between power-ons; the delay time indicated must elapse between two consecutive compressor power-ons.                                                                                                                             | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>Cit</b>             | Minimum compressor activation time before it can be deactivated. If <b>Cit</b> = 0 it is not active.                                                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CAt</b>             | Maximum compressor activation time before it can be deactivated. If <b>CAt</b> = 0 it is not active.                                                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>odo</b>             | Delay in activating outputs after the device is powered on or after a power failure. 0 = not active.                                                                                                                                         | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcS</b>             | "Deep Cooling Cycle" setpoint                                                                                                                                                                                                                | -67.0...302               | °C/°F | 0.0     | 0.0   | 0.0   | 0.0   |
| <b>tdC</b>             | "Deep Cooling Cycle" duration                                                                                                                                                                                                                | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dcc</b>             | Defrost activation delay after a "Deep Cooling Cycle"                                                                                                                                                                                        | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>CP2</b>             | Compressor 2 activation delay.                                                                                                                                                                                                               | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dFA</b>             | Condenser fan and compressor activation delay from the request.                                                                                                                                                                              | 0...250                   | s     | 0       | 0     | 0     | 0     |
| <b>dEF (Defrost)</b>   |                                                                                                                                                                                                                                              |                           |       |         |       |       |       |
| <b>dtY</b>             | Type of defrost.<br>• 0 = electric defrost or due to stoppage - compressor OFF during defrost<br>• 1 = cycle inversion (hot gas) defrost; compressor on during defrost<br>• 2 = defrost with "Free" mode; defrost independent of compressor. | 0/1/2                     | num   | 0       | 0     | 0     | 0     |
| <b>doH</b>             | Defrost cycle activation delay from the call                                                                                                                                                                                                 | 0...250                   | min   | 0       | 0     | 0     | 0     |
| <b>dt2</b>             | Unit of measure for defrost duration ( <b>dEt</b> parameter).<br>• 0 = hours<br>• 1 = minutes<br>• 2 = seconds.                                                                                                                              | 0/1/2                     | num   | 1       | 1     | 1     | 1     |
| <b>dEt</b>             | Defrost timeout. Determines the maximum duration of the defrost                                                                                                                                                                              | 1...250                   | min   | 30      | 30    | 30    | 30    |

| Parameter  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Range       | MU    | Default | AP1 | AP2 | AP3 |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|---------|-----|-----|-----|
| <b>dS1</b> | Evaporator 1 defrost end temperature (measured by probe Pb2)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | -67.0...302 | °C/°F | 8.0     | 8.0 | 8.0 | 8.0 |
| <b>dS2</b> | Evaporator 2 defrost end temperature (measured by Pb3 if <b>H43</b> = 2EP)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>dPo</b> | Defrost activation request at power-on, if the temperature measured by Pb2 allows. <ul style="list-style-type: none"> <li><b>n</b>(0) = no</li> <li><b>y</b>(1) = yes.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                 | n/y         | flag  | n       | n   | n   | n   |
| <b>tCd</b> | Minimum period of time with the compressor ON or OFF before defrost is activated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | -127...127  | min   | 0       | 0   | 0   | 0   |
| <b>Cod</b> | Time with the compressor OFF before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>dMr</b> | Enables the defrost count reset in the case of manual defrosting. <ul style="list-style-type: none"> <li><b>n</b> = count reset does not take place</li> <li><b>y</b> = count reset takes place</li> </ul>                                                                                                                                                                                                                                                                                                                                                        | n/y         | flag  | n       | n   | n   | n   |
| <b>d00</b> | Compressor running time before defrost is activated                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0...250     | hours | 0       | 0   | 0   | 0   |
| <b>d01</b> | <b>d00</b> unit of measure. <ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>dit</b> | Time interval between one defrost and the next                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | 0...250     | hours | 6       | 6   | 6   | 6   |
| <b>d11</b> | <b>dit</b> unit of measure. <ul style="list-style-type: none"> <li><b>0</b> = hours</li> <li><b>1</b> = minutes</li> <li><b>2</b> = seconds.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                           | 0/1/2       | num   | 0       | 0   | 0   | 0   |
| <b>d20</b> | Can be used to activate the defrost when the compressor is off. <ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost is not activated.</li> <li><b>1</b> = enabled. Defrost is activated when the compressor is off.</li> </ul>                                                                                                                                                                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d40</b> | Enables/disables use of probe Pb2. <ul style="list-style-type: none"> <li><b>0</b> = disabled. Defrost does not take Pb2 into account</li> <li><b>1</b> = enabled. Defrost runs according to the value read by Pb2 (only refers to defrost with threshold)</li> </ul>                                                                                                                                                                                                                                                                                             | 0/1         | flag  | 0       | 0   | 0   | 0   |
| <b>d41</b> | Sets the defrost activation threshold                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | -67.0...302 | °C/°F | 0.0     | 0.0 | 0.0 | 0.0 |
| <b>d42</b> | Sets the maximum time for which the evaporator can remain under the threshold <b>d41</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0...250     | min   | 0       | 0   | 0   | 0   |
| <b>d43</b> | Sets the type of time count in which the evaporator temperature remains under the threshold value. <ul style="list-style-type: none"> <li><b>0</b> = count independent of the compressor status</li> <li><b>1</b> = count with compressor on (when the compressor is off the count begins again)</li> <li><b>2</b> = count independent of the compressor status. The count stops when the temperature rises above the threshold <b>d41</b></li> <li><b>3</b> = count with compressor on and until the temperature rises above the threshold <b>d41</b></li> </ul> | 0...3       | num   | 0       | 0   | 0   | 0   |
| <b>d44</b> | Sets the threshold management mode. <ul style="list-style-type: none"> <li><b>0</b> = absolute value (for example: <b>d41</b> = -25°C means that the threshold temperature is exactly -25°C)</li> <li><b>1</b> = relative value (negative offset, relative to the value measured by the defrost probe Pb2 (if <b>d40</b> = 1) at the end of the first cooling cycle or on power-on)</li> </ul>                                                                                                                                                                    | 0/1         | flag  | 0       | 0   | 0   | 0   |

| Parameter  | Description                                                                                                                                                                                                                                                                                           | Range       | MU    | Default                 | AP1 | AP2 | AP3 |
|------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|-------|-------------------------|-----|-----|-----|
| <b>d90</b> | Sets the defrost mode with RTC. <ul style="list-style-type: none"><li><b>0</b> = RTC disabled</li><li><b>1</b> = Reserved</li><li><b>2</b> = RTC at fixed intervals (<b>d91</b>)</li><li><b>3</b> = Regular RTC (<b>d94</b>)</li></ul>                                                                | 0...3       | num   | 0                       | 0   | 0   | 0   |
| <b>d91</b> | Sets the number of daily defrosts (only if <b>d90</b> =2)                                                                                                                                                                                                                                             | 0...255     | num   | 0                       | 0   | 0   | 0   |
| <b>d92</b> | Sets the first weekend/holiday day. <ul style="list-style-type: none"><li><b>0</b> = Sunday</li><li><b>1</b> = Monday</li><li><b>2</b> = Tuesday</li><li><b>3</b> = Wednesday</li><li><b>4</b> = Thursday</li><li><b>5</b> = Friday</li><li><b>6</b> = Saturday</li><li><b>7</b> = Disabled</li></ul> | 0...7       | num   | 0                       | 0   | 0   | 0   |
| <b>d93</b> | Sets the second weekend/holiday day. Same as <b>d92</b> .                                                                                                                                                                                                                                             | 0...7       | num   | 0                       | 0   | 0   | 0   |
| <b>d94</b> | Sets the duration of the regular defrost in days (only if <b>d90</b> =3).                                                                                                                                                                                                                             | 1...7       | num   | 1                       | 1   | 1   | 1   |
| <b>d1H</b> | 1st weekday defrost start hour. <ul style="list-style-type: none"><li><b>0...23</b> = start hour</li><li><b>24</b> = disabled</li></ul>                                                                                                                                                               | 0...24      | hours | 0 (not in applications) |     |     |     |
| <b>d1n</b> | 1st weekday defrost start minutes.                                                                                                                                                                                                                                                                    | 0...59      | min   | 0 (not in applications) |     |     |     |
| <b>F1H</b> | 1st weekend/holiday defrost start hour. <ul style="list-style-type: none"><li><b>0...23</b> = start hour</li><li><b>24</b> = disabled</li></ul>                                                                                                                                                       | 0...24      | hours | 0 (not in applications) |     |     |     |
| <b>F1n</b> | 1st weekend/holiday defrost start minutes.                                                                                                                                                                                                                                                            | 0...59      | min   | 0 (not in applications) |     |     |     |
| Fan (Fans) |                                                                                                                                                                                                                                                                                                       |             |       |                         |     |     |     |
| <b>FPt</b> | Sets whether parameter <b>FSt</b> is expressed as an absolute temperature value or as a value relative to the Setpoint. <ul style="list-style-type: none"><li><b>0</b> = absolute</li><li><b>1</b> = relative.</li></ul>                                                                              | 0/1         | flag  | 0                       | 0   | 0   | 0   |
| <b>FSt</b> | Fan disabling temperature; a value, read by the evaporator probe.                                                                                                                                                                                                                                     | -67.0...320 | °C/°F | 8.0                     | 8.0 | 8.0 | 8.0 |
| <b>FAd</b> | Evaporator fan trigger differential.                                                                                                                                                                                                                                                                  | 0.1...25.0  | °C/°F | 2.0                     | 2.0 | 2.0 | 2.0 |
| <b>Fdt</b> | Fan activation delay time after a defrost.                                                                                                                                                                                                                                                            | 0...250     | min   | 0                       | 0   | 0   | 0   |
| <b>dt</b>  | Dripping time.                                                                                                                                                                                                                                                                                        | 0...250     | min   | 0                       | 0   | 0   | 0   |
| <b>dFd</b> | Used to select or deselect the exclusion of the evaporator fans during defrosting. <ul style="list-style-type: none"><li><b>n(0)</b> = no</li><li><b>y(1)</b> = yes (fan excluded - off).</li></ul>                                                                                                   | n/y         | flag  | y                       | y   | y   | y   |

| Parameter                                                                                                                                                                                                                                                                                                       | Description                                                                                                                                                                                             | Range       | MU     | Default | AP1   | AP2   | AP3   |     |     |     |     |     |       |  |       |    |    |    |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------|---------|-------|-------|-------|-----|-----|-----|-----|-----|-------|--|-------|----|----|----|
| FCo                                                                                                                                                                                                                                                                                                             | Evaporator fan operating mode.                                                                                                                                                                          | 0...3       | num    | 1       | 1     | 1     | 1     |     |     |     |     |     |       |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 | <table><tr><th rowspan="2">Pb2</th><th rowspan="2">H42</th><th rowspan="2">FCo</th><th colspan="2">day</th><th colspan="2">night</th></tr><tr><th>Cn</th><th>Cf</th><th>Cn</th><th>Cf</th></tr></table> |             |        |         |       |       |       | Pb2 | H42 | FCo | day |     | night |  | Cn    | Cf | Cn | Cf |
|                                                                                                                                                                                                                                                                                                                 | Pb2                                                                                                                                                                                                     |             |        |         |       |       |       |     |     |     | H42 | FCo | day   |  | night |    |    |    |
|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                         |             |        |         |       |       |       | Cn  | Cf  | Cn  |     |     | Cf    |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 | ok                                                                                                                                                                                                      |             |        |         |       |       |       | y   | 0   | T   | Off | T   | Off   |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                         |             |        |         |       |       |       |     | 1   | T   | T   | T   | T     |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                         |             |        |         |       |       |       |     | 2   | T   | DCd | T   | DCn   |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                         |             |        |         |       |       |       |     | 3   | T   | DCd | T   | DCn   |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 | ko                                                                                                                                                                                                      |             |        |         |       |       |       | y   | 0   | On  | Off | On  | Off   |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                         |             |        |         |       |       |       |     | 1   | On  | On  | On  | On    |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                         |             |        |         |       |       |       |     | 2   | On  | DCd | On  | DCd   |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                         |             |        |         |       |       |       |     | 3   | On  | DCd | On  | DCd   |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 | no                                                                                                                                                                                                      |             |        |         |       |       |       | n   | 0   | On  | Off | On  | Off   |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                         |             |        |         |       |       |       |     | 1   | On  | On  | On  | On    |  |       |    |    |    |
|                                                                                                                                                                                                                                                                                                                 |                                                                                                                                                                                                         |             |        |         |       |       |       |     | 2   | On  | DCd | On  | DCd   |  |       |    |    |    |
| 3                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                         | On          | DCd    | On      | DCd   |       |       |     |     |     |     |     |       |  |       |    |    |    |
| Headings legend:<br>Pb2 = probe Pb2 status (ok = present; ko = in E2 error and no = absent); day = day mode; night = night mode; Cn = compressor on; Cf = compressor off.<br><br>Status legend:<br>T = thermostat controlled fans; On = fans on; Off= fans off; DCd = Day duty cycle or DCn = Night duty cycle. |                                                                                                                                                                                                         |             |        |         |       |       |       |     |     |     |     |     |       |  |       |    |    |    |
| Fon                                                                                                                                                                                                                                                                                                             | Day duty cycle: time with fans on.                                                                                                                                                                      | 0...250     | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |
| FoF                                                                                                                                                                                                                                                                                                             | Day duty cycle: time with fans off.                                                                                                                                                                     | 0...250     | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |
| Fnn                                                                                                                                                                                                                                                                                                             | Night duty cycle: time with fans on.                                                                                                                                                                    | 0...250     | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |
| FnF                                                                                                                                                                                                                                                                                                             | Night duty cycle: time with fans off.                                                                                                                                                                   | 0...250     | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |
| ESF                                                                                                                                                                                                                                                                                                             | "Night" mode activation.<br><ul style="list-style-type: none"><li>n(0) = no</li><li>y(1) = yes.</li></ul>                                                                                               | n/y         | flag   | n       | n     | n     | n     |     |     |     |     |     |       |  |       |    |    |    |
| AL (Alarms)                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                         |             |        |         |       |       |       |     |     |     |     |     |       |  |       |    |    |    |
| Att                                                                                                                                                                                                                                                                                                             | Sets the absolute or relative value for parameters HAL and LAL.<br><ul style="list-style-type: none"><li>0 = absolute value</li><li>1 = relative value</li></ul>                                        | 0/1         | flag   | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |
| AFd                                                                                                                                                                                                                                                                                                             | Alarm differential.                                                                                                                                                                                     | 0,1...25,0  | °C/°F  | 2.0     | 2.0   | 2.0   | 2.0   |     |     |     |     |     |       |  |       |    |    |    |
| HAL                                                                                                                                                                                                                                                                                                             | Maximum temperature alarm.<br>Temperature value (in an absolute or relative value - see Att) which, when exceeded, will lead to the activation of alarm signaling.                                      | LAL...302   | °C/°F  | 150.0   | 150.0 | 150.0 | 150.0 |     |     |     |     |     |       |  |       |    |    |    |
| LAL                                                                                                                                                                                                                                                                                                             | Minimum temperature alarm.<br>Temperature value (in an absolute or relative value - see Att) which, when not reached, will lead to the activation of alarm signaling.                                   | -67,0...HAL | °C/°F  | -50.0   | -50.0 | -50.0 | -50.0 |     |     |     |     |     |       |  |       |    |    |    |
| PAo                                                                                                                                                                                                                                                                                                             | Alarm exclusion time when switching on the device, after a power failure.                                                                                                                               | 0...10      | min*10 | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |
| dAo                                                                                                                                                                                                                                                                                                             | Temperature alarm exclusion time after defrosting.                                                                                                                                                      | 0...999     | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |
| oAo                                                                                                                                                                                                                                                                                                             | Alarm signaling delay after deactivation of the digital input (door closure). Alarm refers to high and low temperature alarms.                                                                          | 0...10      | hours  | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |
| tdo                                                                                                                                                                                                                                                                                                             | Door open alarm activation delay time.                                                                                                                                                                  | 0...250     | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |
| tAo                                                                                                                                                                                                                                                                                                             | Temperature alarm signaling delay time.                                                                                                                                                                 | 0...250     | min    | 0       | 0     | 0     | 0     |     |     |     |     |     |       |  |       |    |    |    |

| Parameter                       | Description                                                                                                                                                                                                                                                     | Range        | MU    | Default                    | AP1 | AP2 | AP3 |
|---------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|----------------------------|-----|-----|-----|
| dAt                             | Defrost ended due to timeout alarm indication. <ul style="list-style-type: none"><li>n(0) = alarm not activated</li><li>y(1) = alarm activated.</li></ul>                                                                                                       | n/y          | flag  | 0                          | 0   | 0   | 0   |
| EAL                             | An external alarm inhibits the regulators. <ul style="list-style-type: none"><li>0 = does not inhibit the regulators</li><li>1 = compressor and defrost inhibited</li><li>2 = fans, compressor and defrost inhibited;</li></ul>                                 | 0/1/2        | flag  | n                          | n   | n   | n   |
| AoP                             | Alarm output polarity. <ul style="list-style-type: none"><li>0 = NO (Normally open)</li><li>1 = NC (Normally closed).</li></ul>                                                                                                                                 | 0/1          | flag  | 1                          | 1   | 1   | 1   |
| SA3                             | Probe 3 alarm setpoint.                                                                                                                                                                                                                                         | -67,0...302  | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| dA3                             | Probe 3 alarm differential.                                                                                                                                                                                                                                     | 0.1...30.0   | °C/°F | 1.0                        | 1.0 | 1.0 | 1.0 |
| rFt                             | Low refrigerant alarm signaling delay.                                                                                                                                                                                                                          | 0...250      | min   | 0 (non nelle applicazioni) |     |     |     |
| Lit (Lights and digital inputs) |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| dOd                             | Digital input shuts off utilities. <ul style="list-style-type: none"><li>0 = disabled</li><li>1 = disables fans</li><li>2 = disables compressor</li><li>3 = disables fans and compressor.</li></ul>                                                             | 0...3        | num   | 0                          | 0   | 3   | 3   |
| dAd                             | Digital input activation delay                                                                                                                                                                                                                                  | 0...250      | min   | 0                          | 0   | 0   | 0   |
| dCo                             | Compressor switch-off delay from door opening.                                                                                                                                                                                                                  | 0...250      | min   | 0                          | 0   | 1   | 0   |
| AUP                             | Auxiliary (AUX) output activation when the door is opened. <ul style="list-style-type: none"><li>n(0) = disabled</li><li>y(1) = AUX output activation</li></ul>                                                                                                 | n/y          | flag  | n                          | n   | n   | n   |
| PrE (Pressure switch)           |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| PEn                             | Number of errors permitted per minimum/maximum pressure switch input                                                                                                                                                                                            | 0...15       | num   | 0                          | 0   | 0   | 0   |
| PEi                             | Minimum/maximum pressure switch error count interval                                                                                                                                                                                                            | 1...99       | min   | 1                          | 1   | 1   | 1   |
| PEt                             | Compressor activation delay after pressure switch deactivation                                                                                                                                                                                                  | 0...255      | min   | 0                          | 0   | 0   | 0   |
| EnS (Energy Saving)             |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| oSP                             | Temperature value to be added to the setpoint in the case of an enabled reduced set (Economy function).                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |
| odF                             | Differential offset during an energy saving cycle or reduced set.                                                                                                                                                                                               | 0.1...30.0   | °C/°F | 2.0                        | 2.0 | 2.0 | 2.0 |
| Add (Communication)             |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| Adr                             | Modbus protocol device address.                                                                                                                                                                                                                                 | 1...247      | num   | 1 (not in applications)    |     |     |     |
| bAU                             | Modbus Baudrate selection. <ul style="list-style-type: none"><li>96 (0) = 9600 baud</li><li>192 (1) = 19200 baud</li><li>384 (2) = 38400 baud</li></ul>                                                                                                         | 96/192/384   | num   | 96 (not in applications)   |     |     |     |
| Pty                             | Modbus parity bit. <ul style="list-style-type: none"><li>n(0) = none</li><li>E(1) = even</li><li>o(2) = odd.</li></ul>                                                                                                                                          | n/E/o        | num   | E (not in applications)    |     |     |     |
| diS (Display)                   |                                                                                                                                                                                                                                                                 |              |       |                            |     |     |     |
| dro                             | Selects the unit of measure used when displaying the temperature read by the probes. (0 = °C, 1 = °F).<br><b>Note:</b> changing from °C to °F or vice-versa does NOT change the <b>SEt</b> , <b>diF</b> values, etc. (example: <b>SEt</b> = 10°C becomes 10°F). | 0/1          | flag  | 0                          | 0   | 0   | 0   |
| CA1 (!)                         | Positive or negative temperature value to be added to the value of Pb1.                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0                        | 0.0 | 0.0 | 0.0 |

| Parameter                              | Description                                                                                                                                                                                                                                                                                                                                                                     | Range        | MU    | Default | AP1  | AP2  | AP3  |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-------|---------|------|------|------|
| <b>CA2 (!)</b>                         | Positive or negative temperature value to be added to the value of Pb2.                                                                                                                                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0     | 0.0  | 0.0  | 0.0  |
| <b>CA3 (!)</b>                         | Positive or negative temperature value to be added to the value of Pb3.                                                                                                                                                                                                                                                                                                         | -30.0...30.0 | °C/°F | 0.0     | 0.0  | 0.0  | 0.0  |
| <b>CAi</b>                             | Activation of the calibration value.<br><ul style="list-style-type: none"> <li><b>0</b> = Adds the value to the temperature value displayed</li> <li><b>1</b> = Adds the value to the temperature used by the regulators and not to the one displayed</li> <li><b>2</b> = Adds the value to the temperature used by the regulators and to the temperature displayed.</li> </ul> | 0/1/2        | num   | 2       | 2    | 2    | 2    |
| <b>LoC</b>                             | Keypad lock.<br><ul style="list-style-type: none"> <li><b>n(0)</b> = Keypad lock disabled</li> <li><b>y(1)</b> = Keypad lock enabled (on startup or when 30 seconds have passed since the last action carried out on the user interface)</li> </ul>                                                                                                                             | n/y          | flag  | y       | y    | y    | y    |
| <b>ddd</b>                             | Selects the type of value to show on the display.<br><ul style="list-style-type: none"> <li><b>0</b> = setpoint</li> <li><b>1</b> = Pb1 probe</li> <li><b>2</b> = Pb2 probe</li> <li><b>3</b> = Pb3 probe.</li> </ul>                                                                                                                                                           | 0...3        | num   | 1       | 1    | 1    | 1    |
| <b>ddL</b>                             | Display mode during defrosting.<br><ul style="list-style-type: none"> <li><b>0</b> = display the temperature read by Pb1</li> <li><b>1</b> = inhibits reading on the value of Pb1 at the start of defrost and until the setpoint is reached</li> <li><b>2</b> = displays label <b>dEF</b> during defrost until the setpoint is reached.</li> </ul>                              | 0/1/2        | num   | 0       | 0    | 0    | 0    |
| <b>Ldd</b>                             | Display unlock timeout value - label <b>dEF</b>                                                                                                                                                                                                                                                                                                                                 | 0...250      | min   | 30      | 30   | 30   | 30   |
| <b>ndt</b>                             | Display with decimal point.<br><ul style="list-style-type: none"> <li><b>n(0)</b> = no</li> <li><b>y(1)</b> = yes.</li> </ul>                                                                                                                                                                                                                                                   | n/y          | flag  | y       | y    | y    | y    |
| <b>FSE</b>                             | Sets the value used by the low-pass filter to calculate the temperature value to be displayed.<br><ul style="list-style-type: none"> <li><b>0</b> = disabled</li> <li><b>1</b> = 200 (quicker response)</li> <li><b>2</b> = 100</li> <li><b>3</b> = 50</li> <li><b>4</b> = 25</li> <li><b>5</b> = 12</li> <li><b>6</b> = 6</li> <li><b>7</b> = 3 (slower response).</li> </ul>  | 0...7        | num   | 0       | 0    | 0    | 0    |
| <b>FdS</b>                             | Filter disabling threshold.                                                                                                                                                                                                                                                                                                                                                     | -67.0...302  | °C/°F | 0.0     | 0.0  | 0.0  | 0.0  |
| <b>Ftt</b>                             | Time that has passed beyond the value of <b>FdS</b> before the filter is disabled.                                                                                                                                                                                                                                                                                              | 0...250      | min   | 0       | 0    | 0    | 0    |
| <b>FHt</b>                             | Filter sampling interval.                                                                                                                                                                                                                                                                                                                                                       | 1...250      | s     | 1       | 1    | 1    | 1    |
| <b>PS1</b>                             | When enabled ( <b>PS1</b> ≠0) this is the access key for the user parameters.                                                                                                                                                                                                                                                                                                   | 0...250      | num   | 0       | 0    | 0    | 0    |
| <b>PS2</b>                             | When enabled ( <b>PS2</b> ≠0) this is the access key for the installer parameters.                                                                                                                                                                                                                                                                                              | 0...250      | num   | 15      | 15   | 15   | 15   |
| <b>VSC (Variable-speed compressor)</b> |                                                                                                                                                                                                                                                                                                                                                                                 |              |       |         |      |      |      |
| <b>CEr</b>                             | Controlled capacity value in the event of regulation probe error.                                                                                                                                                                                                                                                                                                               | 0.0...100    | %     | 50.0    | 50.0 | 50.0 | 5.0  |
| <b>PdS</b>                             | Differential for forced activation of a pull-down.                                                                                                                                                                                                                                                                                                                              | -50.0...50.0 | K/°R  | 3.0     | 3.0  | 3.0  | 0.3  |
| <b>PUS</b>                             | Differential for forced activation of a pull-up.                                                                                                                                                                                                                                                                                                                                | -50.0...50.0 | K/°R  | -3.0    | -3.0 | -3.0 | -0.3 |

| Parameter                  | Description                                                                                                                                                                                                                                                                                                                                                                                                       | Range        | MU   | Default | AP1  | AP2  | AP3 |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|------|---------|------|------|-----|
| <b>PUd</b>                 | Temperature outside range timeout. The timer is activated when the regulation probe reaches a value greater than <b>SEt+PdS</b> (for Pull Down) or less than <b>SEt+PuS</b> (for Pull Up). When the timer runs out, a Pull Down or Pull Up procedure will be started depending on the zone in which the probe is located. If the temperature recovers before the end of this timed period, the timer is reloaded. | 0...1000     | min  | 4       | 4    | 4    | 4   |
| <b>PdE</b>                 | Pull-down end differential.                                                                                                                                                                                                                                                                                                                                                                                       | -50.0...50.0 | K/°R | 0.0     | 0.0  | 0.0  | 0.0 |
| <b>PUE</b>                 | Pull-up end differential. If a pull-up is activated when the timer <b>PUd</b> runs out, the compressor is stopped until <b>SEt+PUE</b> is reached.                                                                                                                                                                                                                                                                | -50.0...50.0 | K/°R | 0.0     | 0.0  | 0.0  | 0.0 |
| <b>Pdt</b>                 | Optimized pull-down timeout.                                                                                                                                                                                                                                                                                                                                                                                      | 0...1000     | min  | 10      | 10   | 10   | 10  |
| <b>Pdd</b>                 | Controlled capacity value, if a pull-down is activated, when the time period <b>PUd</b> has elapsed, that will be maintained: <ul style="list-style-type: none"> <li>for a time period <b>Pdt</b> at the end of which the capacity will be forced to 100% until <b>SEt+PdE</b> is reached.</li> <li>until the temperature <b>SEt+PdE</b> is reached (if the time &lt; <b>Pdt</b>).</li> </ul>                     | 0.0...100    | %    | 60.0    | 60.0 | 60.0 | 6.0 |
| <b>CPd</b>                 | Controlled capacity after a pull-down in day operating mode.                                                                                                                                                                                                                                                                                                                                                      | 0.0...100    | %    | 60.0    | 60.0 | 60.0 | 6.0 |
| <b>CPn</b>                 | Controlled capacity after a pull-down in night operating mode.                                                                                                                                                                                                                                                                                                                                                    | 0.0...100    | %    | 50.0    | 50.0 | 50.0 | 5.0 |
| <b>CPb</b>                 | PID regulator proportional band.                                                                                                                                                                                                                                                                                                                                                                                  | 0.1...3200   | K/°R | 3.0     | 3.0  | 3.0  | 0.3 |
| <b>Cti</b>                 | PID integral time.                                                                                                                                                                                                                                                                                                                                                                                                | 0...65535    | s    | 60      | 60   | 60   | 60  |
| <b>Ctd</b>                 | PID derivative time.                                                                                                                                                                                                                                                                                                                                                                                              | 0...65535    | s    | 0       | 0    | 0    | 0   |
| <b>CSd</b>                 | Duration of constant-speed compressor heating (set by <b>CSC</b> ) on startup or after a stand-by.                                                                                                                                                                                                                                                                                                                | 0...900      | s    | 120     | 120  | 120  | 120 |
| <b>CSC</b>                 | Fixed compressor capacity for a time period equal to <b>CSd</b> on startup or after a stand-by.                                                                                                                                                                                                                                                                                                                   | 44.4...100   | %    | 80.0    | 80.0 | 80.0 | 8.0 |
| <b>CAU</b>                 | Selects automatic or manual PID mode. <ul style="list-style-type: none"> <li><b>0</b> = automatic</li> <li><b>1</b> = manual.</li> </ul>                                                                                                                                                                                                                                                                          | 0/1          | flag | 0       | 0    | 0    | 0   |
| <b>CdU</b>                 | PID duty cycle in manual mode. If <b>CAU</b> = <b>AU</b> , <b>CdU</b> will function as a maximum controlled capacity limiter (%). If <b>CAU</b> = <b>FiH</b> , <b>CdU</b> will force controlled capacity of the compressor (%).                                                                                                                                                                                   | 0.0...100    | %    | 100     | 100  | 100  | 10  |
| <b>F_1</b>                 | Maximum compressor operating frequency.                                                                                                                                                                                                                                                                                                                                                                           | 0.0...250    | Hz   | 150     | 150  | 150  | 150 |
| <b>F_2</b>                 | Minimum compressor operating frequency.                                                                                                                                                                                                                                                                                                                                                                           | 0.0...250    | Hz   | 67      | 67   | 67   | 67  |
| <b>CnF (Configuration)</b> |                                                                                                                                                                                                                                                                                                                                                                                                                   |              |      |         |      |      |     |
| <b>H00</b>                 | Selects the probe type. <ul style="list-style-type: none"> <li><b>0</b> = PTC</li> <li><b>1</b> = NTC</li> <li><b>2</b> = Pt1000.</li> </ul>                                                                                                                                                                                                                                                                      | 0/1/2        | flag | 1       | 1    | 1    | 1   |
| <b>H08</b>                 | Stand-by operating mode. <ul style="list-style-type: none"> <li><b>0</b> = display off; the regulators are active and the device signals possible alarms by reactivating the display</li> <li><b>1</b> = display off; the regulators and the alarms are blocked</li> <li><b>2</b> = the display shows the label "OFF"; the regulators and alarms are inhibited.</li> </ul>                                        | 0/1/2        | num  | 2       | 2    | 2    | 2   |

| Parameter | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Range     | MU  | Default | AP1 | AP2 | AP3 |
|-----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|-----|---------|-----|-----|-----|
| H11       | Configuration of digital input 1 ( <b>DI</b> )/ polarity. <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>±1</b> = defrost</li> <li>• <b>±2</b> = reduced set</li> <li>• <b>±3</b> = auxiliary</li> <li>• <b>±4</b> = door switch</li> <li>• <b>±5</b> = external alarm</li> <li>• <b>±6</b> = stand-by</li> <li>• <b>±7</b> = pressure switch</li> <li>• <b>±8</b> = deep cooling</li> <li>• <b>±9</b> = light</li> <li>• <b>±10</b> = energy saving</li> </ul> <b>Note:</b> <ul style="list-style-type: none"> <li>• the '+' sign indicates that the input is active if the contact is closed.</li> <li>• the '-' sign indicates that the input is active if the contact is open.</li> </ul> | -10...+10 | num | 0       | 0   | -4  | -4  |
| H21       | Configuration of digital output 1 ( <b>OC1</b> ). <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = compressor</li> <li>• <b>2</b> = defrost</li> <li>• <b>3</b> = evaporator fans</li> <li>• <b>4</b> = alarm</li> <li>• <b>5</b> = auxiliary</li> <li>• <b>6</b> = stand-by</li> <li>• <b>7</b> = light</li> <li>• <b>8</b> = reserved</li> <li>• <b>9</b> = compressor 2</li> <li>• <b>10</b> = evaporator 2 defrost</li> <li>• <b>11</b> = condenser fans</li> <li>• <b>12</b> = heater deadband control</li> <li>• <b>13</b> = variable-speed compressor (VSC).</li> </ul>                                                                                                          | 0...13    | num | 13      | 13  | 13  | 13  |
| H22       | Configuration of digital output 2 ( <b>Out2</b> ). <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = compressor</li> <li>• <b>2</b> = defrost</li> <li>• <b>3</b> = evaporator fans</li> <li>• <b>4</b> = alarm</li> <li>• <b>5</b> = auxiliary</li> <li>• <b>6</b> = stand-by</li> <li>• <b>7</b> = light</li> <li>• <b>8</b> = reserved</li> <li>• <b>9</b> = compressor 2</li> <li>• <b>10</b> = evaporator 2 defrost</li> <li>• <b>11</b> = condenser fans</li> <li>• <b>12</b> = heater deadband control.</li> </ul>                                                                                                                                                                | 0...12    | num | 2       | 2   | 2   | 2   |
| H23       | Configuration of digital output 3 ( <b>Out3</b> ). Same as H22.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0...12    | num | 4       | 4   | 7   | 7   |
| H24       | Configuration of digital output 4 ( <b>Out4</b> ). Same as H22.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | 0...12    | num | 3       | 3   | 3   | 3   |
| H31       | Configuration of $\Delta$ key. <ul style="list-style-type: none"> <li>• <b>0</b> = disabled</li> <li>• <b>1</b> = defrost</li> <li>• <b>2</b> = auxiliary</li> <li>• <b>3</b> = reduced set</li> <li>• <b>4</b> = stand-by</li> <li>• <b>5</b> = Autotuning procedure <b>nPL</b></li> <li>• <b>6</b> = Autotuning procedure <b>tun</b></li> <li>• <b>7</b> = deep cooling</li> <li>• <b>8</b> = light.</li> </ul>                                                                                                                                                                                                                                                                                                         | 0...8     | num | 1       | 1   | 1   | 1   |
| H32       | Configuration of $\nabla$ key. Same as H31.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0...8     | num | 0       | 0   | 0   | 0   |
| H33       | Configuration of $\Phi$ key. Same as H31.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0...8     | num | 4       | 4   | 4   | 4   |
| H34       | Configuration of $\Psi$ key. Same as H31.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 0...8     | num | 0       | 0   | 0   | 0   |

| Parameter           | Description                                                                                                                                                                                                                                                                                                 | Range   | MU    | Default                 | AP1 | AP2 | AP3 |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------|-------|-------------------------|-----|-----|-----|
| H35                 | Configuration of ☆ key. Same as H31.                                                                                                                                                                                                                                                                        | 0...8   | num   | 0                       | 0   | 0   | 0   |
| H42                 | Probe Pb2 present.<br>• n(0) = not present<br>• y(1) = present.                                                                                                                                                                                                                                             | n/y     | flag  | y                       | y   | y   | y   |
| H43                 | Probe Pb3 present.<br>• n(0) = not present<br>• y(1) = present<br>• 2EP(2) = second evaporator.                                                                                                                                                                                                             | n/y/2EP | flag  | n                       | n   | n   | n   |
| H45                 | Defrost input mode for applications with dual evaporator.<br>0 = first evaporator only;<br>1 = if at least one of the evaporators is below its defrost end temperature;<br>2 = only if both evaporators are under the respective defrost end temperature;<br>3 = evaporator 1 and evaporator 2 alternately. | 0...3   | num   | 0                       | 0   | 0   | 0   |
| H48                 | RTC (Real Time Clock) present.<br>• 0 = no RTC<br>• 1 = RTC present.                                                                                                                                                                                                                                        | 0/1     | flag  | 0                       | 0   | 0   | 0   |
| H60                 | Display selected application.<br>0 = disabled; 1 = AP1; 2 = AP2; 3 = AP3.                                                                                                                                                                                                                                   | 0...3   | num   | 1 (not in applications) |     |     |     |
| tAb                 | Reserved: read-only parameter.                                                                                                                                                                                                                                                                              | /       | /     | / (not in applications) |     |     |     |
| FPr (UNICARD)       |                                                                                                                                                                                                                                                                                                             |         |       |                         |     |     |     |
| UL                  | Transfer of the programming parameters from the device to the UNICARD.                                                                                                                                                                                                                                      | /       | /     | - (not in applications) |     |     |     |
| Fr                  | UNICARD formatting. Deletes all data on the UNICARD.<br><b>Note:</b> the use of parameter <b>Fr</b> results in the loss of all data entered. This operation cannot be reversed.                                                                                                                             | /       | /     | - (not in applications) |     |     |     |
| FnC (Functions)     |                                                                                                                                                                                                                                                                                                             |         |       |                         |     |     |     |
| tAL                 | Force alarm acknowledgment                                                                                                                                                                                                                                                                                  | /       | /     | - (not in applications) |     |     |     |
| rAP                 | Reset pressure switch alarms                                                                                                                                                                                                                                                                                | /       | /     | - (not in applications) |     |     |     |
| tun                 | Autotuning activation/deactivation                                                                                                                                                                                                                                                                          | /       | /     | - (not in applications) |     |     |     |
| nPL                 | Preliminary Autotuning procedure activation/deactivation.                                                                                                                                                                                                                                                   | /       | /     | - (not in applications) |     |     |     |
| Cnt                 | Reset TelevisAir diagnostic counters (see Reset TelevisAir diagnostic counters)                                                                                                                                                                                                                             | /       | /     | - (not in applications) |     |     |     |
| nAd (Night and Day) |                                                                                                                                                                                                                                                                                                             |         |       |                         |     |     |     |
| E10                 | Selects Event 1 activation mode.<br>0 = disabled; 1 = Monday; 2 = Tuesday; 3 = Wednesday; 4 = Thursday; 5 = Friday; 6 = Saturday; 7 = Sunday; 8 = Monday to Friday; 9 = Monday to Saturday; 10 = Saturday and Sunday; 11 = every day.                                                                       | 0...11  | num   | 0 (not in applications) |     |     |     |
| E11                 | Event 1 start hour.                                                                                                                                                                                                                                                                                         | 0...23  | hours | 0 (not in applications) |     |     |     |
| E12                 | Event 1 start minute.                                                                                                                                                                                                                                                                                       | 0...59  | min   | 0 (not in applications) |     |     |     |
| E13                 | Event 1 end hour.                                                                                                                                                                                                                                                                                           | 0...23  | hours | 0 (not in applications) |     |     |     |
| E14                 | Event 1 end minute.                                                                                                                                                                                                                                                                                         | 0...59  | min   | 0 (not in applications) |     |     |     |
| E15                 | Sets Event 1 type.<br>0 = Energy Saving; 1 = AUX deactivated; 2 = AUX activated; 3 = Stand-by; 4 = Light on; 5 = Light off.                                                                                                                                                                                 | 0...5   | num   | 0 (not in applications) |     |     |     |
| E20                 | Selects Event 2 activation mode. Same as E10.                                                                                                                                                                                                                                                               | 0...11  | num   | 0 (not in applications) |     |     |     |
| E21                 | Event 2 start hour.                                                                                                                                                                                                                                                                                         | 0...23  | hours | 0 (not in applications) |     |     |     |
| E22                 | Event 2 start minute.                                                                                                                                                                                                                                                                                       | 0...59  | min   | 0 (not in applications) |     |     |     |
| E23                 | Event 2 end hour.                                                                                                                                                                                                                                                                                           | 0...23  | hours | 0 (not in applications) |     |     |     |
| E24                 | Event 2 end minute.                                                                                                                                                                                                                                                                                         | 0...59  | min   | 0 (not in applications) |     |     |     |
| E25                 | Sets Event 2 type. Same as E15.                                                                                                                                                                                                                                                                             | 0...5   | num   | 0 (not in applications) |     |     |     |

**Note:** if one or more parameters in folder **CnF** or marked with (!) are changed, the device must be switched off and then on again to make sure it works properly.

---

# Modbus MSK 750 functions and resources

---

## Contents

This section includes the following topics:

|                                                             |     |
|-------------------------------------------------------------|-----|
| Setting parameters via Modbus .....                         | 198 |
| Modbus table content .....                                  | 199 |
| Table of Modbus Parameters .....                            | 201 |
| Visibility table for folders relating to applications ..... | 223 |
| Table of Modbus Resources .....                             | 225 |

## Setting parameters via Modbus

### Introduction

Modbus is a client/server protocol for communication between devices connected in a network. Modbus devices communicate using a master-slave technique in which only one device (master) can send messages. The other devices in the network (slave) respond, returning the data requested by the master or executing the action contained in the message sent. A slave is a device connected to a network that processes information and sends the results to the master using the Modbus protocol.

The master device can send messages to individual slaves, or to the entire network (broadcast), whilst slave devices can only respond to messages individually and to the master device. The Modbus standard used by Eliwell employs the RTU code for data transmission.

### Data format (RTU)

The coding type used defines the structure of messages transmitted on the network and the way in which this information is deciphered. The coding type is usually chosen according to specific parameters (baudrate, parity, stop), plus certain devices only support specific coding types. Use the same coding type for all devices connected to a Modbus network.

The protocol uses the RTU binary method with the serial frame configured as follows:

- 8 bits for data
- parity bits NONE (configurable)
- 2 stop BITS

Parameters can be changed via:

- Device keypad
- UNICARD / DMI
- Send data via Modbus protocol directly to an individual device or in a broadcast using the address 0 (broadcast)

### Modbus commands available and data areas

The following commands are implemented:

| Modbus command       | Description                                                                                                                                                                                                |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>03</b> (hex 0x03) | Read resources                                                                                                                                                                                             |
| <b>16</b> (hex 0x10) | Write resources                                                                                                                                                                                            |
| <b>43</b> (hex 0x2B) | Read device ID.<br>The following 3 fields can be read: <ul style="list-style-type: none"> <li>• 0 = Manufacturer ID</li> <li>• 1 = Model ID</li> <li>• 2 = Family ID (MSK 750) / device version</li> </ul> |

**Note:** Maximum length of transmitted/received messages equal to 50 bytes.

### Address configuration

The **TTL** serial port may be used to configure the device, parameters, statuses, variables with Modbus using the Modbus protocol.

The address of a device within a Modbus message is set via parameter **Adr**.

The address **0** is used for broadcast messages that all slaves recognize. Slaves do not respond to a broadcast type request.

The device configuration parameters are as follows:

| Parameter  | Description                                                                                                                                                                                                                                                        |
|------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Adr</b> | Modbus protocol device address                                                                                                                                                                                                                                     |
| <b>bAU</b> | Baudrate selection                                                                                                                                                                                                                                                 |
| <b>Pty</b> | Sets the Modbus protocol parity BIT and the number of stop BITS: <ul style="list-style-type: none"> <li>• <b>n</b> = NONE parity bit + 2 stop BITS</li> <li>• <b>E</b> = EVEN parity bit + 1 stop BIT</li> <li>• <b>o</b> = ODD parity bit + 1 stop BIT</li> </ul> |

**Note:** Switch the device off and on again after changing **Pty**.

## Parameter values and visibility

Below are several notes relating to the value and visibility of the parameters.

### Notes:

- Unless otherwise indicated, the parameter should be considered as visible and able to be changed unless the user applies custom settings via the serial port.
- If the visibility of the folder is changed all the parameters in that folder will assume the new setting.

## Modbus table content

### Introduction

The tables below contain the information required to access the resources properly.

There are 3 tables:

- **Modbus Parameters Table:** contains all the device configuration parameters including visibility
- **Folder Visibility Table:** contains the visibility of the folders containing the parameters
- **Modbus Resource Table:** contains all status (I/O) and alarm resources available in the volatile memory of the device.

### Description of the columns

#### FOLDER

Indicates the name of the folder containing the parameter in question.

#### LABEL

Indicates the name with which the parameter appears in the menu.

#### DESCRIPTION

Description of the parameter's meaning.

#### PAR. ADDRESS VAL.

Represents the Modbus register address which contains the read or write value of the resource in the device.

#### FILTER VAL.

Represents the position of the most significant data bit inside the register. This information is always provided when the register contains more than one piece of information and it is necessary to distinguish which bits actually represent the data (the useful size of the data, indicated in the DATA SIZE column, should also be taken into account).

#### PAR. ADDRESS VIS.

Contains the Modbus register address which contains the visibility value of the resource to read or write in the device.

#### FILTER VIS.

Mask representing the position of the data inside the register (it has BITS set to 1 in correspondence with the register BITS effectively associated with the resource). It assumes values from 0 to 65535.

**Note:** in binary representation the least significant is furthest to the right.

**Note:** the size of the piece of visibility data is 2 BIT.

Visibility value:

- Value **0** = parameter or folder NOT visible
- Value **1** = parameter or folder only visible at 'User' level
- Value **2** = parameter or folder only visible at 'Installer' level
- Value **3** = parameter or folder is visible at 'User' and 'Installer' level

**R/W**

Indicates the option of reading or writing the resource:

- R = the resource is read-only
- W = the resource is write-only
- R/W = the resource can be both read and written

**DATA SIZE**

Indicates the size of the piece of data (in bit):

- WORD = 16 bit
- Byte = 8 bit
- "n" bit = 0...15 bit based on the value of "n"

**CPL**

When the field indicates **Y**, the value read by the register needs to be converted because the value represents a number with a sign. In the other cases the value is always positive or null.

To convert it, proceed as follows:

| If the register value falls between... | Then the result is...                                               |
|----------------------------------------|---------------------------------------------------------------------|
| 0 and 32767                            | the same value (zero and positive values).                          |
| 32768 and 65535                        | the register value, from which to subtract 65536 (negative values). |

**RANGE**

Describes the interval of values that can be assigned to the parameter. This range can be correlated to the value of other parameters.

**MU**

Unit of measure for the values.

## Table of Modbus Parameters

| Label      | Description                                                                       | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range               | MU    |
|------------|-----------------------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|---------------------|-------|
| <b>SEt</b> | Regulation setpoint                                                               | -      | 32769             | 0           | 32935             | 49152       | R/W | Word      | Y   | <b>LSE...HSE</b>    | °C/°F |
| <b>dIF</b> | Activation differential                                                           | CP     | 32770             | 0           | 32932             | 768         | R/W | Word      | -   | 0,1...30,0          | °C/°F |
| <b>LSE</b> | Minimum setpoint value that can be set                                            | CP     | 32771             | 0           | 32932             | 3072        | R/W | Word      | Y   | -67,0... <b>HSE</b> | °C/°F |
| <b>HSE</b> | Maximum setpoint value that can be set                                            | CP     | 32773             | 0           | 32932             | 12288       | R/W | Word      | Y   | <b>LSE</b> ...302   | °C/°F |
| <b>HC</b>  | Operating mode (Heating/Cooling)                                                  | CP     | 32980             | 256         | 32932             | 49152       | R/W | Byte      | -   | 0/1                 | flag  |
| <b>ont</b> | Compressor output ON time if probe Pb1 is in error                                | CP     | 32768             | 0           | 32933             | 3           | R/W | Byte      | -   | 0...250             | min   |
| <b>oFt</b> | Compressor output OFF time if probe Pb1 is in error                               | CP     | 32772             | 0           | 32933             | 12          | R/W | Byte      | -   | 0...250             | min   |
| <b>don</b> | Compressor output activation delay from call                                      | CP     | 32776             | 0           | 32933             | 48          | R/W | Byte      | -   | 0...250             | s     |
| <b>doF</b> | Compressor output activation delay from switch-off                                | CP     | 32780             | 0           | 32933             | 192         | R/W | Byte      | -   | 0...250             | min   |
| <b>dbi</b> | Delay between two consecutive compressor output power-ons                         | CP     | 32784             | 0           | 32933             | 768         | R/W | Byte      | -   | 0...250             | min   |
| <b>Cit</b> | Minimum compressor output activation time                                         | CP     | 32800             | 0           | 32934             | 3           | R/W | Byte      | -   | 0...250             | min   |
| <b>CAt</b> | Maximum compressor output activation time                                         | CP     | 32804             | 0           | 32934             | 12          | R/W | Byte      | -   | 0...250             | min   |
| <b>odo</b> | Output activation delay at startup                                                | CP     | 32788             | 0           | 32933             | 3072        | R/W | Byte      | -   | 0...250             | min   |
| <b>dCS</b> | Deep cooling setpoint                                                             | CP     | 32834             | 0           | 32951             | 768         | R/W | Word      | Y   | -67,0...302         | °C/°F |
| <b>tdC</b> | Deep cooling duration                                                             | CP     | 32886             | 0           | 32952             | 12288       | R/W | Byte      | -   | 0...250             | min   |
| <b>dcc</b> | Defrost delay after deep cooling                                                  | CP     | 32883             | 0           | 32952             | 3072        | R/W | Byte      | -   | 0...250             | min   |
| <b>CP2</b> | Compressor 2 activation delay                                                     | CP     | 32887             | 255         | 32952             | 49152       | R/W | Byte      | -   | 0...250             | min   |
| <b>dFA</b> | Condenser fan and compressor activation delay from the call                       | CP     | 32895             | 0           | 32934             | 3072        | R/W | Byte      | -   | 0...250             | s     |
| <b>dtY</b> | Type of defrost                                                                   | dEF    | 32912             | 61440       | 32934             | 768         | R/W | Byte      | -   | 0/1/2               | num   |
| <b>doH</b> | Defrost cycle activation delay from the call                                      | dEF    | 32820             | 0           | 32935             | 3           | R/W | Byte      | -   | 0...250             | min   |
| <b>dEt</b> | Defrost timeout. Determines the maximum duration of the defrost.                  | dEF    | 32816             | 0           | 32934             | 12288       | R/W | Byte      | -   | 1...250             | min   |
| <b>dS1</b> | Evaporator 1 defrost end temperature                                              | dEF    | 32774             | 0           | 32935             | 12          | R/W | Word      | Y   | -67,0...302         | °C/°F |
| <b>dS2</b> | Evaporator 2 defrost end temperature                                              | dEF    | 32775             | 0           | 32935             | 48          | R/W | Word      | Y   | -67,0...302         | °C/°F |
| <b>dt2</b> | Unit of measure for defrost duration                                              | dEF    | 32929             | 192         | 32934             | 49152       | R/W | Byte      | -   | 0/1/2               | num   |
| <b>dPo</b> | Defrost activation request at startup, if the temperature measured by Pb2 allows. | dEF    | 32980             | 1024        | 32935             | 768         | R/W | Byte      | -   | 0/1                 | flag  |

| Label      | Description                                                     | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range       | MU    |
|------------|-----------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|-------------|-------|
| <b>tCd</b> | Compressor output activation/deactivation time before a defrost | dEF    | 32796             | 0           | 32933             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| <b>Cod</b> | Compressor OFF time before defrost                              | dEF    | 32792             | 0           | 32933             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| <b>dMr</b> | Enable defrost timer reset with manual defrost                  | dEF    | 32981             | 2048        | 32965             | 12          | R/W | Byte      | -   | 0/1         | flag  |
| <b>d00</b> | Cumulative time for defrost activation                          | dEF    | 32889             | 0           | 32953             | 12          | R/W | Byte      | -   | 0...250     | hours |
| <b>d01</b> | Parameter d00 unit of measure                                   | dEF    | 32929             | 12          | 32955             | 12          | R/W | Byte      | -   | 0/1/2       | num   |
| <b>dit</b> | Device time for defrost activation                              | dEF    | 32812             | 0           | 32953             | 49152       | R/W | Byte      | -   | 0...250     | hours |
| <b>d11</b> | Parameter dit unit of measure                                   | dEF    | 32929             | 48          | 32955             | 48          | R/W | Byte      | -   | 0/1/2       | num   |
| <b>d20</b> | Enable defrost at compressor stop                               | dEF    | 32981             | 256         | 32955             | 768         | R/W | Byte      | -   | 0/1         | flag  |
| <b>d40</b> | Select defrost probe 1                                          | dEF    | 32917             | 240         | 32954             | 3           | R/W | Byte      | -   | 0/1         | flag  |
| <b>d41</b> | Temperature threshold for starting defrost                      | dEF    | 32837             | 0           | 32951             | 49152       | R/W | Word      | Y   | -67,0...302 | °C/°F |
| <b>d42</b> | Time the evaporator temperature must remain below the threshold | dEF    | 32839             | 0           | 32951             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| <b>d43</b> | Time count mode for temperature below threshold                 | dEF    | 32917             | 3840        | 32954             | 12          | R/W | Byte      | -   | 0...3       | num   |
| <b>d44</b> | Threshold management mode                                       | dEF    | 32917             | 61440       | 32954             | 48          | R/W | Byte      | -   | 0/1         | flag  |
| <b>d90</b> | Clock defrost mode                                              | dEF    | 32918             | 3840        | 32954             | 3072        | R/W | Byte      | -   | 0...3       | num   |
| <b>d91</b> | Number of daily defrosts                                        | dEF    | 32890             | 255         | 32953             | 48          | R/W | Byte      | -   | 0...255     | num   |
| <b>d92</b> | 1st weekend/holiday day                                         | dEF    | 32918             | 15          | 32954             | 192         | R/W | Byte      | -   | 0...7       | num   |
| <b>d93</b> | 2nd weekend/holiday day                                         | dEF    | 32918             | 240         | 32954             | 768         | R/W | Byte      | -   | 0...7       | num   |
| <b>d94</b> | Regular defrost interval duration                               | dEF    | 32918             | 61440       | 32954             | 12288       | R/W | Byte      | -   | 1...7       | num   |
| <b>d1H</b> | Weekday defrost no. 1 start hour                                | dEF    | 32890             | 0           | 32953             | 192         | R/W | Byte      | -   | 0...23      | hours |
| <b>d1n</b> | Weekday defrost no. 1 start minute                              | dEF    | 32891             | 255         | 32953             | 768         | R/W | Byte      | -   | 0...59      | min   |
| <b>F1H</b> | Weekend/holiday defrost no. 1 start hour                        | dEF    | 32891             | 0           | 32953             | 3072        | R/W | Byte      | -   | 0...23      | hours |
| <b>F1n</b> | Weekend/holiday defrost no. 1 start minute                      | dEF    | 32892             | 0           | 32953             | 12288       | R/W | Byte      | -   | 0...59      | min   |
| <b>FPt</b> | FSt parameter mode (absolute or relative)                       | FAn    | 32980             | 4096        | 32937             | 3           | R/W | Byte      | -   | 0/1         | flag  |
| <b>FSt</b> | Evaporator fan disabling temperature                            | FAn    | 32778             | 0           | 32937             | 12          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| <b>FAd</b> | Evaporator fan trigger differential                             | FAn    | 32869             | 0           | 32937             | 48          | R/W | Word      | -   | 1,0...25,0  | °C/°F |

| Label      | Description                                                           | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range               | MU    |
|------------|-----------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|---------------------|-------|
| <b>Fdt</b> | Evaporator fan activation delay time after a defrost cycle            | FAn    | 32832             | 0           | 32951             | 48          | R/W | Byte      | -   | 0...250             | min   |
| <b>dt</b>  | Dripping time                                                         | FAn    | 32870             | 255         | 32937             | 192         | R/W | Byte      | -   | 0...250             | min   |
| <b>dFd</b> | Evaporator fan cut-out during defrost                                 | FAn    | 32980             | 8192        | 32937             | 768         | R/W | Byte      | -   | 0/1                 | flag  |
| <b>FCO</b> | Evaporator fan status with compressor output OFF                      | FAn    | 32913             | 15          | 32936             | 49152       | R/W | Byte      | -   | 0...3               | num   |
| <b>Fon</b> | Evaporator fan ON time in cyclical regulator mode                     | FAn    | 32871             | 255         | 32937             | 12288       | R/W | Byte      | -   | 0...250             | min   |
| <b>FoF</b> | Evaporator fan OFF time in cyclical regulator mode                    | FAn    | 32871             | 0           | 32937             | 49152       | R/W | Byte      | -   | 0...250             | min   |
| <b>Fnn</b> | Evaporator fan ON time in night duty cycle mode                       | FAn    | 32868             | 0           | 32936             | 3072        | R/W | Byte      | -   | 0...250             | num   |
| <b>FnF</b> | Evaporator fan OFF time in night duty cycle mode                      | FAn    | 32869             | 255         | 32936             | 12288       | R/W | Byte      | -   | 0...250             | num   |
| <b>ESF</b> | Night mode activation                                                 | FAn    | 32981             | 512         | 32955             | 3072        | R/W | Byte      | -   | 0/1                 | flag  |
| <b>Att</b> | <b>HAL</b> and <b>LAL</b> parameter mode (absolute or relative)       | AL     | 32980             | 32768       | 32938             | 12          | R/W | Byte      | -   | 0/1                 | flag  |
| <b>AFd</b> | Alarm activation differential                                         | AL     | 32872             | 0           | 32938             | 48          | R/W | Word      | -   | 0,1...25,0          | °C/°F |
| <b>HAL</b> | Maximum alarm threshold                                               | AL     | 32779             | 0           | 32938             | 192         | R/W | Word      | Y   | <b>LAL</b> ...302   | °C/°F |
| <b>LAL</b> | Minimum alarm threshold                                               | AL     | 32781             | 0           | 32938             | 768         | R/W | Word      | Y   | -67,0... <b>HAL</b> | °C/°F |
| <b>PAo</b> | Alarm exclusion at startup                                            | AL     | 32873             | 255         | 32938             | 3072        | R/W | Byte      | -   | 0...10              | hours |
| <b>dAo</b> | Exclusion time for temperature alarms after a defrost cycle           | AL     | 32873             | 0           | 32938             | 12288       | R/W | Word      | -   | 0...250             | min   |
| <b>oAo</b> | High and low temperature alarms exclusion time after closing the door | AL     | 32874             | 255         | 32938             | 49152       | R/W | Byte      | -   | 0...10              | hours |
| <b>tdo</b> | Door open alarm exclusion time                                        | AL     | 32875             | 255         | 32939             | 49152       | R/W | Byte      | -   | 0...250             | min   |
| <b>tAo</b> | Temperature alarm signaling delay time                                | AL     | 32874             | 0           | 32939             | 3           | R/W | Byte      | -   | 0...250             | min   |
| <b>dAt</b> | Defrost ended due to timeout alarm signaling                          | AL     | 32782             | 0           | 32939             | 12          | R/W | Byte      | -   | 0/1                 | flag  |
| <b>EAL</b> | External alarm inhibits the regulators                                | AL     | 32919             | 3840        | 32939             | 48          | R/W | Byte      | -   | 0/1/2               | num   |
| <b>AoP</b> | Alarm output polarity                                                 | AL     | 32981             | 1           | 32939             | 768         | R/W |           |     | 0/1                 | flag  |
| <b>SA3</b> | Alarm setpoint for probe 3                                            | AL     | 32831             | 0           | 32951             | 12          | R/W | Word      | Y   | -67,0...302         | °C/°F |
| <b>dA3</b> | Probe 3 alarm tripping differential                                   | AL     | 32833             | 0           | 32951             | 192         | R/W | Word      | -   | 0,1...30,0          | °C/°F |
| <b>rFt</b> | Refrigerant level alarm bypass                                        | AL     | 33051             | 0           | 32985             | 12288       | R/W | Byte      | -   | 0...250             | min   |
| <b>dOd</b> | Enable utility shutoff upon door switch activation                    | Lit    | 32913             | 3840        | 32939             | 12288       | R/W | Byte      | -   | 0...3               | num   |
| <b>dAd</b> | Digital input activation delay                                        | Lit    | 32882             | 255         | 32944             | 3072        | R/W | Byte      | -   | 0...250             | min   |

| Label      | Description                                                               | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range        | MU    |
|------------|---------------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|--------------|-------|
| <b>dCO</b> | Compressor deactivation delay from door opening                           | Lit    | 32840             | 0           | 32935             | 3072        | R/W | Byte      | -   | 0...250      | min   |
| <b>AUP</b> | Associate aux relay with door switch                                      | Lit    | 32913             | 240         | 32939             | 192         | R/W | Byte      | -   | 0/1          | flag  |
| <b>PEn</b> | Number of activations permitted per minimum/maximum pressure switch input | PrE    | 32894             | 255         | 32950             | 12288       | R/W | Byte      | -   | 0...15       | num   |
| <b>PEi</b> | Minimum/maximum pressure switch error calculation interval                | PrE    | 32894             | 0           | 32950             | 49152       | R/W | Byte      | -   | 1...99       | min   |
| <b>PEt</b> | Compressor activation delay after pressure switch deactivation            | PrE    | 32895             | 255         | 32951             | 3           | R/W | Byte      | -   | 0...255      | min   |
| <b>oSP</b> | Offset on setpoint                                                        | EnS    | 32783             | 0           | 32940             | 49152       | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| <b>odF</b> | Trigger differential correction                                           | EnS    | 32785             | 0           | 32941             | 48          | R/W | Word      | -   | 0,1...30,0   | °C/°F |
| <b>Adr</b> | Modbus protocol device address                                            | Add    | 33048             | 0           | 32984             | 768         | R/W | Byte      | -   | 0...247      | num   |
| <b>bAU</b> | Baudrate selection                                                        | Add    | 33051             | 255         | 32984             | 3072        | R/W | Byte      | -   | 0/1/2        | num   |
| <b>PtY</b> | Modbus parity bit                                                         | Add    | 33049             | 255         | 32984             | 12288       | R/W | Byte      | -   | 0/1/2        | num   |
| <b>dro</b> | Select °C / °F                                                            | diS    | 32981             | 8           | 32941             | 192         | R/W | Byte      | -   | 0/1          | flag  |
| <b>CA1</b> | Probe Pb1 calibration                                                     | diS    | 32786             | 0           | 32941             | 768         | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| <b>CA2</b> | Probe Pb2 calibration                                                     | diS    | 32787             | 0           | 32941             | 3072        | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| <b>CA3</b> | Probe Pb3 calibration                                                     | diS    | 32789             | 0           | 32941             | 12288       | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| <b>CAi</b> | Calibration trigger                                                       | diS    | 32928             | 49152       | 32941             | 49152       | R/W | Byte      | -   | 0/1/2        | num   |
| <b>LoC</b> | Enable keypad lock                                                        | diS    | 32981             | 16          | 32942             | 48          | R/W | Byte      | -   | 0/1          | flag  |
| <b>ddd</b> | Select main display value                                                 | diS    | 32913             | 61440       | 32942             | 192         | R/W | Byte      | -   | 0...3        | num   |
| <b>ddL</b> | Inhibit resources at the end of defrost                                   | diS    | 32914             | 15          | 32942             | 768         | R/W | Byte      | -   | 0/1/2        | num   |
| <b>Ldd</b> | Display lock timeout from end of defrost                                  | diS    | 32878             | 255         | 32942             | 3072        | R/W | Byte      | -   | 0...250      | min   |
| <b>ndt</b> | Display with decimal point                                                | diS    | 32981             | 32          | 32942             | 12288       | R/W | Byte      | -   | 0/1          | flag  |
| <b>FSE</b> | Select display filter                                                     | diS    | 32914             | 240         | 32942             | 49152       | R/W | Byte      | -   | 0...7        | num   |
| <b>FdS</b> | Filter disabling threshold                                                | diS    | 32793             | 0           | 32943             | 3           | R/W | Word      | Y   | -67,0...302  | °C/°F |
| <b>Ftt</b> | Time spent above the filter disabling threshold                           | diS    | 32878             | 0           | 32943             | 12          | R/W | Byte      | -   | 0...250      | min   |
| <b>FHt</b> | Sampling interval for filtering                                           | diS    | 32879             | 255         | 32943             | 48          | R/W | Byte      | -   | 1...250      | s     |
| <b>PS1</b> | Password 1 value                                                          | diS    | 32879             | 0           | 32943             | 192         | R   | Byte      | -   | 0...250      | num   |
| <b>PS2</b> | Password 2 value                                                          | diS    | 32880             | 0           | 32943             | 768         | R   | Byte      | -   | 0...250      | num   |
| <b>H00</b> | Select analog input type NTC/PTC/Pt1000                                   | CnF    | 32914             | 3840        | 32943             | 3072        | R/W | Byte      | -   | 0/1/2        | num   |
| <b>H08</b> | Stand-by operating mode                                                   | CnF    | 32929             | 3           | 32943             | 12288       | R/W | Byte      | -   | 0/1/2        | num   |
| <b>H11</b> | Digital input 1 configuration and polarity                                | CnF    | 32881             | 255         | 32943             | 49152       | R/W | Word      | Y   | -10...10     | num   |
| <b>H21</b> | Digital output 1 configuration                                            | CnF    | 32884             | 0           | 32944             | 12288       | R/W | Byte      | -   | 0...13       | num   |
| <b>H22</b> | Digital output 2 configuration                                            | CnF    | 32885             | 255         | 32944             | 49152       | R/W | Byte      | -   | 0...12       | num   |

| Label | Description                                                                                        | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range        | MU   |
|-------|----------------------------------------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|--------------|------|
| H23   | Digital output 3 configuration                                                                     | CnF    | 32885             | 0           | 32945             | 3           | R/W | Byte      | -   | 0...12       | num  |
| H24   | Digital output 4 configuration                                                                     | CnF    | 32886             | 255         | 32945             | 12          | R/W | Byte      | -   | 0...12       | num  |
| H25   | Digital output 5 (buzzer) configuration                                                            | CnF    | 32897             | 255         | 32935             | 12288       | R/W | Byte      | -   | 0/1          | num  |
| H31   | Key configuration                                                                                  | CnF    | 32914             | 61440       | 32945             | 48          | R/W | Byte      | -   | 0...8        | num  |
| H32   | Key configuration                                                                                  | CnF    | 32915             | 15          | 32945             | 192         | R/W | Byte      | -   | 0...8        | num  |
| H33   | Key configuration                                                                                  | CnF    | 32915             | 240         | 32945             | 768         | R/W | Byte      | -   | 0...8        | num  |
| H34   | Key configuration                                                                                  | CnF    | 32915             | 3840        | 32945             | 3072        | R/W | Byte      | -   | 0...8        | num  |
| H35   | Key configuration                                                                                  | CnF    | 32915             | 61440       | 32945             | 12288       | R/W | Byte      | -   | 0...8        | num  |
| H42   | Evaporator probe present                                                                           | CnF    | 32916             | 61440       | 32946             | 3           | R/W | Byte      | -   | 0/1          | flag |
| H43   | Probe Pb3 present                                                                                  | CnF    | 32917             | 15          | 32946             | 12          | R/W | Byte      | -   | 0/1/2        | num  |
| H45   | Defrost input mode for applications with dual evaporator                                           | CnF    | 32919             | 15          | 32954             | 49152       | R/W | Byte      | -   | 0...3        | num  |
| H48   | RTC present                                                                                        | CnF    | 32981             | 64          | 32946             | 48          | R/W | Byte      | -   | 0/1          | flag |
| H60   | Parameter vector selector                                                                          | CnF    | 33043             | 0           | 32987             | 192         | R   | Byte      | -   | 0...3        | num  |
| tAb   | Parameter table visibility                                                                         | CnF    | 32997             | 0           | 32985             | 12          | R   | Byte      | -   | 0...999      | num  |
| UL    | Visibility of the function transferring the programming parameters from the device to the CopyCard | FPr    | -                 | -           | 32985             | 48          | R/W | 2 bit     | -   | 0...3        | num  |
| Fr    | CopyCard formatting function visibility                                                            | FPr    | -                 | -           | 32985             | 768         | R/W | 2 bit     | -   | 0...3        | num  |
| rAP   | Pressure switch alarm reset visibility                                                             | FnC    | -                 | -           | 32985             | 3072        | R/W | 2 bit     | -   | 0...3        | num  |
| CEr   | Probe error capacity                                                                               | VSC    | 32795             | 0           | 32946             | 768         | R/W | Byte      | -   | 0...100      | %    |
| PdS   | Pull Down forced startup differential                                                              | VSC    | 32797             | 0           | 32946             | 3072        | R/W | Word      | Y   | -50,0...50,0 | K°R  |
| PUS   | Pull Up forced startup differential                                                                | VSC    | 32798             | 0           | 32946             | 12288       | R/W | Word      | Y   | -50,0...50,0 | K°R  |
| PUD   | Temperature outside range timeout                                                                  | VSC    | 32799             | 0           | 32946             | 49152       | R/W | Byte      | -   | 0...1000     | min  |
| PdE   | Pull Down end differential                                                                         | VSC    | 32801             | 0           | 32947             | 3           | R/W | Word      | Y   | -50,0...50,0 | K°R  |
| PUE   | Pull Up end differential                                                                           | VSC    | 32802             | 0           | 32947             | 12          | R/W | Word      | Y   | -50,0...50,0 | K°R  |
| Pdt   | Optimized Pull Down timeout                                                                        | VSC    | 32803             | 0           | 32947             | 48          | R/W | Byte      | -   | 0...1000     | min  |
| Pdd   | Optimized Pull Down capacity                                                                       | VSC    | 32805             | 0           | 32947             | 192         | R/W | Byte      | -   | 0...100      | %    |
| CPd   | Capacity after Pull Down day                                                                       | VSC    | 32806             | 0           | 32947             | 768         | R/W | Byte      | -   | 0...100      | %    |
| CPn   | Capacity after Pull Down night                                                                     | VSC    | 32807             | 0           | 32947             | 3072        | R/W | Byte      | -   | 0...100      | %    |
| CPb   | Compressor PID proportional band                                                                   | VSC    | 32810             | 0           | 32947             | 49152       | R/W | Word      | Y   | 0,1...3200   | K°R  |
| Cti   | Compressor PID integral time                                                                       | VSC    | 32811             | 0           | 32948             | 768         | R/W | Word      | -   | 0...65535    | s    |
| Ctd   | Compressor PID derivative time                                                                     | VSC    | 32813             | 0           | 32948             | 3072        | R/W | Word      | -   | 0...65535    | s    |

| Label                             | Description                                               | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range               | MU    |
|-----------------------------------|-----------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|---------------------|-------|
| <b>CSd</b>                        | Compressor startup duration                               | VSC    | 32814             | 0           | 32948             | 12288       | R/W | Word      | -   | 0...900             | s     |
| <b>CSC</b>                        | Capacity during compressor startup                        | VSC    | 32815             | 0           | 32948             | 49152       | R/W | Word      | -   | 44,4...100          | %     |
| <b>CAU</b>                        | Select PID automatic or manual mode                       | VSC    | 32882             | 0           | 32949             | 12          | R/W | Byte      | -   | 0/1                 | flag  |
| <b>CdU</b>                        | PID duty cycle in manual mode                             | VSC    | 32818             | 0           | 32949             | 48          | R/W | Byte      | -   | 0...100             | num   |
| <b>F_1</b>                        | Maximum frequency                                         | VSC    | 32827             | 0           | 32950             | 192         | R/W | Byte      | -   | 0...250             | Hz    |
| <b>F_2</b>                        | Minimum frequency                                         | VSC    | 32829             | 0           | 32950             | 768         | R/W | Byte      | -   | 0...250             | Hz    |
| <b>E10</b>                        | Event 1 profile                                           | nAd    | 33040             | 0           | 32985             | 49152       | R/W | Byte      | -   | 0...11              | num   |
| <b>E11</b>                        | Event 1 start hour                                        | nAd    | 33041             | 0           | 32986             | 3           | R/W | Byte      | -   | 0...23              | hours |
| <b>E12</b>                        | Event 1 start minute                                      | nAd    | 33042             | 255         | 32986             | 12          | R/W | Byte      | -   | 0...59              | min   |
| <b>E13</b>                        | Event 1 end hour                                          | nAd    | 33042             | 0           | 32986             | 48          | R/W | Byte      | -   | 0...23              | hours |
| <b>E14</b>                        | Event 1 end minute                                        | nAd    | 33043             | 255         | 32986             | 192         | R/W | Byte      | -   | 0...59              | min   |
| <b>E15</b>                        | Enable functions during event 1                           | nAd    | 33041             | 255         | 32986             | 768         | R/W | Byte      | -   | 0...5               | num   |
| <b>E20</b>                        | Event 2 profile                                           | nAd    | 33044             | 0           | 32986             | 3072        | R/W | Byte      | -   | 0...11              | num   |
| <b>E21</b>                        | Event 2 start hour                                        | nAd    | 33045             | 0           | 32986             | 12288       | R/W | Byte      | -   | 0...23              | hours |
| <b>E22</b>                        | Event 2 start minute                                      | nAd    | 33046             | 255         | 32986             | 49152       | R/W | Byte      | -   | 0...59              | min   |
| <b>E23</b>                        | Event 2 end hour                                          | nAd    | 33046             | 0           | 32987             | 3           | R/W | Byte      | -   | 0...23              | hours |
| <b>E24</b>                        | Event 2 end minute                                        | nAd    | 33047             | 255         | 32987             | 12          | R/W | Byte      | -   | 0...59              | min   |
| <b>E25</b>                        | Enable functions during event 2                           | nAd    | 33045             | 255         | 32987             | 48          | R/W | Byte      | -   | 0...5               | num   |
| <b>Application AP1 parameters</b> |                                                           |        |                   |             |                   |             |     |           |     |                     |       |
| <b>V1-SEt</b>                     | Regulation setpoint                                       | V1     | 33061             | 0           | 33227             | 49152       | R/W | Word      | Y   | <b>LSE...HSE</b>    | °C/°F |
| <b>V1-diF</b>                     | Activation differential                                   | V1     | 33062             | 0           | 33224             | 768         | R/W | Word      | -   | 0,1...30,0          | °C/°F |
| <b>V1-LSE</b>                     | Minimum setpoint value that can be set                    | V1     | 33063             | 0           | 33224             | 3072        | R/W | Word      | Y   | -67,0... <b>HSE</b> | °C/°F |
| <b>V1-HSE</b>                     | Maximum setpoint value that can be set                    | V1     | 33065             | 0           | 33224             | 12288       | R/W | Word      | Y   | <b>LSE</b> ...302   | °C/°F |
| <b>V1-HC</b>                      | Operating mode (Heating/Cooling)                          | V1     | 33272             | 256         | 33224             | 49152       | R/W | Byte      | -   | 0/1                 | flag  |
| <b>V1-ont</b>                     | Compressor output ON time if probe Pb1 is in error        | V1     | 33060             | 0           | 33225             | 3           | R/W | Byte      | -   | 0...250             | min   |
| <b>V1-oFt</b>                     | Compressor output OFF time if probe Pb1 is in error       | V1     | 33064             | 0           | 33225             | 12          | R/W | Byte      | -   | 0...250             | min   |
| <b>V1-don</b>                     | Compressor output activation delay from call              | V1     | 33068             | 0           | 33225             | 48          | R/W | Byte      | -   | 0...250             | s     |
| <b>V1-doF</b>                     | Compressor output activation delay from switch-off        | V1     | 33072             | 0           | 33225             | 192         | R/W | Byte      | -   | 0...250             | min   |
| <b>V1-dbi</b>                     | Delay between two consecutive compressor output power-ons | V1     | 33076             | 0           | 33225             | 768         | R/W | Byte      | -   | 0...250             | min   |
| <b>V1-Cit</b>                     | Minimum compressor output activation time                 | V1     | 33092             | 0           | 33226             | 3           | R/W | Byte      | -   | 0...250             | min   |
| <b>V1-CAt</b>                     | Maximum compressor output activation time                 | V1     | 33096             | 0           | 33226             | 12          | R/W | Byte      | -   | 0...250             | min   |

| Label  | Description                                                                       | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range       | MU    |
|--------|-----------------------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|-------------|-------|
| V1-odo | Output activation delay at startup                                                | V1     | 33080             | 0           | 33225             | 3072        | R/W | Byte      | -   | 0...250     | min   |
| V1-dCS | Deep cooling setpoint                                                             | V1     | 33126             | 0           | 33243             | 768         | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V1-tdC | Deep cooling duration                                                             | V1     | 33178             | 0           | 33244             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V1-dcc | Defrost delay after deep cooling                                                  | V1     | 33175             | 0           | 33244             | 3072        | R/W | Byte      | -   | 0...250     | min   |
| V1-CP2 | Compressor 2 activation delay                                                     | V1     | 33179             | 255         | 33244             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V1-dFA | Condenser fan and compressor activation delay from the call                       | V1     | 33187             | 0           | 33226             | 3072        | R/W | Byte      | -   | 0...250     | s     |
| V1-dtY | Type of defrost                                                                   | V1     | 33204             | 61440       | 33226             | 768         | R/W | Byte      | -   | 0/1/2       | num   |
| V1-doH | Defrost cycle activation delay from the call                                      | V1     | 33112             | 0           | 33227             | 3           | R/W | Byte      | -   | 0...250     | min   |
| V1-dEt | Defrost timeout. Determines the maximum duration of the defrost.                  | V1     | 33108             | 0           | 33226             | 12288       | R/W | Byte      | -   | 1...250     | min   |
| V1-dS1 | Evaporator 1 defrost end temperature                                              | V1     | 33066             | 0           | 33227             | 12          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V1-dS2 | Evaporator 2 defrost end temperature                                              | V1     | 33067             | 0           | 33227             | 48          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V1-dt2 | Unit of measure for defrost duration                                              | V1     | 33221             | 192         | 33226             | 49152       | R/W | Byte      | -   | 0/1/2       | num   |
| V1-dPo | Defrost activation request at startup, if the temperature measured by Pb2 allows. | V1     | 33272             | 1024        | 33227             | 768         | R/W | Byte      | -   | 0/1         | flag  |
| V1-tCd | Compressor output activation/deactivation time before a defrost                   | V1     | 33088             | 0           | 33225             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V1-Cod | Compressor OFF time before defrost                                                | V1     | 33084             | 0           | 33225             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V1-dMr | Enable defrost timer reset with manual defrost                                    | V1     | 33273             | 2048        | 33257             | 12          | R/W | Byte      | -   | 0/1         | flag  |
| V1-d00 | Cumulative time for defrost activation                                            | V1     | 33181             | 0           | 33245             | 12          | R/W | Byte      | -   | 0...250     | hours |
| V1-d01 | Parameter d00 unit of measure                                                     | V1     | 33221             | 12          | 33247             | 12          | R/W | Byte      | -   | 0/1/2       | num   |
| V1-dit | Device time for defrost activation                                                | V1     | 33104             | 0           | 33245             | 49152       | R/W | Byte      | -   | 0...250     | hours |
| V1-d11 | Parameter dit unit of measure                                                     | V1     | 33221             | 48          | 33247             | 48          | R/W | Byte      | -   | 0/1/2       | num   |
| V1-d20 | Enable defrost at compressor stop                                                 | V1     | 33273             | 256         | 33247             | 768         | R/W | Byte      | -   | 0/1         | flag  |
| V1-d40 | Select defrost probe 1                                                            | V1     | 33209             | 240         | 33246             | 3           | R/W | Byte      | -   | 0/1         | flag  |
| V1-d41 | Temperature threshold for starting defrost                                        | V1     | 33129             | 0           | 33243             | 49152       | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V1-d42 | Time the evaporator temperature must remain below the threshold                   | V1     | 33131             | 0           | 33243             | 12288       | R/W | Byte      | -   | 0...250     | min   |

| Label  | Description                                                | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range       | MU    |
|--------|------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|-------------|-------|
| V1-d43 | Time count mode for temperature below threshold            | V1     | 33209             | 3840        | 33246             | 12          | R/W | Byte      | -   | 0...3       | num   |
| V1-d44 | Threshold management mode                                  | V1     | 33209             | 61440       | 33246             | 48          | R/W | Byte      | -   | 0/1         | flag  |
| V1-d90 | Clock defrost mode                                         | V1     | 33210             | 3840        | 33246             | 3072        | R/W | Byte      | -   | 0...3       | num   |
| V1-d91 | Number of daily defrosts                                   | V1     | 33182             | 255         | 33245             | 48          | R/W | Byte      | -   | 0...255     | num   |
| V1-d92 | 1st weekend/holiday day                                    | V1     | 33210             | 15          | 33246             | 192         | R/W | Byte      | -   | 0...7       | num   |
| V1-d93 | 2nd weekend/holiday day                                    | V1     | 33210             | 240         | 33246             | 768         | R/W | Byte      | -   | 0...7       | num   |
| V1-d94 | Regular defrost interval duration                          | V1     | 33210             | 61440       | 33246             | 12288       | R/W | Byte      | -   | 1...7       | num   |
| V1-d1H | Weekday defrost no. 1 start hour                           | V1     | 33182             | 0           | 33245             | 192         | R/W | Byte      | -   | 0...23      | hours |
| V1-d1n | Weekday defrost no. 1 start minute                         | V1     | 33183             | 255         | 33245             | 768         | R/W | Byte      | -   | 0...59      | min   |
| V1-F1H | Weekend/holiday defrost no. 1 start hour                   | V1     | 33183             | 0           | 33245             | 3072        | R/W | Byte      | -   | 0...23      | hours |
| V1-F1n | Weekend/holiday defrost no. 1 start minute                 | V1     | 33184             | 0           | 33245             | 12288       | R/W | Byte      | -   | 0...59      | min   |
| V1-FPt | FSt parameter mode (absolute or relative)                  | V1     | 33272             | 4096        | 33229             | 3           | R/W | Byte      | -   | 0/1         | flag  |
| V1-FSt | Evaporator fan disabling temperature                       | V1     | 33070             | 0           | 33229             | 12          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V1-FAd | Evaporator fan trigger differential                        | V1     | 33161             | 0           | 33229             | 48          | R/W | Word      | -   | 1,0...25,0  | °C/°F |
| V1-Fdt | Evaporator fan activation delay time after a defrost cycle | V1     | 33124             | 0           | 33243             | 48          | R/W | Byte      | -   | 0...250     | min   |
| V1-dt  | Dripping time                                              | V1     | 33162             | 255         | 33229             | 192         | R/W | Byte      | -   | 0...250     | min   |
| V1-dFd | Evaporator fan cut-out during defrost                      | V1     | 33272             | 8192        | 33229             | 768         | R/W | Byte      | -   | 0/1         | flag  |
| V1-FCO | Evaporator fan status with compressor output OFF           | V1     | 33205             | 15          | 33228             | 49152       | R/W | Byte      | -   | 0...3       | num   |
| V1-Fon | Evaporator fan ON time in cyclical regulator mode          | V1     | 33163             | 255         | 33229             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V1-FoF | Evaporator fan OFF time in cyclical regulator mode         | V1     | 33163             | 0           | 33229             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V1-Fnn | Evaporator fan ON time in night duty cycle mode            | V1     | 33160             | 0           | 33228             | 3072        | R/W | Byte      | -   | 0...250     | num   |
| V1-FnF | Evaporator fan OFF time in night duty cycle mode           | V1     | 33161             | 255         | 33228             | 12288       | R/W | Byte      | -   | 0...250     | num   |
| V1-ESF | Night mode activation                                      | V1     | 33273             | 512         | 33247             | 3072        | R/W | Byte      | -   | 0/1         | flag  |
| V1-Att | HAL and LAL parameter mode (absolute or relative)          | V1     | 33272             | 32768       | 33230             | 12          | R/W | Byte      | -   | 0/1         | flag  |
| V1-AFd | Alarm activation differential                              | V1     | 33164             | 0           | 33230             | 48          | R/W | Word      | -   | 0,1...25,0  | °C/°F |
| V1-HAL | Maximum alarm threshold                                    | V1     | 33071             | 0           | 33230             | 192         | R/W | Word      | Y   | LAL...302   | °C/°F |

| Label  | Description                                                               | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range        | MU    |
|--------|---------------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|--------------|-------|
| V1-LAL | Minimum alarm threshold                                                   | V1     | 33073             | 0           | 33230             | 768         | R/W | Word      | Y   | -67,0...HAL  | °C/°F |
| V1-PAo | Alarm exclusion at startup                                                | V1     | 33165             | 255         | 33230             | 3072        | R/W | Byte      | -   | 0...10       | hours |
| V1-dAo | Exclusion time for temperature alarms after a defrost cycle               | V1     | 33165             | 0           | 33230             | 12288       | R/W | Word      | -   | 0...250      | min   |
| V1-oAo | High and low temperature alarms exclusion time after closing the door     | V1     | 33166             | 255         | 33230             | 49152       | R/W | Byte      | -   | 0...10       | hours |
| V1-tdo | Door open alarm exclusion time                                            | V1     | 33167             | 255         | 33231             | 49152       | R/W | Byte      | -   | 0...250      | min   |
| V1-tAo | Temperature alarm signaling delay time                                    | V1     | 33166             | 0           | 33231             | 3           | R/W | Byte      | -   | 0...250      | min   |
| V1-dAt | Defrost ended due to timeout alarm signaling                              | V1     | 33074             | 0           | 33231             | 12          | R/W | Byte      | -   | 0/1          | flag  |
| V1-EAL | External alarm inhibits the regulators                                    | V1     | 33211             | 3840        | 33231             | 48          | R/W | Byte      | -   | 0/1/2        | num   |
| V1-AoP | Alarm output polarity                                                     | V1     | 33273             | 1           | 33231             | 768         | R/W |           |     | 0/1          | flag  |
| V1-SA3 | Alarm setpoint for probe 3                                                | V1     | 33123             | 0           | 33243             | 12          | R/W | Word      | Y   | -67,0...302  | °C/°F |
| V1-dA3 | Probe 3 alarm tripping differential                                       | V1     | 33125             | 0           | 33243             | 192         | R/W | Word      | -   | 0,1...30,0   | °C/°F |
| V1-dOd | Enable utility shutoff upon door switch activation                        | V1     | 33205             | 3840        | 33231             | 12288       | R/W | Byte      | -   | 0...3        | num   |
| V1-dAd | Digital input activation delay                                            | V1     | 33174             | 255         | 33236             | 3072        | R/W | Byte      | -   | 0...250      | min   |
| V1-dCO | Compressor deactivation delay from door opening                           | V1     | 33132             | 0           | 33227             | 3072        | R/W | Byte      | -   | 0...250      | min   |
| V1-AUP | Associate aux relay with door switch                                      | V1     | 33205             | 240         | 33231             | 192         | R/W | Byte      | -   | 0/1          | flag  |
| V1-PEn | Number of activations permitted per minimum/maximum pressure switch input | V1     | 33186             | 255         | 33242             | 12288       | R/W | Byte      | -   | 0...15       | num   |
| V1-PEi | Minimum/maximum pressure switch error calculation interval                | V1     | 33186             | 0           | 33242             | 49152       | R/W | Byte      | -   | 1...99       | min   |
| V1-PEt | Compressor activation delay after pressure switch deactivation            | V1     | 33187             | 255         | 33243             | 3           | R/W | Byte      | -   | 0...255      | min   |
| V1-oSP | Offset on setpoint                                                        | V1     | 33075             | 0           | 33232             | 49152       | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V1-odF | Trigger differential correction                                           | V1     | 33077             | 0           | 33233             | 48          | R/W | Word      | -   | 0,1...30,0   | °C/°F |
| V1-dro | Select °C / °F                                                            | V1     | 33273             | 8           | 33233             | 192         | R/W | Byte      | -   | 0/1          | flag  |
| V1-CA1 | Probe Pb1 calibration                                                     | V1     | 33078             | 0           | 33233             | 768         | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V1-CA2 | Probe Pb2 calibration                                                     | V1     | 33079             | 0           | 33233             | 3072        | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V1-CA3 | Probe Pb3 calibration                                                     | V1     | 33081             | 0           | 33233             | 12288       | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V1-CAi | Calibration trigger                                                       | V1     | 33220             | 49152       | 33233             | 49152       | R/W | Byte      | -   | 0/1/2        | num   |
| V1-LoC | Enable keypad lock                                                        | V1     | 33273             | 16          | 33234             | 48          | R/W | Byte      | -   | 0/1          | flag  |

| Label  | Description                                              | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range       | MU    |
|--------|----------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|-------------|-------|
| V1-ddd | Select main display value                                | V1     | 33205             | 61440       | 33234             | 192         | R/W | Byte      | -   | 0...3       | num   |
| V1-ddL | Inhibit resources at the end of defrost                  | V1     | 33206             | 15          | 33234             | 768         | R/W | Byte      | -   | 0/1/2       | num   |
| V1-Ldd | Display lock timeout from end of defrost                 | V1     | 33170             | 255         | 33234             | 3072        | R/W | Byte      | -   | 0...250     | min   |
| V1-ndt | Display with decimal point                               | V1     | 33273             | 32          | 33234             | 12288       | R/W | Byte      | -   | 0/1         | flag  |
| V1-FSE | Select display filter                                    | V1     | 33206             | 240         | 33234             | 49152       | R/W | Byte      | -   | 0...7       | num   |
| V1-FdS | Filter disabling threshold                               | V1     | 33085             | 0           | 33235             | 3           | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V1-Ftt | Time spent above the filter disabling threshold          | V1     | 33170             | 0           | 33235             | 12          | R/W | Byte      | -   | 0...250     | min   |
| V1-FHt | Sampling interval for filtering                          | V1     | 33171             | 255         | 33235             | 48          | R/W | Byte      | -   | 1...250     | s     |
| V1-PS1 | Password 1 value                                         | V1     | 33171             | 0           | 33235             | 192         | R   | Byte      | -   | 0...250     | num   |
| V1-PS2 | Password 2 value                                         | V1     | 33172             | 0           | 33235             | 768         | R   | Byte      | -   | 0...250     | num   |
| V1-H00 | Select analog input type NTC/PTC/Pt1000                  | V1     | 33206             | 3840        | 33235             | 3072        | R/W | Byte      | -   | 0/1/2       | num   |
| V1-H08 | Stand-by operating mode                                  | V1     | 33221             | 3           | 33235             | 12288       | R/W | Byte      | -   | 0/1/2       | num   |
| V1-H11 | Digital input 1 configuration and polarity               | V1     | 33173             | 255         | 33235             | 49152       | R/W | Word      | Y   | -10...10    | num   |
| V1-H21 | Digital output 1 configuration                           | V1     | 33176             | 0           | 33236             | 12288       | R/W | Byte      | -   | 0...13      | num   |
| V1-H22 | Digital output 2 configuration                           | V1     | 33177             | 255         | 33236             | 49152       | R/W | Byte      | -   | 0...12      | num   |
| V1-H23 | Digital output 3 configuration                           | V1     | 33177             | 0           | 33237             | 3           | R/W | Byte      | -   | 0...12      | num   |
| V1-H24 | Digital output 4 configuration                           | V1     | 33178             | 255         | 33237             | 12          | R/W | Byte      | -   | 0...12      | num   |
| V1-H25 | Digital output 5 (buzzer) configuration                  | V1     | 33189             | 255         | 33227             | 12288       | R/W | Byte      | -   | 0/1         | num   |
| V1-H31 | Key configuration                                        | V1     | 33206             | 61440       | 33237             | 48          | R/W | Byte      | -   | 0...8       | num   |
| V1-H32 | Key configuration                                        | V1     | 33207             | 15          | 33237             | 192         | R/W | Byte      | -   | 0...8       | num   |
| V1-H33 | Key configuration                                        | V1     | 33207             | 240         | 33237             | 768         | R/W | Byte      | -   | 0...8       | num   |
| V1-H34 | Key configuration                                        | V1     | 33207             | 3840        | 33237             | 3072        | R/W | Byte      | -   | 0...8       | num   |
| V1-H35 | Key configuration                                        | V1     | 33207             | 61440       | 33237             | 12288       | R/W | Byte      | -   | 0...8       | num   |
| V1-H42 | Evaporator probe present                                 | V1     | 33208             | 61440       | 33238             | 3           | R/W | Byte      | -   | 0/1         | flag  |
| V1-H43 | Probe Pb3 present                                        | V1     | 33209             | 15          | 33238             | 12          | R/W | Byte      | -   | 0/1/2       | num   |
| V1-H45 | Defrost input mode for applications with dual evaporator | V1     | 33211             | 15          | 33246             | 49152       | R/W | Byte      | -   | 0...3       | num   |
| V1-H48 | RTC present                                              | V1     | 33273             | 64          | 33238             | 48          | R/W | Byte      | -   | 0/1         | flag  |

| Label                      | Description                                         | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range        | MU    |
|----------------------------|-----------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|--------------|-------|
| V1-CEr                     | Probe error capacity                                | V1     | 33087             | 0           | 33238             | 768         | R/W | Byte      | -   | 0...100      | %     |
| V1-PdS                     | Pull Down forced startup differential               | V1     | 33089             | 0           | 33238             | 3072        | R/W | Word      | Y   | -50,0...50,0 | K°R   |
| V1-PUS                     | Pull Up forced startup differential                 | V1     | 33090             | 0           | 33238             | 12288       | R/W | Word      | Y   | -50,0...50,0 | K°R   |
| V1-PUD                     | Temperature outside range timeout                   | V1     | 33091             | 0           | 33238             | 49152       | R/W | Byte      | -   | 0...1000     | min   |
| V1-PdE                     | Pull Down end differential                          | V1     | 33093             | 0           | 33239             | 3           | R/W | Word      | Y   | -50,0...50,0 | K°R   |
| V1-PUE                     | Pull Up end differential                            | V1     | 33094             | 0           | 33239             | 12          | R/W | Word      | Y   | -50,0...50,0 | K°R   |
| V1-Pdt                     | Optimized Pull Down timeout                         | V1     | 33095             | 0           | 33239             | 48          | R/W | Byte      | -   | 0...1000     | min   |
| V1-Pdd                     | Optimized Pull Down capacity                        | V1     | 33097             | 0           | 33239             | 192         | R/W | Byte      | -   | 0...100      | %     |
| V1-CPd                     | Capacity after Pull Down day                        | V1     | 33098             | 0           | 33239             | 768         | R/W | Byte      | -   | 0...100      | %     |
| V1-CPn                     | Capacity after Pull Down night                      | V1     | 33099             | 0           | 33239             | 3072        | R/W | Byte      | -   | 0...100      | %     |
| V1-CPb                     | Compressor PID proportional band                    | V1     | 33102             | 0           | 33239             | 49152       | R/W | Word      | Y   | 0,1...3200   | K°R   |
| V1-Cti                     | Compressor PID integral time                        | V1     | 33103             | 0           | 33240             | 768         | R/W | Word      | -   | 0...65535    | s     |
| V1-Ctd                     | Compressor PID derivative time                      | V1     | 33105             | 0           | 33240             | 3072        | R/W | Word      | -   | 0...65535    | s     |
| V1-CSd                     | Compressor startup duration                         | V1     | 33106             | 0           | 33240             | 12288       | R/W | Word      | -   | 0...900      | s     |
| V1-CSC                     | Capacity during compressor startup                  | V1     | 33107             | 0           | 33240             | 49152       | R/W | Word      | -   | 44,4...100   | %     |
| V1-CAU                     | Select PID automatic or manual mode                 | V1     | 33174             | 0           | 33241             | 12          | R/W | Byte      | -   | 0/1          | flag  |
| V1-CdU                     | PID duty cycle in manual mode                       | V1     | 33110             | 0           | 33241             | 48          | R/W | Byte      | -   | 0...100      | num   |
| V1-F <sub>1</sub>          | Maximum frequency                                   | V1     | 33119             | 0           | 33242             | 192         | R/W | Byte      | -   | 0...250      | Hz    |
| V1-F <sub>2</sub>          | Minimum frequency                                   | V1     | 33121             | 0           | 33242             | 768         | R/W | Byte      | -   | 0...250      | Hz    |
| Application AP2 parameters |                                                     |        |                   |             |                   |             |     |           |     |              |       |
| V2-SEt                     | Regulation setpoint                                 | V2     | 33281             | 0           | 33447             | 49152       | R/W | Word      | Y   | LSE...HSE    | °C/°F |
| V2-diF                     | Activation differential                             | V2     | 33282             | 0           | 33444             | 768         | R/W | Word      | -   | 0,1...30,0   | °C/°F |
| V2-LSE                     | Minimum setpoint value that can be set              | V2     | 33283             | 0           | 33444             | 3072        | R/W | Word      | Y   | -67,0...HSE  | °C/°F |
| V2-HSE                     | Maximum setpoint value that can be set              | V2     | 33285             | 0           | 33444             | 12288       | R/W | Word      | Y   | LSE...302    | °C/°F |
| V2-HC                      | Operating mode (Heating/Cooling)                    | V2     | 33492             | 256         | 33444             | 49152       | R/W | Byte      | -   | 0/1          | flag  |
| V2-ont                     | Compressor output ON time if probe Pb1 is in error  | V2     | 33280             | 0           | 33445             | 3           | R/W | Byte      | -   | 0...250      | min   |
| V2-ofT                     | Compressor output OFF time if probe Pb1 is in error | V2     | 33284             | 0           | 33445             | 12          | R/W | Byte      | -   | 0...250      | min   |

| Label  | Description                                                                       | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range       | MU    |
|--------|-----------------------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|-------------|-------|
| V2-don | Compressor output activation delay from call                                      | V2     | 33288             | 0           | 33445             | 48          | R/W | Byte      | -   | 0...250     | s     |
| V2-doF | Compressor output activation delay from switch-off                                | V2     | 33292             | 0           | 33445             | 192         | R/W | Byte      | -   | 0...250     | min   |
| V2-dbi | Delay between two consecutive compressor output power-ons                         | V2     | 33296             | 0           | 33445             | 768         | R/W | Byte      | -   | 0...250     | min   |
| V2-Cit | Minimum compressor output activation time                                         | V2     | 33312             | 0           | 33446             | 3           | R/W | Byte      | -   | 0...250     | min   |
| V2-CAt | Maximum compressor output activation time                                         | V2     | 33316             | 0           | 33446             | 12          | R/W | Byte      | -   | 0...250     | min   |
| V2-odo | Output activation delay at startup                                                | V2     | 33300             | 0           | 33445             | 3072        | R/W | Byte      | -   | 0...250     | min   |
| V2-dCS | Deep cooling setpoint                                                             | V2     | 33346             | 0           | 33463             | 768         | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V2-tdC | Deep cooling duration                                                             | V2     | 33398             | 0           | 33464             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V2-dcc | Defrost delay after deep cooling                                                  | V2     | 33395             | 0           | 33464             | 3072        | R/W | Byte      | -   | 0...250     | min   |
| V2-CP2 | Compressor 2 activation delay                                                     | V2     | 33399             | 255         | 33464             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V2-dFA | Condenser fan and compressor activation delay from the call                       | V2     | 33407             | 0           | 33446             | 3072        | R/W | Byte      | -   | 0...250     | s     |
| V2-dtY | Type of defrost                                                                   | V2     | 33424             | 61440       | 33446             | 768         | R/W | Byte      | -   | 0/1/2       | num   |
| V2-doH | Defrost cycle activation delay from the call                                      | V2     | 33332             | 0           | 33447             | 3           | R/W | Byte      | -   | 0...250     | min   |
| V2-dEt | Defrost timeout. Determines the maximum duration of the defrost.                  | V2     | 33328             | 0           | 33446             | 12288       | R/W | Byte      | -   | 1...250     | min   |
| V2-dS1 | Evaporator 1 defrost end temperature                                              | V2     | 33286             | 0           | 33447             | 12          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V2-dS2 | Evaporator 2 defrost end temperature                                              | V2     | 33287             | 0           | 33447             | 48          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V2-dt2 | Unit of measure for defrost duration                                              | V2     | 33441             | 192         | 33446             | 49152       | R/W | Byte      | -   | 0/1/2       | num   |
| V2-dPo | Defrost activation request at startup, if the temperature measured by Pb2 allows. | V2     | 33492             | 1024        | 33447             | 768         | R/W | Byte      | -   | 0/1         | flag  |
| V2-tCd | Compressor output activation/deactivation time before a defrost                   | V2     | 33308             | 0           | 33445             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V2-Cod | Compressor OFF time before defrost                                                | V2     | 33304             | 0           | 33445             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V2-dMr | Enable defrost timer reset with manual defrost                                    | V2     | 33493             | 2048        | 33477             | 12          | R/W | Byte      | -   | 0/1         | flag  |
| V2-d00 | Cumulative time for defrost activation                                            | V2     | 33401             | 0           | 33465             | 12          | R/W | Byte      | -   | 0...250     | hours |
| V2-d01 | Parameter d00 unit of measure                                                     | V2     | 33441             | 12          | 33467             | 12          | R/W | Byte      | -   | 0/1/2       | num   |
| V2-dit | Device time for defrost activation                                                | V2     | 33324             | 0           | 33465             | 49152       | R/W | Byte      | -   | 0...250     | hours |
| V2-d11 | Parameter dit unit of measure                                                     | V2     | 33441             | 48          | 33467             | 48          | R/W | Byte      | -   | 0/1/2       | num   |

| Label  | Description                                                     | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range       | MU    |
|--------|-----------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|-------------|-------|
| V2-d20 | Enable defrost at compressor stop                               | V2     | 33493             | 256         | 33467             | 768         | R/W | Byte      | -   | 0/1         | flag  |
| V2-d40 | Select defrost probe 1                                          | V2     | 33429             | 240         | 33466             | 3           | R/W | Byte      | -   | 0/1         | flag  |
| V2-d41 | Temperature threshold for starting defrost                      | V2     | 33349             | 0           | 33463             | 49152       | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V2-d42 | Time the evaporator temperature must remain below the threshold | V2     | 33351             | 0           | 33463             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V2-d43 | Time count mode for temperature below threshold                 | V2     | 33429             | 3840        | 33466             | 12          | R/W | Byte      | -   | 0...3       | num   |
| V2-d44 | Threshold management mode                                       | V2     | 33429             | 61440       | 33466             | 48          | R/W | Byte      | -   | 0/1         | flag  |
| V2-d90 | Clock defrost mode                                              | V2     | 33430             | 3840        | 33466             | 3072        | R/W | Byte      | -   | 0...3       | num   |
| V2-d91 | Number of daily defrosts                                        | V2     | 33402             | 255         | 33465             | 48          | R/W | Byte      | -   | 0...255     | num   |
| V2-d92 | 1st weekend/holiday day                                         | V2     | 33430             | 15          | 33466             | 192         | R/W | Byte      | -   | 0...7       | num   |
| V2-d93 | 2nd weekend/holiday day                                         | V2     | 33430             | 240         | 33466             | 768         | R/W | Byte      | -   | 0...7       | num   |
| V2-d94 | Regular defrost interval duration                               | V2     | 33430             | 61440       | 33466             | 12288       | R/W | Byte      | -   | 1...7       | num   |
| V2-d1H | Weekday defrost no. 1 start hour                                | V2     | 33402             | 0           | 33465             | 192         | R/W | Byte      | -   | 0...23      | hours |
| V2-d1n | Weekday defrost no. 1 start minute                              | V2     | 33403             | 255         | 33465             | 768         | R/W | Byte      | -   | 0...59      | min   |
| V2-F1H | Weekend/holiday defrost no. 1 start hour                        | V2     | 33403             | 0           | 33465             | 3072        | R/W | Byte      | -   | 0...23      | hours |
| V2-F1n | Weekend/holiday defrost no. 1 start minute                      | V2     | 33404             | 0           | 33465             | 12288       | R/W | Byte      | -   | 0...59      | min   |
| V2-FPt | FSt parameter mode (absolute or relative)                       | V2     | 33492             | 4096        | 33449             | 3           | R/W | Byte      | -   | 0/1         | flag  |
| V2-FSt | Evaporator fan disabling temperature                            | V2     | 33290             | 0           | 33449             | 12          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V2-FAd | Evaporator fan trigger differential                             | V2     | 33381             | 0           | 33449             | 48          | R/W | Word      | -   | 1,0...25,0  | °C/°F |
| V2-Fdt | Evaporator fan activation delay time after a defrost cycle      | V2     | 33344             | 0           | 33463             | 48          | R/W | Byte      | -   | 0...250     | min   |
| V2-dt  | Dripping time                                                   | V2     | 33382             | 255         | 33449             | 192         | R/W | Byte      | -   | 0...250     | min   |
| V2-dFd | Evaporator fan cut-out during defrost                           | V2     | 33492             | 8192        | 33449             | 768         | R/W | Byte      | -   | 0/1         | flag  |
| V2-FCO | Evaporator fan status with compressor output OFF                | V2     | 33425             | 15          | 33448             | 49152       | R/W | Byte      | -   | 0...3       | num   |
| V2-Fon | Evaporator fan ON time in cyclical regulator mode               | V2     | 33383             | 255         | 33449             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V2-FoF | Evaporator fan OFF time in cyclical regulator mode              | V2     | 33383             | 0           | 33449             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V2-Fnn | Evaporator fan ON time in night duty cycle mode                 | V2     | 33380             | 0           | 33448             | 3072        | R/W | Byte      | -   | 0...250     | num   |

| Label  | Description                                                               | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range        | MU    |
|--------|---------------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|--------------|-------|
| V2-FnF | Evaporator fan OFF time in night duty cycle mode                          | V2     | 33381             | 255         | 33448             | 12288       | R/W | Byte      | -   | 0...250      | num   |
| V2-ESF | Night mode activation                                                     | V2     | 33493             | 512         | 33467             | 3072        | R/W | Byte      | -   | 0/1          | flag  |
| V2-Att | HAL and LAL parameter mode (absolute or relative)                         | V2     | 33492             | 32768       | 33450             | 12          | R/W | Byte      | -   | 0/1          | flag  |
| V2-AFd | Alarm activation differential                                             | V2     | 33384             | 0           | 33450             | 48          | R/W | Word      | -   | 0,1...25,0   | °C/°F |
| V2-HAL | Maximum alarm threshold                                                   | V2     | 33291             | 0           | 33450             | 192         | R/W | Word      | Y   | LAL...302    | °C/°F |
| V2-LAL | Minimum alarm threshold                                                   | V2     | 33293             | 0           | 33450             | 768         | R/W | Word      | Y   | -67,0...HAL  | °C/°F |
| V2-PAo | Alarm exclusion at startup                                                | V2     | 33385             | 255         | 33450             | 3072        | R/W | Byte      | -   | 0...10       | hours |
| V2-dAo | Exclusion time for temperature alarms after a defrost cycle               | V2     | 33385             | 0           | 33450             | 12288       | R/W | Word      | -   | 0...250      | min   |
| V2-oAo | High and low temperature alarms exclusion time after closing the door     | V2     | 33386             | 255         | 33450             | 49152       | R/W | Byte      | -   | 0...10       | hours |
| V2-tdo | Door open alarm exclusion time                                            | V2     | 33387             | 255         | 33451             | 49152       | R/W | Byte      | -   | 0...250      | min   |
| V2-tAo | Temperature alarm signaling delay time                                    | V2     | 33386             | 0           | 33451             | 3           | R/W | Byte      | -   | 0...250      | min   |
| V2-dAt | Defrost ended due to timeout alarm signaling                              | V2     | 33294             | 0           | 33451             | 12          | R/W | Byte      | -   | 0/1          | flag  |
| V2-EAL | External alarm inhibits the regulators                                    | V2     | 33431             | 3840        | 33451             | 48          | R/W | Byte      | -   | 0/1/2        | num   |
| V2-AoP | Alarm output polarity                                                     | V2     | 33493             | 1           | 33451             | 768         | R/W | Byte      | -   | 0/1          | flag  |
| V2-SA3 | Alarm setpoint for probe 3                                                | V2     | 33343             | 0           | 33463             | 12          | R/W | Word      | Y   | -67,0...302  | °C/°F |
| V2-dA3 | Probe 3 alarm tripping differential                                       | V2     | 33345             | 0           | 33463             | 192         | R/W | Word      | -   | 0,1...30,0   | °C/°F |
| V2-dOd | Enable utility shutoff upon door switch activation                        | V2     | 33425             | 3840        | 33451             | 12288       | R/W | Byte      | -   | 0...3        | num   |
| V2-dAd | Digital input activation delay                                            | V2     | 33394             | 255         | 33456             | 3072        | R/W | Byte      | -   | 0...250      | min   |
| V2-dCO | Compressor deactivation delay from door opening                           | V2     | 33352             | 0           | 33447             | 3072        | R/W | Byte      | -   | 0...250      | min   |
| V2-AUP | Associate aux relay with door switch                                      | V2     | 33425             | 240         | 33451             | 192         | R/W | Byte      | -   | 0/1          | flag  |
| V2-PEn | Number of activations permitted per minimum/maximum pressure switch input | V2     | 33406             | 255         | 33462             | 12288       | R/W | Byte      | -   | 0...15       | num   |
| V2-PEi | Minimum/maximum pressure switch error calculation interval                | V2     | 33406             | 0           | 33462             | 49152       | R/W | Byte      | -   | 1...99       | min   |
| V2-PEt | Compressor activation delay after pressure switch deactivation            | V2     | 33407             | 255         | 33463             | 3           | R/W | Byte      | -   | 0...255      | min   |
| V2-oSP | Offset on setpoint                                                        | V2     | 33295             | 0           | 33452             | 49152       | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V2-odF | Trigger differential correction                                           | V2     | 33297             | 0           | 33453             | 48          | R/W | Word      | -   | 0,1...30,0   | °C/°F |
| V2-dro | Select °C / °F                                                            | V2     | 33493             | 8           | 33453             | 192         | R/W | Byte      | -   | 0/1          | flag  |

| Label  | Description                                     | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range        | MU    |
|--------|-------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|--------------|-------|
| V2-CA1 | Probe Pb1 calibration                           | V2     | 33298             | 0           | 33453             | 768         | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V2-CA2 | Probe Pb2 calibration                           | V2     | 33299             | 0           | 33453             | 3072        | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V2-CA3 | Probe Pb3 calibration                           | V2     | 33301             | 0           | 33453             | 12288       | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V2-CAi | Calibration trigger                             | V2     | 33440             | 49152       | 33453             | 49152       | R/W | Byte      | -   | 0/1/2        | num   |
| V2-LoC | Enable keypad lock                              | V2     | 33493             | 16          | 33454             | 48          | R/W | Byte      | -   | 0/1          | flag  |
| V2-ddd | Select main display value                       | V2     | 33425             | 61440       | 33454             | 192         | R/W | Byte      | -   | 0...3        | num   |
| V2-ddL | Inhibit resources at the end of defrost         | V2     | 33426             | 15          | 33454             | 768         | R/W | Byte      | -   | 0/1/2        | num   |
| V2-Ldd | Display lock timeout from end of defrost        | V2     | 33390             | 255         | 33454             | 3072        | R/W | Byte      | -   | 0...250      | min   |
| V2-ndt | Display with decimal point                      | V2     | 33493             | 32          | 33454             | 12288       | R/W | Byte      | -   | 0/1          | flag  |
| V2-FSE | Select display filter                           | V2     | 33426             | 240         | 33454             | 49152       | R/W | Byte      | -   | 0...7        | num   |
| V2-FdS | Filter disabling threshold                      | V2     | 33305             | 0           | 33455             | 3           | R/W | Word      | Y   | -67,0...302  | °C/°F |
| V2-Ftt | Time spent above the filter disabling threshold | V2     | 33390             | 0           | 33455             | 12          | R/W | Byte      | -   | 0...250      | min   |
| V2-FHt | Sampling interval for filtering                 | V2     | 33391             | 255         | 33455             | 48          | R/W | Byte      | -   | 1...250      | s     |
| V2-PS1 | Password 1 value                                | V2     | 33391             | 0           | 33455             | 192         | R   | Byte      | -   | 0...250      | num   |
| V2-PS2 | Password 2 value                                | V2     | 33392             | 0           | 33455             | 768         | R   | Byte      | -   | 0...250      | num   |
| V2-H00 | Select analog input type NTC/PTC/Pt1000         | V2     | 33426             | 3840        | 33455             | 3072        | R/W | Byte      | -   | 0/1/2        | num   |
| V2-H08 | Stand-by operating mode                         | V2     | 33441             | 3           | 33455             | 12288       | R/W | Byte      | -   | 0/1/2        | num   |
| V2-H11 | Digital input 1 configuration and polarity      | V2     | 33393             | 255         | 33455             | 49152       | R/W | Word      | Y   | -10...10     | num   |
| V2-H21 | Digital output 1 configuration                  | V2     | 33396             | 0           | 33456             | 12288       | R/W | Byte      | -   | 0...13       | num   |
| V2-H22 | Digital output 2 configuration                  | V2     | 33397             | 255         | 33456             | 49152       | R/W | Byte      | -   | 0...12       | num   |
| V2-H23 | Digital output 3 configuration                  | V2     | 33397             | 0           | 33457             | 3           | R/W | Byte      | -   | 0...12       | num   |
| V2-H24 | Digital output 4 configuration                  | V2     | 33398             | 255         | 33457             | 12          | R/W | Byte      | -   | 0...12       | num   |
| V2-H25 | Digital output 5 (buzzer) configuration         | V2     | 33409             | 255         | 33447             | 12288       | R/W | Byte      | -   | 0/1          | num   |
| V2-H31 | Key configuration                               | V2     | 33426             | 61440       | 33457             | 48          | R/W | Byte      | -   | 0...8        | num   |
| V2-H32 | Key configuration                               | V2     | 33427             | 15          | 33457             | 192         | R/W | Byte      | -   | 0...8        | num   |
| V2-H33 | Key configuration                               | V2     | 33427             | 240         | 33457             | 768         | R/W | Byte      | -   | 0...8        | num   |
| V2-H34 | Key configuration                               | V2     | 33427             | 3840        | 33457             | 3072        | R/W | Byte      | -   | 0...8        | num   |
| V2-H35 | Key configuration                               | V2     | 33427             | 61440       | 33457             | 12288       | R/W | Byte      | -   | 0...8        | num   |

| Label                      | Description                                              | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range        | MU    |
|----------------------------|----------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|--------------|-------|
| V2-H42                     | Evaporator probe present                                 | V2     | 33428             | 61440       | 33458             | 3           | R/W | Byte      | -   | 0/1          | flag  |
| V2-H43                     | Probe Pb3 present                                        | V2     | 33429             | 15          | 33458             | 12          | R/W | Byte      | -   | 0/1/2        | num   |
| V2-H45                     | Defrost input mode for applications with dual evaporator | V2     | 33431             | 15          | 33466             | 49152       | R/W | Byte      | -   | 0...3        | num   |
| V2-H48                     | RTC present                                              | V2     | 33493             | 64          | 33458             | 48          | R/W | Byte      | -   | 0/1          | flag  |
| V2-CEr                     | Probe error capacity                                     | V2     | 33307             | 0           | 33458             | 768         | R/W | Byte      | -   | 0...100      | %     |
| V2-PdS                     | Pull Down forced startup differential                    | V2     | 33309             | 0           | 33458             | 3072        | R/W | Word      | Y   | -50,0...50,0 | K°R   |
| V2-PUS                     | Pull Up forced startup differential                      | V2     | 33310             | 0           | 33458             | 12288       | R/W | Word      | Y   | -50,0...50,0 | K°R   |
| V2-PUD                     | Temperature outside range timeout                        | V2     | 33311             | 0           | 33458             | 49152       | R/W | Byte      | -   | 0...1000     | min   |
| V2-PdE                     | Pull Down end differential                               | V2     | 33313             | 0           | 33459             | 3           | R/W | Word      | Y   | -50,0...50,0 | K°R   |
| V2-PUE                     | Pull Up end differential                                 | V2     | 33314             | 0           | 33459             | 12          | R/W | Word      | Y   | -50,0...50,0 | K°R   |
| V2-Pdt                     | Optimized Pull Down timeout                              | V2     | 33315             | 0           | 33459             | 48          | R/W | Byte      | -   | 0...1000     | min   |
| V2-Pdd                     | Optimized Pull Down capacity                             | V2     | 33317             | 0           | 33459             | 192         | R/W | Byte      | -   | 0...100      | %     |
| V2-CPd                     | Capacity after Pull Down day                             | V2     | 33318             | 0           | 33459             | 768         | R/W | Byte      | -   | 0...100      | %     |
| V2-CPn                     | Capacity after Pull Down night                           | V2     | 33319             | 0           | 33459             | 3072        | R/W | Byte      | -   | 0...100      | %     |
| V2-CPb                     | Compressor PID proportional band                         | V2     | 33322             | 0           | 33459             | 49152       | R/W | Word      | Y   | 0,1...3200   | K°R   |
| V2-Cti                     | Compressor PID integral time                             | V2     | 33323             | 0           | 33460             | 768         | R/W | Word      | -   | 0...65535    | s     |
| V2-Ctd                     | Compressor PID derivative time                           | V2     | 33325             | 0           | 33460             | 3072        | R/W | Word      | -   | 0...65535    | s     |
| V2-CSd                     | Compressor startup duration                              | V2     | 33326             | 0           | 33460             | 12288       | R/W | Word      | -   | 0...900      | s     |
| V2-CSC                     | Capacity during compressor startup                       | V2     | 33327             | 0           | 33460             | 49152       | R/W | Word      | -   | 44,4...100   | %     |
| V2-CAU                     | Select PID automatic or manual mode                      | V2     | 33394             | 0           | 33461             | 12          | R/W | Byte      | -   | 0/1          | flag  |
| V2-CdU                     | PID duty cycle in manual mode                            | V2     | 33330             | 0           | 33461             | 48          | R/W | Byte      | -   | 0...100      | num   |
| V2-F <sub>1</sub>          | Maximum frequency                                        | V2     | 33339             | 0           | 33462             | 192         | R/W | Byte      | -   | 0...250      | Hz    |
| V2-F <sub>2</sub>          | Minimum frequency                                        | V2     | 33341             | 0           | 33462             | 768         | R/W | Byte      | -   | 0...250      | Hz    |
| Application AP3 parameters |                                                          |        |                   |             |                   |             |     |           |     |              |       |
| V3-SEt                     | Regulation setpoint                                      | V3     | 33497             | 0           | 33663             | 49152       | R/W | Word      | Y   | LSE...HSE    | °C/°F |
| V3-diF                     | Activation differential                                  | V3     | 33498             | 0           | 33660             | 768         | R/W | Word      | -   | 0,1...30,0   | °C/°F |
| V3-LSE                     | Minimum setpoint value that can be set                   | V3     | 33499             | 0           | 33660             | 3072        | R/W | Word      | Y   | -67,0...HSE  | °C/°F |

| Label  | Description                                                                       | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range       | MU    |
|--------|-----------------------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|-------------|-------|
| V3-HSE | Maximum setpoint value that can be set                                            | V3     | 33501             | 0           | 33660             | 12288       | R/W | Word      | Y   | LSE...302   | °C/°F |
| V3-HC  | Operating mode (Heating/Cooling)                                                  | V3     | 33708             | 256         | 33660             | 49152       | R/W | Byte      | -   | 0/1         | flag  |
| V3-ont | Compressor output ON time if probe Pb1 is in error                                | V3     | 33496             | 0           | 33661             | 3           | R/W | Byte      | -   | 0...250     | min   |
| V3-oFt | Compressor output OFF time if probe Pb1 is in error                               | V3     | 33500             | 0           | 33661             | 12          | R/W | Byte      | -   | 0...250     | min   |
| V3-don | Compressor output activation delay from call                                      | V3     | 33504             | 0           | 33661             | 48          | R/W | Byte      | -   | 0...250     | s     |
| V3-doF | Compressor output activation delay from switch-off                                | V3     | 33508             | 0           | 33661             | 192         | R/W | Byte      | -   | 0...250     | min   |
| V3-dbi | Delay between two consecutive compressor output power-ons                         | V3     | 33512             | 0           | 33661             | 768         | R/W | Byte      | -   | 0...250     | min   |
| V3-Cit | Minimum compressor output activation time                                         | V3     | 33528             | 0           | 33662             | 3           | R/W | Byte      | -   | 0...250     | min   |
| V3-CAt | Maximum compressor output activation time                                         | V3     | 33532             | 0           | 33662             | 12          | R/W | Byte      | -   | 0...250     | min   |
| V3-odo | Output activation delay at startup                                                | V3     | 33516             | 0           | 33661             | 3072        | R/W | Byte      | -   | 0...250     | min   |
| V3-dCS | Deep cooling setpoint                                                             | V3     | 33562             | 0           | 33679             | 768         | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V3-tdC | Deep cooling duration                                                             | V3     | 33614             | 0           | 33680             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V3-dcc | Defrost delay after deep cooling                                                  | V3     | 33611             | 0           | 33680             | 3072        | R/W | Byte      | -   | 0...250     | min   |
| V3-CP2 | Compressor 2 activation delay                                                     | V3     | 33615             | 255         | 33680             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V3-dFA | Condenser fan and compressor activation delay from the call                       | V3     | 33623             | 0           | 33662             | 3072        | R/W | Byte      | -   | 0...250     | s     |
| V3-dtY | Type of defrost                                                                   | V3     | 33640             | 61440       | 33662             | 768         | R/W | Byte      | -   | 0/1/2       | num   |
| V3-doH | Defrost cycle activation delay from the call                                      | V3     | 33548             | 0           | 33663             | 3           | R/W | Byte      | -   | 0...250     | min   |
| V3-dEt | Defrost timeout. Determines the maximum duration of the defrost.                  | V3     | 33544             | 0           | 33662             | 12288       | R/W | Byte      | -   | 1...250     | min   |
| V3-dS1 | Evaporator 1 defrost end temperature                                              | V3     | 33502             | 0           | 33663             | 12          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V3-dS2 | Evaporator 2 defrost end temperature                                              | V3     | 33503             | 0           | 33663             | 48          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V3-dt2 | Unit of measure for defrost duration                                              | V3     | 33657             | 192         | 33662             | 49152       | R/W | Byte      | -   | 0/1/2       | num   |
| V3-dPo | Defrost activation request at startup, if the temperature measured by Pb2 allows. | V3     | 33708             | 1024        | 33663             | 768         | R/W | Byte      | -   | 0/1         | flag  |
| V3-tCd | Compressor output activation/deactivation time before a defrost                   | V3     | 33524             | 0           | 33661             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V3-Cod | Compressor OFF time before defrost                                                | V3     | 33520             | 0           | 33661             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V3-dMr | Enable defrost timer reset with manual defrost                                    | V3     | 33709             | 2048        | 33693             | 12          | R/W | Byte      | -   | 0/1         | flag  |

| Label  | Description                                                     | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range       | MU    |
|--------|-----------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|-------------|-------|
| V3-d00 | Cumulative time for defrost activation                          | V3     | 33617             | 0           | 33681             | 12          | R/W | Byte      | -   | 0...250     | hours |
| V3-d01 | Parameter d00 unit of measure                                   | V3     | 33657             | 12          | 33683             | 12          | R/W | Byte      | -   | 0/1/2       | num   |
| V3-dit | Device time for defrost activation                              | V3     | 33540             | 0           | 33681             | 49152       | R/W | Byte      | -   | 0...250     | hours |
| V3-d11 | Parameter dit unit of measure                                   | V3     | 33657             | 48          | 33683             | 48          | R/W | Byte      | -   | 0/1/2       | num   |
| V3-d20 | Enable defrost at compressor stop                               | V3     | 33709             | 256         | 33683             | 768         | R/W | Byte      | -   | 0/1         | flag  |
| V3-d40 | Select defrost probe 1                                          | V3     | 33645             | 240         | 33682             | 3           | R/W | Byte      | -   | 0/1         | flag  |
| V3-d41 | Temperature threshold for starting defrost                      | V3     | 33565             | 0           | 33679             | 49152       | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V3-d42 | Time the evaporator temperature must remain below the threshold | V3     | 33567             | 0           | 33679             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V3-d43 | Time count mode for temperature below threshold                 | V3     | 33645             | 3840        | 33682             | 12          | R/W | Byte      | -   | 0...3       | num   |
| V3-d44 | Threshold management mode                                       | V3     | 33645             | 61440       | 33682             | 48          | R/W | Byte      | -   | 0/1         | flag  |
| V3-d90 | Clock defrost mode                                              | V3     | 33646             | 3840        | 33682             | 3072        | R/W | Byte      | -   | 0...3       | num   |
| V3-d91 | Number of daily defrosts                                        | V3     | 33618             | 255         | 33681             | 48          | R/W | Byte      | -   | 0...255     | num   |
| V3-d92 | 1st weekend/holiday day                                         | V3     | 33646             | 15          | 33682             | 192         | R/W | Byte      | -   | 0...7       | num   |
| V3-d93 | 2nd weekend/holiday day                                         | V3     | 33646             | 240         | 33682             | 768         | R/W | Byte      | -   | 0...7       | num   |
| V3-d94 | Regular defrost interval duration                               | V3     | 33646             | 61440       | 33682             | 12288       | R/W | Byte      | -   | 1...7       | num   |
| V3-d1H | Weekday defrost no. 1 start hour                                | V3     | 33618             | 0           | 33681             | 192         | R/W | Byte      | -   | 0...23      | hours |
| V3-d1n | Weekday defrost no. 1 start minute                              | V3     | 33619             | 255         | 33681             | 768         | R/W | Byte      | -   | 0...59      | min   |
| V3-F1H | Weekend/holiday defrost no. 1 start hour                        | V3     | 33619             | 0           | 33681             | 3072        | R/W | Byte      | -   | 0...23      | hours |
| V3-F1n | Weekend/holiday defrost no. 1 start minute                      | V3     | 33620             | 0           | 33681             | 12288       | R/W | Byte      | -   | 0...59      | min   |
| V3-FPt | FSt parameter mode (absolute or relative)                       | V3     | 33708             | 4096        | 33665             | 3           | R/W | Byte      | -   | 0/1         | flag  |
| V3-FSt | Evaporator fan disabling temperature                            | V3     | 33506             | 0           | 33665             | 12          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V3-FAd | Evaporator fan trigger differential                             | V3     | 33597             | 0           | 33665             | 48          | R/W | Word      | -   | 1,0...25,0  | °C/°F |
| V3-Fdt | Evaporator fan activation delay time after a defrost cycle      | V3     | 33560             | 0           | 33679             | 48          | R/W | Byte      | -   | 0...250     | min   |
| V3-dt  | Dripping time                                                   | V3     | 33598             | 255         | 33665             | 192         | R/W | Byte      | -   | 0...250     | min   |
| V3-dFd | Evaporator fan cut-out during defrost                           | V3     | 33708             | 8192        | 33665             | 768         | R/W | Byte      | -   | 0/1         | flag  |

| Label  | Description                                                               | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range       | MU    |
|--------|---------------------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|-------------|-------|
| V3-FCO | Evaporator fan status with compressor output OFF                          | V3     | 33641             | 15          | 33664             | 49152       | R/W | Byte      | -   | 0...3       | num   |
| V3-Fon | Evaporator fan ON time in cyclical regulator mode                         | V3     | 33599             | 255         | 33665             | 12288       | R/W | Byte      | -   | 0...250     | min   |
| V3-FoF | Evaporator fan OFF time in cyclical regulator mode                        | V3     | 33599             | 0           | 33665             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V3-Fnn | Evaporator fan ON time in night duty cycle mode                           | V3     | 33596             | 0           | 33664             | 3072        | R/W | Byte      | -   | 0...250     | num   |
| V3-FnF | Evaporator fan OFF time in night duty cycle mode                          | V3     | 33597             | 255         | 33664             | 12288       | R/W | Byte      | -   | 0...250     | num   |
| V3-ESF | Night mode activation                                                     | V3     | 33709             | 512         | 33683             | 3072        | R/W | Byte      | -   | 0/1         | flag  |
| V3-Att | HAL and LAL parameter mode (absolute or relative)                         | V3     | 33708             | 32768       | 33666             | 12          | R/W | Byte      | -   | 0/1         | flag  |
| V3-AFd | Alarm activation differential                                             | V3     | 33600             | 0           | 33666             | 48          | R/W | Word      | -   | 0,1...25,0  | °C/°F |
| V3-HAL | Maximum alarm threshold                                                   | V3     | 33507             | 0           | 33666             | 192         | R/W | Word      | Y   | LAL...302   | °C/°F |
| V3-LAL | Minimum alarm threshold                                                   | V3     | 33509             | 0           | 33666             | 768         | R/W | Word      | Y   | -67,0...HAL | °C/°F |
| V3-PAo | Alarm exclusion at startup                                                | V3     | 33601             | 255         | 33666             | 3072        | R/W | Byte      | -   | 0...10      | hours |
| V3-dAo | Exclusion time for temperature alarms after a defrost cycle               | V3     | 33601             | 0           | 33666             | 12288       | R/W | Word      | -   | 0...250     | min   |
| V3-oAo | High and low temperature alarms exclusion time after closing the door     | V3     | 33602             | 255         | 33666             | 49152       | R/W | Byte      | -   | 0...10      | hours |
| V3-tdo | Door open alarm exclusion time                                            | V3     | 33603             | 255         | 33667             | 49152       | R/W | Byte      | -   | 0...250     | min   |
| V3-tAo | Temperature alarm signaling delay time                                    | V3     | 33602             | 0           | 33667             | 3           | R/W | Byte      | -   | 0...250     | min   |
| V3-dAt | Defrost ended due to timeout alarm signaling                              | V3     | 33510             | 0           | 33667             | 12          | R/W | Byte      | -   | 0/1         | flag  |
| V3-EAL | External alarm inhibits the regulators                                    | V3     | 33647             | 3840        | 33667             | 48          | R/W | Byte      | -   | 0/1/2       | num   |
| V3-AoP | Alarm output polarity                                                     | V3     | 33709             | 1           | 33667             | 768         | R/W |           |     | 0/1         | flag  |
| V3-SA3 | Alarm setpoint for probe 3                                                | V3     | 33559             | 0           | 33679             | 12          | R/W | Word      | Y   | -67,0...302 | °C/°F |
| V3-dA3 | Probe 3 alarm tripping differential                                       | V3     | 33561             | 0           | 33679             | 192         | R/W | Word      | -   | 0,1...30,0  | °C/°F |
| V3-dOd | Enable utility shutoff upon door switch activation                        | V3     | 33641             | 3840        | 33667             | 12288       | R/W | Byte      | -   | 0...3       | num   |
| V3-dAd | Digital input activation delay                                            | V3     | 33610             | 255         | 33672             | 3072        | R/W | Byte      | -   | 0...250     | min   |
| V3-dCO | Compressor deactivation delay from door opening                           | V3     | 33568             | 0           | 33663             | 3072        | R/W | Byte      | -   | 0...250     | min   |
| V3-AUP | Associate aux relay with door switch                                      | V3     | 33641             | 240         | 33667             | 192         | R/W | Byte      | -   | 0/1         | flag  |
| V3-PEn | Number of activations permitted per minimum/maximum pressure switch input | V3     | 33622             | 255         | 33678             | 12288       | R/W | Byte      | -   | 0...15      | num   |

| Label  | Description                                                    | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range        | MU    |
|--------|----------------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|--------------|-------|
| V3-PEi | Minimum/maximum pressure switch error calculation interval     | V3     | 33622             | 0           | 33678             | 49152       | R/W | Byte      | -   | 1...99       | min   |
| V3-PEt | Compressor activation delay after pressure switch deactivation | V3     | 33623             | 255         | 33679             | 3           | R/W | Byte      | -   | 0...255      | min   |
| V3-oSP | Offset on setpoint                                             | V3     | 33511             | 0           | 33668             | 49152       | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V3-odF | Trigger differential correction                                | V3     | 33513             | 0           | 33669             | 48          | R/W | Word      | -   | 0,1...30,0   | °C/°F |
| V3-dro | Select °C / °F                                                 | V3     | 33709             | 8           | 33669             | 192         | R/W | Byte      | -   | 0/1          | flag  |
| V3-CA1 | Probe Pb1 calibration                                          | V3     | 33514             | 0           | 33669             | 768         | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V3-CA2 | Probe Pb2 calibration                                          | V3     | 33515             | 0           | 33669             | 3072        | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V3-CA3 | Probe Pb3 calibration                                          | V3     | 33517             | 0           | 33669             | 12288       | R/W | Word      | Y   | -30,0...30,0 | °C/°F |
| V3-CAi | Calibration trigger                                            | V3     | 33656             | 49152       | 33669             | 49152       | R/W | Byte      | -   | 0/1/2        | num   |
| V3-LoC | Enable keypad lock                                             | V3     | 33709             | 16          | 33670             | 48          | R/W | Byte      | -   | 0/1          | flag  |
| V3-ddd | Select main display value                                      | V3     | 33641             | 61440       | 33670             | 192         | R/W | Byte      | -   | 0...3        | num   |
| V3-ddL | Inhibit resources at the end of defrost                        | V3     | 33642             | 15          | 33670             | 768         | R/W | Byte      | -   | 0/1/2        | num   |
| V3-Ldd | Display lock timeout from end of defrost                       | V3     | 33606             | 255         | 33670             | 3072        | R/W | Byte      | -   | 0...250      | min   |
| V3-ndt | Display with decimal point                                     | V3     | 33709             | 32          | 33670             | 12288       | R/W | Byte      | -   | 0/1          | flag  |
| V3-FSE | Select display filter                                          | V3     | 33642             | 240         | 33670             | 49152       | R/W | Byte      | -   | 0...7        | num   |
| V3-FdS | Filter disabling threshold                                     | V3     | 33521             | 0           | 33671             | 3           | R/W | Word      | Y   | -67,0...302  | °C/°F |
| V3-Ftt | Time spent above the filter disabling threshold                | V3     | 33606             | 0           | 33671             | 12          | R/W | Byte      | -   | 0...250      | min   |
| V3-FHt | Sampling interval for filtering                                | V3     | 33607             | 255         | 33671             | 48          | R/W | Byte      | -   | 1...250      | s     |
| V3-PS1 | Password 1 value                                               | V3     | 33607             | 0           | 33671             | 192         | R   | Byte      | -   | 0...250      | num   |
| V3-PS2 | Password 2 value                                               | V3     | 33608             | 0           | 33671             | 768         | R   | Byte      | -   | 0...250      | num   |
| V3-H00 | Select analog input type NTC/PTC/Pt1000                        | V3     | 33642             | 3840        | 33671             | 3072        | R/W | Byte      | -   | 0/1/2        | num   |
| V3-H08 | Stand-by operating mode                                        | V3     | 33657             | 3           | 33671             | 12288       | R/W | Byte      | -   | 0/1/2        | num   |
| V3-H11 | Digital input 1 configuration and polarity                     | V3     | 33609             | 255         | 33671             | 49152       | R/W | Word      | Y   | -10...10     | num   |
| V3-H21 | Digital output 1 configuration                                 | V3     | 33612             | 0           | 33672             | 12288       | R/W | Byte      | -   | 0...13       | num   |
| V3-H22 | Digital output 2 configuration                                 | V3     | 33613             | 255         | 33672             | 49152       | R/W | Byte      | -   | 0...12       | num   |
| V3-H23 | Digital output 3 configuration                                 | V3     | 33613             | 0           | 33673             | 3           | R/W | Byte      | -   | 0...12       | num   |
| V3-H24 | Digital output 4 configuration                                 | V3     | 33614             | 255         | 33673             | 12          | R/W | Byte      | -   | 0...12       | num   |
| V3-H25 | Digital output 5 (buzzer) configuration                        | V3     | 33625             | 255         | 33663             | 12288       | R/W | Byte      | -   | 0/1          | num   |

| Label  | Description                                              | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range        | MU   |
|--------|----------------------------------------------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|--------------|------|
| V3-H31 | Key configuration                                        | V3     | 33642             | 61440       | 33673             | 48          | R/W | Byte      | -   | 0...8        | num  |
| V3-H32 | Key configuration                                        | V3     | 33643             | 15          | 33673             | 192         | R/W | Byte      | -   | 0...8        | num  |
| V3-H33 | Key configuration                                        | V3     | 33643             | 240         | 33673             | 768         | R/W | Byte      | -   | 0...8        | num  |
| V3-H34 | Key configuration                                        | V3     | 33643             | 3840        | 33673             | 3072        | R/W | Byte      | -   | 0...8        | num  |
| V3-H35 | Key configuration                                        | V3     | 33643             | 61440       | 33673             | 12288       | R/W | Byte      | -   | 0...8        | num  |
| V3-H42 | Evaporator probe present                                 | V3     | 33644             | 61440       | 33674             | 3           | R/W | Byte      | -   | 0/1          | flag |
| V3-H43 | Probe Pb3 present                                        | V3     | 33645             | 15          | 33674             | 12          | R/W | Byte      | -   | 0/1/2        | num  |
| V3-H45 | Defrost input mode for applications with dual evaporator | V3     | 33647             | 15          | 33682             | 49152       | R/W | Byte      | -   | 0...3        | num  |
| V3-H48 | RTC present                                              | V3     | 33709             | 64          | 33674             | 48          | R/W | Byte      | -   | 0/1          | flag |
| V3-CEr | Probe error capacity                                     | V3     | 33523             | 0           | 33674             | 768         | R/W | Byte      | -   | 0...100      | %    |
| V3-PdS | Pull Down forced startup differential                    | V3     | 33525             | 0           | 33674             | 3072        | R/W | Word      | Y   | -50,0...50,0 | K°R  |
| V3-PUS | Pull Up forced startup differential                      | V3     | 33526             | 0           | 33674             | 12288       | R/W | Word      | Y   | -50,0...50,0 | K°R  |
| V3-PUd | Temperature outside range timeout                        | V3     | 33527             | 0           | 33674             | 49152       | R/W | Byte      | -   | 0...1000     | min  |
| V3-PdE | Pull Down end differential                               | V3     | 33529             | 0           | 33675             | 3           | R/W | Word      | Y   | -50,0...50,0 | K°R  |
| V3-PUE | Pull Up end differential                                 | V3     | 33530             | 0           | 33675             | 12          | R/W | Word      | Y   | -50,0...50,0 | K°R  |
| V3-Pdt | Optimized Pull Down timeout                              | V3     | 33531             | 0           | 33675             | 48          | R/W | Byte      | -   | 0...1000     | min  |
| V3-Pdd | Optimized Pull Down capacity                             | V3     | 33533             | 0           | 33675             | 192         | R/W | Byte      | -   | 0...100      | %    |
| V3-CPd | Capacity after Pull Down day                             | V3     | 33534             | 0           | 33675             | 768         | R/W | Byte      | -   | 0...100      | %    |
| V3-CPn | Capacity after Pull Down night                           | V3     | 33535             | 0           | 33675             | 3072        | R/W | Byte      | -   | 0...100      | %    |
| V3-CPb | Compressor PID proportional band                         | V3     | 33538             | 0           | 33675             | 49152       | R/W | Word      | Y   | 0,1...3200   | K°R  |
| V3-Cti | Compressor PID integral time                             | V3     | 33539             | 0           | 33676             | 768         | R/W | Word      | -   | 0...65535    | s    |
| V3-Ctd | Compressor PID derivative time                           | V3     | 33541             | 0           | 33676             | 3072        | R/W | Word      | -   | 0...65535    | s    |
| V3-CSd | Compressor startup duration                              | V3     | 33542             | 0           | 33676             | 12288       | R/W | Word      | -   | 0...900      | s    |
| V3-CSC | Capacity during compressor startup                       | V3     | 33543             | 0           | 33676             | 49152       | R/W | Word      | -   | 44,4...100   | %    |
| V3-CAU | Select PID automatic or manual mode                      | V3     | 33610             | 0           | 33677             | 12          | R/W | Byte      | -   | 0/1          | flag |
| V3-CdU | PID duty cycle in manual mode                            | V3     | 33546             | 0           | 33677             | 48          | R/W | Byte      | -   | 0...100      | num  |

| Label             | Description       | Folder | Val. Par. Address | Val. Filter | Vis. Par. Address | Vis. Filter | R/W | Data Size | CPL | Range   | MU |
|-------------------|-------------------|--------|-------------------|-------------|-------------------|-------------|-----|-----------|-----|---------|----|
| V3-F <sub>1</sub> | Maximum frequency | V3     | 33555             | 0           | 33678             | 192         | R/W | Byte      | -   | 0...250 | Hz |
| V3-F <sub>2</sub> | Minimum frequency | V3     | 33557             | 0           | 33678             | 768         | R/W | Byte      | -   | 0...250 | Hz |

## Visibility table for folders relating to applications

| Label                                               | Description                                                 | Address | Filter | Data size | Range | MU  |
|-----------------------------------------------------|-------------------------------------------------------------|---------|--------|-----------|-------|-----|
| <b>Visibility of folders for loaded application</b> |                                                             |         |        |           |       |     |
| <b>vis_CP</b>                                       | Visibility of folder <b>CP</b> (compressor)                 | 32958   | 192    | 2 bit     | 0...3 | num |
| <b>vis_dEF</b>                                      | Visibility of folder <b>dEF</b> (defrost)                   | 32958   | 768    | 2 bit     | 0...3 | num |
| <b>vis_FAn</b>                                      | Visibility of folder <b>FAn</b> (fans)                      | 32958   | 3072   | 2 bit     | 0...3 | num |
| <b>vis_AL</b>                                       | Visibility of folder <b>AL</b> (alarms)                     | 32958   | 12288  | 2 bit     | 0...3 | num |
| <b>vis_Lit</b>                                      | Visibility of folder <b>Lit</b> (lights and digital inputs) | 32958   | 49152  | 2 bit     | 0...3 | num |
| <b>vis_PrE</b>                                      | Visibility of folder <b>PrE</b> (pressure switch)           | 32959   | 3      | 2 bit     | 0...3 | num |
| <b>vis_ENS</b>                                      | Visibility of folder <b>EnS</b> (energy saving)             | 32959   | 12     | 2 bit     | 0...3 | num |
| <b>vis_Add</b>                                      | Visibility of folder <b>Add</b> (communication)             | 32959   | 48     | 2 bit     | 0...3 | num |
| <b>vis_diS</b>                                      | Visibility of folder <b>diS</b> (display)                   | 32959   | 192    | 2 bit     | 0...3 | num |
| <b>vis_CnF</b>                                      | Visibility of folder <b>CnF</b> (configuration)             | 32959   | 3072   | 2 bit     | 0...3 | num |
| <b>vis_FPr</b>                                      | Visibility of folder <b>FPr</b> (CopyCard)                  | 32959   | 12288  | 2 bit     | 0...3 | num |
| <b>vis_FnC</b>                                      | Visibility of folder <b>FnC</b> (functions)                 | 32959   | 49152  | 2 bit     | 0...3 | num |
| <b>vis_VSC</b>                                      | Visibility of folder <b>VSC</b> (VSC compressor)            | 32959   | 768    | 2 bit     | 0...3 | num |
| <b>vis_nAd</b>                                      | Visibility of folder <b>nAd</b> (night/day)                 | 32958   | 48     | 2 bit     | 0...3 | num |
| <b>Visibility of folders for AP1 application</b>    |                                                             |         |        |           |       |     |
| <b>V1-vis_CP</b>                                    | Visibility of folder <b>CP</b> (compressor)                 | 33250   | 192    | 2 bit     | 0...3 | num |
| <b>V1-vis_dEF</b>                                   | Visibility of folder <b>dEF</b> (defrost)                   | 33250   | 768    | 2 bit     | 0...3 | num |
| <b>V1-vis_FAn</b>                                   | Visibility of folder <b>FAn</b> (fans)                      | 33250   | 3072   | 2 bit     | 0...3 | num |
| <b>V1-vis_AL</b>                                    | Visibility of folder <b>AL</b> (alarms)                     | 33250   | 12288  | 2 bit     | 0...3 | num |
| <b>V1-vis_Lit</b>                                   | Visibility of folder <b>Lit</b> (lights and digital inputs) | 33250   | 49152  | 2 bit     | 0...3 | num |
| <b>V1-vis_PrE</b>                                   | Visibility of folder <b>PrE</b> (pressure switch)           | 33251   | 3      | 2 bit     | 0...3 | num |
| <b>V1-vis_ENS</b>                                   | Visibility of folder <b>EnS</b> (energy saving)             | 33251   | 12     | 2 bit     | 0...3 | num |
| <b>V1-vis_Add</b>                                   | Visibility of folder <b>Add</b> (communication)             | 33251   | 48     | 2 bit     | 0...3 | num |
| <b>V1-vis_diS</b>                                   | Visibility of folder <b>diS</b> (display)                   | 33251   | 192    | 2 bit     | 0...3 | num |
| <b>V1-vis_CnF</b>                                   | Visibility of folder <b>CnF</b> (configuration)             | 33251   | 3072   | 2 bit     | 0...3 | num |
| <b>V1-vis_FPr</b>                                   | Visibility of folder <b>FPr</b> (CopyCard)                  | 33251   | 12288  | 2 bit     | 0...3 | num |
| <b>V1-vis_FnC</b>                                   | Visibility of folder <b>FnC</b> (functions)                 | 33251   | 49152  | 2 bit     | 0...3 | num |
| <b>V1-vis_VSC</b>                                   | Visibility of folder <b>VSC</b> (VSC compressor)            | 33251   | 768    | 2 bit     | 0...3 | num |
| <b>V1-vis_nAd</b>                                   | Visibility of folder <b>nAd</b> (night/day)                 | 33250   | 48     | 2 bit     | 0...3 | num |
| <b>Visibility of folders for AP2 application</b>    |                                                             |         |        |           |       |     |
| <b>V2-vis_CP</b>                                    | Visibility of folder <b>CP</b> (compressor)                 | 33470   | 192    | 2 bit     | 0...3 | num |
| <b>V2-vis_dEF</b>                                   | Visibility of folder <b>dEF</b> (defrost)                   | 33470   | 768    | 2 bit     | 0...3 | num |
| <b>V2-vis_FAn</b>                                   | Visibility of folder <b>FAn</b> (fans)                      | 33470   | 3072   | 2 bit     | 0...3 | num |
| <b>V2-vis_AL</b>                                    | Visibility of folder <b>AL</b> (alarms)                     | 33470   | 12288  | 2 bit     | 0...3 | num |
| <b>V2-vis_Lit</b>                                   | Visibility of folder <b>Lit</b> (lights and digital inputs) | 33470   | 49152  | 2 bit     | 0...3 | num |
| <b>V2-vis_PrE</b>                                   | Visibility of folder <b>PrE</b> (pressure switch)           | 33471   | 3      | 2 bit     | 0...3 | num |
| <b>V2-vis_ENS</b>                                   | Visibility of folder <b>EnS</b> (energy saving)             | 33471   | 12     | 2 bit     | 0...3 | num |
| <b>V2-vis_Add</b>                                   | Visibility of folder <b>Add</b> (communication)             | 33471   | 48     | 2 bit     | 0...3 | num |
| <b>V2-vis_diS</b>                                   | Visibility of folder <b>diS</b> (display)                   | 33471   | 192    | 2 bit     | 0...3 | num |
| <b>V2-vis_CnF</b>                                   | Visibility of folder <b>CnF</b> (configuration)             | 33471   | 3072   | 2 bit     | 0...3 | num |
| <b>V2-vis_FPr</b>                                   | Visibility of folder <b>FPr</b> (CopyCard)                  | 33471   | 12288  | 2 bit     | 0...3 | num |
| <b>V2-vis_FnC</b>                                   | Visibility of folder <b>FnC</b> (functions)                 | 33471   | 49152  | 2 bit     | 0...3 | num |
| <b>V2-vis_VSC</b>                                   | Visibility of folder <b>VSC</b> (VSC compressor)            | 33471   | 768    | 2 bit     | 0...3 | num |
| <b>V2-vis_nAd</b>                                   | Visibility of folder <b>nAd</b> (night/day)                 | 33470   | 48     | 2 bit     | 0...3 | num |
| <b>Visibility of folders for AP3 application</b>    |                                                             |         |        |           |       |     |
| <b>V3-vis_CP</b>                                    | Visibility of folder <b>CP</b> (compressor)                 | 33686   | 192    | 2 bit     | 0...3 | num |
| <b>V3-vis_dEF</b>                                   | Visibility of folder <b>dEF</b> (defrost)                   | 33686   | 768    | 2 bit     | 0...3 | num |
| <b>V3-vis_FAn</b>                                   | Visibility of folder <b>FAn</b> (fans)                      | 33686   | 3072   | 2 bit     | 0...3 | num |

| Label             | Description                                                 | Address | Filter | Data size | Range | MU  |
|-------------------|-------------------------------------------------------------|---------|--------|-----------|-------|-----|
| <b>V3-vis_AL</b>  | Visibility of folder <b>AL</b> (alarms)                     | 33686   | 12288  | 2 bit     | 0...3 | num |
| <b>V3-vis_Lit</b> | Visibility of folder <b>Lit</b> (lights and digital inputs) | 33686   | 49152  | 2 bit     | 0...3 | num |
| <b>V3-vis_PrE</b> | Visibility of folder <b>PrE</b> (pressure switch)           | 33687   | 3      | 2 bit     | 0...3 | num |
| <b>V3-vis_ENS</b> | Visibility of folder <b>EnS</b> (energy saving)             | 33687   | 12     | 2 bit     | 0...3 | num |
| <b>V3-vis_Add</b> | Visibility of folder <b>Add</b> (communication)             | 33687   | 48     | 2 bit     | 0...3 | num |
| <b>V3-vis_diS</b> | Visibility of folder <b>diS</b> (display)                   | 33687   | 192    | 2 bit     | 0...3 | num |
| <b>V3-vis_CnF</b> | Visibility of folder <b>CnF</b> (configuration)             | 33687   | 3072   | 2 bit     | 0...3 | num |
| <b>V3-vis_FPr</b> | Visibility of folder <b>FPr</b> (CopyCard)                  | 33687   | 12288  | 2 bit     | 0...3 | num |
| <b>V3-vis_FnC</b> | Visibility of folder <b>FnC</b> (functions)                 | 33687   | 49152  | 2 bit     | 0...3 | num |
| <b>V3-vis_VSC</b> | Visibility of folder <b>VSC</b> (VSC compressor)            | 33687   | 768    | 2 bit     | 0...3 | num |
| <b>V3-vis_nAd</b> | Visibility of folder <b>nAd</b> (night/day)                 | 33686   | 48     | 2 bit     | 0...3 | num |

## Table of Modbus Resources

| Label              | Description                          | Address | Filter | R/W | Data size | CPL | Range       | MU    |
|--------------------|--------------------------------------|---------|--------|-----|-----------|-----|-------------|-------|
| <b>AI1</b>         | Regulation probe                     | 4109    | 0      | R   | Word      | Y   | -67.0...320 | °C/°F |
| <b>AI2</b>         | Defrost probe                        | 4110    | 0      | R   | Word      | Y   | -67.0...320 | °C/°F |
| <b>AI3_a</b>       | Second evaporator defrost probe      | 4111    | 0      | R   | Word      | Y   | -67.0...320 | °C/°F |
| <b>AI3_b</b>       | Compressor temperature probe         | 4111    | 0      | R   | Word      | Y   | -67.0...320 | °C/°F |
| <b>SET</b>         | Regulation setpoint 1 value          | 4114    | 0      | R   | Word      | Y   | -67.0...320 | °C/°F |
| <b>Cap</b>         | Power generated by compressor 1      | 4125    | 0      | R   | Word      | -   | 0.0...100   | %     |
| <b>DI1</b>         | Digital input 1                      | 4118    | 1      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>DI2</b>         | Digital input 2                      | 4118    | 2      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>E1</b>          | Analog input 1 fault                 | 4121    | 1      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>E2</b>          | Analog input 2 fault                 | 4121    | 2      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>E3</b>          | Analog input 3 fault                 | 4121    | 4      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>Opd</b>         | Door open                            | 4121    | 8      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>EA</b>          | External                             | 4121    | 16     | R   | 1 bit     | -   | 0...1       | flag  |
| <b>AL1</b>         | Analog input 1 lower limit exceeded  | 4121    | 32     | R   | 1 bit     | -   | 0...1       | flag  |
| <b>AH1</b>         | Analog input 1 higher limit exceeded | 4121    | 64     | R   | 1 bit     | -   | 0...1       | flag  |
| <b>Ad2</b>         | Defrost end due to timeout           | 4121    | 128    | R   | 1 bit     | -   | 0...1       | flag  |
| <b>E10</b>         | RTC error                            | 4121    | 256    | R   | 1 bit     | -   | 0...1       | flag  |
| <b>COH</b>         | Overtemperature alarm                | 4121    | 512    | R   | 1 bit     | -   | 0...1       | flag  |
| <b>rCA</b>         | Low liquid refrigerant level         | 4121    | 1024   | R   | 1 bit     | -   | 0...1       | flag  |
| <b>nPA</b>         | Pressure switch                      | 4121    | 2048   | R   | 1 bit     | -   | 0...1       | flag  |
| <b>PA</b>          | Critical pressure                    | 4121    | 4096   | R   | 1 bit     | -   | 0...1       | flag  |
| <b>ALM</b>         | Alarm                                | 4115    | 256    | R   | 1 bit     | -   | 0...1       | flag  |
| <b>RL1</b>         | Control output 1                     | 4120    | 1      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>RL2</b>         | Control output 2                     | 4120    | 2      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>RL3</b>         | Control output 3                     | 4120    | 4      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>RL4</b>         | Control output 4                     | 4120    | 8      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>BUZ</b>         | Buzzer                               | 4120    | 256    | R   | 1 bit     | -   | 0...1       | flag  |
| <b>CP1</b>         | Compressor 1                         | 4115    | 2      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>CP2</b>         | Compressor 2                         | 4115    | 4      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>DEF1</b>        | Defrost 1                            | 4115    | 16     | R   | 1 bit     | -   | 0...3       | flag  |
| <b>DEF2</b>        | Defrost 2                            | 4115    | 32     | R   | 1 bit     | -   | 0...3       | flag  |
| <b>FAN</b>         | Evaporator fans                      | 4115    | 64     | R   | 1 bit     | -   | 0...1       | flag  |
| <b>FAN_C</b>       | Condenser fans                       | 4115    | 128    | R   | 1 bit     | -   | 0...1       | flag  |
| <b>LIGHT</b>       | Light                                | 4115    | 1024   | R   | 1 bit     | -   | 0...1       | flag  |
| <b>AUX</b>         | Auxiliary                            | 4115    | 512    | R   | 1 bit     | -   | 0...1       | flag  |
| <b>STD-BY</b>      | Stand-by                             | 4115    | 1      | R   | 1 bit     | -   | 0...1       | flag  |
| <b>ENS</b>         | Energy saving                        | 4115    | 16384  | R   | 1 bit     | -   | 0...1       | flag  |
| <b>ECO</b>         | Reduced set                          | 4115    | 8192   | R   | 1 bit     | -   | 0...1       | flag  |
| <b>DEEP</b>        | Deep Cooling                         | 4115    | 2048   | R   | 1 bit     | -   | 0...1       | flag  |
| <b>DO</b>          | Door status                          | 4115    | 32768  | R   | 1 bit     | -   | 0...1       | flag  |
| <b>ROnAux</b>      | Activates auxiliary output           | 4123    | 1      | W   | 1 bit     | -   | 0...1       | flag  |
| <b>ROffAux</b>     | Deactivates auxiliary output         | 4123    | 2      | W   | 1 bit     | -   | 0...1       | flag  |
| <b>ROnOn</b>       | Device on                            | 4123    | 4      | W   | 1 bit     | -   | 0...1       | flag  |
| <b>ROffOff</b>     | Device off                           | 4123    | 8      | W   | 1 bit     | -   | 0...1       | flag  |
| <b>AttEnSav</b>    | Activates energy saving function     | 4123    | 16     | W   | 1 bit     | -   | 0...1       | flag  |
| <b>DisattEnSav</b> | Deactivates energy saving function   | 4123    | 32     | W   | 1 bit     | -   | 0...1       | flag  |
| <b>Att_SetR</b>    | Activates economy mode               | 4123    | 64     | W   | 1 bit     | -   | 0...1       | flag  |
| <b>Disatt_SetR</b> | Deactivates economy mode             | 4123    | 128    | W   | 1 bit     | -   | 0...1       | flag  |
| <b>ROnLight</b>    | Switches lights on                   | 4123    | 256    | W   | 1 bit     | -   | 0...1       | flag  |

| Label            | Description                        | Address | Filter | R/W | Data size | CPL | Range     | MU       |
|------------------|------------------------------------|---------|--------|-----|-----------|-----|-----------|----------|
| <b>ROffLight</b> | Switches lights off                | 4123    | 512    | W   | 1 bit     | -   | 0...1     | flag     |
| <b>ROnLoc</b>    | Keypad lock                        | 4123    | 1024   | W   | 1 bit     | -   | 0...1     | flag     |
| <b>ROffLoc</b>   | Keypad unlock                      | 4123    | 2048   | W   | 1 bit     | -   | 0...1     | flag     |
| <b>Att_Sbr</b>   | Manual Defrost activation          | 4123    | 4096   | W   | 1 bit     | -   | 0...1     | flag     |
| <b>DCOn</b>      | Deep Cooling regulator activation  | 4124    | 2      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>RTCUp</b>     | Updates clock                      | 4124    | 4      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>TestOn</b>    | Enables autotest                   | 0       | 2      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>TestOff</b>   | Resets test request                | 0       | 2      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OffRL1</b>    | Disables output 1                  | 206     | 1      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OnRL2</b>     | Enables output 2                   | 206     | 2      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OffRL2</b>    | Disables output 2                  | 206     | 2      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OnRL3</b>     | Enables output 3                   | 206     | 4      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OffRL3</b>    | Disables output 3                  | 206     | 4      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OnRL4</b>     | Enables output 4                   | 206     | 8      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OffRL4</b>    | Disables output 4                  | 206     | 8      | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OnBuzz</b>    | Enables output 5                   | 0       | 64     | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OffBuzz</b>   | Disables output 5                  | 0       | 64     | W   | 1 bit     | -   | 0...1     | flag     |
| <b>OnAIIRL</b>   | Enables output                     | 206     | 15     | W   | Word      | -   | 0...255   | num      |
| <b>OffAIIRL</b>  | Disables output                    | 206     | 15     | W   | Word      | -   | 0...255   | num      |
| <b>tim_CP1</b>   | Compressor 1 run time              | 4171    | 0      | R   | Word      | -   | 0...65535 | hours*10 |
| <b>cnt_CP1</b>   | Compressor 1 number of activations | 4172    | 0      | R   | Word      | -   | 0...65535 | num      |
| <b>tim_DEF1</b>  | Defrost 1 activation time          | 4173    | 0      | R   | Word      | -   | 0...65535 | min      |
| <b>cnt_DEF1</b>  | Defrost 1 number of activations    | 4175    | 0      | R   | Word      | -   | 0...65535 | num      |
| <b>tim_Door</b>  | Door opening time                  | 4176    | 0      | R   | Word      | -   | 0...65535 | min      |
| <b>cnt_Door</b>  | Door opening count                 | 4177    | 0      | R   | Word      | -   | 0...65535 | num      |
| <b>tim_DEF2</b>  | Defrost 2 activation time          | 4179    | 0      | R   | Word      | -   | 0...65535 | min      |
| <b>cnt_DEF2</b>  | Defrost 2 number of activations    | 4180    | 0      | R   | Word      | -   | 0...65535 | num      |
| <b>cnt_POWER</b> | Number of device power-ons         | 4181    | 0      | R   | Word      | -   | 0...65535 | num      |
| <b>tim_CP2</b>   | Compressor 2 run time              | 4183    | 0      | R   | Word      | -   | 0...65535 | hours*10 |
| <b>cnt_CP2</b>   | Compressor 2 number of activations | 4184    | 0      | R   | Word      | -   | 0...65535 | num      |



**Eliwell Controls srl**

Via dell'Industria, 15 Z.I. Paludi  
32016 Alpago (BL) Italy  
Telephone +39 (0) 437 986 111  
**[www.elowell.com](http://www.elowell.com)**

**Technical Customers Support**

Telephone +39 (0) 437 986 300  
E [techsuppeliwell@se.com](mailto:techsuppeliwell@se.com)

**Sales**

Telephone +39 (0) 437 986 100 (Italy)  
Telephone +39 (0) 437 986 200 (other countries)  
E [saleseliwell@se.com](mailto:saleseliwell@se.com)