



9IS5479600

# UNICold - UNIDuo







EN

Electronic controllers for refrigeration units






## USER INTERFACE



### KEYS

 <p><b>UP</b>  <b>Press and release</b></p> <ul style="list-style-type: none"> <li>• Scroll menu items</li> <li>• Increases values</li> </ul> <p><b>Press for at least 3 seconds</b></p> <ul style="list-style-type: none"> <li>• Activates manual defrost function by default</li> </ul>	 <p><b>STAND-BY (ESC)</b>  <b>Press and release</b></p> <ul style="list-style-type: none"> <li>• Returns to the previous menu level</li> <li>• Confirm parameter value</li> </ul> <p><b>Press for at least 3 seconds</b></p> <ul style="list-style-type: none"> <li>• Activates stand-by function by default (when outside the menus)</li> </ul>
 <p><b>DOWN</b>  <b>Press and release</b></p> <ul style="list-style-type: none"> <li>• Scroll menu items</li> <li>• Decreases values</li> </ul> <p><b>Press for at least 3 seconds</b></p> <ul style="list-style-type: none"> <li>• Function can be configured by the user (see parameter <b>H32</b>)</li> </ul>	 <p><b>SET (ENTER)</b>  <b>Press and release</b></p> <ul style="list-style-type: none"> <li>• Displays alarms (if present)</li> <li>• Opens Machine Status menu</li> </ul> <p><b>Press for at least 5 seconds</b></p> <ul style="list-style-type: none"> <li>• Open programming menu</li> <li>• Confirms commands</li> </ul>

## ICONS

	<p><b>Reduced SET / Economy icon</b>            Flashing: reduced set active            Off: otherwise</p>		<p><b>Fans icon</b>            Permanently on: fans active            Off: otherwise</p>
	<p><b>Compressor icon</b>            Permanently on: compressor active            Flashing: delay, protection or start blocked            Off: otherwise</p>		<p><b>Defrost icon</b>            Permanently on: defrost active            Flashing: activated manually or from digital input            Off: otherwise</p>
	<p><b>Alarms icon</b>            Permanently on: alarm active            Flashing: alarm silenced            Off: otherwise</p>	<p><b>AUX</b></p>	<p><b>AUX icon</b>            Permanently on: AUX output active            Off: AUX output not active</p>
<p><b>°C</b></p>	<p>Permanently on: values displayed in °C            (dro = 0)            Off: otherwise</p>	<p><b>°F</b></p>	<p>Permanently on: values displayed in °F            (dro = 1)            Off: otherwise</p>

**ELECTRICAL CONNECTIONS** **DANGER****HAZARD OF ELECTRIC SHOCK, EXPLOSION OR ARC FLASH**

- Disconnect all power from all devices 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 devices hazards exist.
- Install and operate this device in an enclosure appropriately rated for its intended environment and secured by a keyed or tooled locking mechanism.
- Power line circuits must be wired and fused in compliance with local and national regulatory requirements for the rated current and voltage of the device used.
- Do not use this device in safety-critical machine functions.
- Do not disassemble, repair, or modify this device.

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

 **DANGER****HAZARD OF ELECTRIC SHOCK AND FIRE**

- Do not apply dangerous voltages to the SELV connection terminals (see "Connections" section).
- Do not expose the device to liquids.
- Do not exceed the temperature and humidity ranges specified in the technical data.
- Only use cables with a suitable cross-section (see "Wiring guidelines" section).

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

**⚠ 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.**

**⚠ WARNING****HAZARD OF OVERHEATING AND 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.
- Verify that your application has not been designed with device outputs connected directly to devices generating a frequently operated 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 outputs, including the shared hub, using cables with a cross-section of 2.5 mm<sup>2</sup> 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 your application not apply a frequently operated capacitive load on the relay, capacitive loads will reduce the life of any electromechanical relay, and installation of a contactor or an external relay, that is sized and maintained according the dimensions and characteristics of the capacitive load, will help minimize the consequence of relay degradation.

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**FLAMMABLE REFRIGERANTS GASES**

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This equipment has been designed to operate outside of any hazardous location, and exclusive of application that generate, or have the potential to generate, hazardous atmospheres. Only install this equipment in zones and applications known to be free, at all times, of hazardous atmospheres.

** DANGER****POTENTIAL FOR EXPLOSION**

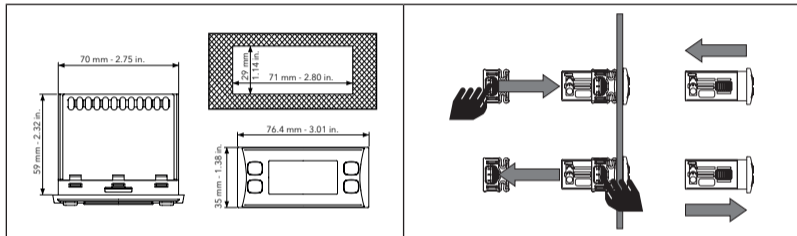
- Install and use this equipment in non-hazardous locations only.
- Do not install and use this equipment in applications capable of generating hazardous atmospheres, such as those applications employing flammable refrigerants.

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

For information concerning the use of control equipment in applications capable of generating hazardous materials, consult your local, regional or national standards bureau or certification agency.

## MOUNTING AND DIMENSIONS

The device is designed for panel mounting. Drill a 71x29 mm (2.80x1.14 in.) hole and insert the device; secure it with the special brackets provided. Keep the area around the device cooling slots adequately ventilated. The panel must be between 0.5 mm (0.02 in.) and 10 mm (0.39 in.) thick.



## WIRING GUIDELINES

**⚠ ⚠ DANGER**

### LOOSE WIRING CAUSES ELECTRIC SHOCK

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.**

**⚠ WARNING****UNINTENDED EQUIPMENT OPERATION**












SELV cables must be kept separate from other cables (see “Connections” section).

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

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

Use copper conductors (obligatory).

The table below shows the type and size of permitted cables for screw terminal blocks.

											N•m	0.5...0.6
	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	Ø 3.5 mm (0.14 in.)	lb-in	4.42...5.31
	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			

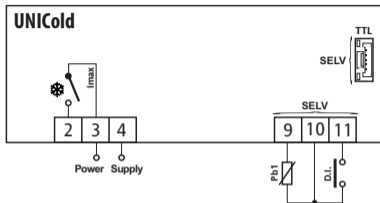
**NOTICE****UNINTENDED EQUIPMENT OPERATION**

- For I/O terminals (probes and digital inputs), use cables no longer than 10 m (32.80 ft).
- For TTL serial line connection, use cables no longer than 3 m (9.84 ft).

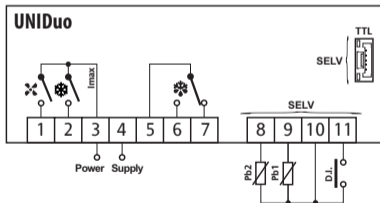
**Failure to follow these instructions can result in equipment damage.**



## CONNECTIONS



TERMINALS	
2-3	❄️ : Compressor relay
3-4	230 Vac power supply input
9-10	Probe Pb1
10-11	Digital input D.I.
TTL	TTL serial port
Imax	17 A maximum
SELV	SELV terminals







TERMINALS	
1-3	☘️ : Fans relay
2-3	❄️ : Compressor relay
3-4	230 Vac power supply input
5-6-7	❄️ : Defrost relay
8-10	Probe Pb2
9-10	Probe Pb1
10-11	Digital input D.I.
TTL	TTL serial port
Imax	17 A maximum
SELV	SELV terminals

**TECHNICAL DATA**

The product complies with the following harmonized Standards: EN 60730-1 and EN 60730-2-9

Construction of control:	Electronic automatic incorporated Control
Purpose of control:	Operating control (non-safety related) device
Type of action:	1.B
Pollution degree:	2
Overvoltage category:	II
Rated impulse voltage:	2500 V
Power supply:	230 Vac ( $\pm 10\%$ ) 50/60 Hz
Power draw (maximum):	4 VA
Ambient operating conditions:	Temperature: -5...55 °C (23 ... 131 °F) Humidity: 10...90 %RH (non-condensing)
Transportation and storage conditions:	Temperature: -30...85 °C (-22...185 °F) Humidity: 10...90 %RH (non-condensing)
Software class:	A

Loads:

Model	Relay	EU (maximum 250 Vac)	USA (maximum 240 Vac)
UNICold	 (Compressor)	12(8) A	12FLA 72LRA
UNIDuo	 (Compressor)	12(8) A	12FLA 72LRA
	 (Defrost)	NO 8(4) A - NC 6(3) A	NO 8 A - NC 6 A resistive NO 4,9FLA 29,4LRA
	 (Fans)	5(2) A	5 A resistive 2FLA 12LRA

**NOTE:** verify the power supply specified on the instrument label; contact our Sales Office for power supply and relay ratings.

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## FURTHER INFORMATION

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### Input Characteristics

Display range:	<b>NTC:</b> -50,0 ... 110 °C (-58,0 ... 230 °F) (on 3-digit display + sign) <b>PTC:</b> -55,0 ... 140 °C (-67,0 ... 284 °F) (on 3-digit display + sign)
Accuracy:	Better than 0.5% of full scale +1 digit
Resolution:	1 or 0,1 °C/°F
Buzzer:	depending on model
Analogue inputs:	<b>UNICold:</b> 1 analogue input ( <b>Pb1</b> ) <b>UNIDuo:</b> 2 analogue inputs ( <b>Pb1</b> and <b>Pb2</b> )
Digital inputs:	1 voltage-free digital input ( <b>D.I.</b> )

### Mechanical Characteristics

Terminals:	Screw terminal blocks
Connectors:	TTL serial port (used to connect Copy Card)

**NOTE:** The technical specifications stated in this document regarding measurement (range, accuracy, resolution, etc.) refer to the device alone and not to any accessories provided (for example: probes).

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## DIAGNOSTICS

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Alarms are always indicated by the buzzer (if present) and the alarm icon (🔊).  
To switch off the buzzer, press and release any key, the relative icon will continue to flash.

**NOTE:** If alarm exclusion times have been set (see **AL** folder in the parameters table) the alarm will not be signalled.

## ALARMS

Label	Description	Cause	Effects	Remedy
E1	Probe Pb1 in error	<ul style="list-style-type: none"> <li>Measured values are outside operating range</li> <li>Probe inoperable/short-circuited/open.</li> </ul>	<ul style="list-style-type: none"> <li>Label <b>E1</b> displayed</li> <li>Alarm icon permanently ON</li> <li>Controller disabled maximum/minimum alarms</li> <li>Compressor operation based on parameters <b>Ont</b> and <b>Oft</b>.</li> </ul>	<ul style="list-style-type: none"> <li>Check probe type (<b>H00</b>)</li> <li>Check the probe wiring</li> <li>Replace probe</li> </ul>
E2	Probe Pb2 in error	<ul style="list-style-type: none"> <li>Measured values are outside operating range</li> <li>Probe inoperable/short-circuited/open</li> </ul>	<ul style="list-style-type: none"> <li>Label <b>E2</b> displayed</li> <li>Alarm icon permanently ON</li> </ul>	<ul style="list-style-type: none"> <li>Check probe type (<b>H00</b>)</li> <li>Check the probe wiring</li> <li>Replace probe</li> </ul>
AH1	Alarm for HIGH Pb1 temperature	Value read by Pb1 > <b>HAL</b> after time of <b>tAO</b> . (see 'MAXIMUM/MINIMUM TEMPERATURE ALARMS')	<ul style="list-style-type: none"> <li>Registration <b>AH1</b> label in the <b>AL</b> folder</li> <li>No effect on regulation</li> <li>Label <b>AH1</b> displayed alternately with the actual value read by Pb1 probe</li> </ul>	Wait until temperature value read by Pb1 returns below <b>HAL</b>
AL1	Alarm for LOW Pb1 temperature	Value read by Pb1 < <b>LAL</b> after time of <b>tAO</b> . (see 'MAXIMUM/MINIMUM TEMPERATURE ALARMS')	<ul style="list-style-type: none"> <li>Registration <b>AL1</b> label in the <b>AL</b> folder</li> <li>No effect on regulation</li> <li>Label <b>AL1</b> displayed alternately with the actual value read by Pb1 probe</li> </ul>	Wait until temperature value read by Pb1 to come back above <b>LAL</b>
EA	External alarm	Digital input activated ( <b>H11</b> = ±5)	<ul style="list-style-type: none"> <li>Registration <b>EA</b> label in the <b>AL</b> folder</li> <li>Alarm icon permanently ON</li> <li>Regulation blocked if <b>rLO=y</b></li> </ul>	Verify and remove the external cause which generate alarm on D.I.


Label	Description	Cause	Effects	Remedy
OPd	Door open alarm	Digital input activated for a longer time than <b>tdO</b> ( <b>H11</b> = ±4)	<ul style="list-style-type: none"> <li>Registration <b>OPd</b> label in the <b>AL</b> folder</li> <li>Alarm icon permanently ON</li> <li>Regulation blocked</li> </ul>	<ul style="list-style-type: none"> <li>Close the door</li> <li>Delay function defined by <b>OAO</b></li> </ul>

## MAXIMUM/MINIMUM TEMPERATURE ALARMS

	Temperature value relative to setpoint (Att=1)	Temperature as an absolute value (Att=0)
Minimum temperature alarm	Temperature $\leq$ <b>SEt</b> + <b>LAL</b> *	Temperature $\leq$ <b>LAL</b> ( <b>LAL</b> with sign)
Maximum temperature alarm	Temperature $\geq$ <b>SEt</b> + <b>HAL</b> **	Temperature $\geq$ <b>HAL</b> ( <b>HAL</b> with sign)
Reset from minimum temperature alarm condition	Temperature $\geq$ <b>SEt</b> + <b>LAL</b> + <b>AFd</b> or $\geq$ <b>SEt</b> -   <b>LAL</b>   + <b>AFd</b> ( <b>LAL</b> <0)	Temperature $\geq$ <b>LAL</b> + <b>AFd</b>
Reset from maximum temperature alarm condition	Temperature $\leq$ <b>SEt</b> + <b>HAL</b> - <b>AFd</b> ( <b>HAL</b> >0)	Temperature $\leq$ <b>HAL</b> - <b>AFd</b>
	* if <b>LAL</b> is negative, <b>SEt</b> + <b>LAL</b> < <b>SEt</b> ** if <b>HAL</b> is negative, <b>SEt</b> + <b>HAL</b> < <b>SEt</b>	




## DEVICE STAND-BY

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To switch the device off, press  for at least 5 seconds. In this condition, the adjustment algorithms and defrost cycles are disabled and the text 'OFF' will appear on the display.

## SETPOINT EDIT LOCK



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The keypad can be locked entering the Machine Status menu with  and pressing within 2 seconds  and  or by programming **LOC** parameter (see **diS** folder). If the keypad is locked, the Machine Status menu can be accessed and the setpoint shown but the value cannot be changed.

## MENU ACCESS AND USE

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The resources are organized in 2 menus that are accessed as follows:

- **Machine status** menu: press and release .
- **Programming** menu: press  for at least 5 seconds.

If the keypad is not pressed for more than 15 seconds (time-out) or pressing , once confirms the last value shown on the display and the previous view is displayed.

## PASSWORD

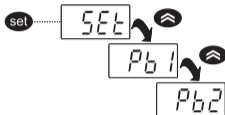
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**Password PA1:** used to access **User (User)** parameters. The password is not enabled by default (**PA1=0**). To enable it (**PA1≠0**): press  for at least 5 seconds, scroll through the parameters using  and  until you see the label **PS1**, press  to display the value, modify it using  and , then save it by pressing  or .

**NOTE:** If the value entered is incorrect, the label **PA1** will be displayed again. Repeat the procedure.

## MACHINE STATUS MENU

Press and release **set** to access the **Machine Status** menu. If no alarms are active, the **SEt** label appears. The various folders of the menu can be scrolled using **⏴** and **⏵**:



- **AL**: Alarms folder (**visible only if an alarm is active**);
- **SEt**: Setpoint setting folder;
- **Pb1**: probe Pb1 value folder;
- **Pb2**: probe Pb2 value folder (if present: **H42=y**)  
(**UNIDuo** model only).

**Setpoint setting:** To display the setpoint value press **set** when the **SEt** label is displayed. The setpoint value appears on the display. To change the Setpoint value, press **⏴** and **⏵** within 15 seconds. Press **set** to confirm the modification.

**Probes display:** When labels **Pb1** or **Pb2** are present, press **set** to view the value measured by the corresponding probe. **NOTE:** the value cannot be modified.

## PROGRAMMING MENU







To access the **Programming** menu, press **set** for at least 5 seconds. If **PASSWORD** protection is activated, a prompt will appear: enter **PA1** for parameters (see **PASSWORD** section).


When the menu is accessed, the display will show the first parameter (**diF**). Press **⏴** and **⏵** to scroll through all of the parameters in the current level. Select the desired parameter by pressing **set**. Press **⏴** and **⏵** to change it and **set** to save changes.

**NOTE:** Switched the device off and then on again each time the configuration of the parameters is changed.

## USING THE COPY CARD

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When connected to the serial port (TTL), the Copy Card allows device parameters to be programmed rapidly. Access the Installer parameters by entering **PA2**, then scroll through the folders using  and  until you find the **FPr** folder. Select it using , scroll through the parameters using  and  and select the function with  (for example **UL**).

- **Upload (UL):** Select **UL** and press . With this function, the programming parameters are uploaded from the device to the card. If the operation is successful, the display will show **y**, otherwise it will show **n**.
- **Format (Fr):** This command is used to format the Copy Card (recommended when using the card for the first time). **NOTE:** use of the **Fr** parameter will delete all current data. This operation cannot be reversed.
- **Download (dL):** Connect the Copy Card with the device switched off. At power-on, data will automatically start downloading from the Copy Card to the device. At the end of the lamp test, the display will show **dLy** if the operation was successful and **dLn** if it failed.

**NOTE:** After the download, the device will use the newly uploaded map settings.

## MANUAL ACTIVATION OF THE DEFROSTING CYCLE

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To manually activate the defrost cycle, hold down  for at least 3 seconds.

If the defrost conditions are not satisfied:

- the parameter **OdO**  $\neq$  0;
- the evaporator probe Pb2 temperature is higher than the defrost end temperature (**UNIDuo** model only).

the display will flash 3 times, to indicate that the operation will not be carried out.



## PARAMETERS TABLE

PAR.	DESCRIPTION	MU	RANGE	UNICold	UNIDuo
<b>SEt</b>	Temperature control Setpoint. <b>The Setpoint is only visible in the 'machine status' menu.</b>	°C/°F	(*)	3.0	-0.5
<b>COMPRESSOR</b>					
<b>diF</b>	Compressor relay activation differential.	°C/°F	0.1...30.0	2.0	2.0
<b>Ont</b>	Controller switch-on time in the event of inoperable probe: • If <b>Ont</b> =1 and <b>Oft</b> =0, the compressor is always on. • If <b>Ont</b> >0 and <b>Oft</b> >0 it operated in duty cycle mode.	min	0...250	15	15
<b>Oft</b>	Controller switch-off time in the event of a inoperable probe: • If <b>Oft</b> =1 and <b>Ont</b> =0, the compressor is always off. • If <b>Oft</b> >0 and <b>Ont</b> >0 it operated in duty cycle mode.	min	0...250	15	15
<b>dOn</b>	Compressor relay activation delay after request.	s	0...250	0	0
<b>dOF</b>	Delay after switching off and subsequent switch-on.	min	0...250	0	1
<b>dbi</b>	Delay between two consecutive compressor switch-ons.	min	0...250	0	0
<b>Odo</b>	Delay in activating outputs after the device is switched on or after a power outage. <b>0</b> = not active.	min	0...250	0	0
<b>* UNICold: 3.0...15.0 °C / °F - UNIDuo: -40.0...10.0 °C / °F</b>					
<b>DEFROST</b>					
<b>dty</b>	Type of defrosting. <b>0</b> = Electric defrost - compressor off (OFF) during defrosting; <b>1</b> = Reverse cycle defrost (hot gas); compressor ON during defrosting; <b>2</b> = 'Free defrost'; defrosting independently of compressor.	num	0/1/2	-	0
<b>dit</b>	defrost interval time. Interval between the start of two successive defrosting operations.	hours	0...250	6	6

PAR.	DESCRIPTION	MU	RANGE	UNICold	UNIDuo
<b>dCt</b>	Selection of count mode for the defrosting interval. <b>0</b> = Compressor operating hours (DIGIFROST® method); Defrosting active only if compressor is on; <b>1</b> = Equipment operating hours; defrost counting is always active when the machine is on and start every time the instrument switch on; <b>2</b> = Compressor stop. Each time the compressor stops a defrosting cycle is performed according to parameter <b>dtY</b> ; <b>3</b> = not used.	num	0...3	1	1
<b>dOH</b>	Defrost start delay time after request.	min	0...59	0	0
<b>dEt</b>	Defrosting time-out; determines duration of defrosting.	min	1...250	20	25
<b>dSt</b>	End of defrosting temperature.	°C/°F	-67.0...320		8.0
<b>dPO</b>	Determines whether the device enter defrost mode at power-on (if the temperature measured by the evaporator allows this operation). <b>n</b> (0) = No; <b>y</b> (1) = Yes (defrosts when switching on).	flag	n/y	n	n
<b>EVAPORATOR FANS</b>					
<b>FPt</b>	Characterizes the <b>FSt</b> parameter that can be expressed or as an absolute temperature value or as a value related to Setpoint. <b>0</b> = Absolute; <b>1</b> = Relative.	flag	0/1	-	0
<b>FSt</b>	Fan lock temperature; if <b>Pb2</b> > <b>FSt</b> , the fans are stopped. The value is either positive or negative and, depending on parameter <b>FPt</b> , can be either the absolute temperature or the temperature relative to <b>SEt</b> .	°C/°F	-67.0...320	-	2.0
<b>FAd</b>	Fan starting differential (see par. <b>FSt</b> ).	°C/°F	1.0...50.0	-	2.0
<b>Fdt</b>	Delay time in activating fans after a defrost operation.	min	0...250	-	3
<b>dt</b>	Dripping time.	min	0...250	-	1
<b>dFd</b>	Allows to select the evaporator probes exclusion during defrost. <b>n</b> (0) = No; <b>y</b> (1) = Yes (fan disable).	flag	n/y	-	y

PAR.	DESCRIPTION				MU	RANGE	UNICold	UNIDuo
FCO	Allows to select compressor fans lock OFF (switched off).				num	0...3	-	1
	<b>H42</b>	<b>FCO</b>	<b>Compressor ON</b>	<b>Compressor OFF</b>				
	H42 = y	0	Thermostat controlled	OFF				
		1	Thermostat controlled	Thermostat controlled				
		2	Reserved	Reserved				
	H42 = n	3	Reserved	Reserved				
		0	ON	OFF				
		1	Reserved	Reserved				
		2	Reserved	Reserved				
		3	Reserved	Reserved				
<b>ALARMS</b>								
<b>Att</b>	Allow you to select if the parameters <b>HAL</b> and <b>LAL</b> will have absolute ( <b>Att=0</b> ) or relative ( <b>Att=1</b> ) values.				flag	0/1	0	0
<b>AFd</b>	Alarms activation differential.				°C/°F	1.0...50.0	2.0	2.0
<b>HAL</b>	Temperature value (intended either as distance from setpoint or as an absolute value based on <b>Att</b> ) which, if exceeded in an upward direction, triggers the activation of the alarm signal.				°C/°F	LAL...320	50.0	50.0
<b>LAL</b>	Temperature value (intended as distance from setpoint or as an absolute value based on <b>Att</b> ) which, if exceeded in an upward direction, triggers the activation of the alarm signal.				°C/°F	-67.0...HAL	-50.0	-50.0
<b>PAO</b>	Alarm exclusion time after instrument switch on, after a power outage.				hours	0...10	0	0
<b>dAO</b>	Temperature alarm exclusion time after defrost.				min	0...999	0	0
<b>OAO</b>	Alarm signaling delay after digital input disabling (door close). Alarm is only for high-low temperature alarms.				hours	0...10	0	0
<b>tdO</b>	Alarm activation delay time open door.				min	0...250	0	0

PAR.	DESCRIPTION	MU	RANGE	UNICold	UNIDuo
<b>tAO</b>	Temperature alarm signal delay time.	min	0...250	0	0
<b>dAt</b>	Alarm for defrosting ended due to time out. <b>n(0)</b> = Alarm deactivated; <b>y(1)</b> = Alarm activated.	flag	n/y	-	n
<b>rLO</b>	External alarm locks the regulators. <b>n(0)</b> = Don't lock regulators; <b>y(1)</b> = Lock regulators.	flag	n/y	n	n
<b>DOOR SWITCH</b>					
<b>dOd</b>	Enable utility switch-off on activation of door switch. <b>0</b> = Disabled; <b>1</b> = Disables fans; <b>2</b> = Disables the compressor; <b>3</b> = Disables fans and compressor.	num	0...3	1	0
<b>dAd</b>	Activation delay for digital input.	min	0...255	0	0
<b>ENERGY SAVING</b>					
<b>OSP</b>	Offset on setpoint.	°C/°F	-30.0...30.0	0.5	0.0
<b>DISPLAY</b>					
<b>LOC</b>	LOCK. Setpoint change shutdown. There is still the possibility to enter into parameters programming and modify these, including the status of this parameter. <b>n(0)</b> = No; <b>y(1)</b> = Yes.	flag	n/y	n	n
<b>PS1</b>	PAssword 1. When enabled ( <b>PS1</b> ≠0) this is the access key to parameters.	núm	0...250	0	0
<b>ndt</b>	Display with decimal point. <b>n(0)</b> = No; <b>y(1)</b> = Yes.	flag	n/y	y	y
<b>CA1</b>	CAlibration 1. Positive or negative temperature value added to the value read by <b>Pb1</b> . This sum is used both for the temperature displayed and for regulation.	°C/°F	-12.0...12.0	0.0	0.0
<b>CA2</b>	CAlibration 2. Positive or negative temperature value added to the value read by <b>Pb2</b> . This sum is used both for the temperature displayed and for regulation.	°C/°F	-12.0...12.0	-	0.0

PAR.	DESCRIPTION	MU	RANGE	UNICold	UNIDuo
<b>ddl</b>	Display mode during defrost. <b>0</b> = Display the temperature read by <b>Pb1</b> ; <b>1</b> = Locks the reading on the temperature value read by <b>Pb1</b> when defrosting starts, and until the next time the <b>SEt</b> value is reached; <b>2</b> = Displays <b>dEF</b> during defrosting, and until the next time the <b>SEt</b> value is reached.	num	0/1/2	2	2
<b>dro</b>	Select °C or °F for displaying the temperature read by the thermostat probe. <b>0</b> = °C, <b>1</b> = °F. <b>NOTE:</b> the switch between °C and °F DO NOT modify setpoint, differential, etc. (for example, if the setting value is 10 °C, it will become 10 °F).	flag	0/1	0	0
<b>ddd</b>	Selection of type of value to be displayed. <b>0</b> = Setpoint; <b>1</b> = Pb1 probe; <b>2</b> = Pb2 probe; <b>3</b> = Reserved.	num	0...3	1	1
<b>CONFIGURATION ('CnF' folder)</b>					
<b>H00</b>	Probe type selection. <b>0</b> = PTC; <b>1</b> = NTC; <b>2</b> = Not used.	num	0/1/2	1	1
<b>H08</b>	Stand-by operating mode. <b>0</b> = Display switch off; <b>1</b> = Display switch off, loads and alarms stopped; <b>2</b> = Display with OFF label, loads and alarms stopped.	num	0/1/2	-	2
<b>H11</b>	Configuration of digital inputs <b>D.1.1</b> /polarity. <b>0</b> = Disabled; <b>±1</b> = Defrost; <b>±2</b> = Reduced set; <b>±3</b> = AUX; <b>±4</b> = Door switch; <b>±5</b> = External alarm; <b>±6</b> = Stand-by; <b>±7, ±8, ±9, ±10</b> = Reserved; <b>NOTE:</b> - the '+' sign indicates that the input is active when the contact is closed. - the '-' sign indicates that the input is active when the contact is open.	num	-10...10	0	0

PAR.	DESCRIPTION	MU	RANGE	UNICold	UNIDuo
H32	Configurability of <b>DOWN</b> key. <b>0</b> = Disabled; <b>1</b> = Defrost; <b>2</b> = AUX; <b>3</b> = Reduced set; <b>4</b> = Stand-by; <b>5,6</b> = Reserved.	num	0...6	0	0
H42	Probe <b>Pb2</b> present. <b>n(0)</b> = Not present; <b>y(1)</b> = Present.	flag	n/y	-	y
<b>COPY CARD / UNICARD ('Fpr' folder)</b>					
UL	Upload. Programming parameter transfer from instrument to Copy card / UNICARD.	/	/	/	/
Fr	Erasing all data in the Copy card/UNICARD.	/	/	/	/

## RESPONSIBILITY AND RESIDUAL RISKS

Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. 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 equipment allowing access to dangerous parts without having to use a keyed or tooled locking mechanism to access the equipment;
- tampering with and/or modification of the product;
- installation/use on equipment that does not comply with the regulations in force in the country of installation.

## CONDITIONS OF USE

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### Permitted use

The device must be installed and used in accordance with the instructions provided. In particular, parts carrying dangerous voltages must not be accessible under normal conditions. It must be adequately protected from water and dust according to the application, and must be accessible only using a keyed or tooled locking mechanism (except for the front panel). The device is suitable for use in commercial or household refrigeration appliances and/or similar equipment and has been tested in accordance with the harmonized European reference standards.

### Improper use

Any use other than that expressly permitted is prohibited. The relay contacts provided are mechanical and subject to failure; any protection devices required by product standards, or suggested by good practice in view of obvious safety requirements, must be installed externally of the device.

## DISCLAIMER

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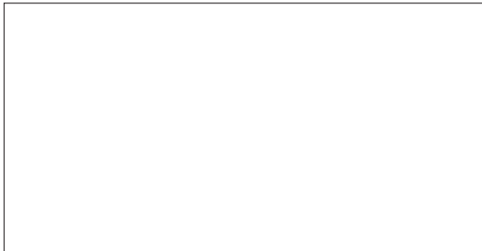
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## DISPOSAL

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The device (or the product) must be disposed of separately in compliance with the local standards in force on waste disposal.



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