USER INTERFACE



IDEPlus 902/961 - HC



IDEPlus 974 -HC

KEYS

UP
Press and release
- Scrolls through menu items
- Increases values

Press for at least 5 seconds
- It activates manual defrost function by default (**H31**=1)
- Function can be configured by the user (see parameter **H31**)

DOWN
Press and release
- Scrolls through menu items
- Decreases values

Press for at least 5 seconds
- The function is disabled by default (**H32**=0)
- Function can be configured by the user (see parameter **H32**)

STAND-BY (ESC)
Press and release
- Returns to the previous menu level
- Confirm parameter value

Press for at least 5 seconds
- Activates the Stand-by function

SET (ENTER)
Press and release
- Displays alarms (if active)
- Opens Machine Status menu

Press for at least 5 seconds
- Opens Programming menu
- Confirms commands

ICONS

Reduced SET / Economy
Flashing: reduced set active
Quick flashing: access to installer parameters
Off: otherwise

Alarm
Permanently on: alarm active
Flashing: alarm silenced
Off: otherwise

Compressor
Permanently on: compressor active
Flashing: delay, protection or start blocked.
Off: otherwise

Defrost
Permanently on: defrost active
Flashing: activated manually or from digital input
Off: otherwise

Fans (**IDEPlus 974** only)
Permanently on: fans active
Off: otherwise

AUX (**IDEPlus 974** only)
Permanently on: AUX output active
Off: AUX output not active

Heat status (**IDEPlus 902/961** only)
Permanently on: compressor in heat mode
Off: otherwise

AUX (**IDEPlus 902/961** only)
Permanently on: AUX output active
Off: AUX output not active

Permanently on: values displayed in °C (**dro**=0)
Off: otherwise

Permanently on: values displayed in °F (**dro**=1)
Off: otherwise

ELECTRICAL WIRING

⚠⚠ 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

POTENTIAL OF OVERHEATING 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 the terminals indicated and cables with a suitable cross-section (see “Wiring guidelines” section).

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

⚠ 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 activated capacitive load (1).
- 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 mm² (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.

(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

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.

FLAMMABLE REFRIGERANT GASES

The use of flammable gas refrigerants is dependent on may factors, including local, regional and/or national regulations.

The devices and corresponding accessories described in the documentation accompanying the product use components and, more specifically, electromechanical relays tested in accordance with IEC standard 60079-15 and classed as nC components (non-sparking ‘n’ electrical apparatus).
This condition complies to Annex BB of EN/IEC 60335-2-89.

Conformance to Annex BB EN/IEC 60335-2-89 is considered sufficient, and thereby suitable, for commercial refrigeration applications applying flammable gas refrigerants, such as R290. However, other limitations, equipment, locations and/or type of machine (refrigerators, vending machines and dispensers, bottle coolers, ice machines, Reach-Ins, etc.) may also be implicated, restricted and/or required in so doing.

The use and application of the information contained herein require expertise in the design and parameterizing/programming of refrigeration control systems. Only you—the original equipment manufacturer, installer or user—can be aware of all the conditions and factors present, and the regulations applicable, during the design, installation and setup, operation, and maintenance of the machine or related processes.

Therefore, only you can determine the suitability of automation and associated equipment, and the related safeties and interlocks, which can be effectively and properly used in the locations for which the equipment is to be put into service. When selecting automation and control equipment, and any other related equipment or software for an application, you must also consider any applicable local, regional or national standards and/or regulations.

You must verify, while incorporating this controller and related equipment, the final compliance of the machine to regulations and standards when using flammable gas refrigerants. Although all statements and information contained herein are believed to be accurate and reliable, they are presented without warranty of any kind. Information provided herein does not relieve you from the responsibility of carrying out your own tests and validations of conformance to any applicable regulations.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION DUE TO ELECTROSTATIC DISCHARGE

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.

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

HAZARD OF OVERHEATING AND FIRE

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) 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 instrument.

Use copper conductors (obligatory).

The table below shows the type and size of permitted cables for screw terminals of power supply and loads:

mm / in. 6.5 / 0.26								
mm²	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

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

The table below shows the type and size of permitted cables for screw terminals of probes and digital input:

mm / in. 6.0 / 0.24				
mm²	0.05…2.5	0.05…1.5	0.05…2.5	0.05…1.5
AWG	30…14	30…16	30…14	30…16

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

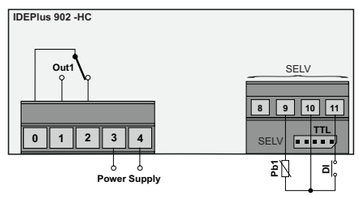
NOTICE

UNINTENDED EQUIPMENT OPERATION

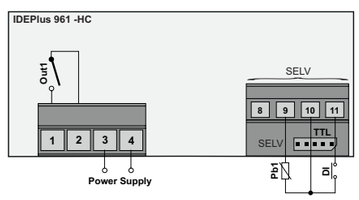
- For I/O terminals (probes and digital inputs), use cables no longer than 10 m (32.80 ft).
- For TTL serial line connection, use cables no longer than 3 m (9.84 ft).

Failure to follow these instructions can result in equipment damage.

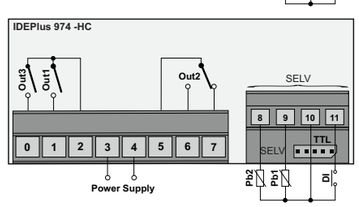
CONNECTIONS



TERMINALS	
0-1-2	**Out1** relay
3-4	230 Vac power supply input
9-10	Probe **Pb1**
11-10	Digital Input **DI**
TTL	TTL serial port
SELV	SELV terminals



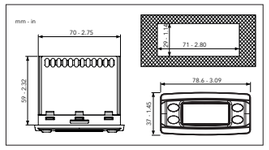
TERMINALS	
1-2	**Out1** relay
3-4	230 Vac power supply input
9-10	Probe **Pb1**
11-10	Digital Input **DI**
TTL	TTL serial port
SELV	SELV terminals

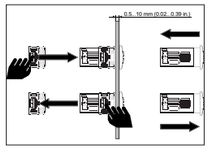


TERMINALS	
0-2	**Out3** relay
1-2	**Out1** relay
3-4	230 Vac power supply input
5-6-7	**Out2** relay
8-10	Probe **Pb2**
9-10	Probe **Pb1**
11-10	Digital Input **DI**
TTL	TTL serial port
SELV	SELV terminals

MOUNTING - 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 instrument cooling slots adequately ventilated. The panel must be between 0.5 mm (0.02 in.) and 10 mm (0.39 in.) thick.





TECHNICAL DATA

The product complies to 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)
Type of action:	1.B
Pollution degree:	2
Overvoltage category:	II
Rated impulse voltage:	2500 V
Power supply:	230 Vac (±10%) 50/60 Hz
Power draw (maximum):	4.5 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...140 °F) Humidity: 10…90 %RH (non-condensing)
Software class:	A

Loads:

Model	Relay	EU (230 Vac)	USA (230 Vac)
IDEPlus 902	**Out1**	NO 10(6) A - NC 9(5) A - CO 9 A resistive	NO 10 A - NC 9 A - CO 9 A resistive / NO 5FLA 30LRA
IDEPlus 961	**Out1**	12(8) A	12FLA 72LRA
IDEPlus 974	**Out1**	12(8) A	12FLA 72LRA
	Out2	NO 8(4) A - NC 6(3) A - CO 6 A resistive	NO 8 A - NC 6 A - CO 6 A resistivi / NO 4,9FLA 29,4LRA
	Out3	5(2) A	5 A resistive / 2FLA 12LRA

FURTHER INFORMATION

Input Characteristics

Display range:	**NTC**: -50...110 °C (-58...230 °F) - on 3-digit display + sign **PTC**: -55...140 °C (-67...284 °F) - on 3-digit display + sign
Accuracy:	**NTC**: -50...-30 °C (-58...-22 °F) = Better than 1.5% of full scale +1 digit -30...110 °C (-22...230 °F) = Better than 1% of full scale +1 digit **PTC**: Better than 0.5% of full scale +1 digit
Resolution:	1 or 0.1 °C/°F
Buzzer:	YES (depends on model)
Analogue inputs:	**IDEPlus 902/961**: 1 NTC/PTC input (**Pb1**) **IDEPlus 974**: 2 NTC/PTC inputs (**Pb1** and **Pb2**)
Digital input:	1 voltage-free digital input (**DI**)

Mechanical Characteristics

Terminals:	screw terminals
Connectors:	TTL serial (used to connect Copy Card / UNICARD)

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).

DEVICE STAND-BY

To activate stand-by function, 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.

PASSWORD

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

Password PA2: Used to access Installer (Inst) parameters. The password is enabled by default (**PA2**=15). To modify it (**PA2**≠15), press set for at least 5 seconds, scroll through the parameters using ∧ and ∨ until you see the label **PA2**, press set, set the value ‘15’ using ∧ and ∨ and confirm it using set. Scroll through the folders until you see the label **diS** and press set to access. Scroll through the parameters using ∧ and ∨ until you see the label **PS2**, press set to display the value, modify it using ∧ and ∨, then save it by pressing set or ⏻.

NOTE: If **PA1**=0, the user parameters will not be protected and will be shown before PA2 label.

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

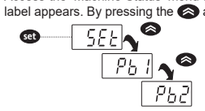
ACCESSING AND USING THE MENU

Resources are organized into 2 menus which are accessed as explained below:
- ‘Machine Status’ menu: press and release set.
- ‘Programming’ menu: press set 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.

MACHINE STATUS MENU

Access the ‘Machine Status’ menu by pressing and releasing the set key. If no alarms are active, the **SEt** label appears. By pressing the ∧ and ∨ keys you can scroll all folders in the ‘Machine Status’ menu:



- **AL**: Alarms folder (**only visible if an alarm is active**);
- **SEt**: Setpoint setting folder;
- **Pb1**: probe 1 folder;
- **Pb2**: probe 2 folder (**IDEPlus 974** only).

Setting the Setpoint: To display the Setpoint value press the set key when the **SEt** label is displayed. The Setpoint value appears on the display. To change the Setpoint value, press the ∧ and ∨ keys within 15 seconds. Press set to confirm changes.

Locking/unlocking the keypad: To lock/unlock the keypad, press ⏻ and ∧ in the ‘Machine Status’ menu. The keypad can be locked automatically by setting the “LOC” parameter.

Probes display: When the Pb1 or Pb2 (Only **IDEPlus 974**) label is displayed, press set and the associated probe value will appear.

‘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 access **User** parameters (User) or **PA2** for access **Installer** parameters (Inst) (see ‘Password’ section).

User parameters: 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.

Installer parameters: When the menu is accessed, the display will show the first folder (**CP**).
Press ∧ and ∨ to scroll through all of the folders in the current level.
Select the desired folder by pressing set.
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.

MANUAL DEFROST CYCLE ACTIVATION

To manually activate the defrost cycle, press ∧ for at least 5 seconds.
It is only activates if the temperature conditions are fulfilled.
Otherwise, the display will flash three times to indicate that the operation will not be performed.

USING THE COPY CARD

Connect the Copy Card to the TTL serial port to allow the rapid programming of instrument parameters.
Access ‘**Installer**’ parameters by entering **PA2**, press ∧ and ∨ to scroll through the folders until folder **FPr** appears. Press set to select it, press ∧ and ∨ to scroll through the parameters, then press set to select the function (for example **UL**).

- Format (**Fr**): This command is used to format the Copy Card (which is necessary when using the card for the first time). **NOTE**: the **Fr** parameter deletes all data present. This operation cannot be reversed.
- Upload (**UL**): Select **UL** and press set. This function uploads the programming parameters from the instrument to the card. If the operation is successful, the display will show **y**, otherwise it will show **n**.
- Download (**dL**): Connect the Copy Card when the instrument is switched off. At power-on, data will automatically start downloading from the Copy Card to the instrument. At the end of the lamp test, the display will show **dLy** if the operation was successful and **dLn** if not successful.

NOTE: After the parameters have been downloaded, the device uses the downloaded parameter map settings.

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9IS5478901

IDEPlus 902/961/974 -HC



EN **Electronic controllers for refrigeration units**

PARAMETERS TABLE

PAR.	Description	MU	Range	IDEPlus 902	IDEPlus 961	IDEPlus 974	Level
SEt	Regulation setpoint with range between the minimum setpoint LSE and the maximum setpoint HSE. The setpoint value is set in the 'Machine status' menu.	°C/°F	LSE...HSE	0.0	0.0	0.0	/
	COMPRESSOR ('CP' folder)						
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.	°C/°F	0.1...30.0	2.0	2.0	2.0	User&Inst
HSE	Maximum setpoint value.	°C/°F	LSE...320	140	140	140	User&Inst
LSE	Minimum setpoint value.	°C/°F	-67.0...HSE	-55.0	-55.0	-55.0	User&Inst
OSP	Temperature value to be added to the setpoint if reduced set is enabled (Economy function).	°C/°F	-30.0...30.0	3.0	3.0	3.0	Inst
HC	Operating mode. **C**(0) = Cooling; **H**(1) = Heating.	flag	C/H	C	C	C	Inst
Ont	Compressor activation time if probe is inoperable. If **Ont**=1 and **OFt**=0, the compressor is always on; if **Ont**=1 and **OFt**>0, it operated in duty cycle mode.	min	0...250	0	0	0	Inst
OFt	Compressor deactivation time if probe is inoperable. If **Ont**=1 and **OFt**=0, the compressor is always on; if **Ont**=1 and **OFt**>0, it operated in duty cycle mode.	min	0...250	1	1	1	Inst
dOn	Compressor relay activation delay time after request.	s	0...250	0	0	0	Inst
dOF	Delay time after switch-off; the indicated time must elapse between compressor relay switch-off and a subsequent switch-on.	min	0...250	0	0	0	Inst
dbi	Delay time between switch-ons; the indicated time must elapse between two consecutive compressor switch-ons..	min	0...250	0	0	0	Inst
OdO	Delay time in activating outputs after the device is power-on or after a power outage. **0** = not active.	min	0...250	0	0	0	Inst
	DEFROST ('dEF' folder)						
dtY	Type of defrost. **0** = electric defrost - compressor off (OFF) during defrost; **1** = reverse cycle defrost (hot gas); compressor on (ON) during defrost; **2** = defrost with "Free" mode; defrost independent of the compressor.	num	0/1/2			0	User&Inst
dit	Interval between the start of two successive defrost cycles.	hours	0...250	6	6	6	User&Inst
dCt	Selection of count mode for the defrost interval. **0** = compressor operating hours (DIGIFROST® method); defrosting active only if compressor is on; **1** = Real Time - equipment operating hours; defrost counting is always active when the machine is on and start every time the instrument switch on; **2** = compressor stop. Each time the compressor stops a defrost cycle is performed according to parameter **dtY**;	num	0/1/2	1	1	1	Inst
dOH	Delay time for first defrost start after request.	min	0...59	0	0	0	Inst
dEt	Determines the maximum defrost duration.	min	1...250	30	30	30	User&Inst
dSt	Defrost end temperature - determined by probe **Pb2**.	°C/°F	-50.0...150			8.0	User&Inst
dPO	Determines if at the power-on the device enter in defrost mode. **n** (0) = no; **y** (1) = yes (it defrosts when power-on).	flag	n/y	n	n	n	Inst
	EVAPORATOR FAN ('FAn' folder)						
FSt	If the value, read by the evaporator probe, is higher than the setpoint value, fans stop.	°C/°F	-50.0...150			50.0	User&Inst
FAd	Evaporator fan activation differential (see parameter **FSt**).	°C/°F	1.0...50.0			2.0	Inst
Fdt	Fan activation delay time after a defrost.	min	0...250			0	User&Inst
dt	Dripping time.	min	0...250			0	User&Inst
dFd	Allows to select the evaporator probe exclusion during defrost. **n** (0) = no; **y** (1) = yes (fan disable).	flag	n/y			y	User&Inst
FCO	Evaporator fan operating mode. The state of the fans will be: DAY / NIGHT (Energy saving) H42 = y, FCO 0: Thermostat controlled* / OFF / Thermostat controlled* / OFF H42 = y, FCO 1: Thermostat controlled* / Thermostat controlled* / Thermostat controlled* / Thermostat controlled* H42 = y, FCO 2: Thermostat controlled* / Duty Cycle day / Thermostat controlled* / Duty Cycle night (*) If **H42** = n or probe **Pb2** is in error (E2 alarm), fans are always on. **Duty cycle day**: controlled by means of parameters Fon and FoF - **Duty cycle night**: controlled by means of parameters Fnn and FnF.	num	0/1/2			0	Inst
FOn	Evaporator fans ON time in duty cycle day mode.	flag	0...99			0	Inst
FOF	Evaporator fans OFF time in duty cycle day mode.	flag	0...99			0	Inst
Fnn	Evaporator fans ON time in duty cycle night mode.	flag	0...99			0	Inst
FnF	Evaporator fans OFF time in duty cycle night mode.	flag	0...99			0	Inst
ESF	Activation of "night" mode. **n** (0) = no (disabled); **y** (1) = yes (active when energy saving mode is active).	flag	n/y			n	Inst
	ALARMS ('AL' folder)						
Att	Allow you to select if the parameters **HAL** and **LAL** will have absolute (**Att**=0) or relative (**Att**=1) values.	flag	0/1	0	0	0	Inst
AFd	Alarm differential.	°C/°F	1.0...50.0	2.0	2.0	2.0	Inst
HAL	Temperature value (in relative value) which if exceeded in an upward direction triggers the activation of the alarm signal.	°C/°F	LAL...150	150	150	150	User&Inst
LAL	Temperature value (in relative value), which if exceeded in a downward direction, triggers the activation of the alarm signal.	°C/°F	-50.0...HAL	-50.0	-50.0	-50.0	User&Inst
PAO	Alarm exclusion time after devic power-on, after a power outage.	minx10	0...10	0	0	0	Inst
dAO	Temperature alarm exclusion time after defrost.	min	0...999	0	0	0	Inst
OAO	Alarm signalling delay after digital input disabling (door close). **Alarm is only for high-low temperature alarms**.	minx10	0...10	0	0	0	Inst
tdO	Alarm activation delay time open door.	min	0...250	0	0	0	Inst
tAO	Temperature alarm signal delay time.	min	0...250	0	0	0	Inst
dAt	Alarm for defrosting ended due to time out. **n** (0) = alarm deactivated; **y** (1) = alarm activated.	flag	n/y			n	Inst
rLO	External alarm locks regulators. **n** (0) = don't lock regulators; **y** (1) = lock regulators.	flag	n/y	n	n	n	Inst
	LIGHTS & DIGITAL INPUTS ('Lit' folder)						
dOd	Digital input shuts off loads: **0** = disabled; **1** = fans disabled; **2** = compressor disabled; **3** = fans and compressor disabled.	flag	0...3	n	n	n	Inst
dAd	Digital input activation delay.	min	0...255	0	0	0	Inst
dCO	Compressor activation delay from silenced.	min	0...255	1	1	1	Inst
	COMMUNICATION ('Add' folder)						
dEA	Device address: indicates the device address to the management protocol.	num	0...14	0	0	0	Inst
FAA	Family address: indicates the device family to the management protocol.	num	0...14	0	0	0	Inst
	DISPLAY ('diS' folder)						
LOC	LOCK. Setpoint change shutdown. There is still the possibility to enter into parameters programming and modify these, including the status of this parameter to permit keyboard shutdown. **n**(0) = No; **y**(1) = Yes.	flag	n/y	n	n	n	User&Inst
PS1	PAssword 1. When enabled (**PS1** ≠ 0), it constitutes the access key for User parameters (User).	num	0...250	0	0	0	User&Inst
PS2	PAssword 2. When enabled (**PS2** ≠ 0), it constitutes the access key for Installer parameters (Inst).	num	0...250	15	15	15	Inst
ndt	View with decimal point. **n** (0) = no; **y** (1) = yes (display with decimal).	flag	n/y	y	y	y	Inst
CA1	CAlibration 1. Positive or negative temperature value added to the value read by probe 1.	°C/°F	-12.0...12.0	0.0	0.0	0.0	User&Inst
CA2	CAlibration 2. Positive or negative temperature value added to the value read by probe 2.	°C/°F	-12.0...12.0			0.0	User&Inst
ddL	Viewing mode during defrosting. **0** = shows the temperature read by the room probe; **1** = locks the reading on the temperature value read by room probe when defrosting starts, and until the next time the setpoint value is reached; **2** = displays the label **dEF** during defrosting, and until the next time te setpoint value is reached.	num	0/1/2	0	0	0	Inst
Ldd	Timeout value for display unlock - dEF label.	min	0...255	30	30	30	Inst
dro	Select °C or °F for displaying the temperature read by the thermostat probe. (**0** = °C, **1** = °F). **NOTE**: the switch between °C and °F do not modify SEt value, differential, etc. (for example **sEt** = 10 °C become 10 °F).	flag	0/1	0	0	0	Inst
ddd	Selection of type of value to be displayed. **0** = Setpoint; **1** = Pb1 probe; **2** = Pb2 probe (**IDEPlus 974** only).	num	0/1/2	1	1	1	Inst

PAR.	Description	MU	Range	IDEPlus 902	IDEPlus 961	IDEPlus 974	Level
	CONFIGURATION ('CnF' folder): Switch the device off and on again each time the parameter configuration is changed						
H00	Probe type selection. **0** = PTC; **1** = NTC.	flag	0/1	1	1	1	Inst
H11	Configuration of digital inputs/polarity (**DI**). **0** = disabled; **±1** = defrost; **±2** = reduced set; **±3** = AUX; **±4** = door switch; **±5** = external alarm; **±6** = stand-by. **NOTE:** - The '**+**' sign indicates that the input is activated when the contact is closed; the '**-**' sign indicates that the input is activated when the contact is open.	num	-6...+6	0	0	0	Inst
H21	Configuration of digital output 1 (**Out1**). **0** = disabled; **1** = compressor; **2** = defrost; **3** = fans; **4** = alarm; **5** = AUX; **6** = stand-by.	num	0...6	1	1	1	Inst
H22	Configuration of digital output 2 (**Out2**). Same as **H21**.	num	0...6			2	Inst
H23	Configuration of digital output 3 (**Out3**). Same as **H21**.	num	0...6			3	Inst
H25	Enable/Disable the buzzer. **0** = disabled; **4** = enabled; **1-2-3-5-6-7** = not used; **8** = positive logic alarm always active. **NOTE**: Parameter **H25** is present only in model with buzzer on board.	num	0...8			4	Inst
H31	**UP** key configurability. **0** = disabled; **1** = defrost; **2** = AUX; **3** = reduced set; **4** = stand-by.	num	0...4	1	1	1	
H32	**DOWN** key configurability. Same as **H31**.	num	0...4	0	0	0	Inst
H42	Pb2 probe presence. **n** (0) = not present; **y** (1) = present.	flag	n/y			y	User&Inst
rEL	Device version. Read only parameter.	/	/	/	/	/	User&Inst
tAb	Reserved. Read only parameter.	/	/	/	/	/	User&Inst
	COPY CARD/UNICARD ('FPr' folder)						
UL	Upload. Programming parameter transfer from device to Copy Card/UNICARD.	/	/	/	/	/	Inst
Fr	Erasing all data in the Copy Card.	/	/	/	/	/	Inst

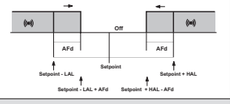
ALARMS

Label	Description	Cause	Effect	Remedy
E1	Pb1 probe error	• Measured values are outside operating range • Probe inoperable / short-circuited / open	• Display label **E1** • Alarm icon permanently ON • Min/max alarm regulator disabled • Compressor operation according to **Ont** and **OFt** parameters	• Verify probe type (see **H00**) • Verify the probe wiring • Replace probe
E2	Pb2 probe error (**IDEPlus 974** only)	• Measured values are outside operating range • Probe inoperable / short-circuited / open	• Display label **E2** • Alarm icon permanently ON • The defrost cycle will end due to Time-out (Parameter **dEt**)	• Verify probe type (see **H00**) • Verify the probe wiring • Replace probe
AH1	Pb1 probe HIGH Temperature alarm	Value read by Pb1 > **HAL** after time of **tAO**. (see "MAXIMUM/MINIMUM TEMPERATURE ALARMS")	• Registration **AH1** label in the AL folder • No effect on regulation	Wait until temperature value read by Pb1 returns below **HAL**
AL1	Pb1 probe LOW Temperature alarm	Value read by Pb1 < **LAL** after time of **tAO**. (see "MAXIMUM/MINIMUM TEMPERATURE ALARMS")	• Recording **AL1** label in the AL folder • No effect on regulation	Wait until temperature value read by Pb1 come back above **LAL**
EA	External alarm	Digital input activated (**H11** = ±5)	• Registration **EA** label in the AL folder • Alarm icon permanently ON • Regulation blocked if **rLO**=y	Verify and remove the external cause which triggered the alarms on **DI**
OPd	Door Open alarm	Digital input activated for a longer time than **tdO** (**H11** = ±4)	• Registration **OPd** label in the AL folder • Alarm icon permanently ON • Regulator blocked	• Close the door • Delay function defined by **OAO**
Ad2	Defrost end due to timeout	End of defrosting because of time instead of because of reaching the defrost end temperature detected by the Pb2 probe	• Registration **Ad2** label in the AL folder • Alarm icon permanently ON	Wait until the next defrost for automatic return

DIAGNOSTICS

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 in the parameters table) the alarm will not be signalled.

MAXIMUM/MINIMUM TEMPERATURE ALARMS



	Relative Temperature Value to setpoint (Att = 1)	Absolute Temperature Value (Att = 0)
Minimum temperature alarm	Temperature ≤ **Set + LAL** *	Temperature ≤ **LAL** (**LAL** with sign)
Maximum temperature alarm	Temperature ≥ **Set + HAL** **	Temperature ≥ **HAL** (**HAL** with sign)
Returning from minimum temperature alarm	Temperature ≥ **Set + LAL + AFd** or ≥ **Set - |LAL| + AFd** (**LAL**<0)	Temperature ≥ **LAL + AFd**
Returning from maximum temperature alarm	Temperature ≤ **Set + HAL - AFd** (**HAL**>0)	Temperature ≤ **HAL - AFd**

* **if LAL is negative, Set + LAL < Set**
** **if HAL is negative, Set + HAL < Set**

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LIABILITY 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

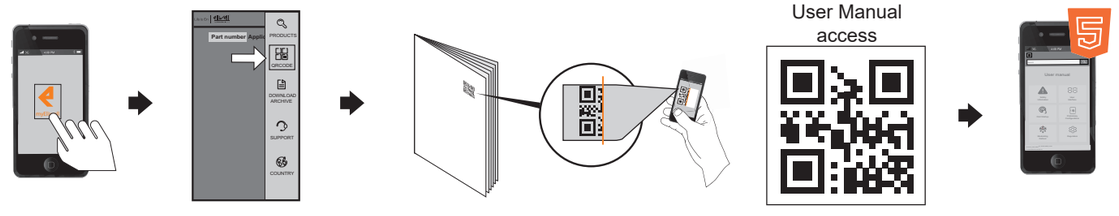
Permitted use
The device must be installed and used in accordance with the instructions provided. In particular, parts carrying dangerous voltages must not be accessible under normal conditions. It must be adequately protected from water and dust according to the application, and must be accessible only using a keyed or tooled locking mechanism (with the exception of the frontlet). 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.

Prohibited 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.

DISPOSAL

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

Scan the QR code using the myEliwell app to access the user manual.



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