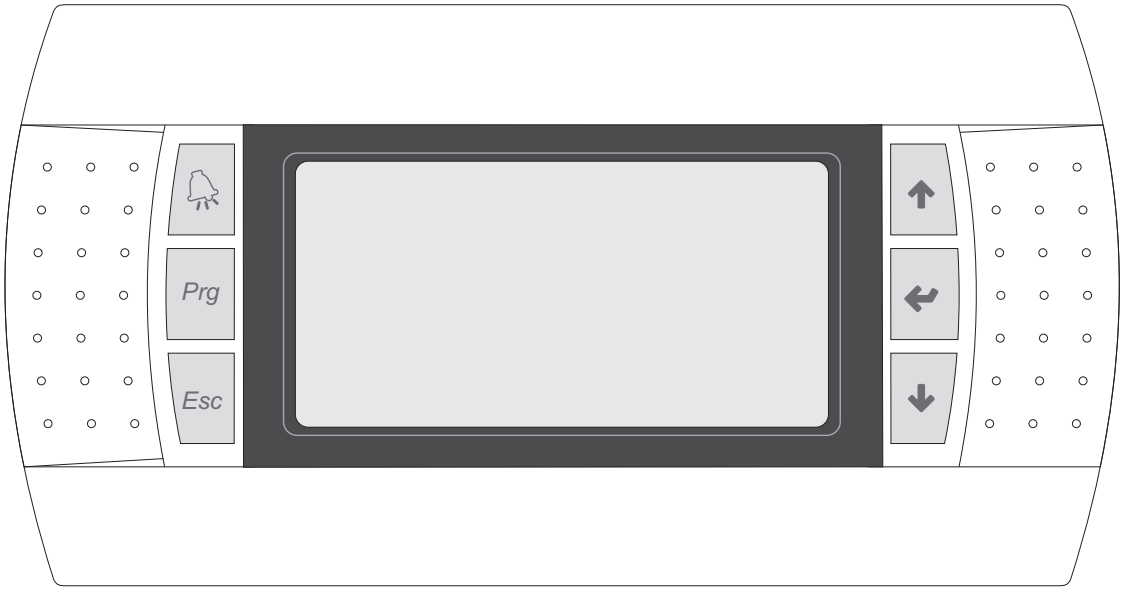
AERMEC



USER MANUAL

pCO5

AIR / WATER HEAT PUMP

AERMEC
COMPANY QUALITY SYSTEM
ICIM
ISO 9001:2000 - Cert. n° 0128/5
CISQ
IQNet
AERMEC S.P.A.

CE

EN

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INDEX

1. USER INTERFACE (PGD1) 4

2. START-UP PROCEDURE 4

3. MENU STRUCTURE AND NAVIGATION 5

4. USER OPERATING PROCEDURES 6

5. MAIN MENU 7
General monitoring 7
System monitoring 7
Circuit 1 monitoring 8
Circuit 2 monitoring (visible if present) 8
General circuits monitoring 8
Freecooling monitor (only present on freecooling models) 9
Glycol free freecooling monitor
(only present on glycol free freecooling models) 9
General master monitor
(only on master units for master/slave configuration) 9
Total recovery monitor (only on units with total recovery) 10
DK monitor (only on units with 2 separate gas-side circuits 10

6.IN / OUT MENU 11
External temperature monitoring 11
Fans monitoring (common or circuit 1) 11
Defrost monitoring circuit 1 / circuit 2 12
Multifunction input monitor 13
Analogue input monitoring (1) 13
Analogue input monitoring (2) 13
Analogue input monitoring (3) 13
Analogue input monitoring (4) (only on units with two circuits) 13
Analogue input monitoring (5) (only on units with two circuits) 14
Digital input monitoring (1) 14
Digital input monitoring (2) 14
Digital input monitoring (3) 14
Digital input monitoring (4) 15
Digital input monitoring (5) 15
Digital input monitoring (6) 15
Digital output monitoring (1) 16
Digital output monitoring (2) 16
Digital output monitoring (3) 16
Digital output monitoring (4) 16
Digital output monitoring (5) 17
Digital output monitoring (6) 17
Analogue output monitor 17

7. ON / OFF MENU 18
Switching unit on or off 18

8. SYSTEM MENU 18
Selecting the operating mode 18
Setting secondary setpoints 19
Time-clock settings (A) and (B) 19
Time-clock settings (C) and (D) 20
Copy time-clock settings function 20
Setting change-over based on external temperature 20
Setting change-over based on calender 21

9. RECOVERY MENU (ONLY FOR UNIT WITH RECOVERY) 21
Activates total recovery 21
Sets the work setpoint for total recovery 21

10. INSTALLER MENU(PASSWORD 0000) 22
Insert password to access menus 22
Enabling digital inputs ID3 and ID4 22
Addresses the BMS supervision system 22
Enabling primary functions by BMS 22
Addressing secondary supervisor system (not opto-isolated) 23
Selecting control for water production 23
Setting parameters for cooling control 23
Setting ambient curve parameters for cooling 24
Setting ambient curve parameters for heating 24
configuration of the anti-free system alarm 24
Setting the parameters for total recovery 24
Pump configuration 25
Setting pump anti-freeze function 25
Setting parameters for total recovery 25
Setting fans anti-icing function 25
Setting pump operation during use of anti-freeze heaters 26
Setting multi-function input 26
Configuration of capacity limit from multi-function input (if enabled) 26
Configuration of variable setpoint from multi-function input (if enabled) 26
Configuration of NTC signal from multi-function input (if enabled) 27
sets night-time silenced operation (only with the accessory DCPX) 27
management of the supplementary electric heaters 27
Enabling boiler 27
Set temperature of integration and substitution 28
Monitoring number of compressor starts circuit 1 28
Monitoring compressor hour counter circuit 2 (if present) 28
Monitoring number of compressor starts circuit 1 28
Monitoring number of compressor starts circuit 2 (if present) 29
Configures fan speed 29
Configures Master/Slave 29
Configures freecooling 29
Freecooling output control 30
management of the valves on the NYB/NRV unit 30
enabling VPF management 30
configures VPF bypass parameters 30
configuration of the VPF opening 31
Monitoring unit configurator and test info 31
Monitoring unit configurator and test info 31

11. CLOCK MENU 32
Setting system date and time 32
Setting automatic time change (summer/winter time) 32
Setting holidays 32

12. ALARM SUMMARY TABLE 33

13. ALARM HISTORY 37
Alarm history and memory 37

1. USER INTERFACE (PGD1)

The unit control panel allow the quick setting and display of the unit's operating parameters. The board memorises all the **Default** settings and any modifications. By installing the remote control panel PGD1 it is possible to remotely replicate all the functions and the settings available on the unit. After a power failure the unit is capable of an automatic restart, retaining the original settings.

The user interface consists of a graphic display with six navigation keys; the display is arranged through a menu hierarchy, activated by pressing the navigation keys. The **Default** display of these menus is the main screen. The navigation between the various parameters is by using the arrow keys located to the right of the display. These keys are also used for the modification of the selected parameter.

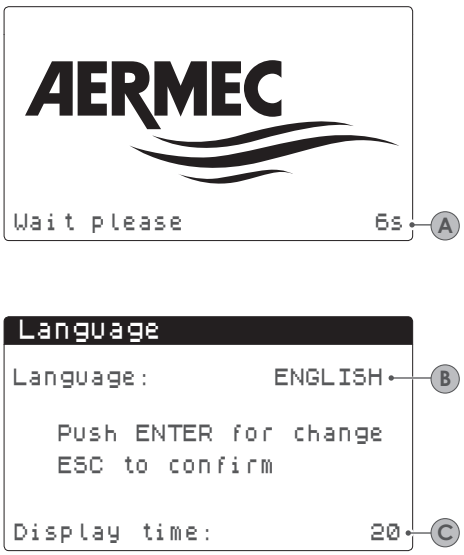
KEY	FUNCTION
	ALARM key Displays the list of active and historical alarms (red LED on = active alarm)
Prg	MENU ACTIVATION key • Pressing this key activates the navigation between menus (orange LED on = winter operating mode active)
Esc	EXIT MENU key • Pressing this key returns to the previous menu
	NAVIGATION (+) key • Pressing this key when navigating between menu/parameters passes to the next menu/parameter • Pressing this key when modifying a parameter increases the value of the selected parameter
	NAVIGATION (enter) key • Pressing this key when navigating between menus allows entry to the selected menu • Pressing this key when navigating between parameters allows selection of the parameter displayed to modify it • Pressing the key when modifying a parameter confirms the modification of the parameter value selected
	NAVIGATION (-) key • Pressing this key when navigating between menu/parameters passes to the previous menu/parameter • Pressing this key when modifying a parameter decreases the value of the selected parameter

2. START-UP PROCEDURE

After having powered up the unit the control board will carry out preliminary operations before being ready for use. This initial procedure takes around 60 seconds to complete. During the initial loading procedure two screens are displayed: a start-up screen and a screen to select the system language. These screens are detailed in the table below.

WARNING: The system language can be set on the screen displayed at the start-up or can be modified at any time through the appropriate screen contained in the Installer menu.

Start-up procedure



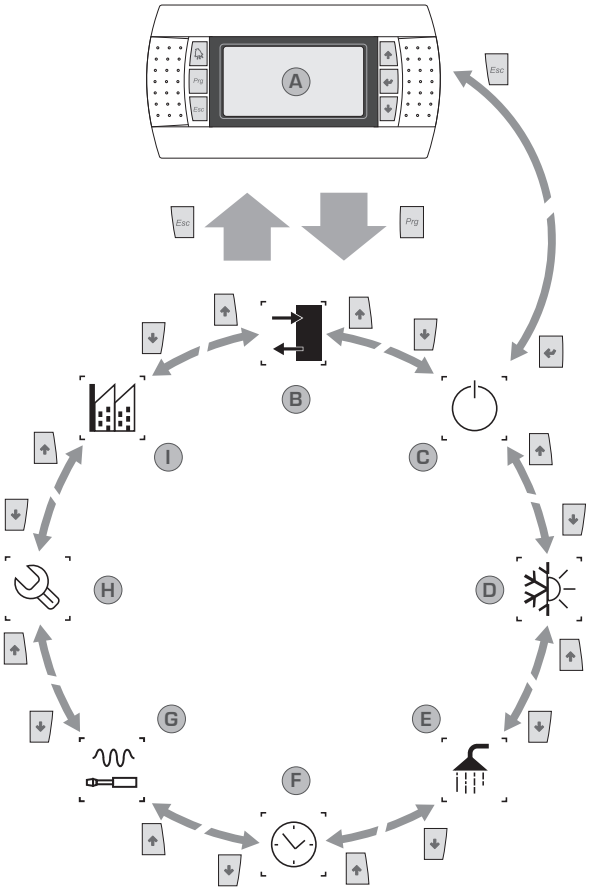
	Display/Parameter	Default
A	**Remaining time for software loading:** this value shows the remaining time to starting the software loaded on the unit, and passing the to system language selection	6s
B	**System language:** this parameter shows the current language set for the system. To change the language follow the instructions shown on the screen.	---
C	**Remaining time to select the language:** this value shows the remaining time to modify the language. When the time elapses the display goes to the main screen (Main screen - General monitoring). WARNING: It is possible to modify the system language at any time using the appropriate screen contained in the Installer menu. (Menu password = 0000).	20s

3. MENU STRUCTURE AND NAVIGATION

Both the functions to control the unit and the operating information are displayed on the unit mounted control panel. All the functions and information are arranged in screens which in turn are grouped into menus.
During the normal operation of the unit the main screen is displayed, from which it is possible to access the selection of the other operating menus.
The menus are displayed through the rotation of the icons that they represent. Once the desired icon is selected the chosen menu is entered, permitting the display or modification of the parameters that it is made up from. The procedure for navigating the menus, or changing parameters, is explained in detail in the chapter "User operating procedures".
The adjacent drawing shows the relation between the various menus and the navigation keys used.

WARNING: The following pages contain all the masks in the menus available to the user. The values contained in each mask represent the **Default** values set in the system (except the main menu and the IN/OUT menu, which contain data read by the unit rather than operating parameters);
Improper selection of the parameters in the Installer menu may cause malfunctions of the unit. It is recommended that these parameters are only modified by personnel qualified in the installation and configuration of the unit.

The operating menus are arranged as in the following drawing:



Index	Icon	Menù	Menu function
A	---	Main	The windows contained in this menu are used to check current unit conditions (unit status, settings, circuit data, etc ...);
B		IN/OUT	This menu contains advanced information about operating the unit;
C		ON/OFF	This menu is used to activate or deactivate the unit; it also provides status information;
D		PLANT	This menu is used to set the operating mode, the setpoints for water production and the time bands to be applied to the system;
E		RECOVERY	This menu (if the unit permits heat recovery) makes it possible to set the parameters related to heat recovery;
F		CLOCK	This menu contains the time settings for system management (date and time, calendar);
G		INSTALLER	This menu contains settings useful for the installer (Digital input enabling, BMS configuration, adjustments, pumps, etc ...); WARNING: this menu is password protected. The value to be set for access is: 0000
H		ASSISTANCE	This menu is not accessible except by authorized staff;
I		MANUFACTURER	This menu is not accessible except by authorized staff;

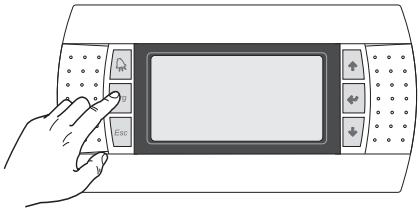
4. USER OPERATING PROCEDURES

To check or modify the operating parameters of the unit it is necessary to use the interface of the control panel on the unit. The basic operations that the user must be capable of, for the correct use of the unit, are:
(1) Moving from one menu to the next.
(2) Selecting and modifying a parameter; In this manual the parameters that can be modified by the icon ( );

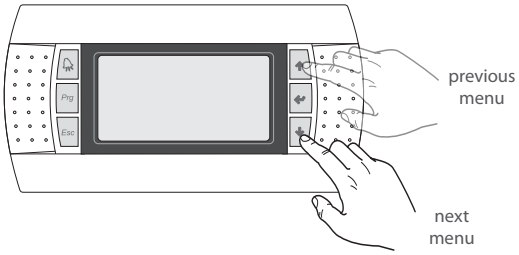
1

Moving between menus

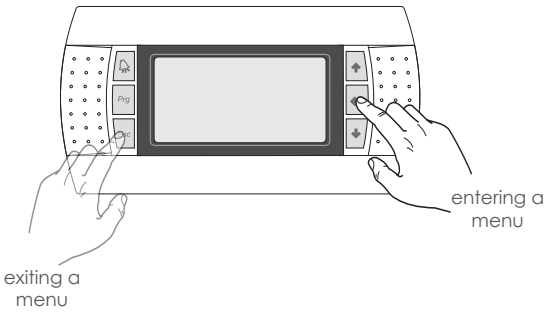
(a) To move between the menus, the order in which they are displayed is shown in the previous page, enter the menu selection mode by pressing the key ( );



(b) Once in the menu selection mode it is possible to move between menus using the arrow keys: the key ( ) to move to the previous menu, and the key ( ) to move to the next menu.



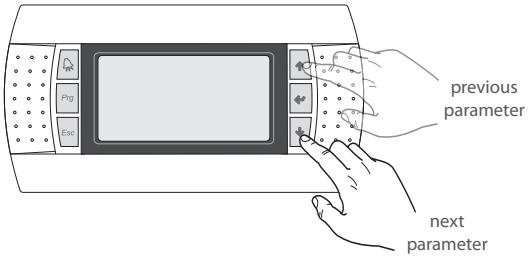
(c) When the desired menu is seen press the key ( )to enter the menu. Press the key( ) to return to the menu selection mode.



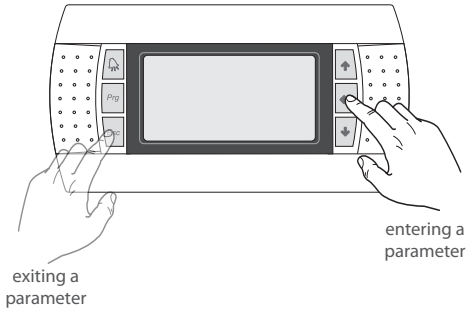
2

Selecting and modifying a menu

(a) Once in the menu selected, by following the procedure (1), it is possible to move between the screens using the arrow keys: the key ( ) to move to the previous parameter, and the key ( ) to move to the next parameter.



(c) When the desired parameter is seen press the key ( ) to enter the parameter. To exit the parameter and return to the parameter selection mode press the key ( ).
WARNING: Once a parameter is selected by pressing the key ( ), the parameter selection mode is automatically accessed and in this mode the desired parameter values can be set with the following procedure:
(1) Pressing the key ( ) causes a flashing cursor to appear on the first modifiable field of the parameter. If no modifiable fields are displayed then the cursor will not appear.
(2) Pressing the key ( ) or the key ( ), the value of the field can be increased or decreased.
(3) Pressing the key ( ) confirms the modification of the field value, saving it in memory. On the basis of the type of parameter selected the number of modifiable fields can change.

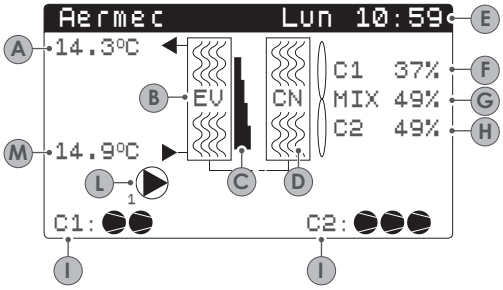


5. MAIN MENU

During normal operation the first screen of the Main menu is displayed on the unit. This menu consists of several screens with different information on the operating status of the system which can be navigated using the arrow keys. In these screens the information is read only and no parameters can be changed.

WARNING: If no keys are pressed for at least 5 minutes during the use of the control panel the software automatically return to the main screen of this menu.

Main menu - General monitoring

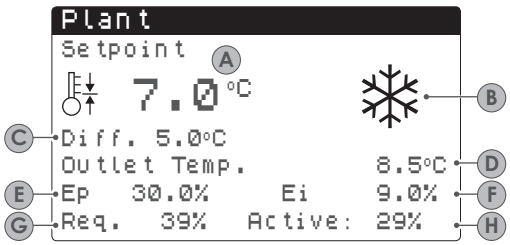


WARNING: Several icons can appear in this screen to show specific states of the system, and the icons can be:

LT	low leaving temperature anti-freeze function is active (compressors switched off)
HT	high leaving water temperature prevention is active (compressors switched off)
LC	low load function active
	anti-freeze heater active (set point: 4.0°C - differential: 1.0K)
↘	the return water temperature is dropping so new requests for cooling load are disabled
↗	the return water temperature is rising so new requests for heating load as disabled
F	the flow switch is open so compressors will be switched off whilst the pump attempts to enable the flow switch

	Display/Parameter	Default
A	Plant water delivery flow temperature: this value indicates the temperature of the water leaving the heat exchanger	---
B	System heat exchangers: EV = evaporator, CN = condenser	---
C	Plant power requirement: this element indicates the power required by the system and is displayed as a bar graph from 0 to 10; WARNING: Based on the type of operation (cold or hot) the plate heat exchanger changes role (evaporator when cold, condenser when hot), which is indicated on this page (EV = evaporator, CN = condenser)	---
D	**Coil: EV** = evaporator, CN = condenser	---
E	**Date and ti**me: indicates the current day and time	---
F	**Circuit 1 fan speed: this value** indicates the percentage value of the fan speed on circuit 1	---
G	**Shared fan speed: this value** indicates the percentage value of the speed of the fans shared between the two circuits	---
H	**Circuit 2 fan speed: this value** indicates the percentage value of the fan speed on circuit 2	---
I	Circuit 1 (C1) or 2 (C2) compressor status: these icons indicate the current status of the compressors on circuit 1 or 2; these statuses can be as follows: • On (●) • Off (○) • Disenabled (⊗) • Alarm (⚠) Capacity control (duration 10 minutes) running (P)	---
L	**Pump active:** this icon appears if the unit's pump is running; if the unit has several pumps, the number next to the icon indicates which one is active	---
M	System return water flow temperature: this value indicates the temperature of the water entering the heat exchanger	---

Main menu - System monitoring

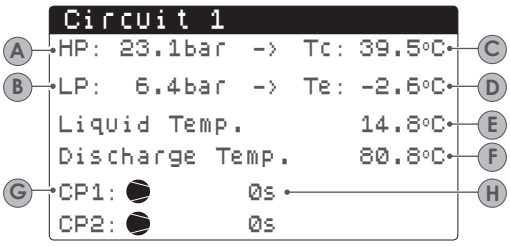


WARNING: Several icons can appear in this screen to show specific states of the system, and the icons can be:

	time-clock is active
M	multi-function input is active
LC	low load function is active

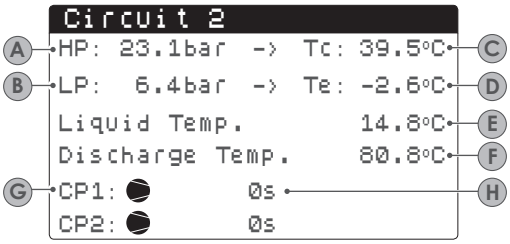
	Display/Parameter	Default
A	**Current setpoint:** shows the current system setpoint	---
B	**Operating mode:** the icon shows the current operating mode of the system (❄ = cooling, ☼ = heating)	---
C	**Differential:** shows the current system working differential	---
D	**Control sensor:** these values show the sensor on which the control is based (inlet or outlet), and the current value read by the selected sensor	---
E	**Proportional error:** if the Proportional + Integral function is active, this shows the proportional value	---
F	**Integral error:** if the Proportional + Integral function is active, this shows the integral value	---
G	**Load request:** shows the percentage load required by the system	---
H	**Capacity output:** shows the percentage output to the system	---

Main menu - Circuit 1 monitoring



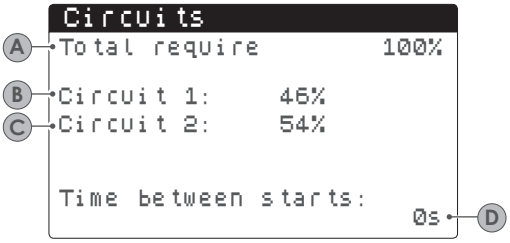
	Display/Parameter	Default
A	**High pressure:** shows the discharge pressure of the circuit	---
B	**Low pressure:** shows the suction pressure of the circuit	---
C	**Condensing temperature:** shows the condensing temperature	---
D	**Evaporating temperature:** shows the evaporating temperature	---
E	**Liquid temperature:** shows the liquid temperature (displayed only for heat pumps models)	---
F	**Discharge temperature:** shows the discharge temperature	---
G	**Compressor status:** the icon represents the compressor status of the circuit. Each compressor is numbered with the code CP, and for each the current status is shown, being: • On (●) • Off (○)	---
H	**Minimum residual time:** the value shows how many seconds remain until minimum required On or Off time elapses for the current status of each compressor	---

Main menu - Circuit 2 monitoring (visible if present)



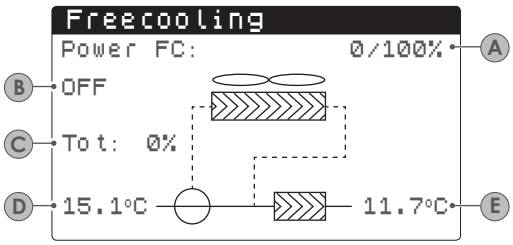
	Display/Parameter	Default
A	**High pressure:** shows the discharge pressure of the circuit	---
B	**Low pressure:** shows the suction pressure of the circuit	---
C	**Condensing temperature:** shows the condensing temperature	---
D	**Evaporating temperature:** shows the evaporating temperature	---
E	**Liquid temperature:** shows the liquid temperature (displayed only for heat pumps models)	---
F	**Discharge temperature:** shows the discharge temperature	---
G	**Compressor status:** the icon represents the compressor status of the circuit. Each compressor is numbered with the code CP, and for each the current status is shown, being: • On (●) • Off (○)	---
H	**Minimum residual time:** the value shows how many seconds remain until minimum required On or Off time elapses for the current status of each compressor	---

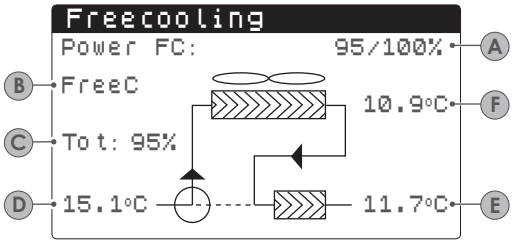
Main menu - General circuits monitoring



	Display/Parameter	Default
A	**Total capacity request:** shows the current value of total capacity request from the system	---
B	**Capacity output of circuit 1:** shows the current capacity output of the circuit to satisfy the system request	---
C	**Capacity output of circuit 2:** shows the current capacity output of the circuit to satisfy the system request	---
D	**Residual time to next compressor:** shows the remaining time before the next compressor is turned on, if required	---

MAIN Menu - Freecooling monitor (only present on freecooling models)

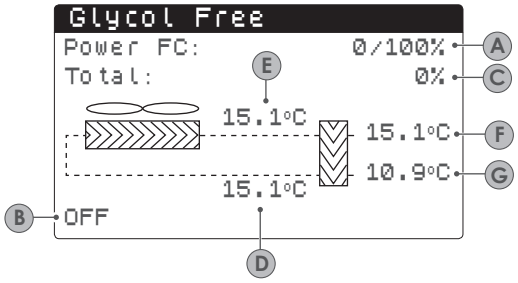


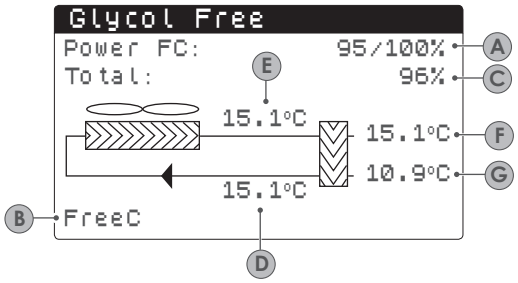


WARNING: The diagram of this mask will appear different, depending on whether the freecooling mode is activated or not (the moving arrows indicate the operation of the pump and water circulation).

	Display/Parameter	Default
A	**Freecooling power:** this value indicates the actual power supplied by the freecooling system based on what is available	---
B	**Status:** this icon indicates the current state of operation; it could be: • OFF: unit off; • FreeC: unit only operating in freecooling; • FC+CP: unit operating in mixed freecooling plus compressors; • CP: unit operating only with compressors;	---
C	**Total power:** this value indicates the total power in percentage supplied by the unit. If operating only in freecooling, the total power corresponds to the power supplied by freecooling. In the case of mixed operation, the total power is the sum of the power supplied by freecooling and that supplied by the compressors	---
D	**Input temperature:** this value indicates the unit input temperature (which becomes the freecooling input temperature if the 3-way valve is open)	---
E	**Freecooling output temperature:** visible only with freecooling activated. Corresponds to the temperature read by the evaporator inlet probe	---
F	**Output temperature:** this value indicates the temperature exiting the evaporator	---

MAIN Menu - Glycol free freecooling monitor (only present on glycol free freecooling models)

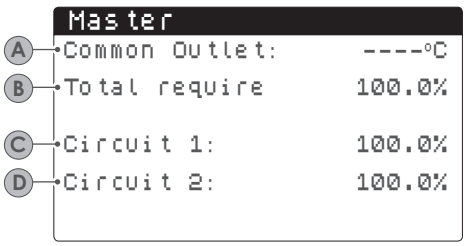




WARNING: The diagram of this mask will appear different, depending on whether the freecooling mode is activated or not (the moving arrows indicate the operation of the pump and water circulation).

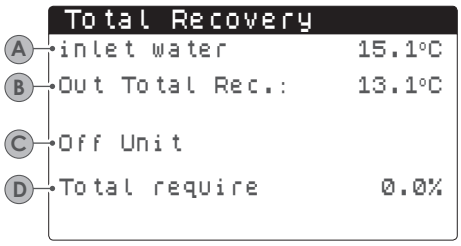
	Display/Parameter	Default
A	**Freecooling power:** this value indicates the actual power supplied by the freecooling system based on what is available	---
B	**Status:** this icon indicates the current state of operation; it could be: • OFF: unit off; • FreeC: unit only operating in freecooling; • FC+CP: unit operating in mixed freecooling plus compressors; • CP: unit operating only with compressors;	---
C	**Total power:** this value indicates the total power in percentage supplied by the unit. If operating only in freecooling, the total power corresponds to the power supplied by freecooling. In the case of mixed operation, the total power is the sum of the power supplied by freecooling and that supplied by the compressors	---
D	**Input temperature:** this value indicates the freecooling input temperature	---
E	**Freecooling output temperature:** this value indicates the freecooling output temperature	---
F	**Output temperature:** this value indicates the intermediate heat exchanger output temperature (which is the temperature read by the evaporator inlet probe)	---
G	**Input temperature:** this value indicates the intermediate heat exchanger input temperature	---

MAIN Menu - General master monitor (only on master units for master/slave configuration)



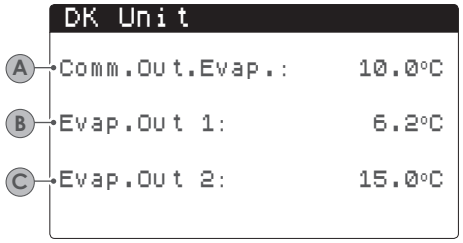
	Display/Parameter	Default
A	**Common output:** this value indicates the current temperature value read by the water probe placed on the common of the two outlets of the master and slave unit	---
B	**Demand:** this value indicates the actual power calculated by the thermostat of the Master unit which will be distributed onto the two units	---
C	**Unit 1:** this value indicates the actual power requested to the MASTER unit by the system	---
D	**Unit 2:** this value indicates the actual power requested to the SLAVE unit by the system	---

MAIN Menu - Total recovery monitor (only on units with total recovery)



	Display/Parameter	Default
A	**Water input:** indicates the current temperature value for incoming water to the total recovery system	---
B	**Water output:** this value indicates the current temperature value for outgoing water from the total recovery system	---
C	**Status:** this value indicates the current status of the total recovery; this status can be: • General off: whole unit in stand-by; • Flow switch open: water is not circulating in the hydraulic circuit of the recovery system and therefore it is disabled; • Enabled: water is circulating in the hydraulic circuit of the recovery system and therefore it is enabled;	---
D	**Demand:** this value indicates the actual power requested for total recovery	---

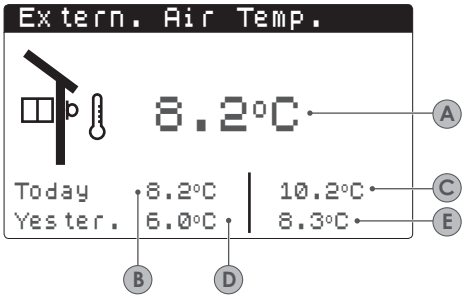
MAIN Menu - DK monitor (only on units with 2 separate gas-side circuits



	Display/Parameter	Default
A	**Evaporator common output:** indicates the current temperature value read by the probe placed on the common output connection from the two evaporators	---
B	**Evaporator water output 1:** indicates the current temperature value for water leaving the evaporator 1	---
C	**Evaporator water output 2:** indicates the current temperature value for water leaving the evaporator 2	---

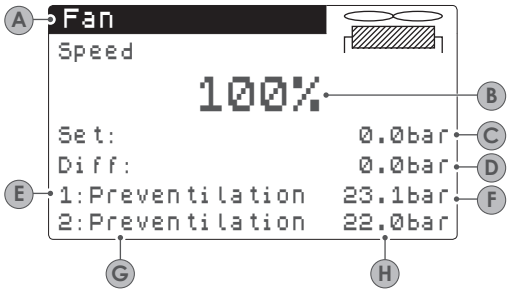
6. IN / OUT MENU

In / Out Menu - External temperature monitoring



	Display/Parameter	Default
A	**External air temperature:** shows the current external air temperature	---
B	**External air temperature (minimum today):** shows the minimum external air temperature read today	---
C	**External air temperature (maximum today):** shows the maximum external air temperature read today	---
D	**External air temperature (minimum yesterday):** shows the minimum external air temperature read yesterday	---
E	**External air temperature (maximum yesterday):** shows the maximum external air temperature read yesterday	---

In / Out Menu - Fans monitoring (common or circuit 1)



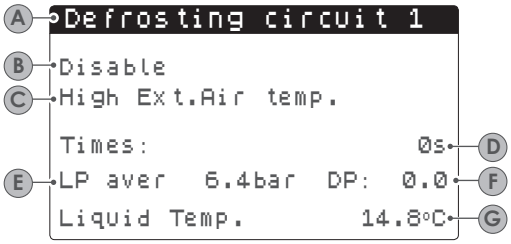
WARNING: The information contained in this screen can be split into two screens of "Fans circuit 1" and "Fans circuit 2". The control types can be:

• COMMON control: The fans of both circuits are controlled together, in which case there will be only one screen which summarises the data relating to the fans (as seen in the screen above).

• INDIVIDUAL control: The fans of circuit 1 and circuit 2 are controlled independently, so the system will display two distinctive screens to display the data of the two circuits. In this case the two screens will be successively displayed and will contain the same type of data, except for points (E) and (G) in that (E) is displayed only in the screen "Fans circuit 1", whilst (G) is displayed only in the screen "Fans circuit 2".

	Display/Parameter	Default
A	**Circuit fans:** shows which circuit the data refers to, with options of: • Fans: shows that the fans are common to both circuits • Fans 1: data refer to the fans of circuit 1 • Fans 2: data refers to the fans of circuit 2	---
B	**Fan speed:** shows the percentage speed at which the fans are operating (common, circuit 1 or circuit 2)	---
C	**Fan setpoint:** shows the current fans setpoint	---
D	**Differential on fan setpoint:** shows the current differential applied on the fan setpoint	---
E	**Fan status circuit 1:** shows the current status of the fans, which can be: • OFF: fans off • PRE-VENTILATION: fans on in anticipation of compressor • HIGH PRESSURE: control based on high pressure • POST-VENTILATION: fans on after compressors switch off • ANTI-ICING: fans on phase to prevent ice accumulation • DEFROST: defrost phase • LOW PRESSURE: control based on low pressure • MAXIMUM SPEED: fans at maximum speed • SILENCED: speed reduction to reduce noise levels	---
F	**Fan pressure circuit 1:** shows the current pressure value read	---
G	**Fan status circuit 2:** equivalent values to that of item (E) and this value is only displayed if the fans are common to the two circuits. If not, this value is not displayed but is shown in the following screen "Fans circuit 2"	---
H	**Fan pressure circuit 2:** shows the current pressure value read and is only displayed if the fans are common to both circuits. If not, this value is not displayed but is shown in the following screen "Fans circuit 2".	---

In / Out Menu - Defrost monitoring circuit 1 / circuit 2



WARNING: in the case the unit has two circuits this screen is repeated and the heading of (A) changed to C2, and each screen will provide data for the relevant circuit.

	Display/Parameter	Default
A	**Defrost circuit:** shows which circuit the values refer to, if a second circuit is present, and provides a second screen for the second circuit: • Defrost C1: data relating to circuit 1 • Defrost C2: data relating to circuit 2	---
B	**Defrost information:** provides status information on the defrost, which can be: • DISABLED: defrost disabled • BYPASS: bypass phase after the compressor start • DECREASING CALCULATION: phase calculating the decrease of pressure • AWAITING CYCLE INVERSION: system in pause before cycle inversion • START DEFROST: defrost in start phase • DEFROSTING: defrost cycle • END DEFROST: end of the defrost cycle • FIRST DEFROST: shows the first defrost phase after a power loss	---
C	**Additional defrost information:** provides additional status information on the defrost: • HIGH EXTERNAL AIR TEMPERATURE: the external air temperature is above the level for enabling defrost • CIRCUIT OFF: all the compressors of the circuit are off; defrost is disabled • LP ABOVE LIMIT: the low pressure is above the level to enable defrost • MINIMUM TIME BETWEEN DEFROST: defrost is disabled during the period of minimum time between defrosts • START CP: compressor just started; await the bypass time before calculating the pressure decrease • NEW LP REFERENCE: a new low pressure value has been taken as reference for the calculation of decreasing pressure; • START FOR LP LIMIT: start of defrost to overcome the low pressure limit • START FOR DELTA P: start of defrost to overcome the decreasing value of low pressure • TEMP. LIQUID OK: the liquid temperature has overcome the limit to define the end of defrost • MINIMUM DEFROST TIME: defrost continuous until the minimum time is exceeded even if the exit conditions are met • AWAITING OTHER CIRCUIT: occurs if the fans are common to both circuits and the first circuit to finish defrost awaits the second circuit to finish • BYPASS FIRST START: the first defrost after a power loss can only occur after the compressor has run for the determined time • LIQUID TEMP. LOW: liquid temperature below the level that determines the end of defrost • START FOR DGT: defrost is activated due to the level of the discharge gas temperature exceeding the limit • FORCED: in the case the fans are common to both circuits this circuit has been forced into defrost due to defrost of the other circuit, even if not required	---
D	**Defrost time:** the value can indicate the maximum time before completing defrost (in the event the normal levels for completion have not been met), or the minimum defrost cycle time (in the event the "TEMP. LIQUID OK" message is displayed), to exit defrost	---
E	**Low average pressure:** shows the average low pressure in the last minute	---
F	**Delta pressure:** shows the accumulated delta pressure to determine activation of defrost	---
G	**Liquid temperature:** shows the liquid temperature to determine exit of the defrost cycle	---

IN/OUT menu - Multifunction input monitor

```
Plant
Input Multifunction
ID18: Active

Power limitation
pCO5 U10=          57.0%
```

	Display/Parameter	Default
A	**Digital Input ID18: thi**s value indicates the status of the digital input connected to multifunction input U10 enabling on the evaporator. The following statuses are possible: • OPEN: multifunction input (U10) NOT ENABLED • CLOSED: multifunction input (U10) ENABLED	---
B	**Function assigned to input U10: this** value indicates which function was set for the multifunction input U10 (for more information about the available functions, refer to the specific paragraph on page XXX)	---
C	**Signal applied to input U10: this v**alue indicates, relatively to the size selected for input U10 (for more information about the available functions, refer to the specific paragraph on page XXX), its percentage value	---

In / Out Menu - Analogue input monitoring (1)

```
Inputs
pCO5
U1 = Inlet Temp.water
     evap.:        14.9°C
U2 = Outlet Temp.water
     evap.:        18.0°C
U3 = Ext.Air temp.:
                   17.9°C
```

	Display/Parameter	Default
A	**Analogue input U1:** shows the heat exchanger inlet water temperature	---
B	**Analogue input U2:** shows the heat exchanger outlet temperature	---
C	**Analogue input U3:** shows the external air temperature	---

In / Out Menu - Analogue input monitoring (2)

```
Inputs
pCO5

U4 = Delivery Temp.Comp.
     Circuit 1:    15.3°C
```

	Display/Parameter	Default
A	**Analogue input U4:** shows the discharge gas temperature of circuit 1	---

In / Out Menu - Analogue input monitoring (3)

```
Inputs
pCO5
U5 = High press.circ.1:
     0.0bar        59.3°C
U6 = Low pres.circ.1:
     0.0bar       -28.5°C
```

	Display/Parameter	Default
A	**Analogue input U5:** shows the high pressure transducer value read for circuit 1	---
B	**Conversion HP temperature:** this is the conversion value into temperature from the pressure read by the high pressure transducer of circuit 1	---
C	**Analogue input U6:** shows the low pressure transducer value read for circuit 1	---
D	**Conversion LP temperature:** this is the conversion value into temperature from the pressure read by the low pressure transducer for circuit 1	---

In / Out Menu - Analogue input monitoring (4) (only on units with two circuits)

```
Inputs
pCO5

U7 = Delivery Temp.Comp.
     Circuit 2:    15.3°C
```

	Display/Parameter	Default
A	**Analogue input U7:** shows the discharge gas temperature of circuit 2	---

In / Out Menu - Analogue input monitoring (5) (only on units with two circuits)

```
Inputs
pCO5
U8 = High press.circ.2:
      0.0bar        59.3°C
U9 = Low pres.circ.2:
      0.0bar       -28.5°C
```

	Display/Parameter	Default
A	**Analogue input U8: thi**s is the value read by the high pressure transducer on circuit 2	---
B	**HP Temperature Conversion:** this value indicates the conversion into temperature of data read by the high pressure transducer on circuit 2	---
C	**Analogue input U9: thi**s is the value read by the low pressure transducer on circuit 2	---
D	**BP Temperature Conversion:** this value indicates the conversion into temperature of data read by the low pressure transducer on circuit 2	---

In / Out Menu - Digital input monitoring (1)

```
Inputs
pCO5
ID1: Flow switch
                Close
ID2: High press.circ.1
                Close
ID3: Fan Overload 1
                Close
```

	Display/Parameter	Default
A	**Digital input ID1:** shows the binary status of the input read from the flow switch of the evaporator, which are: • OPEN: flow switch alarm • CLOSED: normal operation	---
B	**Digital input ID2:** shows the binary status of the input read from the high pressure pressostat of circuit 1, which are: • OPEN: high pressure pressostat alarm • CLOSED: normal operation	---
C	**Digital input ID3:** shows the binary status of the input relating to the circuit breaker of the fans on circuit 1, which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---

In / Out Menu - Digital input monitoring (2)

```
Inputs
pCO5
ID4: Al.Phase Monitor
                Close
ID5: Overl.comp1 circ1
                Close
ID6: Overl.comp2 circ1
                Close
```

	Display/Parameter	Default
A	**Digital input ID4:** shows the binary status read from the input of the phase control device, which can be: • OPEN: phase control device in alarm • CLOSED: normal operation	---
B	**Digital input ID5:** shows the binary status of the input relating to the circuit breaker of compressor 1 on circuit 1, which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---
C	**Digital input ID6:** shows the binary status of the input relating to the circuit breaker of compressor 2 on circuit 1, which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---

In / Out Menu - Digital input monitoring (3)

```
Inputs
pCO5
ID7: Overl.comp3 circ1
                Close
ID8: High press.circ.2
                Close
ID9: Fan Overload 2
                Close
```

	Display/Parameter	Default
A	**Digital input ID7:** shows the binary status of the input relating to the circuit breaker of compressor 3 on circuit 1, which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---
B	**Digital input ID8:** shows the binary status of the input read from the high pressure pressostat of circuit 2 (if provided), which are: • OPEN: high pressure pressostat in alarm • CLOSED: normal operation	---
C	**Digital input ID9:** shows the binary status of the input relating to the circuit breaker of the fans on circuit 2 (if provided), which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---

In / Out Menu - Digital input monitoring (4)

```
Inputs
pCO5
ID10:2nd Set enable
                    open   (A)
ID11:Overl.comp1 circ2
                    Close  (B)
ID12:Overl.comp2 circ2
                    Close  (C)
```

	Display/Parameter	Default
A	**Digital input ID10:** shows the binary status of the input relating to the secondary setpoint function, which are: • OPEN: secondary setpoint not active • CLOSED: secondary setpoint active NOTE: To control this function the installer must use the digital input ID10 and provide a volt free contact for the activation of the secondary setpoint	---
B	**Digital input ID8:** shows the binary status of the input relating to the circuit breaker of compressor 1 on circuit 2, which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---
C	**Digital input ID9:** shows the binary status of the input relating to the circuit breaker of compressor 2 on circuit 2, which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---

In / Out Menu - Digital input monitoring (5)

```
Inputs
pCO5
ID13:Overl.comp3 circ2
                    Close  (A)
ID14:Overl.pump1 plant
                    Close  (B)
ID15:Overl.pump2 plant
                    Close  (C)
```

	Display/Parameter	Default
A	**Digital input ID13:** shows the binary status of the input relating to the circuit breaker of compressor 3 on circuit 2, which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---
B	**Digital input ID14:** shows the binary status of the input relating to the circuit breaker of pump 1, which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---
C	**Digital input ID15:** shows the binary status of the input relating to the circuit breaker of pump 2 (visible if present), which can be: • OPEN: circuit breaker alarm • CLOSED: normal operation	---

In / Out Menu - Digital input monitoring (6)

```
Inputs
pCO5
ID16:Remote Cool/Heat
                    open   (A)
ID17:Remote On/Off
                    open   (B)
ID18:Multifunct Enable
                    open   (C)
```

	Display/Parameter	Default
A	**Digital input ID16:** shows the binary status of the input relating to the change of season function, which can be: • OPEN: remote season change not active • CLOSED: remote season change active NOTE: To control this function the installer must use the digital input ID16 and provide a volt free contact for the activation of the remote season changeover	---
B	**Digital input ID17:** shows the binary status of the input relating to the remote ON/OFF function, which can be: • OPEN: remote ON/OFF remote not active • CLOSED: remote ON/OFF active NOTE: To control this function the installer must use the digital input ID17 and provide a volt free contact for the activation of the remote ON/OFF	---
C	**Digital input ID18:** shows the binary status of the input relating to the multi-function U10 (this function is detailed in the Installer menu), which can be: • OPEN: multi-function contact not enabled • CLOSED: multi-function contact enabled NOTE: To control this function the installer must use the digital input ID18 and provide a volt free contact for the activation of the multi-function	---

In / Out Menu - Digital output monitoring (1)

```
Output
pCO5
NO1: Pump 1:
                    Close   (A)
NO2: Comp.1 circ.1
                    Close   (B)
NO3: Comp.2 circ.1
                    Close   (C)
```

	Display/Parameter	Default
A	**Digital output NO1:** shows the binary status of the output relating to pump 1, which can be: • OPEN: pump 1 not active • CLOSED: pump 1 active	---
B	**Digital output NO2:** shows the binary status of the output relating to compressor 1 of circuit 1, which can be: • OPEN: compressor not active • CLOSED: compressor active	---
C	**Digital output NO3:** shows the binary status of the output relating to compressor 2 of circuit 1, which can be: • OPEN: compressor not active • CLOSED: compressor active	---

In / Out Menu - Digital output monitoring (2)

```
Output
pCO5
NO4: Comp.3 circ.1
                    open    (A)
NO5: VSL 1
                    open    (B)
NO6: VIC 1
                    open    (C)
```

	Display/Parameter	Default
A	**Digital output NO4:** shows the binary status of the output relating to compressor 3 of circuit 1, which can be: • OPEN: compressor not active • CLOSED: compressor active	---
B	**Digital output NO5:** shows the binary status of the output to the liquid solenoid valve of circuit 1, which can be: • OPEN: valve not active • CLOSED: valve active	---
C	**Digital output NO6:** shows the binary status of the output to the reversing valve of circuit 1 (in heat pump models), which can be: • OPEN: valve not active • CLOSED: valve active	---

In / Out Menu - Digital output monitoring (3)

```
Output
pCO5
NO7: Fan 1
                    open    (A)
NO8: Serious alarm
                    open    (B)
NO9: Comp.1 circ.2
                    open    (C)
```

	Display/Parameter	Default
A	**Digital output NO7:** shows the binary status of the output to the fans of circuit 1, which can be: • OPEN: fans not active; • CLOSED: fans active	---
B	**Digital output NO8:** shows the binary status of the output generated by a serious alarm, which can be: • OPEN: no alarm present • CLOSED: alarm present	---
C	**Digital output NO9:** shows the binary status of the output relating to compressor 1 of circuit 2 (visible if present), which can be: • OPEN: compressor not active • CLOSED: compressor active	---

In / Out Menu - Digital output monitoring (4)

```
Output
pCO5
NO10:Comp.2 circ.2
                    open    (A)
NO11:Comp.3 circ.3
                    open    (B)
NO12:VSL 2
                    open    (C)
```

	Display/Parameter	Default
A	**Digital output NO10:** shows the binary status of the output relating to compressor 2 of circuit 2 (visible if present), which can be: • OPEN: compressor not active • CLOSED: compressor active	---
B	**Digital output NO11:** shows the binary status of the output relating to compressor 3 of circuit 2 (visible if present), which can be: • OPEN: compressor not active • CLOSED: compressor active	---
C	**Digital input NO12:** shows the binary status of the output to the liquid solenoid valve of circuit 2 (visible if present), which can be: • OPEN: valve not active • CLOSED: valve active	---

In / Out Menu - Digital output monitoring (5)

```
Output
pCO5
NO13:Fan 2
                    open   (A)
NO14:VIC 2
                    open   (B)
NO15:VSBP1
                    open   (C)
```

	Display/Parameter	Default
A	**Digital output NO13:** shows the binary status of the output to the fans of circuit 2 (visible if present), which can be: • OPEN: fans not active • CLOSED: fans active	---
B	**Digital output NO14:** shows the binary status of the output to the reversing valve of circuit 2 (visible if second circuit present in heat pump models), which can be: • OPEN: valve not active • CLOSED: valve active	---
C	**Digital input NO15:** shows the binary status of the output to the bypass solenoid valve of circuit 1 (in heat pump models), which can be: • OPEN: valve not active • CLOSED: valve active	---

In / Out Menu - Digital output monitoring (6)

```
Output
pCO5
NO16:VSBP2
                    open   (A)
NO17:Antifreeze Heater
                    open   (B)
NO18:Pump 2:
                    open   (C)
```

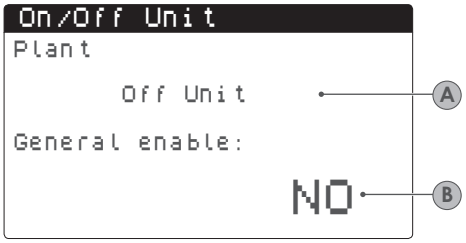
	Display/Parameter	Default
A	**Digital output NO16:** shows the binary status of the output to the bypass solenoid valve of circuit 2 (visible if second circuit present in heat pump models), which can be: • OPEN: valve not active • CLOSED: valve active	---
B	**Digital output NO17:** shows the binary status of the output to the anti-freeze heater, which can be: • OPEN: heater not active • CLOSED: heater active	---
C	**Digital input NO18:** shows the binary status of the output relating to pump 2 (visible if present), which can be: • OPEN: pump 2 not active • CLOSED: pump 2 active	---

IN/OUT Menu - Analogue output monitor

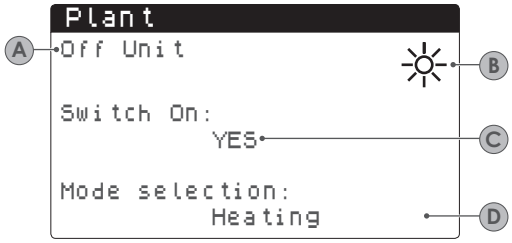
```
Inputs
pCO5
Y1=DCP1             0   (A)
Y2=DCP2             0   (B)
Y3=DCP3             0   (C)
Y4=----             0   (D)
Y5=----             0   (E)
```

	Display/Parameter	Default
A	**Modulating fans 1: this** value indicates the signal (represented by values from 1 to 1000) applied to the control of modulating fans 1	---
B	**Modulating fans 2: this** value indicates the signal (represented by values from 1 to 1000) applied to the control of modulating fans 2	---
C	**Modulating fans 1+2 or 3: this** value indicates the signal (represented by values from 1 to 1000) applied to the control of modulating fans 1 + modulating fans 2, or modulating fans 3	---
D	**Modulating fans 1 (NRB only): this** value indicates the signal (represented by values from 1 to 1000) applied to the control of circuit 1 modulating fans, which turn off at low temperatures	
E	**Modulating fans 2 (NRB only): this** value indicates the signal (represented by values from 1 to 1000) applied to the control of circuit 2 modulating fans, which turn off at low temperatures	---

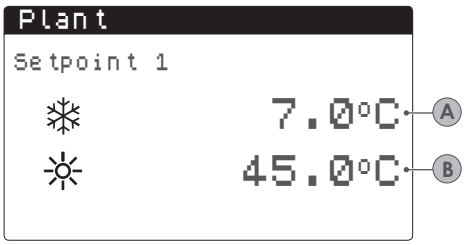
7. ON / OFF MENU

ON / OFF Menu - Switching unit on or off			
		Display/Parameter	**Default**
	A	**Current status:** shows the current status of the unit: • ENABLED: unit on • OFF GENERAL: unit in standby • OFF FOR ALARM: unit in standby due to an alarm • OFF BY BMS: unit in standby, disabled by the BMS • OFF BY CLOCK: unit in standby, disabled by time-clock settings • OFF BY DIG. IN: unit in standby, disabled by digital input ID8 • OFF BY DISPLAY: unit in standby, disabled from the terminal • ANTI-ICING: unit forced on to avoid icing	---
● User modifiable parameters	B ●	**Switching unit on or off:** by modifying this parameter it is possible to switch the unit on or off: • YES: unit on • NO: unit off	---

8. SYSTEM MENU

SYSTEM Menu - Selecting the operating mode			
		Display/Parameter	**Default**
	A	**Current status:** shows the current status of the unit: • ENABLED: unit on • OFF GENERAL: unit in standby • OFF FOR ALARM: unit in standby due to an alarm • OFF BY BMS: unit in standby, disabled by the BMS • OFF BY CLOCK: unit in standby, disabled by time-clock settings • OFF BY DIG. IN: unit in standby, disabled by digital input ID8 • OFF BY DISPLAY: unit in standby, disabled from the terminal • ANTI-ICING: unit forced on to avoid icing	---
	B	**Active season:** the symbol shows the current operating mode: • (☼): heating mode • (❄): cooling mode	---
	C ●	**Unit enabled:** shows if the unit is enabled for operation, which can be: • OFF: system not enabled for operation • ON: system enabled for operation • ON WITH SET2: system enabled for operation with secondary setpoint • TIME-CLOCK: system enabled to operate under time-clock programme	---
● User modifiable parameters	D ●	**Selecting the operating mode:** by modifying this parameter it is possible to select the operating mode of the unit: • COOLING: unit produces chilled water • HEATING: unit unit produces hot water • BY EXT. TEMP.: operating mode decided automatically by the external air temperature • BY DIG. IN: operating mode decided by digital input ID16 (input closed = heating) • BY SUPERV.: operating mode decided by BMS • BY CALENDAR: operating mode decided automatically based on the season change-over date in the calender	---

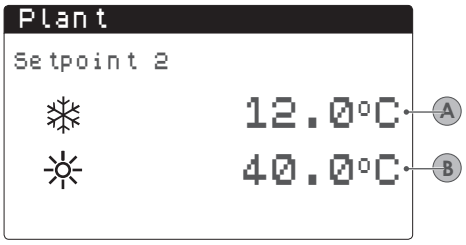
SYSTEM Menu - Setting main setpoints



● User modifiable parameters

	Display/Parameter	Default
A ●	**Main cooling setpoint:** shows the operating setpoint used for cooling mode	---
B ●	**Main heating setpoint:** shows the operating setpoint used for heating mode	---

SYSTEM Menu - Setting secondary setpoints

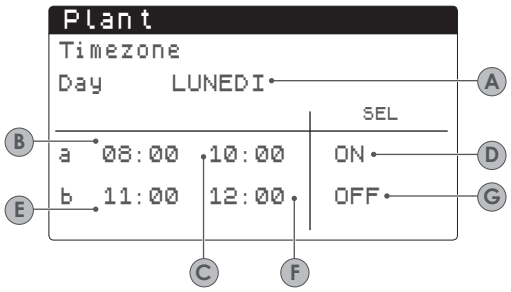


WARNING: There are two possibilities for using the secondary setpoint of the system:
• Enable the system with the secondary setpoint as an option (ON CON SET 2) in the first screen of the System menu.
• Use the digital input ID10, which activates the secondary setpoint when closed.

● User modifiable parameters

	Display/Parameter	Default
A ●	**Secondary cooling setpoint:** shows the secondary operating setpoint for cooling mode	---
B ●	**Heating secondary setpoint:** shows the secondary operating setpoint for heating mode	---

SYSTEM Menu - Time-clock settings (A) and (B)



WARNING:
- All the screens for time-clock programming are only visible if activated in the main screen of the System menu (Enabling = TIME-CLOCK)
- The values selected for the time-clock (a) and (b) must follow logically:

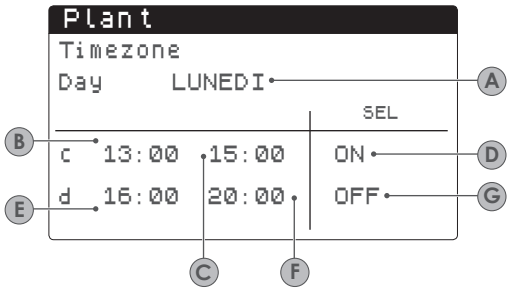
B < C < E < F

NOTE: Outside of the four possible time-clock programmes the system will remain OFF

● User modifiable parameters

	Display/Parameter	Default
A ●	**Day to set:** this shows the day for which the first two time-clock values (a) and (b) are programmed. This value can be any day of the week or a HOLIDAY day	---
B ●	**Time-clock start (a):** shows the value of the start of the first time-clock	---
C ●	**Time-clock stop (a):** shows the value of the stop of the first time-clock	---
D ●	**Action associated with time-clock (a):** shows the action carried out with the first time-clock, which can be: • ON: unit enabled with main setpoint • SET2: unit enabled with secondary setpoint • OFF: unit in standby	---
E ●	**Time-clock start (b):** shows the value of the start of the second time-clock	---
F ●	**Time-clock stop (b):** shows the value of the stop of the second time-clock	---
G ●	**Action associated with time-clock (b):** shows the action carried out with the first time-clock, which can be: • ON: unit enabled with main setpoint • SET2: unit enabled with secondary setpoint • OFF: unit in standby	---

SYSTEM Menu - Time-clock settings (C) and (D)



WARNING:

- All the screens for time-clock programming are only visible if activated in the main screen of the System menu (Enabling = TIME-CLOCK)
- The values selected for the time-clock (a) and (b) must follow logically:

B < C < E < F

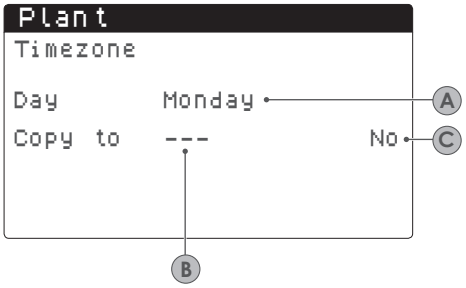
- In addition, the time bands (c) and (d) cannot be earlier than the preceding time bands (a) and (b);

NOTE: Outside of the four possible time-clock programmes the system will remain OFF

● User modifiable parameters

	Display/Parameter	Default
A ●	**Day to set:** this shows the day for which the last two time-clock values (c) and (d) are programmed. This value can be any day of the week or a HOLIDAY day	---
B ●	**Time-clock start (c):** shows the value of the start of the third time-clock	---
C ●	**Time-clock stop (c):** shows the value of the stop of the third time-clock	---
D ●	**Action associated with time-clock (c):** shows the action carried out with the first time-clock, which can be: • ON: unit enabled with main setpoint • SET2: unit enabled with secondary setpoint • OFF: unit in standby	---
E ●	**Time-clock start (d):** shows the value of the start of the fourth time-clock	---
F ●	**Time-clock stop (d):** shows the value of the stop of the fourth time-clock	---
G ●	**Action associated with time-clock (d):** shows the action carried out with the first time-clock, which can be: • ON: unit enabled with main setpoint • SET2: unit enabled with secondary setpoint • OFF: unit in standby	---

SYSTEM Menu - Copy time-clock settings function

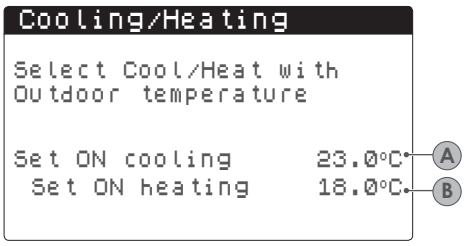


WARNING: All the screens for time-clock programming are only visible if activated in the main screen of the System menu (Enabling = TIME-CLOCK)

● User modifiable parameters

	Display/Parameter	Default
A ●	**Day to copy from:** shows from which day the four time-clock programmes are to be copied	---
B ●	**Day to copy to:** shows to which day to copy to the selected settings. The time-clock from the reference day can be copied to an individual day of the week, to all remaining days or only for holidays	---
C ●	**Make copy:** by changing this value to requested copy from the reference day is made for the requested days	---

SYSTEM Menu - Setting change-over based on external temperature



WARNING: This screen for automatic control based on external air temperature is only visible if activated in the main screen of the System menu (Selection mode = BY EXT. TEMP.)

● User modifiable parameters

	Display/Parameter	Default
A ●	**Temperature level for cooling:** shows the external air temperature value above which cooling mode is automatically activated	---
B ●	**Temperature level for heating:** shows the external air temperature value below which heating mode is automatically activated	---

SYSTEM Menu - Setting change-over based on calender			
		Display/Parameter	**Default**
Cooling/Heating Select Cool/Heat with Calendar Start Heating 01/OTT (A) Finish Heating 01/MAG (B)	A ●	**Date to activate heating mode:** shows the date after which the change is made from cooling mode to heating mode	---
WARNING: This screen for automatic control based on calender is only visible if activated in the main screen of the System menu (Selection mode = BY CALENDAR) ● User modifiable parameters	B ●	**Date to deactivate heating mode:** shows the date after which the change is made from heating mode to cooling mode	---

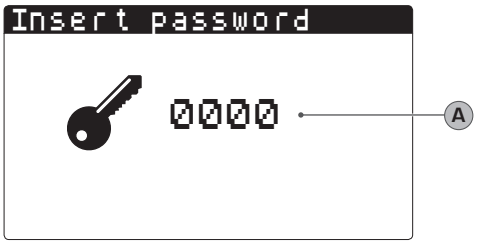
9. RECOVERY MENU (ONLY FOR UNIT WITH RECOVERY)

RECOVERY Menu - Activates total recovery			
		Display/Parameter	**Default**
Total Recovery (A) Off Unit Abilitazione: (B) SI	A	**Status:** this value indicates the current status of the recovery	---
● User modifiable parameters	B ●	**Enabling:** this value indicates the password to use to access the installer menu; remember that for access, the **Default** value (0000) must be entered	---

RECOVERY Menu - Sets the work setpoint for total recovery			
		Display/Parameter	**Default**
Total Recovery Setpoint 1: (A) 45.0 °C	A ●	**Total recovery setpoint:** this value indicates the total recovery work setpoint. The total recovery regulates it with the input probe	---
● User modifiable parameters			

10. INSTALLER MENU(PASSWORD 0000)

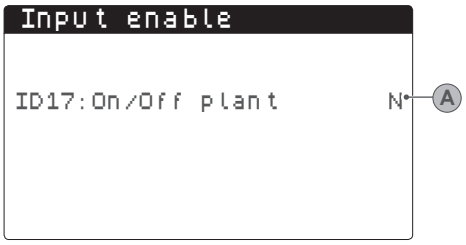
INSTALLER Menu- Insert password to access menus



● User modifiable parameters

	Display/Parameter	Default
A ●	**Access password to menus:** the password to be used to access the Installer menus is the **Default** value (0000)	0000

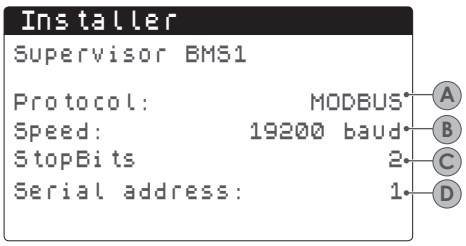
INSTALLER Menu- Enabling digital inputs ID3 and ID4



● User modifiable parameters

	Display/Parameter	Default
A ●	**Enabling ID17:** shows if the digital input ID3 is enabled for the remote ON/OFF control function (ON = closed, OFF = open)	N

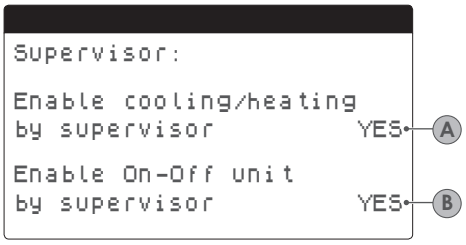
INSTALLER Menu - Addresses the BMS supervision system



● User modifiable parameters

	Display/Parameter	Default
A ●	**Select protocol:** this value indicates which protocol is used to communicate with the BMS supervision system; the support protocols are: • MODBUS: Modbus/rs485 protocol; • CAREL: protocol for expansions; • pCOWEB: protocol for pCOWEB expansions; • LON: protocol for LON expansion • MODBUS EXT: Modbus in extended version with more available addresses. By selecting this protocol you will have the same addresses available on BMS2 for AerWeb or other supervisor.	MODBUS
B ●	**Transmission speed:** this value indicates which speed is set for serial communication	19200
C ●	**Stopbits:** this value indicates the number of bits used to indicate the bit-stop in serial communication	2
D ●	**Address:** this value indicates the address assigned to the BMS supervision system towards which communication will be made	1

INSTALLER Menu- Enabling primary functions by BMS



● User modifiable parameters

	Display/Parameter	Default
A ●	**Enable change-over by BMS:** shows if the remote change-over by the BMS is enabled	YES
B ●	**Enable ON/OFF by BMS:** shows if the remote starting and stopping of the unit by the BMS is enabled	YES

INSTALLER Menu- Addressing secondary supervisor system (not opto-isolated)

```
Installer
AerWeb300 BMS2

Serial address:          1
```

User modifiable parameters

	Display/Parameter	Default
A ●	**Address:** shows the value of the address for the secondary supervisor system for communications (this serial interface is not opto-isolated so the connection distance permitted is less than the main serial interface) NOTE: The use of the second serial link is intended for transmission via the web (AerWeb300), although the serial link can be to a second supervisor system in addition to the main one (BMS1)	1

INSTALLER Menu- Selecting control for water production

```
Installer
Regulation temperature
sensor with:

       Outlet (U2)

Type reg.:     PROP + INT.
Integ. Time (Ki)      600s
```

User modifiable parameters

	Display/Parameter	Default
A ●	**Control sensor:** shows which sensor the system bases the control of water produced, which can be: • OUTLET(U2): the sensor used to control the production of water is that leaving the heat exchanger • INLET(U1): the sensor used to control the production of water is that entering the heat exchanger • COMMON OUTLET SENSOR (U3 uPC): the sensor used to control the production of water is the common leaving sensor in the event there are two heat exchangers WARNING: Selecting the control based on the entering temperature means that the correct setting for the operating setpoints must consider the addition or subtraction (based on cooling or heating mode) of the differential temperature to the operating setpoint	OUTLET (U2)
B ●	**Type of control:** shows the logic used for the control, which can be: • PROP+INT: applies proportional and integral control • PROP: applies proportional control only	PROP+INT
C ●	**Integral time:** shows the integral time to add to the proportional control (in the event the type of control selection is proportional and integral)	600s

INSTALLER Menu- Setting parameters for cooling control

```
Regulation
Cool
fixed setpoint

Differential:          5.0°C
```

User modifiable parameters

	Display/Parameter	Default
A ●	**Type of setpoint:** shows what type of logic is used for the control of the operating setpoint, which can be: • FIXED SETPOINT: the system will use as the operating setpoint the values set by the user in the System menu screen (main and secondary setpoints) • AMBIENT CURVE: the operating setpoint is calculated automatically based on the selected ambient curve	FIXED SETPOINT
B ●	**Differential:** shows the differential applied between the water inlet and outlet, where such value depends on the flow rate the system operates at	5.0°C

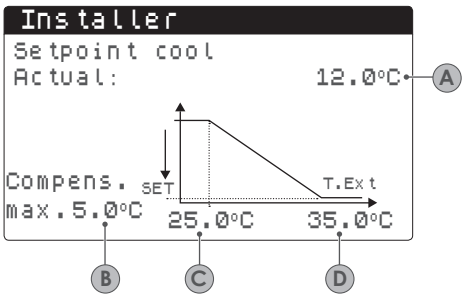
Menù INSTALLATORE - Impostazione parametri per la regolazione a caldo

```
Regulation
Heat
fixed setpoint

Differential:          3.0°C
```

User modifiable parameters

	Display/Parameter	Default
A ●	**Type of setpoint:** shows what type of logic is used for the control of the operating setpoint, which can be: • FIXED SETPOINT: the system will use as the operating setpoint the values set by the user in the System menu screen (main and secondary setpoints) • AMBIENT CURVE: the operating setpoint is calculated automatically based on the selected ambient curve	FIXED SETPOINT
B ●	**Differential:** shows the differential applied between the water inlet and outlet, where such value depends on the flow rate the system operates at	5.0°C

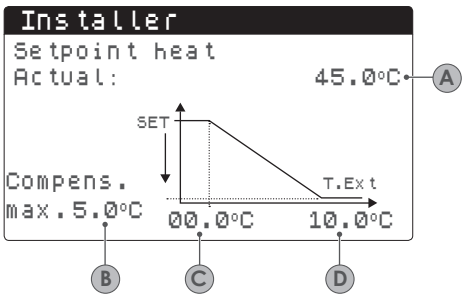
INSTALLER Menu- Setting ambient curve parameters for cooling



● User modifiable parameters

	Display/Parameter	Default
A	**Actual setpoint:** shows the current setpoint from the ambient curve	---
B ●	**Maximum differential on setpoint compensation:** shows the maximum change to apply to the original setpoint, when reaching the external temperature specified at point (C)	5.0°C
C ●	**Minimum external air temperature limit:** shows the external air temperature at which the maximum differential as specified at point (B) will be applied to the original setpoint	25.0°C
D ●	**Maximum external air temperature limit:** shows the external air temperature at which the original setpoint is applied. Below this temperature the setpoint is proportionally increased up to the value specified in point (C), where the setpoint will be compensated by the maximum differential specified in point (B)	35.0°C

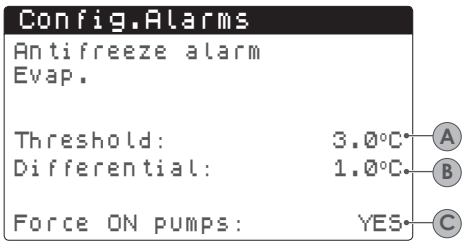
INSTALLER Menu- Setting ambient curve parameters for heating



● User modifiable parameters

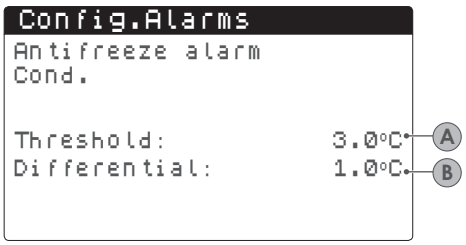
	Display/Parameter	Default
A	**Actual setpoint:** shows the current setpoint from the ambient curve	---
B ●	**Maximum differential on setpoint compensation:** shows the maximum change to apply to the original setpoint, when reaching the external temperature specified at point (D)	5.0°C
C ●	**Minimum external air temperature limit:** shows the external air temperature at which the original setpoint is applied. Above this temperature the setpoint is proportionally decreased up to the value specified in point (D), where the setpoint will be compensated by the maximum differential specified in point (B)	0.0°C
D ●	**Maximum external air temperature limit:** shows the external air temperature at which the maximum differential as specified at point (B) will be applied to the original setpoint	10.0°C

INSTALLER menu - configuration of the anti-free system alarm



	Display/Parameter	Default
A ●	**Anti-free alarm activation threshold (evaporator):** this value indicates the temperature of the inlet or outlet water (based on the type of regulation selected), below which the anti-free alarm activates	3.0°C
B ●	**Anti-free alarm differential: t**his value indicates the differential to apply to the anti-freeze activation threshold; when the water temperature (inlet or outlet) is higher than the threshold value plus the differential, the anti-freeze alarm is deactivated	3.0°C
C ●	**Pump ON power: by c**hanging this value, it is possible to decide whether to automatically activate or deactivate the pumps during the anti-freeze alarm	SI

INSTALLER Menu - Setting the parameters for total recovery



● User modifiable parameters

	Display/Parameter	Default
A ●	**Anti-freeze alarm activation threshold (condenser):** this value indicates the temperature of the inlet or outlet water (based on the type of regulation selected), below which the anti-free alarm activates	3.0°C
B ●	**Anti-free alarm differential: t**his value indicates the differential to apply to the anti-freeze activation threshold; when the water temperature (inlet or outlet) is higher than the threshold value plus the differential, the anti-freeze alarm is deactivated	3.0°C

INSTALLER Menu - Pump configuration

```
Installer
Number of Pumps:        1   (A)
Idle time:
                      168h  (B)
Delay switch-off:       5s  (C)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Number of pumps:** this value indicates the number of pumps managed by the unit; WARNING: if this parameter is modified, the system may not be able to manage the loads installed on the unit, excluding any pumps installed	1
B ●	**Off time:** this value indicates the off time for a pump, after which the pump is activated (if there are several pumps installed on the unit this prevents limescale build-up in the pump in the case of an extended stop)	168h
C ●	**Delay Off:** this value indicates the delay in turning off the pump after disabling the compressors or other sources (resistors, freecooling, etc.)	5s

INSTALLER Menu- Setting pump anti-freeze function

```
Installer
Cycles pump start
Pumps plant             N   (A)
Cycle time:          30min  (B)
Pulse time            2min  (C)
Min.Extern.Air Temp.
                     5.0°C  (D)
```

● User modifiable parameters

	Display/Parameter	Default
A	**Enabling anti-freeze function:** shows whether to enable the anti-freeze cycle function which activates the pump	N
B ●	**Time cycle:** shows the time interval between pump activations	30min
C ●	**Pump activation time:** shows the time period that the pump will be activated for the anti-freeze function	2min
D ●	**External air temperature limit:** shows the temperature below which the anti-freeze cycle is activated (if enabled)	5.0°C

INSTALLER Menu - Setting parameters for total recovery

```
Installer
Antifreeze alarm
Total Recovery
Threshold:           3.0°C  (A)
Differential:        1.0°C  (B)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Threshold:** This value indicates the temperature of the incoming water and outgoing recovery under which the alarm is activated low temperature recovery (alarm 42/43)	3.0°C
B ●	**Differential:** this value indicates the differential used to calculate the power necessary for low temperature recovery alarm.	3.0°C

INSTALLER Menu- Setting fans anti-icing function

```
Fan
Fan antifreezer/snow
Switch On:            YES   (A)
Ext.Air temp.:        1.0°C (B)
Pulse time Off:     120min  (C)
Pulse time On :        30s  (D)
```

● User modifiable parameters

	Display/Parameter	Default
A	**Enabling anti-icing function:** shows whether to enable the anti-icing function for the fans	SI
B ●	**External air temperature limit:** shows the temperature below which the anti-icing cycle is activated (if enabled)	1.0°C
C ●	**Time off:** shows the time interval between the periods of activation for the fans during the anti-icing function	120min
D ●	**Fan activation time:** shows the time period that the fans will be activated for the anti-icing function	30s

INSTALLER Menu- Setting pump operation during use of anti-freeze heaters

```
Antifreeze Heater

Force ON pumps:        YES
```

User modifiable parameters

	Display/Parameter	Default
A	**Pump enable:** shows whether the pump is activated during the operation of the electric anti-freeze heaters	NO

INSTALLER Menu- Setting multi-function input

```
Input Multifunction
Config. Input (U10):
variable set point

Type:        0-10V
```

User modifiable parameters

	Display/Parameter	Default
A	**Multi-function input:** shows which function is assigned to the multi-function input U10, which can be: • NOT PRESENT: multi-function input disabled • CAPACITY LIMIT: the input U10 is used to limit the capacity of the unit in a manner proportional to the signal applied at the input U10 (the configuration of the capacity range controlled is available in the next screen, if this option is activated) • VARIABLE SETPOINT: the input U10 is used to vary the operating setpoint in a manner proportional to the signal applied at the input U10 (the configuration of the variation to the setpoint range is available in the next screen, if this option is activated) WARNING: If the multi-function input is enabled then the status of the input to U10 will shown in the In/Out menu	NOT PRESENT
B	**Type:** shows the type of signal used for the multi-function input, which can be: • 0-10V: input signal 0-10V • NTC: input signal NTC • 4-20mA: input signal 4-20mA	0-10V

INSTALLER Menu- Configuration of capacity limit from multi-function input (if enabled)

```
Input Multifunction
Power limitation

Minimum:                0%
Maximum:              100%
```

User modifiable parameters

	Display/Parameter	Default
A	**Minimum capacity limit:** shows the minimum capacity limit as a function of the input signal	0%
B	**Maximum capacity limit:** shows the maximum capacity limit as a function of the input signal	100%

INSTALLER Menu- Configuration of variable setpoint from multi-function input (if enabled)

```
Input Multifunction

variable set point
Mode :

   Cool        |    Heat
Min:   7.0°C   | Min:  45.0°C
Max:  11.0°C   | Max:  50.0°C
```

User modifiable parameters

	Display/Parameter	Default
A	**Minimum cooling setpoint:** shows the minimum setpoint as a function of the input signal (on input U10)	7.0°C
B	**Maximum heating setpoint:** shows the maximum setpoint as a function of the input signal (on input U10)	7.0°C
C	**Minimum heating setpoint:** shows the minimum setpoint as a function of the input signal (on input U10)	7.0°C
D	**Maximum heating setpoint:** shows the maximum setpoint as a function of the input signal (on input U10)	7.0°C

INSTALLER Menu- Configuration of NTC signal from multi-function input (if enabled)

```
Input Multifunction
Config. NTC
Minimum temp.:      7.0°C  (A)
Maximum temp.:     11.0°C  (B)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Minimum NTC signal:** Shows the minimum temperature which corresponds to the to the minimum value for the function selected to the multi-function input (capacity limitation or variable setpoint)	7°C
B ●	**Maximum NTC signal:** Shows the maximum temperature which corresponds to the to the maximum value for the function selected to the multi-function input (capacity limitation or variable setpoint)	7°C

INSTALLER menu - sets night-time silenced operation (only with the accessory DCPX)

```
Fan
Silent mode
overnight           NO  (A)
On:              21:00  (B)
Off:              8:00  (C)
Cooling VMax:     6.0V  (D)
FreeCool. Vmax:   6.0V  (E)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Enables night-time silenced operation: thi**s value indicates if the night mode function should be activated; this function enables a silenced operation during the time band specified in the following parameters	NO
B ●	**Start of the night mode function time ban**d: if night-time silenced operation is active, this parameter indicates the time after which this operation will be activated	---
C ●	**End of the night mode function time ban**d: if night-time silenced operation is active, this parameter indicates the time after which this operation will be deactivated	---
D ●	**Cooling VMax:** if night-time silenced operation is active, this parameter indicates the maximum Volt applied to the cold condensation control	---
E ●	**Free Cooling VMax**: if night-time silenced operation is active, this parameter indicates the maximum Volt applied to the free cooling condensation control	---

INSTALLER menu - management of the supplementary electric heaters

```
Installer
Suppl.electric heaters
Number:                 0  (A)

Power:
                      10%  (B)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Number of installed electric heaters: th**is value indicates the number of installed electric heaters (minimum zero, maximum three)	0
B ●	**Percentage power with respect to the sys**tem: this value specifies the percentage power of the individual heater with respect to the unit's total power; WARNING: in order to permit correct management of the system's electric heaters, all heaters must have the same power; Also note that the maximum power of the single heater managed by the system is equivalent to 50% of the nominal power of the unit WARNING: To manage the supplementary heaters in the NRK modules, the accessory VMF-CRP is required	10%

INSTALLER Menu - Enabling boiler

```
Installer
Boiler in replacement
Enable:                NO  (A)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Enable boiler replacement:** This parameter specifies whether to enable the boiler when the outside temperature falls below the value of "replacement" specified in the next window, or in the case where the heat pump is in "full alarm" WARNING: To manage the boiler on NRK models, it is necessary to provide the accessory VMF-CRP	NO

INSTALLER Menu - Set temperature of integration and substitution

```
Installer
Integration air temp.:
                    5.0°C   (A)

Replacement air temp.:
                   -5.0°C   (B)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Temperature integration:** this value indicates the outdoor temperature above which the heat pump function without the aid of electrical resistors, while if the outside temperature is lower than this value, but still higher than temperature replacement, the heat pump operates TOGETHER resistances	5.0°C
B ●	**Replacement temperature:** this value indicates the outside temperature below which the heat pump stops and the electric heaters or, if enabled, the boiler, are used for heating	-5.0°C

INSTALLER Menu- Monitoring number of compressor starts circuit 1

```
Hour meter
Circuit 1

Compressor 1:       0000h   (A)
Compressor 2:       0000h   (B)
Compressor 3:         ---h  (C)
```

● User modifiable parameters

	Display/Parameter	Default
A	**Compressor 1 hour counter:** shows the number of running hours for compressor 1 on circuit 1	---
B	**Compressor 2 hour counter:** shows the number of running hours for compressor 2 on circuit 1 (if present)	---
C	**Compressor 3 hour counter:** shows the number of running hours for compressor 3 on circuit 1 (if present)	---

INSTALLER Menu- Monitoring compressor hour counter circuit 2 (if present)

```
Hour meter
Circuit 2

Compressor 1:       0000h   (A)
Compressor 2:       0000h   (B)
Compressor 3:         ---h  (C)
```

● User modifiable parameters

	Display/Parameter	Default
A	**Compressor 1 hour counter:** shows the number of running hours for compressor 1 on circuit 2 (if present)	---
B	**Compressor 2 hour counter:** shows the number of running hours for compressor 2 on circuit 2 (if present)	---
C	**Compressor 3 hour counter:** shows the number of running hours for compressor 3 on circuit 2 (if present)	---

INSTALLER Menu- Monitoring number of compressor starts circuit 1

```
Hour meter
Circuit 1
Number of starts

Compressor 1:         0000  (A)
Compressor 2:         0000  (B)
Compressor 3:          ---  (C)
```

● User modifiable parameters

	Display/Parameter	Default
A	**Compressor 1 number of starts:** shows the number of starts for compressor 1 on circuit 1	---
B	**Compressor 2 number of starts:** shows the number of starts for compressor 2 on circuit 1	---
C	**Compressor 3 number of starts:** shows the number of starts for compressor 3 on circuit 1	---

INSTALLER Menu- Monitoring number of compressor starts circuit 2 (if present)

```
Hour meter
Circuit 2
Number of starts
Compressor 1:        0000  (A)
Compressor 2:        0000  (B)
Compressor 3:         ---  (C)
```

● User modifiable parameters

	Display/Parameter	Default
A	**Compressor 1 number of starts:** shows the number of starts for compressor 1 on circuit 2	---
B	**Compressor 2 number of starts:** shows the number of starts for compressor 1 on circuit 2	---
C	**Compressor 3 number of starts:** shows the number of starts for compressor 3 on circuit 2	---

INSTALLER Menu - Configures fan speed

```
Fan
Fan
Start time:          1s  (A)

Min Volt:           1.5  (B)
Max V cooling:     10.0  (C)
Max V heating:     10.0  (D)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Duration of the initial start:** this value indicates the duration of the start at 4V when the fans are started	1s
B ●	**Minimum Speed:** this value indicates the voltage at minimum speed before shutdown	1.5V
C ●	**Cooling maximum speed:** this value indicates the voltage at maximum speed during cooling mode. Used for silenced versions with NRB	10.0V
D ●	**Heating maximum speed:** this value indicates the voltage at maximum speed during heating mode. Used for silenced versions with NRB	10.0V

INSTALLER Menu - Configures Master/Slave

```
Master/Slave
Unit:              single  (A)
Step:                1.0%  (B)
Slave Pump off with
Compressor off:        NO  (C)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Type of unit:** this value indicates the type of setting for the unit; this type can be: • SINGLE: unit without Master/Slave connection; • MASTER: identifies the master unit; • SLAVE: identifies the slave unit;	SINGLE
B ●	**Power step:** the required power calculated by the thermostat is divided between the master and slave units based on this parameter. E.g.: 1% = the units work in parallel. 100%= the units work in sequential mode (first all the power of one is used and then all the power of the other is used)	1%
C ●	**Slave pump Off with CP Off:** this value indicates management of the pump on the slave unit; this management can be: • YES: the slave pump turns off if there is no request on the slave; • NO: the slave pump turns on and shuts down together with the master;	NO

INSTALLER Menu - Configures freecooling

```
Installer
Delta T:            15.0°C  (A)
Max V Freecooilng:
                     10.0v  (B)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Delta T:** this value indicates the delta T generated at maximum fan speed at an external design air temperature.	15.0°C
B ●	**Maximum voltage in freecooling operation:** this value indicates the maximum voltage to fans during freecooling operation. Used in silenced units to reduce noise	10.0V

INSTALLER Menu - Freecooling output control

```
Installer
Freecoling
Control of gain

Delta T:          1.5°C  (A)

Time:             180s   (B)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Delta T on freecooling battery:** this value indicates the Delta T generated at maximum fan speed. The freecooling operation output control constantly verifies that the freecooling battery generates a DeltaT; this data item is used as a safety control on the operation of the 3-way valve (the control is activated only with maximum ventilation)	1.5°C
B ●	**Control time:** this value indicates the bypass time of the output control from the input in freecooling.	180s

INSTALLER menu - management of the valves on the NYB/NRV unit

```
Installer
NYB/NRV StandBy
Valves closed :   NO  (A)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Enables the boiler as replacemen**t: this parameter indicates whether or not to close the valves for the passage of water in the evaporator when the units are in stand-by: • NO: the water will pass in the evaporator when the machine is in stand-by; • YES: the water will not pass in the evaporator when the machine is in stand-by;	NO

INSTALLER menu - enabling VPF management

```
Installer
VPF
Enable:           YES    (A)
Differential pressure
Set:              1.5    (B)
Diff:             10.0   (C)
Integral:         10.0   (D)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Enable VPF:** this value indicates whether or not to enable management of the primary variable flow rate	NO
B ●	**Pressure set: thi**s value indicates the pressure that VPF management will maintain at the terminals of the evaporator by opening and closing the bypass valve	150mbar
C ●	**Differential:** this value indicates the differential used when regulating bypass valve opening	150mbar
D ●	**Integral time: t**his value indicates the integral time used when regulating the bypass valve	180s

INSTALLER menu - configures VPF bypass parameters

```
Installer
VPF
Bypass min:       4.0V   (A)
Bypass max:       8.0V   (B)

Trasd. 4mA:       0mbar  (C)
Trasd. 20mA:      1000mbar (D)
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Bypass MIN:** this value indicates the volts to which the bypass minimum corresponds (all the water passes in the system)	4.0V
B ●	**Bypass MAX:** this value indicates the volts to which the bypass maximum corresponds (all the water recirculates through the bypass)	8.0V
C ●	**Transducer 4mA:** this value indicates the value in mbar at 4mA read by the differential transducer	0
D ●	**Transducer 20mA:** this value indicates the value in mbar at 20mA read by the differential transducer	1000

INSTALLER menu - configuration of the VPF opening

```
Installer
VPF
Pressure:          211mbar   A
Bypass
Proportional        61.0%    B
Integral:          100.0%    C
Opening valve:       4.0V    D
Bypass time:         0.0V    E
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**Pressure:** this value indicates the current pressure read by the transducer	---
B ●	**Proportional:** this value indicates the proportional component when calculating bypass opening	---
C ●	**Integral:** this value indicates the integral component when calculating bypass opening	---
D ●	**Valve opening command: th**is value indicates the current command for opening the bypass valve	---
E ●	**Bypass valve test: this** value indicates the forced command to use as a test (set the value 0.0V to deactivate forcing)	0.0V

INSTALLER Menu- Monitoring unit configurator and test info

```
Information
Aermec S.p.A.
Code:
            NRL1400°°°°°°°00   A
B Ver.: 0.0.1       12/03/13   C
Testing date:
      10:23         13/06/13   E
        D
```

● User modifiable parameters

	Display/Parameter	Default
A	**Configuration code:** shows the commercial code which identifies the unit and configuration	---
B	**Software version:** shows the software version installed on the unit	---
C	**Software version date:** shows the date of the software installed on the unit	---
D	**Test time:** shows the time the unit was tested in the factory	---
E	**Test date:** shows the date the unit was tested in the factory	---

INSTALLER Menu- Monitoring unit configurator and test info

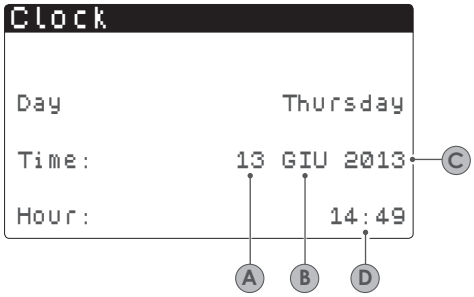
```
Language
Language:        ENGLISH   A

   Push ENTER for change
```

● User modifiable parameters

	Display/Parameter	Default
A ●	**System language:** shows the system language in use, which can be modified by following the instructions on the screen (ENTER to modify the language)	---

11. CLOCK MENU

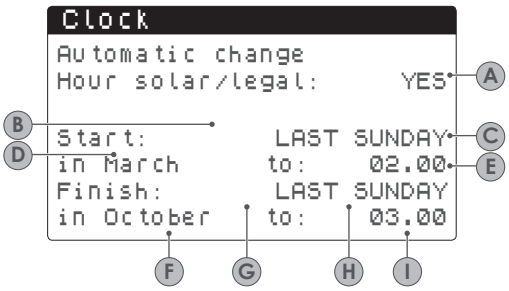
CLOCK Menu - Setting system date and time



● User modifiable parameters

	Display/Parameter	Default
A ●	**System day:** shows the day of the system	---
B ●	**System month:** shows the month of the system	---
C ●	**System year:** shows the year of the system	---
D ●	**Orario del sistema:** questo valore indica l'ora impostata sul sistema	---

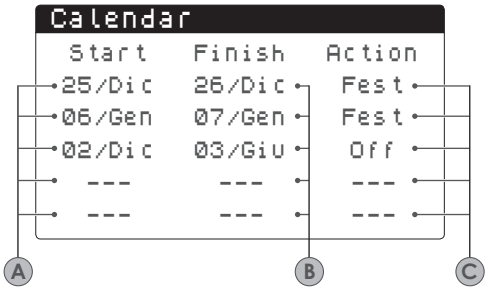
CLOCK Menu - Setting automatic time change (summer/winter time)



● User modifiable parameters

	Display/Parameter	Default
A ●	**Enable automatic control:** shows if the time change between summer and winter time is carried out automatically	---
B ●	**Time change week:** shows which week of the month that the time change is made	---
C ●	**Time change day:** shows which day of the week that the time change is made	---
D ●	**Time change month:** shows which month the time change is made	---
E ●	**Time change hour:** shows what hour that the time change is made	---
F ●	**Return time change week:** shows which week of the month that the return time change is made	---
G ●	**Return time change day:** shows which day of the week that the return time change is made	---
H ●	**Return time change month:** shows which month the return time change is made	---
I ●	**Return time change hour:** shows what hour that the return time change is made	---

CLOCK Menu - Setting holidays



● User modifiable parameters

	Display/Parameter	Default
A ●	**Start date:** shows the date of the start of the holiday. The calender can control a maximum of 5 days defined as hlidays, during which time specific actions are carried out	---
B ●	**End date:** shows the date of the end of the holiday. The calender can control a maximum of 5 days defined as holidays, during which time specific actions are carried out	---
C ●	**Action to associate with holiday:** shows which action the unit will take during the holiday, which may be: • OFF: unit will be off during the days selected • FEST.: unit will be controlled as specified in the time-clock programme called HOLIDAY (for further information refer to the function of the time-clock) • --- : if no action is specified the unit will be controlled by the manual settings	---

12. ALARM SUMMARY TABLE

The unit provides a display of the possible faults, announced by the flashing of the alarm key with the bell symbol located on the left of the display. Pressing the bell key displays the alarm. The reset of the alarm can be automatic, manual or semi-automatic on the basis of the type and severity of the alarm. To reset the alarm message it is necessary to press the bell key again, but this does not reset the cause of the alarm, but only acknowledges it.

The following table lists the faults that can be generated by the unit and a brief explanation of the possible cause.

Alarm reset types:

Manual reset:
Unit is reset manually by removing and re-applying power.

Automatic reset:
The unit is reset automatically

Semi-automatic reset:
The unit is reset semi-automatically if the alarm is repeated a maximum of three times consecutively, and after a further alarm requires manual reset.

ALARM summary table			
Code	**Alarm description**	**Reset**	**Note**
AL01	Clock battery faulty or not connected		---
AL02	Expansion memory damaged		---
AL03	Phase monitor		---
AL04	---	---	---
AL05	High pressure sensor circuit 1 faulty or not connected		Analogue input U5
AL06	High pressure sensor circuit 2 faulty or not connected		Analogue input U8
AL07	Low pressure sensor circuit 1 faulty or not connected		Analogue input U6
AL08	Low pressure sensor circuit 2 faulty or not connected		Analogue input U9
AL09	Inlet water temp sensor evap.1 faulty or not connected		Analogue input U1
AL10	Outlet water temp sensor evap.1 faulty or not connected		Analogue input U2
AL11	Outlet water temp sensor evap.com. faulty or not connected		---
AL12	Inlet water temp sensor recovery faulty or not connected		---
AL13	Outlet water temp sensor recovery1 faulty or not connected		---
AL14	Outlet water temp sensor recovery2 faulty or not connected		---
AL15	Outlet water temp sensor recovery common faulty or not connected		---
AL16	External temperature sensor faulty or not connected		---
AL17	Liquid temperature sensor circuit 1 faulty or not connected		---
AL18	Liquid temperature sensor circuit 2 faulty or not connected		---
AL23	Circuit breaker compressor 1 circuit 1		---

AL24	Thermal alarm system pump 1		---
AL25	Thermal alarm system pump 2		---
AL26	Thermal alarm heat recovery pump 1		---
AL27	Thermal alarm heat recovery pump 2		---
AL28	Fans circuit breaker circuit 1		---
AL29	Fans circuit breaker circuit 2		---
AL31	Low pressure sensor circuit 1		---
AL32	High pressure pressostat circuit 1		---
AL33	High pressure sensor circuit 1		---
AL34	Circuit 1 low pressure sensor (serious)		---
AL35	Circuit 2 low pressure sensor (serious)		---
AL38	Loss of evaporator water flow		---
AL39	Loss of heat recovery water flow		---
AL40	Anti-freeze alarm system inlet/outlet temperature		---
AL41	Anti-freeze alarm system common outlet temperature		---
AL42	Anti-freeze alarm heat recovery 1 inlet/outlet temperature		---
AL43	Anti-freeze alarm heat recovery 2 outlet temperature		---
AL44	Anti-freeze alarm heat recovery common outlet temperature		---
AL45	Expansion IO (uPC) Off-line		---
AL46	Expansion IO (pCOe) Off-line		---
AL48	Discharge gas temperature sensor circuit 1 faulty or not connected		---
AL49	Discharge gas temperature sensor circuit 2 faulty or not connected		---
AL50	Board re-start from lost power		Non è un allarme
AL59	Circuit breaker compressor 2 circuit 1		---
AL60	Circuit breaker compressor 3 circuit 1		---
AL61	Circuit breaker compressor 1 circuit 2		---
AL62	Circuit breaker compressor 2 circuit 2		---
AL63	Circuit breaker compressor 3 circuit 2		---
AL65	Low pressure sensor circuit 2		---
AL66	High pressure pressostat circuit 2		---
AL67	High pressure sensor circuit 2		---
AL75	High discharge gas temperature circuit 1		---
AL76	High discharge gas temperature circuit 2		---

AL84	High heat recovery inlet temperature alarm		---
AL85	High system inlet temperature alarm		---
AL87	Master Offline		---
AL88	Slave Offline		---
AL89	Incorrect Master/Slave software version. (the two cards do not have the same software version)		---
AL90	Freecooling efficiency alarm		---
AL91	Slave alarm summary		---
AL92	Glycol Free flow switch		---
AL93	Glycol Free pump thermal		---
AL94	pCOE expansion offline (address=3) DK Unit		---
AL95	Common evaporator output probe broken or not connected		---
AL96	Evaporator output probe 2 broken or not connected		---
AL97	Freecooling input probe broken or not connected		---
AL98	Freecooling output probe broken or not connected		---
AL99	Glycol intermediate heat exchanger input probe broken or not connected		---
AL100	Offline pCOE expansion (address=4) condenser unit		---
AL101	Offline pCOE expansion (address=5) free cooling		---
AL102	Water input outside operating limits		---
AL103	DeltaP Circ1 alarm		---
AL104	DeltaP Circ2 alarm		---
AL105	EVD Valve A motor error		---
AL106	EVD Low evap. temp.(LOP) A		---
AL107	EVD High evap. temp.(MOP) A		---
AL108	EVD Low overheat.(LowSH) A		---
AL109	EVD Low intake temp. A		---
AL110	EVD High condensation temp. A		---
AL111	EVD Valve motor error B		---
AL112	EVD Low evap. temp.(LOP) B		---
AL113	EVD High evap. temp. (MOP) B		---
AL114	EVD Low overheat.(LowSH) B		---
AL115	EVD Low intake temp. B		---
AL116	EVD Probe S1 alarm		---
AL117	EVD Probe S2 alarm		---

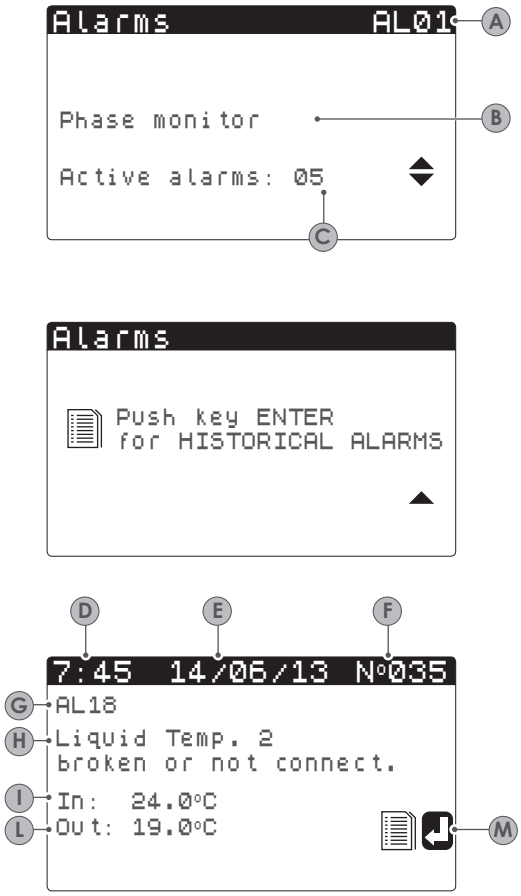
AL118	EVD Probe S3 alarm		---
AL119	EVD Probe S4 alarm		---
AL120	EVD EEPROM alarm		---
AL121	EVD Driver offline		---
AL122	EVD Battery discharged		---
AL123	EVD Parameter transmission error		---
AL124	EVD Firmware not compatible		---
AL125	EVD Battery 2 battery liquid temperature probe broken or not connected		---
AL126	Expansion IO (pCOe) OffLine (address=6)		---
AL127	Circuit 1 intake temperature probe broken or not connected		---
AL128	Circuit 2 intake temperature probe broken or not connected		---
AL129	Expansion IO (pCOe) OffLine (address=7)		---
AL130	Differential transducer broken or not connected		---

13. ALARM HISTORY

Each time an alarm is generated it is saved in the "alarm history" memory. This memory contains the last 100 alarms recorded. For each alarm saved the inlet and outlet water temperatures are also recorded, so that the service personnel can have a clear picture of the unit at the time the alarm occurred.

To access the alarm history:
(a) Press the key ( ) and enter the alarm display.
(b) If any are present, go through the active alarms with the key ( ) and reach the icon that gives access to the alarm history.
(3) Press the key ( ) to enter the alarm history.
(4) To exit the alarm history press the key ( ) or the key ( ).

Alarm history and memory



	Display/Parameter	Default
A	**Code of active alarm:** shows the code for the active alarm currently displayed	---
B	**Description of active alarm:** shows the description of the active alarm currently displayed	---
C	**Total number of active alarms:** shows the total number of active alarms. Active alarms are announced by a red light on the bell labelled key	---
D	**Alarm history - Alarm time:** shows the time of the alarm occurring	---
E	**Alarm history - Alarm date:** shows the date of the alarm occurring	---
F	**Alarm history - Alarm index:** shows the index of alarm (maximum 100) in the alarm history	---
G	**Alarm history - Alarm code:** shows the identifying code of thee alarm	---
H	**Alarm history - Alarm description:** shows the description of the alarm	---
I	**Alarm history - Temperature IN:** shows the water inlet temperature at the time the alarm occurred	---
L	**Alarm history - Temperature OUT:** shows the outlet water temperature at the time the alarm occurred	---
M	**Alarm history - Refrigerant circuit pressure info:** pressing the enter key during the display of the alarm history the water temperature data is replaced by the high (HP) and low (LP) pressure values measured on the refrigerant circuit at the time the alarm occurred **Note: further pressing of the enter key alternates between the water temperatures and the circuit refrigerant pressures**	---

THE ALARM HISTORY CANNOT BE CANCELLED and having a limit of 100 alarm histories, any additional new alarms after the index value 99 will incrementally start with the index value 00 and overwrite the old data.

Tutte le specifiche sono soggette a modifiche senza preavviso. Sebbene sia stato fatto ogni sforzo per assicurare la precisione, Aermec non si assume alcuna responsabilità per eventuali errori od omissioni.

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