AERMEC

la prima per il clima

SWIMMING POOL LINE – Manual adjustment for Eliwell Control - User Manual

SPL

EN

AERMEC
COMPANY QUALITY SYSTEM
ICIM
ISO 9001:2000 - n° 0128/4
CISQ IQNet
AERMEC S.P.A.

CE

0412-6180864 Rev.00

1 INDEX

2 PURPOSE

- The purpose of this manual is to provide all the basic information needed to run a **SPL** UNIT equipped with EXTK PRO keyboard (see Fig. 1 page 6).
- The recipients of this manual include those involved in the basic operation of the UNIT.

3 USE OF THE DEVICE

Permitted use

This product is used for the control of the SPL unit. For safety reasons, the control device must be installed and used according to the instructions provided and in particular, under normal conditions, live parts must not be accessible.

The device must be protected from water and dust according to the application, and should only be accessible with the use of tools.

Unintended use

Any use other than that expressly permitted is prohibited. Please note that the relay contacts supplied are functional and are subject to failure, (since they are managed by an electronic component they can short or remain open). Any protection devices required by product standards or dictated by common sense for obvious safety reasons should therefore be made outside of the instrument.

4 RESPONSABILITIES AND RESIDUAL RISKS

Aermec SpA are not liable for any damages arising from:

• installation/use other than that prescribed and, in particular, that does not comply with safety requirements laid down by regulations and/or specified in the present;

• use on equipment that do not provide adequate protection against electric shock, water and dust following the assembly;

• use of devices that allow access to hazardous parts without the use of tools;

• installation/use on equipment not conforming to regulations and provisions in force.

5 WEEE DIRECTIVE (FOR EU ONLY)

WEEE Directive (for EU only)

All materials must be recovered or disposed of in accordance with national regulations.

• The WEEE Directive requires that the disposal and recycling of electrical and electronic equipment must be managed through a special collection, in appropriate centres, separate from the one adopted for the disposal of mixed municipal waste.

• The user is obliged not to dispose of equipment at the end of its useful life as municipal waste, but to dispose of it in a special collection centres.

• The units covered by the WEEE Directive are marked with the above symbol.

• Potential effects on the environment and human health are presented in this manual.

• Additional information may be obtained from the manufacturer.

6 DIAGRAM OF THE PARAMETER MASKS

MENU

Password	1	*****
Modo Configur. IO		SI/NO
		IO XTMH
		AI
		AO
		ID
		NO
		MODO TEST
		ABILITA
		TEST DO AO
		SET POLARITA'

PARAMETRI

	Bios	
	Stringhe	
lingua	Generali	PAR_BOO_BIOS_5
	Gfg XTMH	
	Gfg XTMH1	
	Gfg XTMH2	
	Gfg XTMH3	
	Gfg XTMH4	
	Comunicazione	
Protocollo	PAR_ANA_BIOS_190	(2= Paramanager, 3= Modbus)
Baudrate	PAR_ANA_BIOS_191	(0=9600, 1=19200, 2=38400)
Parità	PAR_ANA_BIOS_192	(0=NULL, 1=ODD, 2=EVEN)

Allarmi

Allarmi Bios
Allarmi User
Errori Sonda
Reset allarmi
Storico
Cancella Storico

Data e Ora

Modifica Data
Modifica Ora

Stati

Impianto
Modo
Sonda PA
Vent. Mandata
Vent. Ripresa
Deum. Aria Est.:
Um. Sp. Est.:
Um. Sp. Set
Serranda 1-3
Serranda 4-5
Circuito
Compressori
Cond. Aria
Valvola Acqua

Temperature

Ambiente
Limite
Esterna
Esp.Antigelo
Antigelo
Set Ambiente
Set post

Altre Sonde

UM. Ambiente
UM Esterna

Funzioni

Limite Temp
Limite Umidità ECO
AF Rec.

Fascie Orarie

Timer
Tipo Timer
Impostazioni

Ore d'uso

Impianto
Compressore 1
Filtri

SETPOINT

	Piscina
	Comfort
	Economy
	Ambiente
	Offset
	Umidità
3.1	**Post Ventilazione**

IMPIANTO

Strutturali	
Tipo Impianto	Serr-Frigo
N° Compressori	1
Condensatori	
TIPO	Aria-Acqua
Tempo min cambio condensatore	20s
Termoregolazione	
Configurazione	
Min Set	15.0 °C
Max Set	35.0 °C
Ambiente-Piscina	
Comfort Piscina	29.0 °C
Economy piscina	27.0 °C
Offset Ambinete vs piscina	0.0 °C
Post Riscaldamento	
Banda proporzionale	4.0 °C
Max Offset Post vs Set Ambinte	10.0 °C
Conf. Allarmi	
Alta Temperatura	No
Alta Temperatura OFFSET	0.5 °C
Alta TempByPass Ingresso	60min.
Bassa Temperatura	No
Bassa Temperatura OFFSET	0.5 °C
Bassa TempByPass Ingresso	60min.
Umidità	
Set Comfort	60%
Max Offset Economy	10%
Set temperatura esterna	15.0 °C
Banda proporzionale temp. esterna	10.0 °C
Diff. Umidità Specifica	2.0g/Kg
Diff. Umidità Elevata Eco	5%
Bypass Umidità Elevata Eco	5min.
Diff.Allarme Alta umidità	20.0%
Antigelo Rec.	
Antigelo Rec. Set Temperatura	1.0 °C
Antigelo Rec. Isteresi	4.0 °C
Bypass Allarme	15min.
Cicli	
Ciclo 3	Off
Ciclo 3S	On
Circuiti	
Alta Pressione	
Alta Press.Set	38.0 °C
Alta Press.Isteresi	2.0 °C
Prev.Alta Pressione	
SET	31.0bar
ISTERESI	4.0bar
Bassa Pressione	
Max Allarmi Ora	3
SET	4.0bar
Isteresi	0.6bar
Bassa Press.BY Pass Ingr.	30s
Pressione Differenziale	
Set	5.0bar
Tempo di ripristino	10s
Max Allarmi Ora	3
Massima Bassa Press.	
Abilita	No
Set	11.5bar
Diff.Temp. Esterna	5.0 °C
Compressori	
Minimo OFF ON	240s
Minimo ON OFF	240s
Partenze/Ora Massimo	6
Termica Compressore	Si
Abilita Swap	Si
Massimo tempo di ON per Swap	100h
Min. tempo di OFF per Swap	100h
Ritardo compressore vs EEV	10s
Banda proporzionale deumidificazione	20%
Banda proporzionale post	5.0 °C
Zona morta post	0.0 °C
Selez. Compressori	
Compressore 1	Si
Compressore 2	Si
Altri allarmi	
Limite Temp. Serrande	
Diff. Mandata Ambiente	6.0 °C
Tempo chiusure serrande	15min.
Tempo Bypass	10min.
Limite ore d'uso	
Soglia Ore Impianto	20000h
Soglia Ore Compressore	10000h
Filtri e Ventole	
All. Sonda PA Set	50Pa
All. Sonda PA Isteresi	20Pa
Bypass Allarmi Sonda PA	10s
Storico	Si

MANUTENZIONE

Tempi Impianto	
Ritardo Accensione	60s
Ritardo Spegnimento	60s
Valvola Acqua	
Valvola Acqua Post. Banda Prop.	2.0 °C
Zona morta compr. Disponibili	1.0 °C
Zona morta non compr. Disponibili	0.0 °C
Antigelo	
Antigelo	No
Max Allarmi Ora	10000
Antigelo SET	3.0 °C
Antigelo Isteresi	4.0 °C
Antigelo ByP Ingresso	30s
Serranda	
Messa a Regime	10 Min
Aperture con Errore Sonda Press. Diff.	20%
Apertura minima Comfort	30%
Apertura minima Economy	10%
Banda proporz. CWD/Ciclo2-3S	20%
Banda proporz. Ciclo3	20%
Min Zona morta Ciclo2-3	4%
Max Zona morta Ciclo2-3	4%
Banda prop. UM.Spec.	6,0g/Kg
Set temp. esterna Ciclo3S	0.0 °C
Diff. Temp. Esterna Ciclo3S	3.0 °C
Set Pressione Start Ciclo 3S	6.9bar
Limiti	
Temp. Mandata	
Set Up	50
Isteresi	6.0 °C

7 USER INTERFACE

The Figure 1 illustrates the keyboard for the user interface which allows to perform all operations concerning the use of the controller and in particular:

- turn the unit on and/or off;
- set the unit's operating mode;
- set the time slots;
- manage alarm situations;
- set the parameters

Figure 1: Keyboard on the machine (standard) and/or remote keyboard (accessory)

The keyboard, with degree of protection IP65, consists of:

- a graphic 4-line LCD display .

When any one of the keys is pressed, the monitor lights up for 10 seconds. In normal view (main view with default menu) the "menu" is displayed and allows:

- to enter the password
- to access the configuration mode
- to view the inputs and outputs of the XTMH basic card (the card that translates commands from the control card in machine language)

- 3 leds that indicate:

- Green Led 1 (first from the top).
  Indicates the presence of the supply voltage.
  Lights if the unit is electrically powered (main switch in the ON position) even when off or in stand-by; it will be off if the device is not powered (main switch set to OFF).

- Yellow Led 2 (second from the top). 

  Indicates that there is communication between the keyboard and the controller.
  Lights if there is communication and off if the communication is interrupted or absent.
  The absence of communication has a delay time of 10 seconds, after which the yellow LED flashes and the display will show “Energy XT PRO”.
  To restore communication, the yellow LED lights and the lack of communication status previously displayed appears again on the screen.

- Red Led 3 (third from the top).
  Indicates that an alarm is present.
  Lights if there is at least one alarm active;
  Off if there are no alarms active;
  Flashing if there are alarms active that can be turned off manually.

ON / OFF

Function keys: F1, F2, F3, F4 and Push: ON/OFF

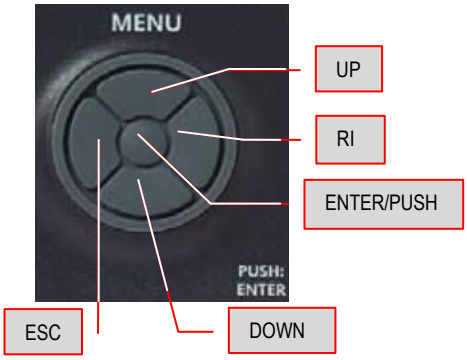
These buttons provide access via shortcuts to specific commands that are present in the general menu. These keys give direct access to some commands without following the canonical path foreseen by the menu.

The unit is turned on or off by pressing the centre button for a few seconds (PUSH: ON / OFF).
Act on the four external positions (F1: above; F3: below; F2: right; F4: left):

- a single press: accesses the Menu menu
- pressing for a few seconds:

TEMPERATURE 01/03 **Room** 26.7°C **Limit** 37.5°C **Outside** 0.5°C	- F1: displaying the temperatures detected and the SETs set;
STATUS 01/05 **System** Comfort **Mode** Cycle3s	- F2: displaying the component's operation conditions (e.g. whether it is operating a Comfort or Economy cycle);
ALARMS 01/02 **Bios Alarms** **User Alarms** **Probe errors**	- F3: access to the alarms menu;
TIME SLOTS 01/01 **Timer** No **Timer type** Weekly **Settings**	- F4: access to the time slot menu.

Menu keys: Arrow up, down, right, left and central Enter/Push key.
With a single press of the keys:



- top arrow: scrolls the items in the menu upwards;
- bottom arrow: scrolls the items in the menu downwards;
- left arrow (ESC): returns to the previous menu (each press returns by one level)
- right arrow: accesses to possible changes and/or confirms the set value
- central Push key: confirms the command or accesses the indicated menu.

As well as the main panel there may also be a remote panel (additional) which repeats all of its functions; to connect the remote panel follow the instructions on the wiring diagram of the unit. The indications for fixing the remote panel to a suitable support are included in the packaging of the accessory itself. The accessory normally comes packed and positioned inside the electrical panel of the unit.

8 SWITCHING ON AND OF

The unit is turned on or off by pressing the centre button for a few seconds (PUSH: ON / OFF).

The unit can be turned on or off by pressing the Push: ON/OFF key (centre button of the Function keys) on the machine control panel or remote control panel (accessory) for a few seconds.

In the event of power failure during the operation of the machine, when the power returns, the unit starts to operate again in the same manner prior to the power supply failure.

If the unit has already been activated with the Push:ON/OFF key, it can be subsequently turned off and on again

- from the dedicated remote digital input (refer to the wiring diagram for indication of the remote ON/OFF contact). This contact can only turn the unit off: the unit cannot be turned on again by the Push: ON/OFF if the contact is closed
- by the time slot, if enabled.

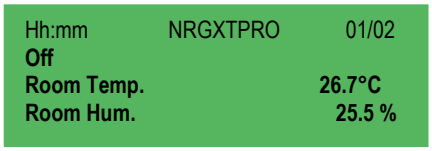
When the unit turns off the "shut down" procedure starts and stops the machine. "OFF" is displayed only after all components have been switched off.

- to use the remote contact for the first time, turn the unit on with the Push: ON/OFF key;
- the switch on/shut down of the unit via the remote contact is priority both on the start-up/shut down by the Push: ON/OFF key as well as on the time slot;
- if the Push: ON/OFF key has to be used, the remote contact must be ON and/or the time slot disabled.

In the event of power failure during the shut down procedure of the machine, when the power returns the machine restarts **Off** (standby).

The initial default mask (on two pages/screens).

A mask appears on two pages when the controller is turned on



Each screen can display 4 lines at a time.

The second screen or the subsequent screens can be displayed by pressing the arrow keys at the bottom of the Menu keys group.

NOTE: The following screens can be displayed also by
- pressing repeatedly the ESC key on the left of the Menu Keys Group.

9 MODIFYING THE SET-POINT

Before going into detail on the operational procedures necessary to carry out the variation of a SET-POINT parameter, the potential variables present in the menu must be clearly explained.
2 programs are discussed on page 1/3 with which it is possible to set the water temperature in the tank in “Comfort” mode and in “Economy” mode

All temperatures are detected in the recovery part of the machine.

The "Comfort" menu provides the option to vary the temperature of water in the tank, in accordance with the needs of the customer (sports, recreational, therapeutic etc.)

The "Economy" menu is used when no activities are scheduled for the pool (e.g. at night), and it maintains the water temperature at a level a few degrees below the one set for the “Comfort” mode.

Two parameters which related to the temperature of the internal air are discussed on page 2/3:

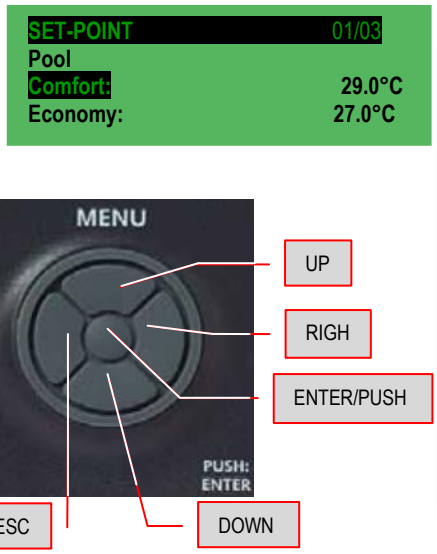
Offset in which the Δt (temperature difference) between the water in the tank and the air is indicated; to be indicated at the customer's discretion in accordance with the intended use.

Humidity in which the percentage of humidity required within the pool premises is entered.

Page 3/3 provides information on the Post Vent., a piece of data which relates *exclusively to the delivery part* of the unit, this data cannot be manipulated and is always equal to the temperature of the water in the "Comfort” mode tank

The temperature settings can be modified as required from the second page of the initial default mask.
Position the cursor on the text "Set Point" using the UP-DOWN keys:

press the ENTER/PUSH button



1 DOWN arrow to select the value to be modified (Comfort - Economy);

2 Right arrow to select the value;

3 ENTER/PUSH to modify it (the value flashes);

4 UP arrow or DOWN arrow to modify it;

5 ENTER/PUSH to confirm. Left arrow/ESC to end the editing of the value selected.

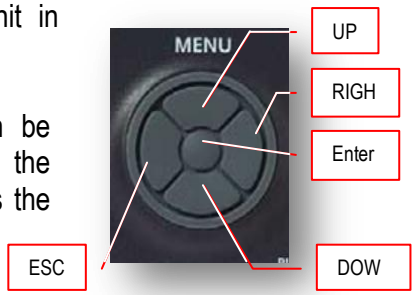
6 Left arrow/ESC to return to the initial screen.

- Modify the economy SET POINTS by repeating steps 1 to 6.

- To return to the default mask, press the "Left arrow" key several times.

10 TIME SLOTS

Up to 4 different interventions called "slots" can be set for each day of the week. They can be activated individually and within them all the information necessary to operate the unit in automatic mode can be entered.



The management of the time slots can be accessed from the main menu; scroll on the main menu with the DOWN key as far as the heading TIME SLOTS appears.

After confirming the selection with the centre key of the MENU, the Timer, Timer type and Settings modes appear on screen.
This menu can be accessed directly by pressing and holding the F4 key.

The TIMER menu is only accessed to set or not the application:
TIMER, ENTER, right key to make the YES/NO flash, UP - DOWN key to perform the desired variation, confirm with ENTER and exit a level with ESC + ESC.

The TIMER TYPE can be selected from the TIMER menu by means of the UP–DOWN keys;

the following types are available:

1 - 7/7:
in which the data can be entered subdivided in each day of the week in order to meet all user needs;

2 - Weekly:
in which is set a standard value repeated for each day of the week;

3 - 5+2:
in which the week is essentially managed with working slots and festive slots.

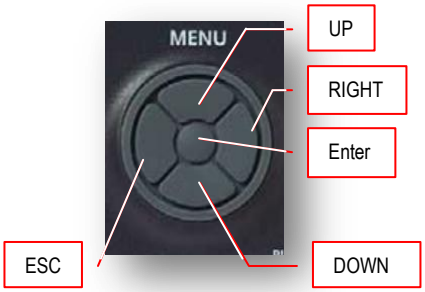
Depending on the choice made (7/7, Weekly, 5+2) the SETTINGS menu, of the TIME SLOTS menu, will give you the possibility to set options according to your personal needs: by the way, in any case 4 slots are managed for each type of timer, in which it is possible, for each of them, to change the condition of the unit.

e.g.: Slot 1- switch on at 5.00 in the morning in economy mode;
Slot 2- mode variation from economy to comfort at 08.00 in the morning;
Slot 3 - mode variation from comfort to economy at 22.00 at night;
Slot 4- off at 24.00 at night.

or

Slot 1- mode variation from economy to comfort at 08.00 in the morning;
Slot 2 - mode variation from comfort to economy at 22.00 at night;
Slot 3- not in use;
Slot 4- not in use.
(in this case the unit is not switched off; rather it remains on 24/24h).

Etc.



- Timer type 7/7:

- scroll the Time Slots menu with the UP-DOWN keys till you find SETTINGS, then press ENTER;

- all the days of the week that can be selected via the UP-DOWN keys appear
; select the desired day by pressing ENTER (e.g.: Monday);

- SLOT1 appears on the screen with the TIME setting, press ENTER (the time flashes);

- press the UP-DOWN key to select the hours, press ENTER to confirm (the hours continue to flash), press ESC to exit by one level;

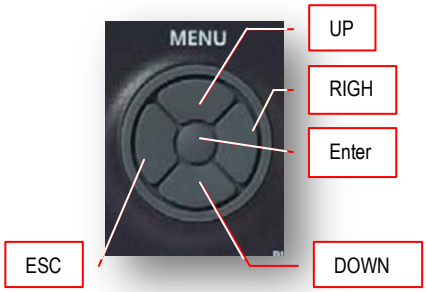
- press the DOWN key, press the ENTER key to select the MINUTES;

- press the UP-DOWN key to select the minutes, press ENTER to confirm (the minutes continue to flash), press ESC to exit by one level;

- press DOWN and then ENTER to select the MODE that can be: ON or OFF

Once the MODE in which the machine must operate in slot 1 has been determined, press the ESC button once to return to the previous menu

It is possible, from the SET menu, to choose whether to perform a Comfort cycle (usually during the day) or an Economy cycle (usually at night).



Timer Type **WEEK:** for this type of selection, the software manages each day of the week in the same way; **The settings are defined step-by-step in the previous paragraph 7/7**; there are four time slots for this module also.

Timer Type **5+2:** for this type of selection, the software manages the week into two sections, the work section from Monday to Friday and the festive section, from Saturday to Sunday, managing them individually; there are four time slots for this module also. **To enter the time slots, use the same method proposed for the 7/7**

11 ALARM DIAGNOSTIC

Generally, all types of alarms and probe errors, where enabled, are managed when the machine is on or when the machine is shutting down. When the status of the system changes from shutting down to off, when exiting the configuration mode or start-up, the alarms and probe errors are reset.

An exception to the previous management:

- the BIOS alarms that are also managed even when the unit is off (if the system is off, the cumulative alarm relay does not trip even if the BIOS is active. The red LED of the keyboard lights and "!Hw" appears on the keyboard)

NB: The alarm management is disabled in configuration mode.

Signal in the event of an alarm and error with Red LED

The presence of alarms and/or probe errors is signalled by the red LED on the keyboard and, if provided, from the menu. The LED lights in the presence of at least one active alarm, flashing if there are only alarms that have returned for some reason (not active) and can therefore be reset, off in the other cases. The LED status is not restricted to the status of the unit (it also works with the unit off). The following paragraphs list the types of alarms that can be found: **for the resolution of all alarms (the presence of which is shown by the red LED with fixed light) please contact the AERMEC service department.**

Cumulative alarm relay

The presence of active alarms with manual reset, probe errors or anti-freeze alarm are signalled by the cumulative alarm relay inside the electrical panel of the unit. The relay also functions with the system off (of course for those alarms that are active when the system is off).

11.1 Thermoregulation alarms

11.1.1 High temperature alarm

In the event the value of the temperature measured by the control probe is maintained at the higher level set and the unit is set to produce cool/cold air, the high-temperature alarm is generated; it is a display only alarm and manual reset.

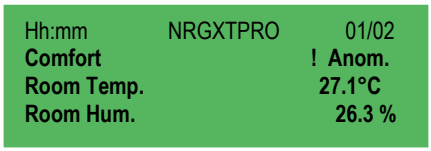
11.1.2 Low temperature alarm

In the event the value of the temperature measured by the intake probe stays at the lower level than that set and the unit is set to produce hot air, the low temperature alarm is generated; it is a display only alarm and manual reset.

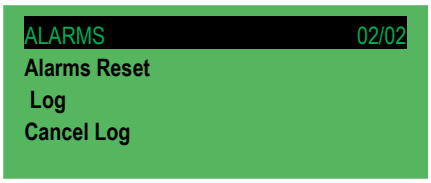
The High and Low temperature alarms are reset:

- Manually if resettable
- When the system is turned on or off;
- When exiting the configuration mode ;

11.2 Alarm reset/anomalies



When a condition of alarm/anomaly persists, this condition is indicated on the main display screen together with the words **"!Anom"** and the lighting of the **red led** , **flashing** or **fixed**.



To know the cause that generated the alarm, simply press and hold the F3 key (shortcut) of the FUNCTION key;
screen (1/2) shows a first part with the Bios Alarms, User Alarms and Probe Errors and a second part (2/2) proposes the Alarms reset option, an alarm log and the cancel option of the alarms log.

- Press ENTER/PUSH from the MENU to select the “Bios Alarms”; the display may show “EMPTY” meaning that the alarm signalled **is not** in the Bios or it may show the wording of the type of alarm detected. Press the ESC key and try to see, moving with the UP - DOWN keys, if an alarm in the User alarms is detected. The same procedure can be used to check the Probe Errors.

- Having established what type of error has been detected, with the UP - DOWN keys, select Reset Alarms and press ENTER/PUSH of the MENU: "OK" is displayed for a fraction of a second and, resetting the alarm, the alarms screen appears again.

By pressing the ESC key of the MENU, the system returns to the main screen; the word “**!Anom.”** disappears and the red LED switches off.

11.2.1 BIOS alarms status list

* TIMEOUT INT. EXP.
* CRC EEPROM BIOS ERROR
* CRC EEPROM USER ERROR
* REAL TIME CLOCK NEED TO BE SET
* REAL TIME CLOCK COMM. ERROR
* REAL TIME CLOCK REGISTERS

11.2.2 USER alarms status list

Alarm Name	Alarm Relay	Anomaly Relay	Alarm Name	Alarm Relay	Anomaly Relay
Internal Expansion Bios (!HW)	X		Suction Filters		X
EEprom	X		Recovery Unit Differential		X
RTC (clock)		X	Compressor/Unit Times		X
System High Pressure		X	Recovery Temperature Probe (Error)		X
System Low Temperature		X	Delivery Probe (Error)		X
Low Delivery Temperature		X	Differential Pressure Probe (Error)		X
Anti-freeze (water coil)	X		Differential Pressure Probe (Error)		X
Recovery Unit Anti-freeze	X		Anti-freeze Temperature Probe (Error)		X
High Digital Pressure		X	Recovery Unit Anti-freeze Temperature Probe (Error)		X
High Probe Pressure		X	Recovery Unit Anti-freeze Temperature Probe (Error)		X
Low pressure		X	High Pressure Probe (Error)		X
Thermal Switch Compressor 1		X	Low Pressure Probe (Error)		X
Thermal Switch Compressor 2		X	Room Humidity Probe (Error)		X
Thermal Switch Compressor 1 and 2		X	External Humidity Probe (Error)		X
Delivery fan	X		External Temperature Probe (Error)		X
Recovery fan	X		Anti-freeze Output Temperature Probe (Error)		X
Phase Sequence	X		High recovery humidity		X
Recovery Filters		X			

11.2.3 Probe error alarms status list

* INTAKE TEMP. ^
* DELIVERY TEMP. ^
* EXTERNAL TEMP. - DYNAMIC SET
* ANTI-FREEZE
* DIFF. PRESS. DEL. FAN
* HUMIDITY LIMIT ^
* EXTERNAL HUMIDITY ^
* AMBIENT HUMIDITY ^
* AIR QUALITY ^
* HIGH PRESSURE, CIRCUIT 1
* HIGH PRESSURE, CIRCUIT 2

* LOW PRESSURE CIRCUIT 1
* LOW PRESSURE CIRCUIT 2

* COND. TEMP. CIRCUIT 1 **
* COND. TEMP. CIRCUIT 2 **

11.3.1 Description and resolution of BIOS alarms

Error description	Action	Troubleshooting	Reset type
TIMEOUT INT. EXP.		Replacement performed by AERMEC service dept.	
CRC EEPROM BIOS ERROR	The default of the parameters are automatically reset	Evaluate to restore parameters or replacement by the AERMEC service Dept.	
CRC EEPROM USER ERROR	The default of the parameters are automatically reset	Evaluate to restore parameters or replacement by the AERMEC service Dept.	
REAL TIME CLOCK NEED TO BE SET		Set date/time, if not resolved replace by the AERMEC service Dept.	
REAL TIME CLOCK COMM. ERROR		Set date/time, if not resolved replace by the AERMEC service Dept.	
REAL TIME CLOCK REGISTERS		Set date/time, if not resolved replace by the AERMEC service Dept.	

11.3.2 Description and resolution of USER alarms and Probe Errors

Error description	Action	Problem description	Troubleshooting	Reset type
LOW ROOM TEMPERATURE	Display only	the system failed to modify the room temperature after a set time	Check if any other alarms are present or contact the service centre	Manual
HIGH ROOM TEMPERATURE	Display only	the system failed to modify the room temperature after a set time	Check if any other alarms are present or contact the service centre	Manual
ANTI-FREEZE	Blocks the cold refrigerant circuit and starts the utilities	Possible freezing of water coil	Contact the Service centre	Delimited on the event
CIRCUIT # PROBE HIGH PRESSURE	Blocks the refrigerant circuit		Contact the Service centre	Manual
HIGH PRESS. DIGITAL CIRCUIT #	Blocks the refrigerant circuit		Contact the Service centre	Manual
CIRCUIT # LOW PRESSURE	Blocks the refrigerant circuit after a set number activations/hour	Circuit empty or low external temperatures	Contact the Service centre	Delimited on the event
FANS # ** THERMAL SWITCH	Blocks the circuits		Contact the Service centre	Manual
COMPRESSOR # THERMAL	Blocks the compressors		Contact the Service centre	Manual
DEL. FAN THERMAL SWITCH	System block	Delivery/intake fans thermal switch activation	Contact the Service centre	Manual
FILTERS BLOCKED	Display only	Functioning hours of the filters exceeded	Reset alarm and check filters	Manual
FILTERS DIRTY	Display only	Filters dirty	Clean/replace	Manual
AIR FLOW	System block		Contact the Service centre	Manual
HEATERS THERMAL SWITCH	Operation block of the heaters and modulating generator	Heaters and modulating generator thermal switch activation	Contact the Service centre	Manual
HEAT. # THERMAL SWITCH	Blocks heaters operation	Thermal switch tripped (input not in common with Gen. Mod. thermal switch)	Contact the Service centre	Manual
DUAL STAGE GEN. THERMAL SWITCH	Dual stage generator operation blocked	Dual stage generator thermal switch tripped	Contact the Service centre	Manual
SMOKE	System block	Fire alarm	Contact the Service centre	Manual
PHASE SEQUENCE	System block	Phase sequence alarm	Incorrect Phase Sequence, Failure of a phase, Low voltage [V]	Manual
MOD. GEN. THERMAL SWITCH	Modulating generator operation blocked	Thermal switch tripped (input not in common with heater thermal switch)	Contact the Service centre	Manual
SYSTEM HOURS OF USE	Display only	System operation time threshold exceeded alarm	Contact the Service centre	Manual
MOD.GEN. HOURS OF USE	Display only	Modulating generator operation time threshold exceeded alarm	Contact the Service centre	Manual
ELE. COIL HOURS OF USE	Display only	Electric coil operation time threshold exceeded alarm	Contact the Service centre	Manual
COMPRESS. # HOURS OF USE	Display only	Compressors operation time threshold exceeded alarm	Contact the Service centre	Manual

Error description	Action	Problem description	Troubleshooting	Reset type
INTAKE TEMP.	System block	Room air temperature probe error (ambient air intake)	Check wiring or replace component	Automatic
DELIVERY TEMP.	Disable delivery limit function	Delivery temperature probe error	Check wiring or replace component	Automatic
EXTERNAL TEMP.	Disable economizer (freecooling, freeheating)	External temperature probe error	Check wiring or replace component	Automatic
ANTI-FREEZE	Disables anti-freeze function	Water coil anti-freeze temperature probe error	Check wiring or replace component	Automatic
DIFF. PRESS. DEL. FAN	System block	>Delivery fan differential pressure switch probe error	Check wiring or replace component	Automatic
HUMIDITY LIMIT	Disables humidifier delivery limit	Delivery humidity probe error	Check wiring or replace component	Automatic
EXTERNAL HUMIDITY	Disables enthalpy economizer (freecooling, freeheating)	External humidity probe error	Check wiring or replace component	Automatic
AMBIENT HUMIDITY	Disables enthalpy economizer (freecooling, freeheating) Dehumidification, humidification	Ambient humidity probe error (ambient air intake)	Check wiring or replace component	Automatic
AIR QUALITY	Disables air quality function	Air quality probe error	Check wiring or replace component	Automatic
CIRCUIT # HIGH PRESSURE	Circuit block	Circuit maximum probe error (high pressure transducer)	Check wiring or replace component	Automatic
CIRCUIT # LOW PRESSURE	Circuit block	Circuit minimum probe error (low pressure transducer)	Check wiring or replace component	Automatic

N.B.: “#” indicates the number of the circuit, the compressor, the thermal switch, etc..

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