Operation manual

Rooftop Packaged Unit

Models:
UATYQ20ABAY1
UATYQ25ABAY1
UATYQ30ABAY1
UATYQ45ABAY1
UATYQ50ABAY1
UATYQ55ABAY1
UATYQ65ABAY1
UATYQ75ABAY1
UATYQ90ABAY1
UATYQ110ABAY1
UATYQ115ABAY1
UATYQ20AFC2Y1
UATYQ25AFC2Y1
UATYQ30AFC2Y1
UATYQ45AFC2Y1
UATYQ50AFC2Y1
UATYQ55AFC2Y1
UATYQ65AFC2Y1
UATYQ75AFC2Y1
UATYQ90AFC2Y1
UATYQ110AFC2Y1
UATYQ115AFC2Y1
UATYQ20AFC3Y1
UATYQ25AFC3Y1
UATYQ30AFC3Y1
UATYQ45AFC3Y1
UATYQ50AFC3Y1
UATYQ55AFC3Y1
UATYQ65AFC3Y1
UATYQ75AFC3Y1
UATYQ90AFC3Y1
UATYQ110AFC3Y1
UATYQ115AFC3Y1

Operation manual
Rooftop Packaged Unit

English

Contents

This operation manual is dedicated to the end user of the unit and it contains a brief description of all free access functions of the unit control.

1 USER INTERFACE

The user interface is a LCD display with 4 rows, 20 columns and automatic backlight; the display has 6 function keys, that are used to navigate the software menu and to set the parameters.

The key functions are described in the following.

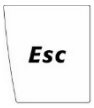
This key, called “up arrow” , allows to scroll up the masks and to modify the value of each mask field, increasing it.

This key, called “down arrow” , allows to scroll up the masks and to modify the value of each mask field, decreasing it.

This key, called “Enter” , confirms the selection done to access the menu branches and stores a parameter that has been modified.

This key, called “alarm”, allows to display active alarms and, in case, to reset them.

This key, called "prg" , allows to enter the software menu.



This key, called "esc" , allows to exit the displayed mask and to go back to the previous menu level.

2 OPERATING GUIDE

The operating guide describes the main control functions.

2.1 Software menu

The software is organized with a menu that allows to access to different branches, each one containing one or more masks or screens, with different access levels: free, partially password-protected or completely password-protected.

Pressing the Prg key from any mask, the following menu loop is displayed:

Italiano	English	Español
ON/OFF unità	Unit ON/OFF	ON/OFF unidad
Costruttore	Manufacturer	Constructor
Utente	User	Usuar
Setpoint	Setpoint	P.Consig.
Orologio	Clock	Reloj
Ingressi/Uscite	Input/Output	Entrad/Salidas
Storico	History	Histor.
Manutenzione	Maintenance	Mantenimiento
Selezione unità	Unit selection	Selecc.unidad
Estate/Inverno	Summer/Winter	Ver./Inv.

With arrow keys ↑ ↓ it is possible to scroll the menu; the selected one is highlighted and marked by an arrow on the left:

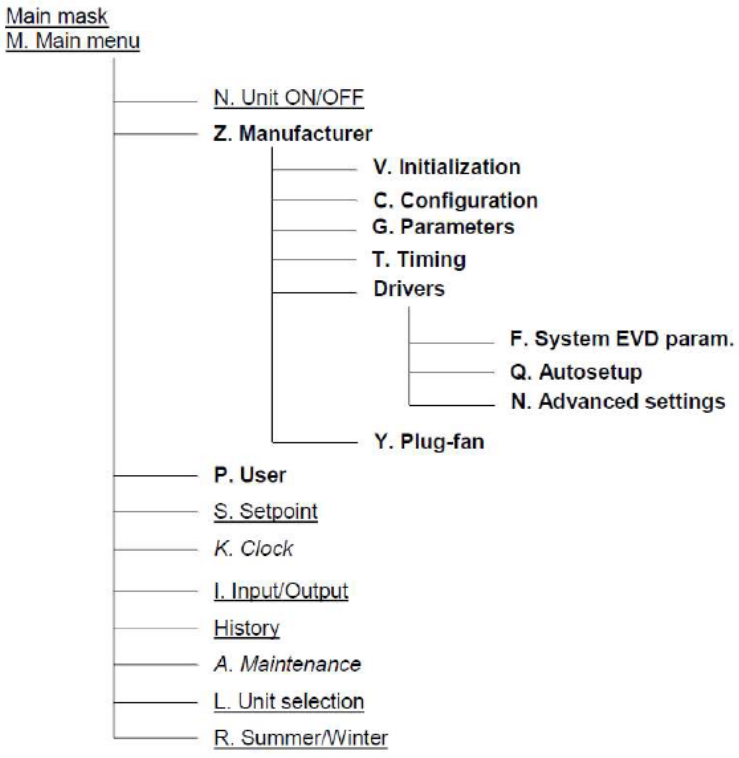
Menu Q0	Menu Q0	Menu Q0
☐ Costruttore	☐ Manufacturer	☐ Constructor
→ Utente	→ User	→ Usuar
☐ Setpoint	☐ Setpoint	☐ P.Consig

To enter the selected menu, press the "enter" key ↵ .

This is the masks tree with all sub-menus:

- The ones reported in underlined letters are free access menu;
- the ones reported in "italic letters" are partially password-protected menu;
- the ones reported in bold letters are completely password-protected menu.

The access to the password-protected menu is reserved to Service technicians.



2.2 Main mask and menu

When the unit is powered, the main mask is displayed on the unit display, showing in its first row the indoor temperature setpoint on the left and the local address of the unit on the right, in bigger fonts the read indoor temperature and on the last row the unit status on the left and the current time on the right.

Set 27.0°C U01 **27.0°C** OFF DA TAST. 10:30	Set 27.0°C U01 **27.0°C** OFF BY KEYB. 10:30	Set 27.0°C U01 **27.0°C** OFF P/TECL. 10:30

↓ to display the unit working mode, the time slots activation, the dehumidification activation (not available), the setpoint compensation activation (where enabled).

Unità in ESTATE M2 Fasce orarie ☐ Deumidifica ☐ Compensazione ☐	Unit in SUMMER M2 Time zone ☐ Dehumidify ☐ Compensation ☐	Unid. en VERANO M2 Franj.horar. ☐ Deshumecta ☐ Compensación ☐

↓ to display if the unit is in defrost, in freecooling or in freeheating mode.

M3 Sbrinamento ☐ Freecooling ☐ Freeheating ☐	M3 Defrost ☐ Freecooling ☐ Freeheating ☐	M3 Desescharche ☐ Freecooling ☐ Freeheating ☐

↓ to display the unit active compressors.

Compressore 1 ☐ M4 Compressore 2 ☐ Compressore 3 ☐ Compressore 4 ☐	Compressor 1 ☐ M4 Compressor 2 ☐ Compressor 3 ☐ Compressor 4 ☐	Compresor 1 ☐ M4 Compresor 2 ☐ Compresor 3 ☐ Compresor 4 ☐

↓ to display if high pressure alarm prevention function in summer mode is active, if the supply temperature limit is active and if the antifreeze function is enabled and active.

Prevent ☐ M5 Limite mandata ☐ Antigelo -	Prevent ☐ M5 Supply limit ☐ Antifreeze -	Prevenc ☐ M5 Limite impuls. ☐ Antihiel -

↓ to display the delivery and return (if present) air fans working mode (manual or automatic).

Funzionamento M6 ventilatori plug-fan Mandata Automatico Ripresa Automatico	Operation M6 Plug-fan Delivery Automatic Return Automatic	Operación M6 Ventilad.Plug-fan Impulsión Automatico Retorno Automatico

↓ to display if the condensate tray electrical heater is active.

M7 Res.vasca cond. ☐	M7 Cond.tray heater ☐	M7 Res.tina cond. ☐

↓ to display if the washing function (forced freecooling at unit start-up) is active.

M8 Gest.lavaggio ☐	M8 Washing mng. ☐	M8 Gestion lavado ☐

↓ to display if the low pressure alarm prevention function in winter mode is active for circuits 1 and 2.

Circuito 1 M9 Prevent L.P. ☐ Circuito 2 Prevent L.P. ☐	Circuit 1 M9 Prevent L.P. ☐ Circuit 2 Prevent L.P. ☐	Circuito 1 M9 Prevent L.P. ☐ Circuito 2 Prevent L.P. ☐

2.3 Switching ON/OFF he unit from keyboard

Prg → select "On/OFF unit" menu → "Enter" → "Enter"to switch ON/OFF the unit.

Stato unità N0 OFF DA TASTIERA ENTER per - ACCENDERE -	Unit status N0 OFF BY KEYBOARD Press ENTER for - SWITCH ON -	Estad unid. N0 OFF POR TECLADO ENTER par - ENCEDER -

If time slots are active, the unit will start running only if it is programmed to be ON in that time slot.

If the unit ON/OFF switching from a supervisor system is enabled, the serial consent is necessary for the effective unit starting-up.

If the unit ON/OFF switching from digital input is enabled, the ON/OFF digital input must be closed for the effective unit starting-up.

If even only one of the previous starting-up systems does not give its consent, the unit will not start running.

2.4 Temperature and air flow setpoint adjust

Prg → select "Setpoint" menu → "Enter" .

From S0 mask, the indoor temperature setpoint in summer mode (cooling) can be adjusted: press "enter" key ↵ , adjust the setpoint value with arrow keys and press ↵ again to confirm the new value.

If time slots are active, the setpoint cannot be modified from this mask, but only from the specific mask of the Clock menu.

Setpoint S0 Temp. **Est 27.0°C**	Temperature S0 setpoint **Sum 27.0°C**	P consig. S0 Temp. **Ver 27.0°C**

↓ from S1 mask, the indoor temperature setpoint in winter mode (heating) can be adjusted: press the key ↵ , adjust the setpoint value with arrow keys and press ↵ again to confirm the new value.

If time slots are active, the setpoint cannot be modified from this mask, but only from the specific mask of the Clock menu.

Setpoint S1 Temp. **Inv 20.0°C**	Temperature S1 setpoint **Win 20.0°C**	P consig. S1 Temp. **Inv 20.0°C**

↓ from S5 mask, the delivery air flow can be adjusted: press the key ↵ , adjust the setpoint value with arrow keys and press ↵ again to confirm the new value.

The real air flow can be read from next mask S6.

Setpoint S5 Portata aria mandata **009000m³/h**	Setpoint S5 Delivery air flow **009000m³/h**	PConsig. S5 Flujo aire impuls. **009000m³/h**

↓ from S7 mask, displayed only for unit with return fans, the return air flow can be adjusted: press ↵ key, adjust the setpoint value with arrow keys and press ↵ again to confirm the new value.
The real air flow can be read from next mask S8.

Setpoint S7	Setpoint S7	PConsig. S7
Portata aria ripresa	Return air flow	Flujo aire returno
008500m³/h	008500m³/h	008500m³/h

2.5 Clock menu and time slots setting

Prg → select "Clock" menu ↵ .
Current time and date can be set from this mask, while the day is automatically updated.

Orologio K0	Clock K0	Reloj K0
Ora 10:30	Hour 10:30	Hora 10:30
Data 01/01/18	Date 01/01/18	Fech 01/01/18
Lunedì	Monday	Lunes

↓ to enable and set time slots, input the Clock menu password and press the key ↵ ; the factory Clock menu password is 0001.

Inserire password K1	Insert password K1	Insertar password K1
0000	0000	0000

↓ from this mask, the daily time slots can be enabled (second line) and switch off the unit outside the time slots (fourth line).

Abilita fasce K2	Daily time zone K2	Habil.franjas K2
orarie giornaliere N	enable: N	horario laboral N
Abilita off unità	Unit OFF by time	Habil. OFF unidad
Fascie: N	zone enable: N	de franja: N

↓ set start and end time of the daily time slot.

Fasce orarie K3	Daily time zone K3	Fr. horarias K3
giornaliere		diario
Inizio 08:00	Start 08:00	Inicio 08:00
Fine 18:00	Ending 18:00	Fin 18:00

↓ set the summer (cooling) indoor temperature setpoint inside the time slot (internal set, third line) and outside the time slot (external set, fourth line).

Fasce orarie K4	Time zone K4	Fr. horarias K4
Funzionamento estivo	Summer working	Funcionamento verano
Set interno 27.0°C	Internal set 27.0°C	Set interno 27.0°C
Set esterno 30.0°C	External set 30.0°C	Set externo 30.0°C

↓ set the winter (heating) indoor temperature setpoint inside the time slot (internal set, third line) and outside the time slot (external set, fourth line).

Fasce orarie K5	Time zone K5	Fr. horarias K5
Funz.invernale	Winter working	Func.invierno
Set interno 20.0°C	Internal set 20.0°C	Set interno 20.0°C
Set esterno 16.0°C	External set 16.0°C	Set externo 16.0°C

- enable the weekly programming, if required.

Abilita OFF K6 unità da fascia settimanale N	Unit OFF K6 by week time zone enable N	Habil. OFF K6 unid. de franja semanal N

- set week days when the unit has to be in ON status (Y) or in OFF status (N).

Fasce orarie K7 Lun N Mar N Mer N Gio N Ven N Sab N Dom N	Time zone K7 Mon N Tue N Wed N Thu N Fri N Sat N Sun N	Fr. Horarias K7 Lun N Mar N Mie N Jue N Vie N Sab N Dom N

2.5.1 Time slots programming examples

To better explain the time slots programming, two examples are reported in the following.

Example n. 1

The unit has to operate every day:

- from 07:00 to 20:00 with summer setpoint 26.0°C and winter setpoint 21.0°C;
- from 20:00 to 07:00 with summer setpoint 30.0°C and winter setpoint 15.0°C.

Moreover, unit main fans must be always active.

Masks K2 to K6 have to be set as follows:

Abilita fasce K2 orarie giornaliere N Abilita off unità Fascie: N	Daily time zone K2 enable: N Unit OFF by time zone enable: N	Habil.franjas K2 horario laboral N Habil. OFF unidad de franja: N

Fasce orarie K3 giornaliere Inizio 07:00 Fine 20:00	Daily time zone K3 Start 07:00 Ending 20:00	Fr. horarias K3 diario Inicio 07:00 Fin 20:00

Fasce orarie K4 Funzionamento estivo Set interno 26.0°C Set esterno 30.0°C	Time zone K4 Summer working Internal set 26.0°C External set 30.0°C	Fr. horarias K4 Funcionamento verano Set interno 26.0°C Set externo 30.0°C

Fasce orarie K5 Funz.invernale Set interno 21.0°C Set esterno 15.0°C	Time zone K5 Winter working Internal set 21.0°C External set 15.0°C	Fr. horarias K5 Func.invierno Set interno 21.0°C Set externo 15.0°C

Abilita OFF K6 unità da fascia settimanale N	Unit OFF K6 by week time zone enable N	Habil. OFF K6 unid. de franja semanal N

It is not required to set working days on mask K7, because weekly programming is disabled from mask K6.

Example n. 2

The unit has to operate from Monday to Friday, from 07:30 to 19:30, with summer setpoint 24.0°C and winter setpoint 20.5°C; moreover, unit fans must be switched OFF from 19:30 to 07:30 and the unit has to be completely switched OFF on Saturday and Sunday.

Masks K2 to K7 have to be set as follows:

Abilita fasce K2 orarie giornaliere N Abilita off unità Fascie: N	Daily time zone K2 enable: N Unit OFF by time zone enable: N	Habil.franjas K2 horario laboral N Habil. OFF unidad de franja: N
Fasce orarie K3 giornaliere Inizio 07:30 Fine 19:30	Daily time zone K3 Start 07:30 Ending 19:30	Fr. horarias K3 diario Inicio 07:30 Fin 19:30
Fasce orarie K4 Funzionamento estivo Set interno 24.0°C Set esterno 30.0°C	Time zone K4 Summer working Internal set 24.0°C External set 30.0°C	Fr. horarias K4 Funcionamento verano Set interno 24.0°C Set externo 30.0°C
Fasce orarie K5 Funz.invernale Set interno 20.5°C Set esterno 15.0°C	Time zone K5 Winter working Internal set 20.5°C External set 15.0°C	Fr. horarias K5 Func.invierno Set interno 20.5°C Set externo 15.0°C
Abilita OFF K6 unità da fascia settimanale S	Unit OFF K6 by week time zone enable Y	Habil. OFF K6 unid. de franja semanal S
Fascia oraria K7 Lun S Mar S Mer S Gio S Ven S Sab N Dom N	Time zone K7 Mon Y Tue Y Wed Y Thu Y Fri Y Sat N Sun N	Fr. Horarias K7 Lun S Mar S Mie S Jue S Vie S Sab N Dom N

In case the “Unit OFF by time slot” function is enabled in mask K2, the external set in mask K4 can be whatever value, because it is not considered by the unit thermoregulation due to the fact that unit is switched OFF.

2.6 Stop washing function (forced freecooling at unit start-up)

Unit with freecooling dampers and washing function enabled.

Main mask → press "Enter" to stop washing function.

2.7 Summer/winter changeover from keyboard

The unit must be switched OFF and the summer/winter changeover from keyboard must be enabled.

Prg → Select “Summer/Winter” menu → "Enter"

Unità in R0 - ESTATE - ENTER per - INVERNO -	Unit in R0 - SUMMER - Press ENTER for - WINTER -	Unid. en R0 - VERANO - ENTER par - INVIERNO -

"Enter" to change unit working mode.

If the changeover from digital input is enabled, mask R0 is not visualized.

If the automatic changeover is enabled, the changeover from winter mode to summer mode is done automatically when the indoor air temperature rises above the summer setpoint, while the changeover from summer mode to winter mode is done automatically when the indoor air temperature falls below the winter setpoint. In any case, the automatic changeover is done with the unit in ON status, so the control will first stop all active devices (compressors, electrical heaters, etc.), except main fans, and it will restart them automatically when the changeover is done, following the thermal load request.

In order to have the automatic summer/winter changeover working properly, winter setpoint must be lower than summer setpoint; if not, the control will activate an alarm that will stop the unit; this alarm will be automatically reset when the summer and winter setpoint are properly set.

2.8 Input/output visualization

Prg → select "Input/Output" menu ↵ .

The mask displays intake air temperatures internal and external.

Sonda temperatura I0	Temperature probe I0	Sonda temperatura I0
Interna 00.0°C	Intake 00.0°C	Interna 00.0°C
Esterna 00.0°C	External 00.0°C	Externa 00.0°C

↓ the mask displays the supply air temperature.

Sonda temperatura I1	Temperature probe I1	Sonda temperatura I1
Mandata 00.0°C	Supply 00.0°C	Impuls. 00.0°C

↓ the mask displays circuit 1 and 2 refrigerant pressures.

Sonda I3	Probe I3	Sonda I3
Pressione 1 00.0Bar	Pressure 1 00.0Bar	Presión 1 00.0Bar
Pressione 2 00.0Bar	Pressure 2 00.0Bar	Presión 2 00.0Bar

↓ The mask displays the CO_2 or VOC concentration, read by the air quality probe, if present.

Sonda I5 qualità aria CO2 0000ppm	Air quality probe I5 CO2 0000ppm	Sonda I5 calidad aire CO2 0000ppm

↓ the masks display the digital input statuses: C = closed, O = open.

Ingressi digitali I8	Digital input I8	Entradas digital. I8
01:CCC 07:CCC	01:CCC 07:CCC	01:CCC 07:CCC
04:CCC 10:CCC	04:CCC 10:CCC	04:CCC 10:CCC

Ingressi digitali I9	Digital input I9	Entradas digital. I9
13:CCC 16:CCC	13:CCC 16:CCC	13:CCC 16:CCC

↓ the mask displays the compressor statuses.

Compressor 1 OFF Ia	Compressor 1 OFF Ia	Compresor 1 OFF Ia
Compressor 2 OFF	Compressor 2 OFF	Compresor 2 OFF
Compressor 3 OFF	Compressor 2 OFF	Compresor 3 OFF
Compressor 4 OFF	Compressor 4 OFF	Compresor 4 OFF

↓ the mask displays the statuses of the external fans and of the 4-way reversing valves of circuit 1 and 2.

Vent.cond.1 OFF Ib	Cond.fan 1 OFF Ib	Vent.cond.1 OFF Ib
Vent.cond.2 OFF	Cond.fan 2 OFF	Vent.cond.2 OFF
Valv.inv.1 OFF	Rev.valve 1 OFF	Valv.inv.1 OFF
Valv.inv.2 OFF	Rev.valve 2 OFF	Valv.inv.2 OFF

- the mask displays the main fan status.

Vent.princ. OFF Ic	Main fan OFF Ic	Vent.princ. OFF Ic

- the mask displays the electrical heater statuses, if present.

Resistenza 1 OFF Id Resistenza 2 OFF	Heater 1 OFF Id Heater 2 OFF	Resistenc. 1 OFF Id Resistenc. 2 OFF

- the mask displays the opening percentages of the external air damper and of the hot water valve, if present.

Serr.esterna 000% Ie Valvola caldo 000%	Ext.damper 000% Ie Heat Valve 000%	Comp.externa 000% Ie Vàlvula calor 000%

- the mask displays the opening percentage of the recirculation damper, if present.

Ie2 Serr.ricircolo 000%	Ie2 Recirc.damper 000%	Ie2 Comp.recircu. 000%

- the mask displays the running percentage of external fans of circuit 1 and 2.

Vent.cond.1 000% If | Vent.cond.2 000% |	Cond.fan1 000% If | Cond.fan2 000% |	Vent.cond.1 000% If | Vent.cond.2 000% |

- the mask displays the running percentage of delivery and return fans (if present).

Vent.Plug-fan IT Segnale Mandata 000% Ripresa 000%	Plug-fan IT Signal Delivery 000% Return 000%	Vent.Plug-fan IT Señal Impuls. 000% Retorno 000%

- the mask displays the air pressures read from the air pressure transducer of supply and return air flow; please note that this pressure is measured on fan nozzle and is not related in any way to the available static pressure.

Vent.Plug-fan Iu Segnale sonde press. Mandata 00000Pa Ripresa 00000Pa	Plug-fan Iu Signal pres.probe Delivery 00000Pa Return 00000Pa	Vent.Plug-fan Iu Señal sondas press. Impuls. 00000Pa Retorno 00000Pa

- the masks display the evaporation temperature, the defrost calculated setpoint and the defrost starting countdown of circuits 1 and 2.

Sbrinamento Iv1 T.evap.: -xx.x°C Set sbrin.: -xx.x°C Countdown: xxx s	Defrost Iv1 Evap.T.: -xx.x°C Defr.set.: -xx.x°C Countdown: xxx s	Descongelation Iv1 T.evap.: -xx.x°C Set desc.: -xx.x°C Countdown: xxx s

Sbrinamento Iv2 T.evap.: -xx.x°C Set sbrin.: -xx.x°C Countdown: xxx s	Defrost Iv2 Evap.T.: -xx.x°C Defr.set.: -xx.x°C Countdown: xxx s	Descongelation Iv2 T.evap.: -xx.x°C Set desc.: -xx.x°C Countdown: xxx s

the mask displays the NO11 auxiliary output status and the condensate tray electrical heater status.

Iz	Iz	Iz
Uscita aus.NO11: OFF	Aux.output NO11: OFF	Salida aux.NO11: OFF
Res.vasca cond.: OFF	Cond.tray heater:OFF	Res. tina cond.: OFF

2.9 Change language and unit and software data visualization

→ "Maintenance" menu → "Enter"

From this mask the control language can be changed, choosing from those available. Press "Enter" change the language.

Lingua corrente Ax	Current language: Ax	Idioma actual Ax
ITALIANO	ENGLISH	ESPAÑOL
premere tasto	press ENTER to	pulsar tecla
ENTER per cambiare	change language	ENTER para cambiar

the mask displays the following unit data: serial number, factory testing date and factory tester identification code.

Dati unità Ay	Unit data Ay	Datos unidad Ay
Matricola: 12345678	Serial n.: 12345678	N.de serie: 12345678
Data coll.: 01/01/18	Test data: 01/01/18	Data ens.: 01/01/18
Collaudatore: 0653	Tester: 0653	Ensayador: 0653

the mask displays the software code, version and release date and the unit model.

Roof Top A0	Roof Top A0	Roof Top A0
Codice:FLBB0mRT0E	Code:FLBB0mRT0E	Código:FLBB0mRT0E
Ver.:3.0 01/03/18	Ver.:3.0 01/03/18	Ver.:3.0 01/03/18
ABCDEFG1234567	ABCDEFG1234567	ABCDEFG1234567

the mask displays the control board bios and boot versions and release dates.

A1	A1	A1
Bios: 6.44 08/12/17	Bios: 6.44 08/12/17	Bios: 6.44 08/12/17
Boot: 5.02 30/03/13	Boot: 5.02 30/03/13	Boot: 5.02 30/03/13

the mask displays the control board model and type.

Hardware A2	Installed A2	Hardware A2
installato	pCO board	instalado
Scheda :pCO5+	Board :pCO5+	Tarjeta:pCO5+
Tipo :LARGE	Type :LARGE	Tipo :LARGE

the mask displays the unit working hours.

Ore funzionamento A3	Working hours A3	Horas func. A3
Unità 000000h	Unit 000000h	Unid. 000000h

the mask displays the working hours of compressors 1 and 2.

Ore funzionamento A4	Working hours A4	Horas func. A4
Comp.1 000000h	Compressor 1 000000h	Comp.1 000000h
Comp.2 000000h	Compressor 2 000000h	Comp.2 000000h

➧ the mask displays the working hours of compressors 3 and 4.

Ore funzionamento A5	Working hours A5	Horas func. A5
Comp.3 000000h	Compressor 3 000000h	Comp.3 000000h
Comp.4 000000h	Compressor 4 000000h	Comp.4 000000h

2.10 Alarms

When an alarm is triggered, the red "Alarm" key is on and the alarm digital output is activated.

By pressing the "Alarm" key, the last alarm is displayed; the other active alarms can be scrolled with arrow keys.

This is an example of an alarm mask:

AL70	AL70	AL70
Sonda B9 guasta o disconnessa	B9 probe broken or disconnected	Sonda B9 averia o desconect.

Each alarm is identified by a code “ALxx” and the alarm cause is described in the mask. To reset an active alarm, press and hold for at least 2 seconds the "Alarm" key; if the alarm has been successfully reset, the alarm mask disappears and, if no other alarms are active, the red "Alarm" key is switched OFF. An alarm can be reset only if the condition that has activated the alarm is not present anymore.

The manual reset of an alarm must be done only after checking the alarm cause and solving the problem that has activated the alarm.

The improper reset of an alarm can cause serious damages to the unit or to its components.

On alarm history menu, last 150 alarms are stored. When the memory is full and another alarm is activated, the oldest alarm is overwritten.

In the following, the full alarm list is reported with the main possible causes, some troubleshooting hints, the reset mode, the action on the unit and on its components.

The alarm reset mode is reported on the “RESET” column:

- A = automatic: when the alarm condition disappears, the alarm is automatically reset;
- AC = automatic controlled: the alarm is automatically reset for a limited number of attempts in a certain time, after that the reset becomes manual;
- M = manual reset from display or from supervisor: the alarm must be manually reset by display as described above or by the supervisor reset variable; for each alarm with manual reset, the reset day and time are stored on the alarm history.

In the “OFF UNIT” column, it is reported if the alarm stops the whole unit or not:

- Yes = the alarm stops the unit;
- No = the alarm does not stop the unit, but only the concerned devices

CODE	DESCRIPTION	MAIN CAUSES	CHECKS AND TROUBLESHOOTING	RESET	UNIT OFF	ITEMS OFF
AL01	Overload Compressor 1	Intervention of the thermal protection compressor 1	Check working conditions. Check cabling, terminals and circuit breaker of the motor. Check adsorbed current. Check compressor discharge temperature.	M	No	Compressor 1
AL02	Overload Compressor 2	Intervention of the thermal protection compressor 2	Check working conditions. Check cabling, terminals and circuit breaker of the motor. Check adsorbed current. Check compressor discharge temperature.	M	No	Compressor 2

CODE	DESCRIPTION	MAIN CAUSES	CHECKS AND TROUBLESHOOTING	RESET	UNIT OFF	ITEMS OFF
AL03	High pressure Circuit 1	High pressure alarm from circuit 1 (high pressure switch)	Check condensing pressure. Check refrigerant charge. Check condensing fan/s operation Check the presence of warm condensing air recycling. Check condensing coil cleaning and eventually clean it. Reset the high pressure switch before resetting the alarm in the controller. Check the correct intervention set for the high-pressure switch.	M	No	All compressors circuit 1
AL04	High pressure Circuit 2	High pressure alarm from circuit 2 (high pressure switch)	Check working conditions. Check condensing pressure. Check refrigerant charge. Check condensing fan/s operation Check the presence of warm condensing air recycling. Check condensing coil cleaning and eventually clean it. Reset the high pressure switch before resetting the alarm in the controller. Check the correct intervention set for the high-pressure switch.	M	No	All compressors circuit 2
AL05	Antifreeze alarm	Digital input 1 open	Check working conditions.	A (2)	No	Compressors (only cooling mode)
AL06	High temp threshold exceeded	Indoor temperature exceeds the max value set	Check working conditions.	A	No	None
AL07	Low temp threshold exceeded	Indoor temperature is lower than the min value set	Check working conditions.	A (2)	No	None
AL08	Low pressure Circuit 1 in summer	Low pressure alarm circuit 1 from the low-pressure switch (cooling mode)	Check working conditions. Check evaporation pressure. Check refrigerant charge Check evaporation fans. Check the correct intervention of the low-pressure switch.	M	No	All compressors circuit 1
AL09	Low pressure Circuit 2 in summer	Low pressure alarm circuit 2 from the low pressure switch (cooling mode)	Check working conditions. Check evaporation pressure. Check refrigerant charge Check evaporation fans. Check the correct intervention of the low-pressure switch.	M	No	All compressors circuit 2
AL10	Low pressure Circuit 1 in winter	Low pressure alarm circuit 1 from the low pressure switch (heating mode)	Check working conditions. Check evaporation pressure. Check refrigerant charge Check evaporation fans. Check the correct intervention of the low-pressure switch.	M	No	All compressors circuit 1
AL11	Low pressure Circuit 2 in winter	Low pressure alarm circuit 2 from the low-pressure switch (heating mode)	Check working conditions. Check evaporation pressure. Check refrigerant charge Check evaporation fans. Check the correct intervention of the low-pressure switch.	M	No	All compressors circuit 2
AL12	Compressor 1 maintenance	It has been exceeded Compressor 1 operating hours threshold.	Check the compressor working conditions.	M (1)	No	None
AL13	Compressor 2 maintenance	It has been exceeded Compressor 2 operating hours threshold.	Check the compressor working conditions.	M (1)	No	None

CODE	DESCRIPTION	MAIN CAUSES	CHECKS AND TROUBLESHOOTING	RESET	UNIT OFF	ITEMS OFF
AL14	Unit Maintenance	It has been exceeded unit operating hours threshold.	Unit check up. Perform the ordinary maintenance operations.	M (1)	No	None
AL15	Main fan overload/ interblock	Thermal protection ventilation fan	Check working conditions. Check fans motor cabling, terminals and adsorbed current. Check thermal overload switch.	M	Yes	All
AL16	Filter dirty	The pressure drop across the filter measured by the differential pressure switch is higher than the set value	Clean or replace the air filters. Calibration of the differential pressure switch for clogged filters.	M M	No	None
AL17	Not used	-	-	-	-	-
AL18	Flow-switch alarm	The differential air pressure switch detects a pressure (airflow) lower than the set point	Check working conditions (airflow and pressure). Check working operation of the ventilation fans. Check air distribution system. Check the correct intervention of the airflow switch.	M	Yes	All
AL19	Clock broken or not present	The clock board is defective	Reboot the controller; if alarm persists, replace the main board.	M	No	None, hourly programming not operating
AL20	Summer setpoint < winter setpoint	Summer set point is lower than winter set point or winter set point is higher than summer set point and automatic changeover is enabled	Check for the correct temperature set point (cooling and heating modes).	A	Yes	All
AL21	B1 probe broken or disconnected	The reading of the probe B1 (supply airflow differential pressure probe) exceeds the operative range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe
AL22	B2 probe broken or disconnected	The reading of the probe B2 (return airflow differential pressure probe) exceeds the operative range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe
AL23	B6 probe broken or disconnected	The reading of the probe B6 (condensing pressure circuit 2) exceeds the range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe

CODE	DESCRIPTION	MAIN CAUSES	CHECKS AND TROUBLESHOOTING	RESET	UNIT OFF	ITEMS OFF
AL24	B7 probe broken or disconnected	The reading of the probe B7 (indoor air humidity) exceeds the range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe
AL25	B4 probe broken or disconnected	The reading of the probe B4 (supply air temperature) exceeds the range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe
AL26	B3 probe broken or disconnected	The reading of the probe B3 (condensing pressure circuit 1) exceeds the range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe
AL27	B8 probe broken or disconnected	The reading of the probe B8 (Outdoor air temperature) exceeds the range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe
AL28	B5 probe broken or disconnected	The reading of the probe B5 (return air temperature) exceeds the range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe
AL29	Heater 1 overload	The circuti breaker of the heater group 1 trips	Check working conditions (airflow and temperature). Check cabling and terminals of the heaters and adsorbed current. Check thermal switch.	M	No	Heater group 1
AL30	Heater 2 overload	The circuit breaker of the heater group 2 trips	Check working conditions (airflow and temperature). Check cabling and terminals of the heaters and adsorbed current. Check thermal switch.	M	No	Heater group 2
AL31	Generic serious alarm by DIN . System off	The serious alarm digital input (DIN) is open	Check external control.	M	Yes	All
AL32	Generic alarm by dig. input System still on	The generic alarm digital input is open	Check extarnal control.	M	No	None

CODE	DESCRIPTION	MAIN CAUSES	CHECKS AND TROUBLESHOOTING	RESET	UNIT OFF	ITEMS OFF
AL33	Compressor 3 Overload	Intervention of the thermal protection compressor 3	Check working conditions. Check cabling, terminals and circuit breaker of the motor. Check adsorbed current. Check compressor discharge temperature.	M	No	Compressor 3
AL34	Compressor 4 Overload	Intervention of the thermal protection compressor 4	Check working conditions. Check cabling, terminals and circuit breaker of the motor. Check adsorbed current. Check compressor discharge temperature.	M	No	Compressor 4
AL35	Compressor 3 maintenance	It has been exceeded compressor 3 operating hours threshold.	Check the working conditions of the compressor.	M (1)	No	None
AL36	Compressor 4 maintenance	It has been exceeded compressor 4 operating hours threshold.	Check the working conditions of the compressor.	M (1)	No	None
AL37-65	Not used	-	-	-	-	-
AL66	WARNING Circuit 1 in Prevent	Condensing pressure circuit 1 is higher than prevention value (cooling mode) Evaporation pressure circuit 1 is lower than prevention value (heating mode)	Check working conditions. Check condensing pressure. Check condensing fans and coil. Check condensing coil air flow. Check refrigerant charge	A (2)	No	One compressor of circuit 1
AL67	WARNING Circuit 2 in Prevent	Condensing pressure circuit 2 is higher than prevention value (cooling mode) Evaporation pressure circuit 2 is lower than prevention value (heating mode)	Check working conditions. Check condensing pressure. Check condensing fans and coil. Check condensing coil air flow. Check refrigerant charge	A (2)	No	One compressor of circuit 2
AL68	Differential probe supply	The value measured from the supplyn air differential pressure probe for the return is outside the allowed range.	Check airflow. Check airflow distribution system. Check supply differential pressure switch and its own connection hoses.	A (2)	No	None
AL69	Differential probe return	The value measured from the return air differential pressure probe for the return is outside the allowed range.	Check airflow. Check airflow distribution system. Check supply differential pressure switch and its own connection hoses.	A (2)	No	None
AL70	B9 probe broken or disconnected	The reading of the probe B9 (indoor air CO2 or VOC) exceeds the range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe
AL71	B10 probe broken or disconnected	The reading of the probe B10 (outdoor air relative humidity) exceeds the range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board.	M	No	All components and fuctions directly related to the probe

CODE	DESCRIPTION	MAIN CAUSES	CHECKS AND TROUBLESHOOTING	RESET	UNIT OFF	ITEMS OFF
AL72	Board 2 Lan disconnected	Interrupted communication between main and expansion boards	Check for correct power supply to the expansion board. Check for the connection between main and expansion boards. Communication setup.	M	No	All components and fuctions directly related to the expansion board
AL73	B1 slave probe broke or disconnected	The reading of the probe B1 of expansion board exceeds the range	Check working conditions. Check in the controller for the correct probe reading range . Check the correct reading of the probe and eventually replace it. Check probe wiring and terminals. Check correct functioning of the analogic input of the main board	M	No	All components and fuctions directly related to the probe
AL74	Circuit 1 High pressure from transd.in cooling Tent.: x/y	High pressure alarm of cooling circuit 1 in cooling (summer) mode from pressure transducer.The attempt “x” of the maximum number “y” of attempts is displayed; when the maximum number of attempts is reached, the alarm reset becomes manual.	Check working conditions. Check condensing pressure. Check condensing fans and coil. Check condensing coil air flow. Check refrigerant charge. Check pressure probe.	AC	No	All compressors of circuit 1
AL75	Circuit 2 High pressure from transd.in cooling Tent.: x/y	High pressure alarm of cooling circuit 2 in cooling (summer) mode from pressure transducer.The attempt “x” of the maximum number “y” of attempts is displayed; when the maximum number of attempts is reached, the alarm reset becomes manual.	Check working conditions. Check condensing pressure. Check condensing fans and coil. Check condensing coil air flow. Check refrigerant charge. Check pressure probe.	AC	No	All compressors of circuit 2
AL76	Circuit 1 Low pressure from transd.in heating Tent.: x/y	Low pressure alarm of cooling circuit 1 in heating (winter) mode from pressure transducer. The attempt “x” of the maximum number “y” of attempts is displayed; when the maximum number of attempts is reached, the alarm reset becomes manual."	Check working conditions. Check evaporating pressure. Check evaporating fans and coil. Check evaporating coil air flow. Check refrigerant charge. Check pressure probe.	AC	No	All compressors of circuit 1
AL77	Circuit 2 Low pressure from transd.in heating Tent.: x/y	Low pressure alarm of cooling circuit 2 in heating (winter) mode from pressure transducer. The attempt “x” of the maximum number “y” of attempts is displayed; when the maximum number of attempts is reached, the alarm reset becomes manual."	Check working conditions. Check evaporating pressure. Check evaporating fans and coil. Check evaporating coil air flow. Check refrigerant charge. Check pressure probe.	AC	No	All compressors of circuit 2
AL78	WARNING Circuit 1 in low pressure prevention	Evaporation pressure of circuit 1 in heating (winter) mode is lower than the low pressure prevention value	Check working conditions. Check evaporating pressure. Check evaporating fans and coil. Check evaporating coil air flow. Check refrigerant charge	A (2)	No	A compressor of circuit 1

CODE	DESCRIPTION	MAIN CAUSES	CHECKS AND TROUBLESHOOTING	RESET	UNIT OFF	ITEMS OFF
AL79	WARNING Circuit 2 in low pressure prevention	Evaporation pressure of circuit 2 in heating (winter) mode is lower than the low pressure prevention value	Check working conditions. Check evaporating pressure. Check evaporating fans and coil. Check evaporating coil air flow. Check refrigerant charge	A (2)	No	A compressor of circuit 2

(1) Maintenance alarms must be reset from masks Ac-Ad-Ae of the Maintenance menu and they cannot be reset by pressing the Alarm key

(2) The alarm is reset automatically, but to clear the alarm visualization it is necessary to press and hold the Alarm key for at least 2 seconds.

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