



REMOTE CONTROL MANUAL

S-0241.02

CONTROL DISPLAY FOR UVR-HE

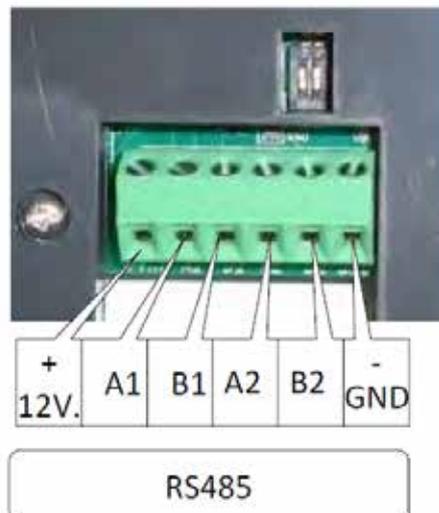
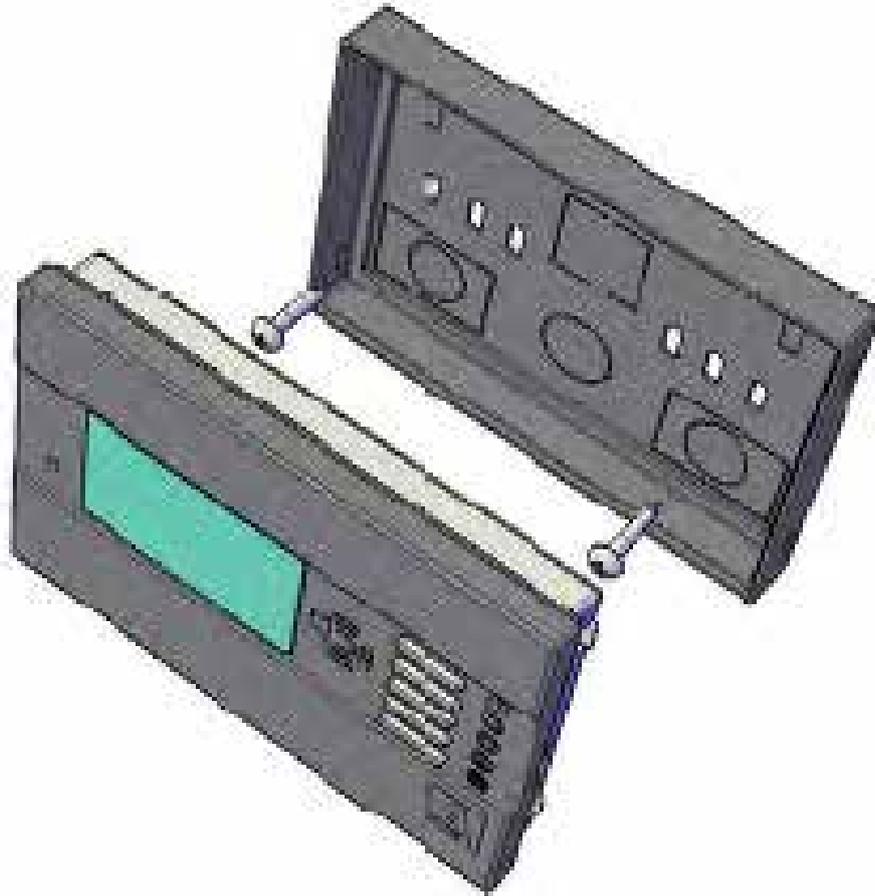


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1 - ASSEMBLY

Its assembly is fast and easy. You just screw the bracket of the console directly on the in-wall box, type 503, using the screws provided.



2 - TWO OPERATION MODES:

“MANUAL”

The user can directly set the supply and exhaust fan speed and he can control the bypass damper (opening and closing). Moreover, it is possible to calibrate the speed of one of the two fans, so that its speed can be always a fraction of the one of reference.

If there are probes for co₂, moisture probes or temperature probes, the measured value is shown on the panel of the remote control.

“AUTOMATIC”

Both the fans and the by-pass are managed by the control without any possibility of intervention by the user. The fan speed changes automatically to maintain the carbon dioxide level measured in the room, below the reference value set by the user. However, it is possible to set the minimum speed of both the fans in a range from 4% to 20%. The by-pass damper opens and closes automatically according to the reference temperature set by the user.

3 - MENU

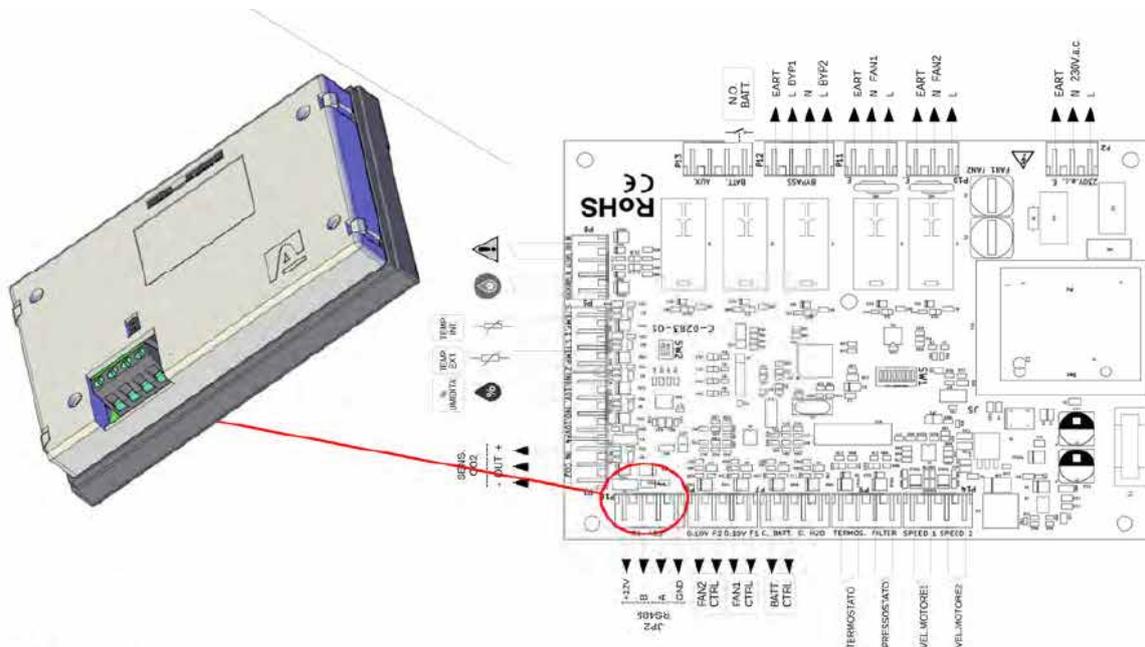
The installer MENU guarantees the possibility of modifying: number of control cards connected, language, display back-lighting, logo at the start, use of buzzer, use of temperature sensor on the card. The additional entries on the menu, under the heading ADMINISTRATOR (hold down the buttons M+BYPASS on the working screen) give access to varying calibrations of the unit.

After a period of non-use of the system, the brightness of the display reduces but it remains in the working screen. Drop-down menu. The buttons ON and BP keep their function: they give direct access to the ON/OFF and BYPASS functions.

Editable variables:

- Date/Time
- Season
- Modes of operation (AUTO, MAN, PROGRAMS)
- ON/OFF system (button ON/OFF)
- ON/OFF bypass (button BYPASS)
- Command percentage supply fan. Only in manual mode.
- Command percentage exhaust fan. Only in manual mode.
- **Visible and differentiated alarm indicators**
 FILTER alarm: symbol of a bell and words “REPLACE AIR FILTER”. When the filter is restored, the alarm stops.
 SANITIZATION alarm: When the mains voltage disappears (230V.a.c.), the bell with the words “SANITIZATION ALARM” appears and it remains for 10 minutes (time adaptable to customer needs) also after the restoration of the entrance. The sanitization alarm interrupts immediately the Ozone generator operations.
- **Sterilizer protocol management with related calendar.** Sterilizer function can be activated/deactivated in the menu, administrator card.
 Through the sterilizer calendar you can choose 2 trigger/deactivation time for each day of the week, with a maximum duration of 2 hours.
- **Implement the firefighting.** When the alarm is active, the entire system stops and a flashing error message appears in the home screen.
 The firefighting function can be disabled in the menu, administrator card.
- **Humidity sensor** can be activated/deactivated in the menu, administrator card.
- The **control card** can manage up to 32 addresses, that means 32 different units with a single electronic one.
- Possibility to configure the **Baud Rate** used (9600 – 19200 – 115200), adding a new heading in the display menu.

4 - NETWORK CONFIGURATION RS-485 MODBUS: Connect the product S-0241-02 or the product S-0277-00 using the connectors shown

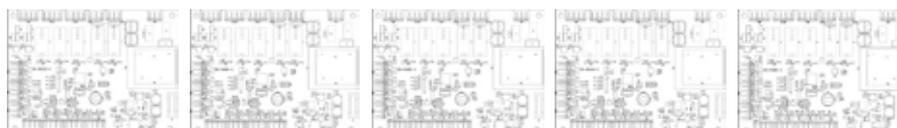


L'alimentazione del Display è fornita dall'UNITA' DI CONTROLLO MOTORI.

NOTE: installation activities must be entrusted to qualify staff.

Connect the display to the nearest control card (connector P16) as explained in the previous page using a "Belden " cable, taking care of connecting also the power supply (+12V and GND).

Connect the Slave units (max 32) with "Belden YC39000" cable, in parallel to the first.



<p>S-0241-02 S-0277-00</p>	<p>S-0242-02 S-0283-00 Address n°1</p>	<p>S-0242-02 S-0283-00 Address n°2</p>	<p>S-0242-02 S-0283-00 Address n°3</p>	<p>S-0242-02 S-0283-00 Address n°4</p>	<p>S-0242-02 S-0283-00 Address n°5</p>
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+12 / A1 / B1 / GND

NOTE 1: configure the network address of the SLAVE cards with progressive values. For the configuration, make reference to the section "ASPIRNOVA SYSTEM - MODBUS PROTOCOL DESCRIPTION, USED IN THE COMMUNICATION BETWEEN DISPLAY CARD AND CONTROL CARD (FW00071 – FW00055)"

NOTE 2: go to the menu "GENERAL SETTING MENU", under the heading "CONTROL CARDS" and activate the cards present on the network. Ex. If the network consists of 5 slave cards, set the number 5.

NOTE 3: the speed communication between the SLAVE cards and the MASTER card is Baud Rate 115200. To modify the value, access the display settings, go to the menu "GENERAL SETTING MENU" under the heading BAUD RATE; the same selection must be made on SW1 of the SLAVE cards.

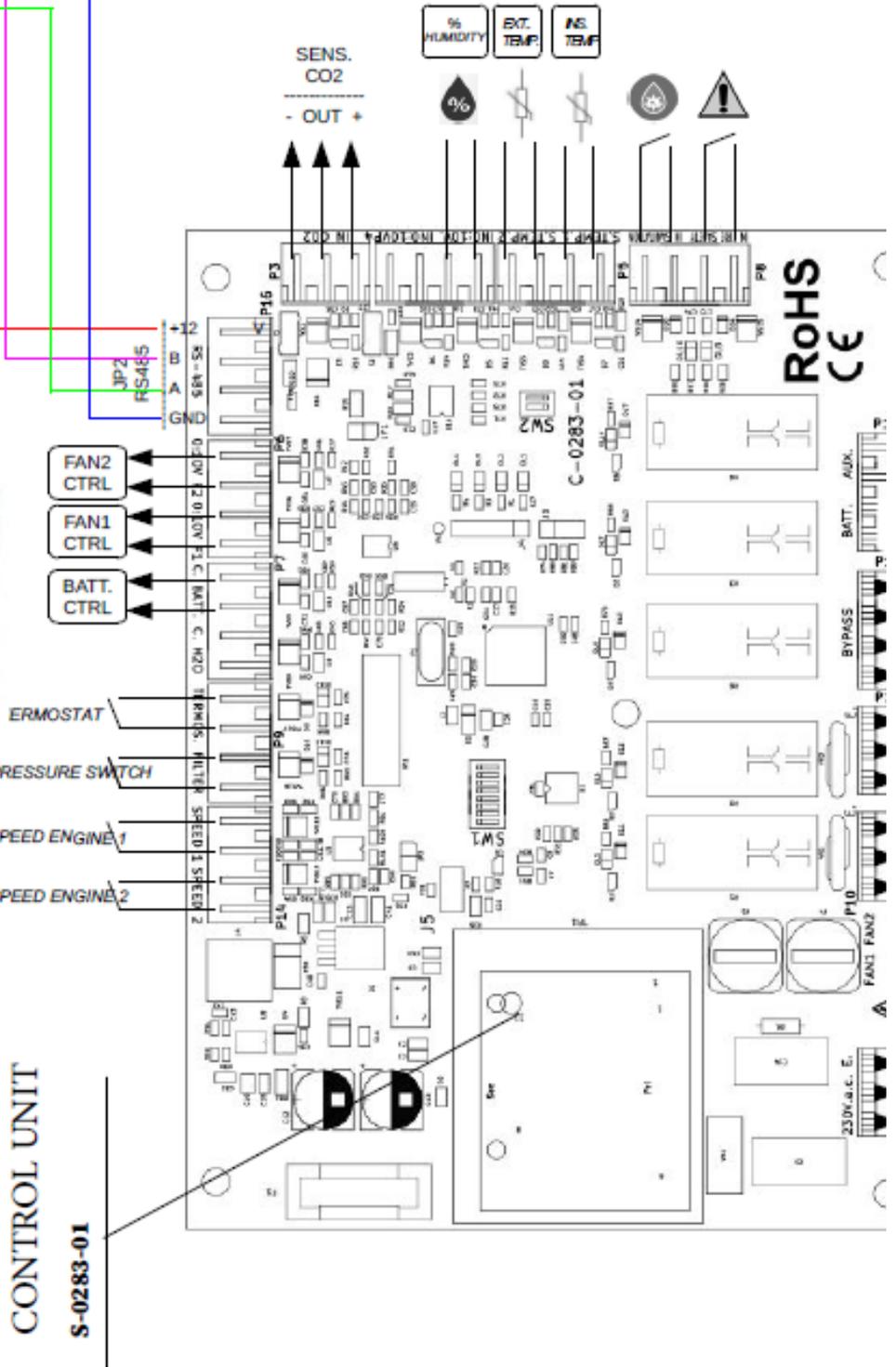
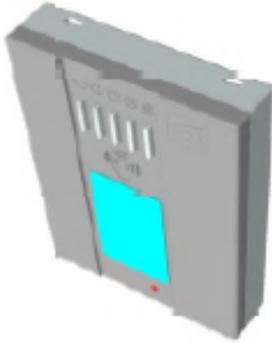
S-0241.02

VERSIONE 7

CONTROL DISPLAY FOR S-02 83 -0 1

S-0241-02

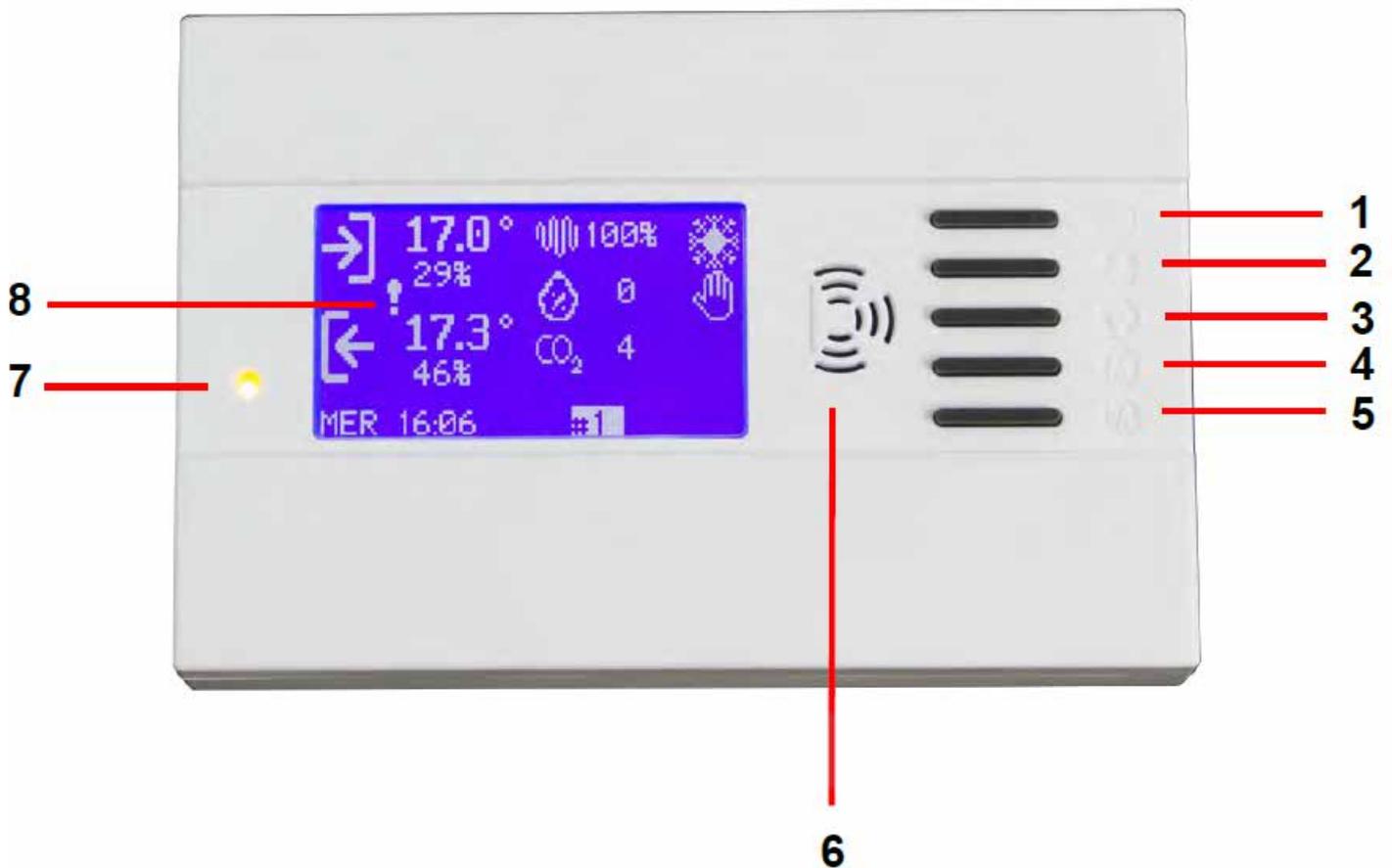
Display



5 - FUNCTIONS

System function's general format

1. ON-OFF button 
2. Decrease button 
3. Increase button 
4. MENU button 
5. BY-PASS actuation button (at all pressure switches)
6. Sounder
7. Two-tone LED (red/green) ON-OFF - filter replacement
8. Exclamation point - possible engine malfunction



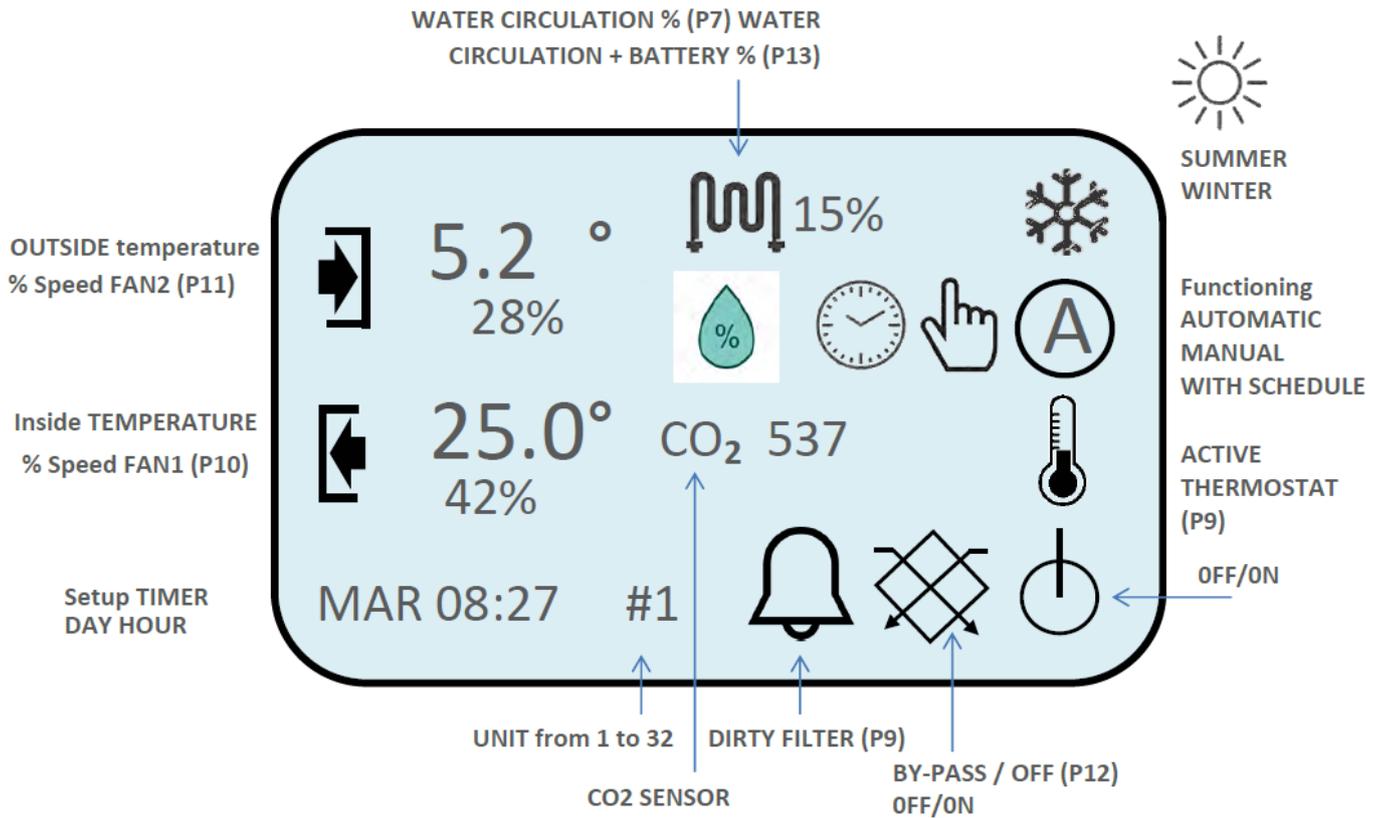
LED DISPLAY:

- If the fans (of every control cards) are off or activated with a command that is lower than 30%, the LED stays OFF
- Otherwise, the LED lights up of green or, if one of the filter is dirty and its entrance is active, it lights up of red
- The filter entrances are considered only on cards with command FAN that are higher than 30% (>30%)

6 - INTRODUCTION

3 modes of operation are available from the menu:

- **Manual functioning**
- **Automatic functioning**
- **Functioning with schedule**



DEMONSTRATION

NOTES

- After 40 seconds from the last button pressure, the display turns off and the buttons will not be more workable. Press any button to turn it on.
- When the machine is off, the bypass remains in the same position and it does not close automatically.
- If there is no electricity, the unit will automatically turn on when the electric current will come back and it will start working according to the last set configuration.
- When thermostat is inserted, the ON-OFF command is disabled and you work with it

7 - MAIN SETTINGS (INSTALLER)

To have access to this MENU, power the system and hold down the button "M".

Up to 32 recovery units can be set



Use the arrows to select the number of machines that you want to control. Then, press the button M

3 different languages can be set:
ITALIAN/SPANISH/ENGLISH



Use the arrows to select the language. Then, press the button M

Illumination and contrast of the display can be set.



Use the arrows to select illumination and contrast. Then, press the button M

You can disable or activate the buzzer of the display



Use the arrows to select ON/OFF. Then, press the button M

You can choose the speed of MOD BUS RS 485 (Baud Rate) (115200)/(19200)(9600) Standart (115200)



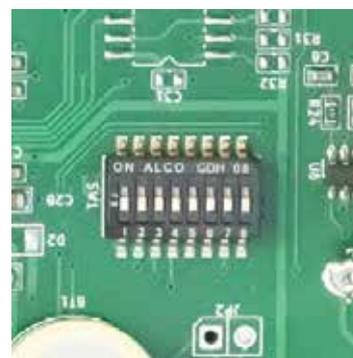
Use the arrows to select the desired speed. Then, press the button M

Once you have finished the various settings, set ESC to activate them



Use the arrows to select ESC. Then, press the button M

If the phrase “COMMUNICATION ERROR” appears, you have to configure the card of the recovery unit by using the SWITCH 6-7 on the card with the same speed of the Display. Changes must be made when the machine is turned OFF



SW1

DIP 7	DIP 6	BAUD RATE
OFF	OFF	115200
OFF	ON	9600
ON	OFF	19200

To have access to this MENU, press the button (M) and then the button B/P simultaneously for 15 seconds

You can modify the speed of the supply fan (OUTSIDE AIR)



Use the arrows to select the desired speed. Then, press the button (M)

You can modify the speed of the exhaust fan (INSIDE AIR)



Use the arrows to select the desired speed. Then, press the button (M)

You can modify the mode of operation
SUMMER / WINTER



ATTENTION! In WINTER mode, if you press the button OFF, the machine turns off after 40 seconds.



Use the arrows to select the desired mode. Then, press the button M

You can modify the reference temperature, the heating and cooling coil
temp °C min- 20 Max + 80



Use the arrows to select the desired mode. Then, press the button (M)

To have access to this MENU, press the button (M) and then the button B/P simultaneously for 15 seconds

Reference threshold PPM (Co2)
standart threshold 600/800.
It works only in automatic mode.



Use the arrows to select the desired mode.
Then, press the button (M)

You can select 2 types of probes: standart 2000 ppm, probe 5000 ppm or you can exclude all the probes in mode NO



Use the arrows to select the desired option: 2000/5000 ppm, or NO.
Then press the button (M)

You can activate or deactivate the Thermostat option.
ATTENTION! If you activate the THERMOSTAT option, it is no longer possible to activate the machinery from the display, but only from the thermostat or remote control



Use the arrows to select the desired option. (NO= / SI).
Then, press the button (M)

Before programming the machine, set hour and date.
Day_month_year



Use the arrows to select the desired option.
Then, press the button (M)

To have access to this MENU, press the button (M) and then the button B/P simultaneously for 15 seconds

Before programming the machine, set hour and date.
Day_month_year



▲
▼
M
B/P

Use the arrows to select the DAY. When the cursor flashes, press the button (M) to store it. Then, press again the down arrow to select MONTH/YEAR/HOUR/SECONDS and press OK

You can select PROGRAMS mode



▲
▼
M
B/P

Use the arrows to select the desired mode. Then, press the button (M)

You can set two daily programs. For ex. Monday starting at 08.00 and shutdown at 12.00; starting at 13.00 and shutdown at 17.00 all week



▲
▼
M
B/P

Use the arrows to select the desired option. Then, press the button M and ESC

Sterilizer (UVC/OZONE lamps)
You can select ON/OFF option. (OFF)



▲
▼
M
B/P

Use the arrows to select the option YES/NO Then, press the button (M)

To have access to this MENU, press the button (M) and then the button B/P simultaneously for 15 seconds

Use only with sanitization method (OPTIONAL)

UVC lamps

OZONE
(DURING SANITIZATION,
STAFF MUST NOT BE IN
THE ROOM)



▲
▼
M
B/P

Use the arrows to select the desired mode.
Then, press the button (M)

Use only with sanitization method (OPTIONAL)

You can set two daily programs. For ex. Monday starting at 20.00 and shutdown at 22.00; starting at 01.00 and shutdown at 02.00; MAX 2 hours per week



▲
▼
M
B/P

Use the arrows to select the desired mode.
Then, press the button (M) and OK

Use it only with moisture sensor (OPTIONAL); if it is activated without probe, on the display the value 0 will appear.

Use the 0_10 Volt sensor



▲
▼
M
B/P

Use the arrows to select YES/NO.
Then, press the button (M)

Where required, use it only with the sprinkler system of the room

Use Pin N-°8 of the contact card (NO) generally open.

In case of fire, the recuperator stops.

The signal "FIRE ALARM" will appear on the Display



▲
▼
M
B/P

Use the arrows to select the option YES/NO
Then, press the button (M)

To have access to this MENU, press the button (M) and then the button B/P simultaneously for 15 seconds

Installer menu

Regulation of the minimum of the two fans. We do not recommend modifying it under 20%



Use the arrows to select the desired option. Then, press the button (M)

Installer menu

Regulation of the maximum of the two fans: when modified the fan speed, for ex. 80%, it is no longer possible to exceed the 80% on both fans (SUPPLY/ EXHAUST)



Use the arrows to select the desired option. Then, press the button (M)

Installer menu

TACHO FANS



Use the arrows to select the desired option. Then, press the button (M)

Installer menu

TACHO FANS

FAN 1 indicates the frequency in Hz of the supply fan

FAN 2 indicates the frequency in Hz of exhaust fan



Use the arrows to select the desired option. Then, press ESC

8 - SYSTEM - MODBUS PROTOCOL DESCRIPTION, USED IN THE COMMUNICATION BETWEEN DISPLAY CARD AND CONTROL CARD (FW00071 – FW00055)

Characteristics:

Protocol: MODBUS RTU

Communication: RS485 port – (115200 / 19200 / 9600)-8-N-1 (Half-Duplex)

Error control: CRC16 (polynomial 0xA001)

End-of-message: consider the MODBUS package completed after 5 ms from the last received byte

Message format:

Master -> Slave:

SLAVE ADDRESS (1byte) – FUNCTION CODE (1byte) – DATES (Nbytes) –CRC16 (2bytes)

Slave -> MASTER:

SLAVE ADDRESS (1byte) – FUNCTION CODE (1byte) – DATES (Nbytes) –CRC16 (2bytes)

Functions:

04 – READ INPUT REGISTER

06 – WRITE SINGLE REGISTER

Address

SLAVE:

Use the dip switch at the edge of the card (SW1) in order to assign the address to a slave card. (SW1). Dip positions' modifications must be done with a not-powered system. Do not use SLAVE with the same address in the same system. Do not use card addresses that are higher than the number of cards managed by the display card (MASTER).

DIP 5	DIP 4	DIP 3	DIP 2	DIP1	CARD ADDRESS
OFF	OFF	OFF	OFF	OFF	1
OFF	OFF	OFF	OFF	ON	2
OFF	OFF	OFF	ON	OFF	3
OFF	OFF	OFF	ON	ON	4
OFF	OFF	ON	OFF	OFF	5
OFF	OFF	ON	OFF	ON	6
OFF	OFF	ON	ON	OFF	7
OFF	OFF	ON	ON	ON	8
OFF	ON	OFF	OFF	OFF	9
OFF	ON	OFF	OFF	ON	10
OFF	ON	OFF	ON	OFF	11
OFF	ON	OFF	ON	ON	12
OFF	ON	ON	OFF	OFF	13
OFF	ON	ON	OFF	ON	14
OFF	ON	ON	ON	OFF	15
OFF	ON	ON	ON	ON	16
ON	OFF	OFF	OFF	OFF	17
ON	OFF	OFF	OFF	ON	18
ON	OFF	OFF	ON	OFF	19
ON	OFF	OFF	ON	ON	20
ON	OFF	ON	OFF	OFF	21

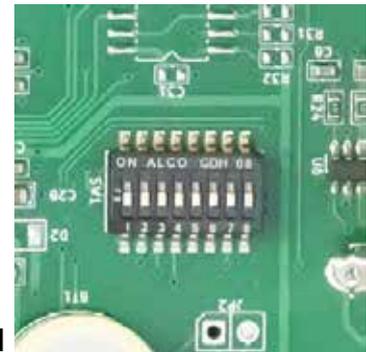
DIP 5	DIP 4	DIP 3	DIP 2	DIP 1	CARD ADDRESS
ON	OFF	ON	OFF	ON	22
ON	OFF	ON	ON	OFF	23
ON	OFF	ON	ON	ON	24
ON	ON	OFF	OFF	OFF	25
ON	ON	OFF	OFF	ON	26
ON	ON	OFF	ON	OFF	27
ON	ON	OFF	ON	ON	28
ON	ON	ON	OFF	OFF	29
ON	ON	ON	OFF	ON	30
ON	ON	ON	ON	OFF	31
ON	ON	ON	ON	ON	32

*The hardware revision S0242 has not the DIP5. For this reason the maximum address on these cards is 16

Communication speed:

To set the Baud Rate of a SLAVE card, use the dip switch 6 and 7 present on the card (SW1). Changes must be made when the system is not connected to the mains. Set the same baud rate configured on the display card (MASTER) through the configuration menu.

DIP 7	DIP 6	BAUD RATE
OFF	OFF	115200
OFF	ON	9600
ON	OFF	19200



SW1

Registers: *The hardware revision S0242 has not the DIP6 and DIP7. For this reason the baud rate on these cards is fixed to 115200.

NAME	HEX ADDRESS	DEC ADDRESS	R/W	FUNCTIONS	COMMENTS
SLAVE_VERSION	0x0	0	R	4	Bit15..8: Hardware (0=S0242, 1=S0283) Bit7..0: Firmware version present on the control card (0.999)
COMMAND	0x0 1	1	W	6	<p>Commands from Master to Slave:</p> <p>0x01 Request for flash saving of the register's actual values (to be used after modifying registers 13..20. If you do not save in flash, modifications will be lost after the slave's reboot).</p> <p>0x02 on/off system: the slave reverses the on/off status system at every pack reception (only if the thermostat is not present and the system is manual or automatic).</p>
					<p>0x03 ByPass command: it reverses the ByPass outlet status (only with manual system)</p> <p>0x04 it sends the slave in updating firmware mode</p>
DATETIME_DD_MM	0x02	2	R-W	4 - 6	<p>Bit15..12: Day of week (1:LUN .. 7:DOM)</p> <p>Bit11..4: Day</p> <p>Bit3..0: Month</p> <p>*</p>
DATETIME_YY_H	0x03	3	R-W	4 - 6	<p>Bit15..8: Year - 2000</p> <p>Bit7..0: Hours</p> <p>*</p>

DATETIME_M_S	0x04	4	R-W	4 – 6	Bit15..8: Minutes Bit7..0: Seconds *
IO	0x05	5	R	4	Input/outlet status: Bit0: DIN_HV1, Bit1: DIN_HV2, Bit2: DIN_TERMOST, Bit3: DIN_FILTRO, Bit8: RELE_FAN1, Bit9: RELE_FAN2, Bit10: RELE_BATT, Bit11: RELE_FCOM, Bit12: RELE_AUX1, Bit13:RELE_BYPASS
CO2	0x06	6	R	4	Sensor value CO2 in ppm
AUX1	0x07	7	R	4	Input value AUX1 in count
AUX2	0x08	8	R	4	Input value AUX2 in count
TEMP_EXT	0x09	9	R	4	Outside temperature value, in °*10
TEMP_INT	0x0A	10	R	4	Inside temperature value, in °*10
H2O_VALUE	0x0B	11	R	4	Command applied on the H2O output, in %
STATUS	0x12	12	R-W	4 – 6	Machine status: Bit 1-0: Modes (0=manual, 1=automatic, 2=programs) Bit2: ByPass status (0=Off, 1=On) Bit3: system status (0=Off, 1=On) Bit4: 1 if fan speed > 30% Bit5: filter status (0=Off,1=On) Bit6: firefighting status (0=Off,1=On) Bit7: Tacho Fans status (0=Ok,1=Ko) Bit8: sanitisation alarm status(0=Off, 1=On)
SEASON	0x0D	13	R-W	4 – 6	Set season (0=winter, 1=summer)
THERMOSTAT	0x0E	14	R-W	4 – 6	Thermostat (0=not in the system, 1=in the system)
AIR_QUALITY	0x0F	15	R-W	4 – 6	Air control (0=not in the system, 1=in the system)
CO2_SETPOINT	0x10	16	R-W	4 – 6	CO2 setpoint set in ppm (it is valid if the air control is enabled)
ROOM_SETPOINT	0x11	17	R-W	4 – 6	Temperature setpoint set in °

FAN2_FAN1	0x12	18	R-W	4 – 6	Bit15..8: % supply command Bit 7..0: % return command
MAX_FAN_MIN_FAN	0x13	19	R-W	4 – 6	Bit15..8: Max. command % applicable to the fan outlets Bit 7..0: Min. command % applicable to the fan outlets
REAL_FAN2_FAN1	0X14	20	R	4	Bit15..8: % supply command applied in this moment Bit7..0: % return command applied in this moment
PROG_1_START	0X15	21	R-W	4 – 6	Trigger time 1 in programs mode: Bit 15..8: starting time 1 Bit 7..0: starting minutes 1 **
PROG_1_STOP	0X16	22	R-W	4 – 6	Deactivation time 1 in programs mode: Bit 15..8: End time 1 Bit 7..0: End minutes 1 **
...			
PROG_14_START	0X2F	47	R-W	4 – 6	Trigger time 14 in programs mode: Bit15..8: starting time 14 Bit 7..0: starting minutes 14 **
PROG_14_STOP	0X30	48	R-W	4 – 6	Deactivation time 14 in programs mode: Bit 15..8: End time 14 Bit. 7..0: End minutes 14 **
STERILIZER_PROG_1_START	0X31	49	R-W	4 – 6	Activation output sterilizer – Hour 1 (MON P1)

					Bit15..8: Starting time 1 Bit7..0: Starting minutes 1 ***
STERILIZER_PROG_1_STOP	0X32	50	R-W	4 - 6	Deactivation output sterilizer – Hour 1 (MON P1): Bit15..8: End time 1 Bit7..0: End minutes 1 ***
...			
STERILIZER_PROG_14_START	0X4B	75	R-W	4 - 6	Activation output sterilizer– Hour 14 (SUN P2): Bit15..8: Starting time 14 Bit7..0: Starting minutes 14 ***
STERILIZER_PROG_14_STOP	0X4C	76	R-W	4 - 6	Deactivation output sterilizer– Hour 14 (DOM P2): Bit15..8: End time 14 Bit7..0: End minutes 14 ***
STERILIZER	0X4D	77	R-W	4 - 6	Sterilizer (0=not in the system, 1= in the system)
ANTIFIRE	0X4E	78	R-W	4 - 6	Firefighting (0=not in the system, 1= in the system)
HUMIDITY_SENSOR	0X4F	79	R-W	4 - 6	Humidity sensor (0=not in the system, 1= in the system)
HUMIDITY_VALUE	0X50	80	R	4	Humidity value read by the sensor, in %
TACHO_FAN_1	0X51	81	R	4	tachymetric value fan 1 read in this moment, in Hz

TACHO_FAN_2	0X52	82	R	4	tachymetric value fan 2 read in this moment, in Hz

* DATE_TIME_X_X registers must always be set in block, as follows:

- Set DATETIME_DD_MM
- Set DATETIME_Y_H
- Set DATETIME_M_S

**Each program must be written in block, as follows:

- Set
PROG_N_START
- Set
PROG_N_STOP

*** Each sterilizer time must be written in block, as follows:

- Set
STERILIZER_PROG_N_START
- Set
STERILIZER_PROG_N_STOP

9 - DISPOSAL



ATTENTION:

Important information concerning the environment friendly disposal of the appliance



This product conforms to EU Directive 2002/96/EC. The symbol of the barred waste bin indicates that, at the end of its useful life, the product has to be collected separately from the domestic waste.

The user will have to take the product to a collection centre for waste electrical and electronic equipment, or return it to a retailer on purchase of a replacement. Failure to do so may incur the penalties established by laws governing waste disposal.

Proper differential collection and the subsequent recycling, processing and environmentally compatible disposal of waste equipments avoids unnecessary damage to the environment and possible related health risk and promotes also recycling of the materials used in the appliance.



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