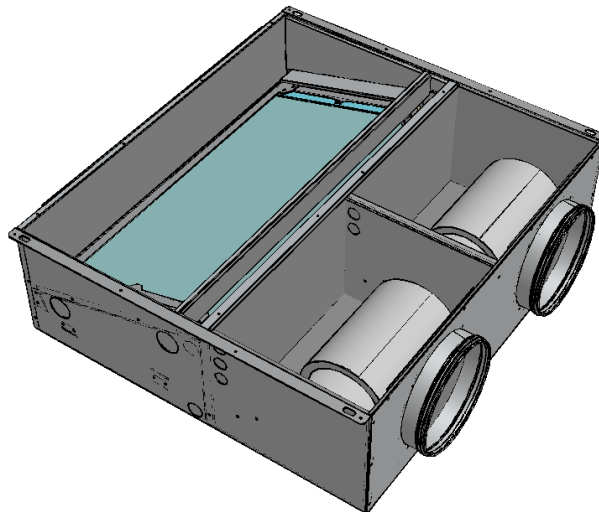


INSTALLATION, USE AND MAINTENANCE MANUAL

DUCTO MULTI

The integrated multi-zone ductable fancoil



DUCTO MULTI - MULTI-ZONE DUCTABLE FANCOIL

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Share capital int. vers. € 150,000. - Tax code / VAT number 01827470228 - REA registration nr. 180610 - Reg. Companies (TN) 10656

Mechanographic number TN025148

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1 GENERALITY

1.1 INTRODUCTION

This manual has been conceived with the aim of making the installation and management of your system as simple as possible.

By reading and applying the suggestions in this manual, you will be able to get the best performance from the product you have purchased.

We would like to thank you for the choice you made with the purchase of our product.

Read this booklet carefully before carrying out any operation on the unit.

You must not install the unit or carry out any work on it if you have not carefully read and understood this manual in all its parts. In particular, all the precautions listed in the manual must be taken.

The documentation accompanying the unit must be delivered to the plant manager so that he can keep it carefully (at least 10 years) for any future assistance, maintenance and repairs.

The installation of the unit must take into account both the purely technical requirements for proper functioning, and any local legislation in force and specific prescriptions.

Make sure that upon delivery of the unit, there are no obvious signs of damage caused by transportation. In this case indicate it on the delivery note.

This manual reflects the state of the art at the time the machine was marketed and cannot be considered inadequate as it is subsequently updated on the basis of new experiences. The Manufacturer reserves the right to update the production and the manuals, without the obligation to update the previous ones, except in exceptional cases.

Contact the Manufacturer's Sales Department to receive further information or updates to the technical documentation and for any improvement proposals to this manual. All reports received will be rigorously examined.

1.2 BASIC SAFETY RULES








We remind you that the use of products that use electricity and water implies the observance of some fundamental safety rules:

- The use of the appliance by disabled and unassisted people is prohibited.
- It is forbidden to touch the appliance with bare feet and with wet or humid parts of the body.
- Any cleaning operation is forbidden before disconnecting the appliance from the power supply by turning the main switch of the system to off.
- It is forbidden to modify the safety or adjustment devices without the authorization and indications of the manufacturer of the appliance.
- It is forbidden to pull, disconnect or twist the electric cables coming out of the appliance, even if it is disconnected from the mains electricity supply.
- It is forbidden to introduce objects and substances through the air intake and delivery grilles.
- It is forbidden to open the access doors to the internal parts of the appliance without first setting the system main switch to off.
- It is forbidden to disperse and leave the packaging material within the reach of children as it can be a potential source of danger.
- Respect the safety distances between the machine and other equipment or structures to ensure sufficient access space to the unit for maintenance and assistance operations as indicated in this booklet.
- The unit must be powered with electric cables with a section suitable for the power of the unit. The voltage and frequency values must correspond to those indicated for the respective machines; all the machines must be earthed as per the regulations in force in the various countries.






1.3 SYMBOLOGY

The symbols shown in the following booklet allow you to quickly provide information necessary for the correct use of the unit.

Safety symbols

	<p>ATTENTION Only authorized personnel</p>	<p>Warns that the operations indicated are important for the safe operation of the machines</p>
	<p>DANGER Risk of electric shock</p>	<p>Warns you that failure to comply with the prescriptions creates a risk of electric shock.</p>
	<p>DANGER</p>	<p>Warns that failure to comply with the prescriptions entails a risk of harm to exposed persons.</p>
	<p>WARNING</p>	<p>Warns that failure to comply with the prescriptions entails a risk of damage to the unit or to the system.</p>
	<p>DANGER</p>	<p>It warns that there is the presence of moving parts and involves a risk of damage to exposed people</p>

1.4 WARNINGS

	<p>The unit must be installed by qualified and authorized personnel according to the regulations in force in the various countries. If the installation is not carried out it could become a dangerous situation</p>
	<p>Avoid installing the unit in very humid rooms or with large heat sources.</p>
	<p>On the electrical side, to prevent any risk of electrocution, it is essential to disconnect the main switch before carrying out electrical connections and all maintenance operations.</p>
	<p>In the event of water leaks inside the unit, set the main system switch to "Off", close the taps of the water and contact the technical service</p>
	<p>It is recommended to use a dedicated power supply circuit; Never use a common power supply with other appliances.</p>

1.6 RANGE

	-1-	-2-	-3-
SLC +	600	H	I

(1) Defines the size	2) Type of installation	3) Electronic type
600 = 2 fans 800 = 3 fans 1000 = 4 fans 1200 = 5 fans	H: horizontal	S: With 0-10v dc control signal for single fan I: Version with electronics and EC motors for single zone

1.7 IDENTIFICATION



- The unit is identifiable through the plate placed on the lower front panel of the same.
 - On the packaging there will be an additional identification plate with the model of the unit and the shipping references.
 - The plate on the packaging has no validity for the traceability of the product in the years following the sale.
- The removal, deterioration and illegibility of the plate placed on the unit involves major problems in identifying the machine, in the availability of spare parts and therefore in any future maintenance.

1.8 DELIVERY STATE

The supply includes:

- Air handling unit
- Coarse class filters pre-inserted inside the unit;
- Electrical box with provision for connection terminal block;
- Side condensate drain connections
- Side inlet and outlet water connections
- Labels / stickers (safety pictograms, channel identification, CE marking ...) already positioned on the unit.
- Installation, use and maintenance manual

1.11 START-UP REQUIREMENTS

Before starting, make sure that there are no foreign bodies inside the unit.
 Check the fastening of the closing panels and inspection doors.
 If there are no channels installed on the aeraulic sockets, install an adequate protection net.
 Check the power supply and grounding of the unit.

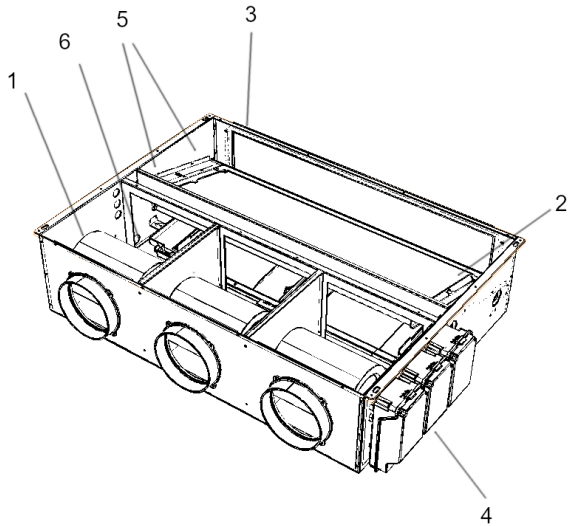
1.10 DISASSEMBLY AND DISPOSAL

Do not disassemble or dispose of the product yourself. Disassembly, demolition, disposal of the product must be carried out by authorized personnel in compliance with local regulations.



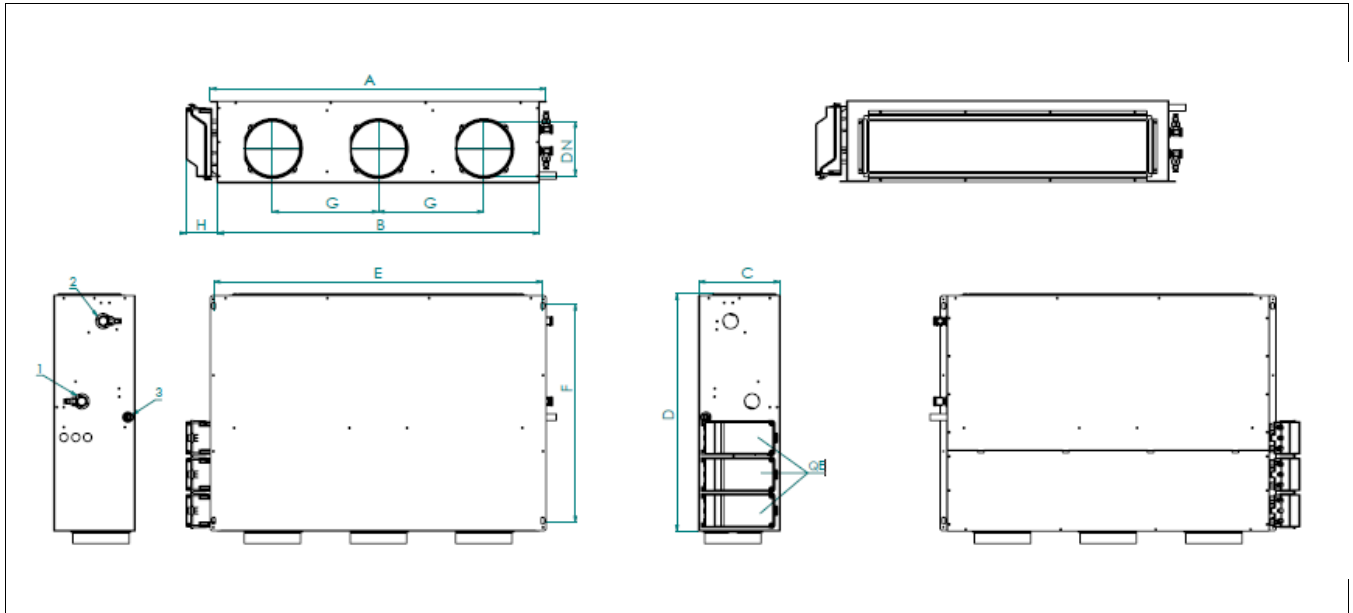
1.11 MAIN COMPONENTS UNITS

The main components of the unit are described below in order to understand the layout and characteristics of the machine.



1 Fan	2 Hydronic battery	3 Filter
4 Electrical connection box	5 Hydraulic connections	6 Condensate drain

1.12 DIMENSIONAL



SLC +						
			600	800	1000	1200
	DIM		SIZE 2	SIZE 3	SIZE 4	SIZE 5
	TO	mm	790	990	1190	1480
	B.	mm	750	950	1150	1440
	C.	mm	240	240	240	240
	D.	mm	695	695	695	695
	AND	mm	770	970	1170	1460
	F.	mm	637	637	637	637
	G.	mm	373	316	287	287
	H.	mm	90	90	90	90
	DN	mm	160	160	160	160
IN WATER	1		3/4 "F	3/4 "F	3/4 "F	3/4 "F
OUT WATER	2		3/4 "F	3/4 "F	3/4 "F	3/4 "F
EXHAUST H	3	mm	Ø 20	Ø 20	Ø 20	Ø 20
QE		No.	2	3	4	5

2 INSTALLATION

2.1 INSTALLATION CONDITIONS

The unit must be installed according to national and local standards that regulate the use of electrical devices and according to the following indications:

- install the unit inside residential buildings with an ambient temperature between 3 ° C and 45 ° C;
- avoid areas near sources of heat, steam, flammable and / or explosive gases and particularly dusty areas;
- install the unit in a place not subject to frost (the condensation water must be drained not frozen, at a certain inclination, using a siphon);
- do not install the unit in areas with a high relative humidity rate (such as a bathroom or toilet) to avoid condensation on the external surface;
- choose an installation site where there is sufficient space around the unit for the connections of the air ducts and to be able to carry out maintenance operations;
- the consistency of the ceiling / wall / floor where the unit will be installed must be adequate for the weight of the unit and not cause vibrations.

The environment chosen for the installation must contain:

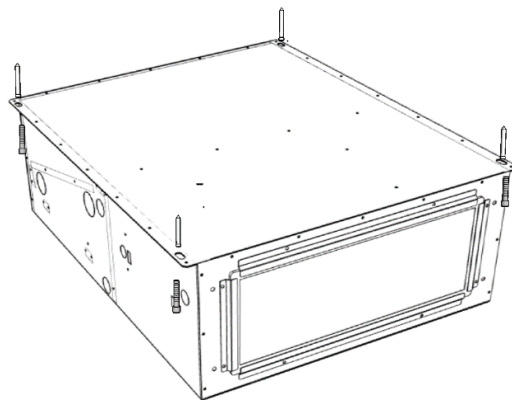
- connections of the air ducts;
- 230 V single-phase electrical connection
- connection for condensate drain
- water inlet and outlet water connection

2.2 UNIT POSITIONING

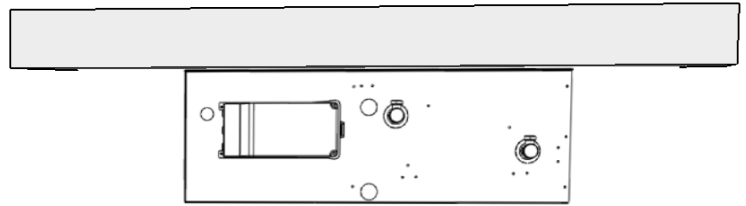
Ceiling mount

To mount the unit on the ceiling, you need:

- Use the 4 mounting holes on the top of the unit.
- Fix the unit to the ceiling, using the brackets, using suitable anchoring systems (dowels, threaded bars, chains...) and check the leveling with the help of a level.
- Ensure sufficient space for carrying out maintenance activities: the opening of the unit cover (from below) and accessibility to the electrical box and to the hydraulic connections must be guaranteed;



Do not mount the unit with sides or surfaces in direct contact with the walls to avoid possible contact noises, insert rubber or neoprene strips in this case.



Ceiling mount

2.3 CONDENSATE DRAIN CONNECTION

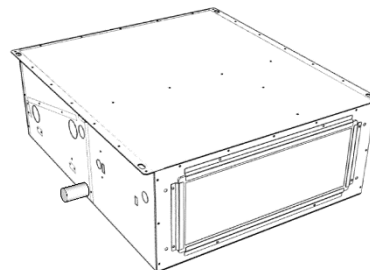


For the heat recovery unit to function correctly, a condensate drain must be connected to the plumbing system (drain) of the house. Furthermore, to allow the condensate water to flow correctly and avoid unpleasant odors, the condensate drain must always be equipped with the appropriate siphon to be placed on the drain line by the installer;

To install the condensate drain, comply with the following standards:

- give a slope of at least 2% to the exhaust pipe;
- provide for the possibility of disconnecting the drain hose for any maintenance (in particular in the case of ceiling installation);
- make sure that the discharge end of the pipe is at least below the water level of the siphon;
- make sure that the siphon is always full of water.

In horizontal positioning the drain is 18 mm in diameter;

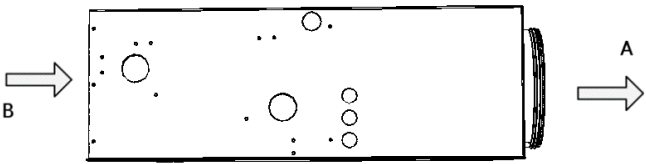
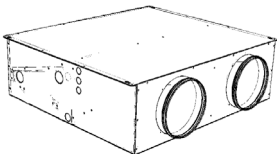
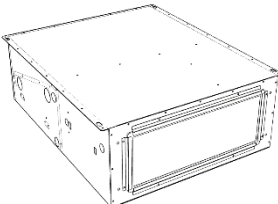


Horizontal installation drain

3 AERAILIC CONNECTIONS

3.1 AERAILIC CONNECTIONS

The unit is equipped with circular male connections for the air delivery part which correspond to each zone;
 On the other hand, a rectangular outlet is provided for the part of the room return air located on the rear side of the unit;
 For the correct connection of the air ducts, refer to the following diagram and the stickers placed on the unit.

<p>Horizontal installation</p> <p>The configurations for the aerailic flows and connections are indicated on the side:</p> <ul style="list-style-type: none"> A- Air delivery B- Air intake 		
		
<p>Aerailic attacks</p>		

Air delivery and return dimensions table

SLC +	600	800	1000	1200
A Base Delivery x Height mm	2 x 160 mm	3 x 160 mm	4x160 mm	5x160 mm
B Base recovery x Height mm	630x143 mm	830x143 mm	1030x143 mm	1317x143 mm

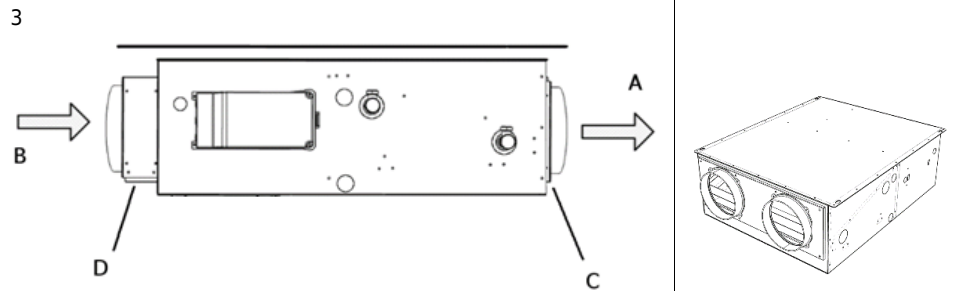
We recommend installing at least 500 mm of flexible piping to avoid entrainment of vibrations and annoying noises due to installation

3.2 AERAILIC CONNECTIONS WITH ACCESSORIES

Accessories are provided to facilitate the installation of the ducts;

The available accessories are:

- D - Return plenum with circular inlets



Aeraulic attacks

Air delivery and return dimensions table with accessories

SLC +	600	800	1000	1200
D. Return Plenum Number of connections / Diameter mm	2 x 160 mm	3 x 160 mm	4x160 mm	5x160 mm

4 HYDRAULIC CONNECTIONS

4.1 GENERALITY

The units are equipped with hydronic coils with water-air exchange;

- The connections on the units, even in the different applications and versions, are always common to all the units.
- Make sure to respect the flows indicated on the labels: inlet (water entering the unit), outlet (water leaving the unit)
- Make sure that the weight of the pipes does not weigh on the predisposed connections
- Provide shut-off valves on the delivery and return pipes to the system
- All the chilled water pipes must be insulated to minimize unwanted heat exchanges and the formation of condensation.
- Before filling the pipes, make sure that they do not contain foreign materials: such as sand, stones, rust flakes, welding drops, slag, etc. Otherwise, wash the hydraulic circuit by bypassing the unit.
- Absolutely avoid pump cavitation and the consequent presence of air in the hydraulic circuit.

Physico-chemical characteristics of water

Incompatible chemical-physical characteristics could compromise the integrity of the hydraulic parts of the unit.

Check the characteristics of the water:

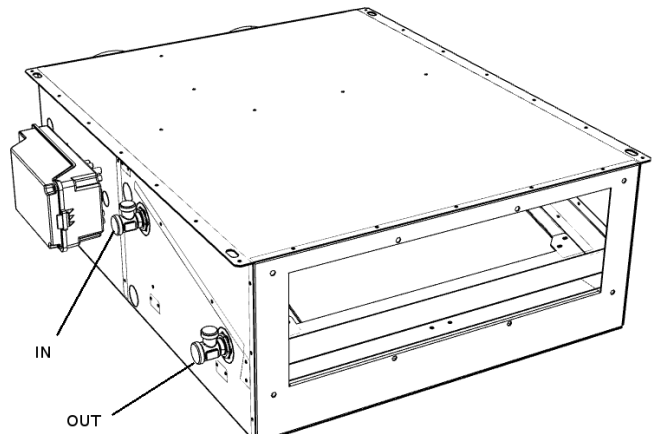
DESCRIPTION	Limit value
Hardness	<10 ° F
PH value	7.5 / 9
Oxygen	<2 mg / l
Conductivity	<500 uS / cm
Iron	<2 mg / l
Manganese	<1 mg / l
Nitrate	<70 mg / l
Sulphate	<70 mg / l
Chlorine compounds	<300 mg / l
Free radical carbon dioxide	<10 mg / l
Ammonium	<20 mg / l

4.2 POSITIONING AND CONNECTION PROCEDURES

The hydraulic connections are located on the side of the unit.

The connections are with Eurokonus $\frac{3}{4}$ " male thread.

Respect IN as the water inlet to the unit and OUT as the water outlet from the unit.

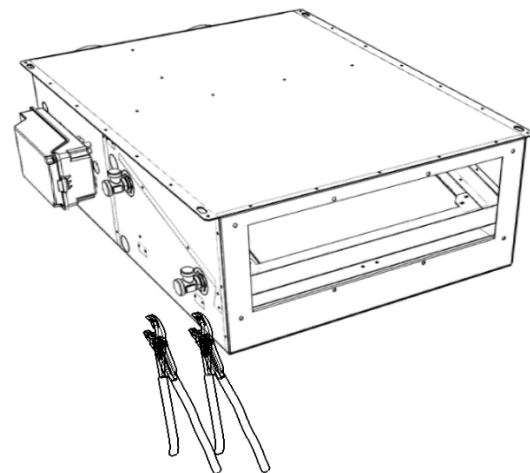


Connect the pipes with a Eurokonus threaded fitting and tighten it with dedicated tools;

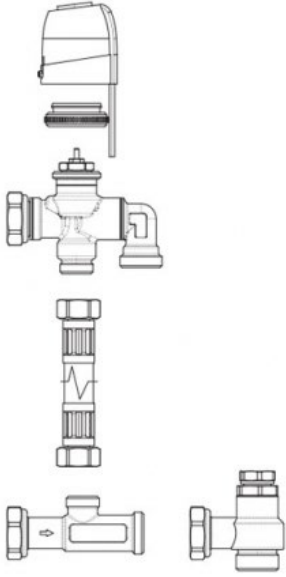
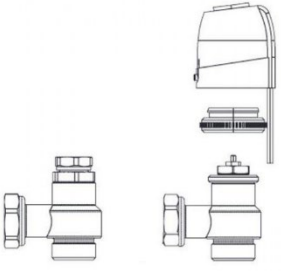
The external thread is connected through a swivel fitting to the battery to prevent rotation in the tightening from damaging the internal pipes;

In any case, be careful not to rotate or twist the pipes coming from inside the unit;

Rotating the pipes during connection could damage the connections inside the unit and cause water leaks during operation;



4.3 3-WAY VALVE CONNECTION

<p>2 and 3-way valve groups are available as accessories for connection to the outside of the unit.</p> <p>The groups are supplied as a kit to be assembled and contain all the fittings to facilitate the connection to the installer.</p>	 <p>The 3-way valve group kit includes a 3-way valve with a handle, a vertical pipe with a check valve, and two T-fittings.</p>	 <p>The two-way valve assembly kit includes a 2-way valve with a handle, a vertical pipe with a check valve, and a T-fitting.</p>
	<p>3-way valve group kit</p>	<p>Two-way valve assembly kit</p>

5 ELECTRICAL CONNECTIONS

5.1 GENERALITY

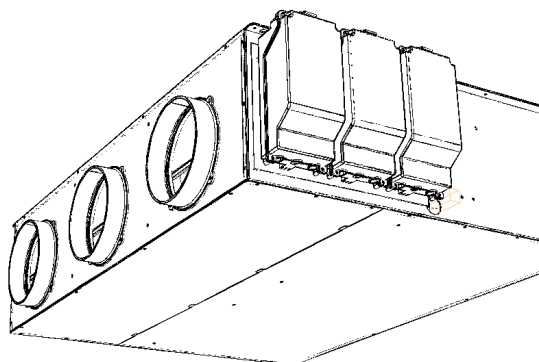
- Before starting any operation to make the electrical connection make sure that the unit is not electrically powered
- Make the necessary electrical connections by consulting only the wiring diagram attached to this manual.
- Install a suitable breaking device and differential protection for the exclusive service of the unit.
- IS it is essential that the unit is connected to an earth socket.
- Check that the electrical components chosen for the installation (main switch, circuit breakers, cable section and terminals) are suitable for the electrical power of the installed unit and that they take into account the starting currents of the compressor as well as the maximum load that can be reached. The relative data are indicated on the attached wiring diagram and on the unit identification plate
- IS It is forbidden to enter the unit with electric cables unless specified in this booklet.
- Use cables and electrical conductors with adequate sections and in compliance with the regulations in force in the various countries.
- Absolutely avoid running electrical cables in direct contact with pipes or components inside the unit
- After the first few moments of operation, check the tightening of the screws of the power supply terminals

Power line sizing table:

SLC+		600	800	1000	1200
Diet	V / Ph / Hz	230/1/50			
Max absorbed power	kW	0.19	0.28	0.37	0.46
Max absorbed current	TO	0.7	1.4	2.1	2.8

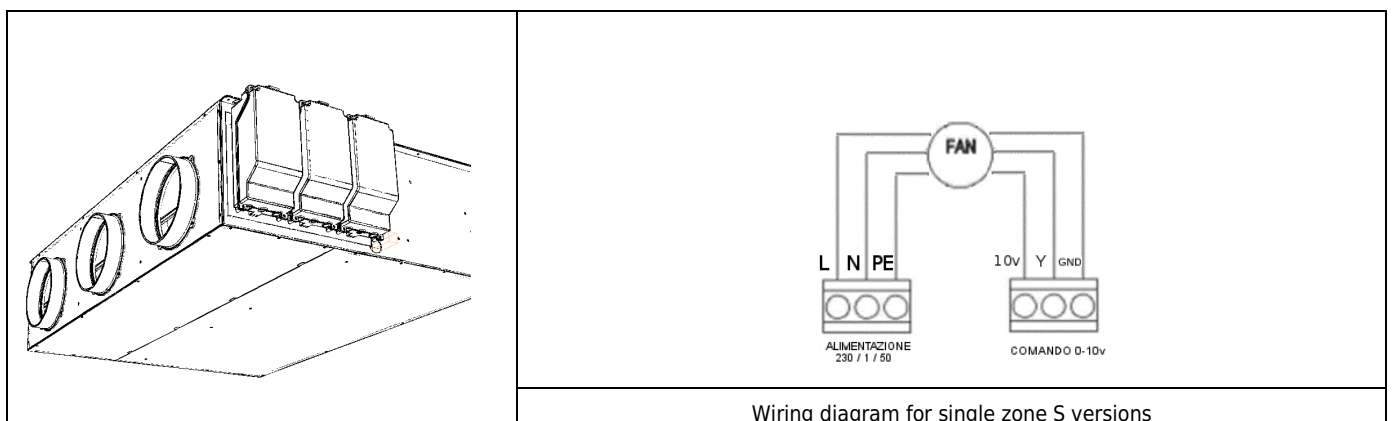
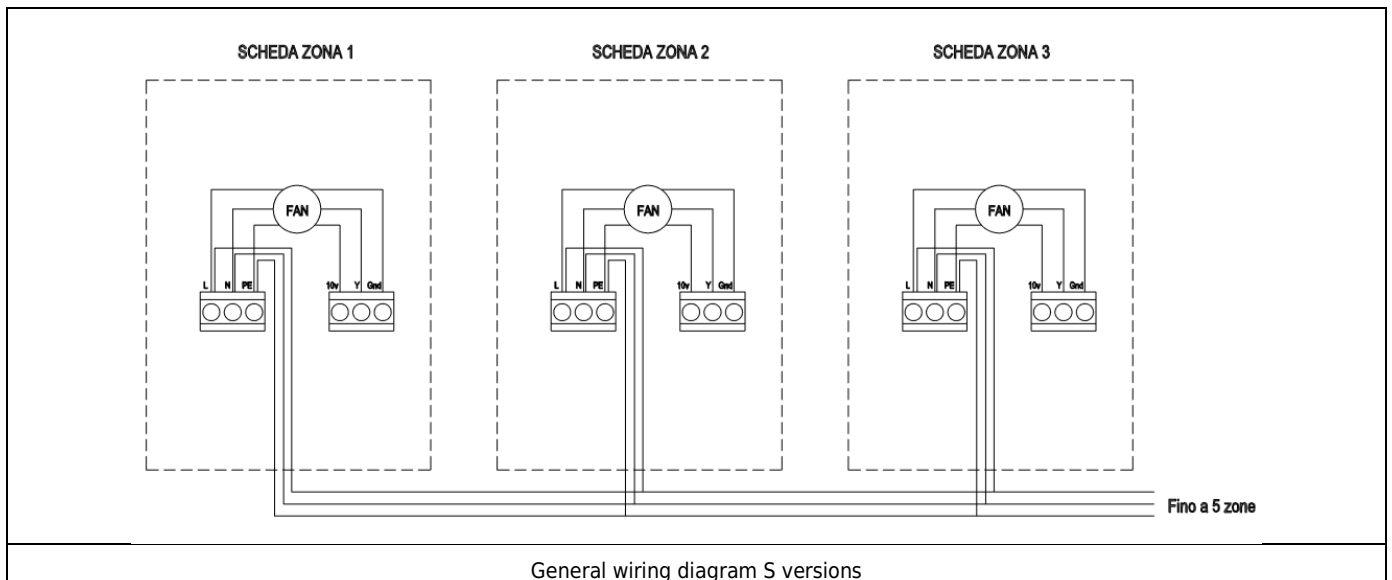
5.2 POSITIONING AND CONNECTION PROCEDURES

On the side of the unit there are the electrical boxes for the electrical connections of each single output, while inside the box there are the cable clamps and the screws supplied.



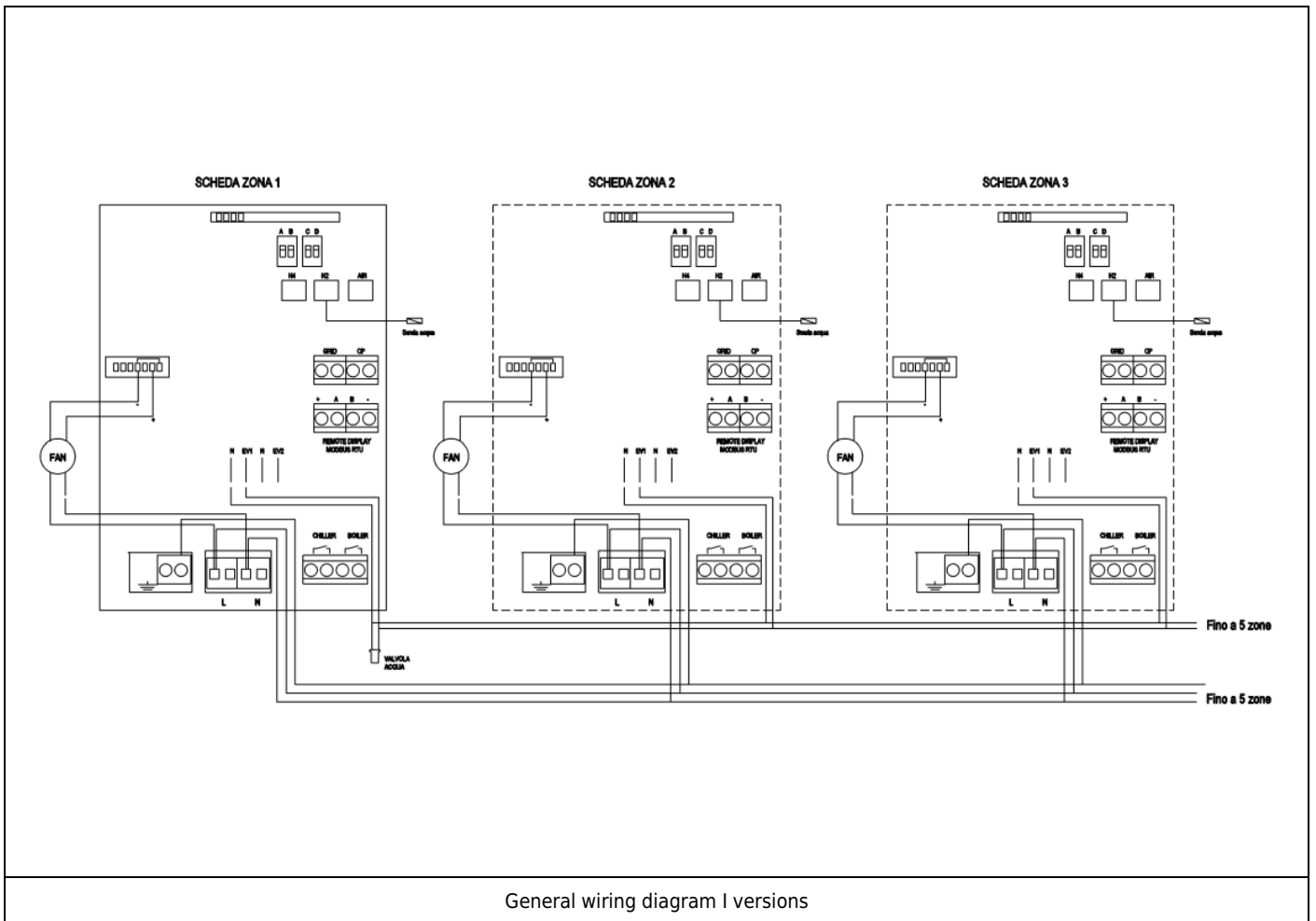
Electrical connections

5.3 S VERSION UNIT WIRING DIAGRAMS - (0-10V DC COMMAND)

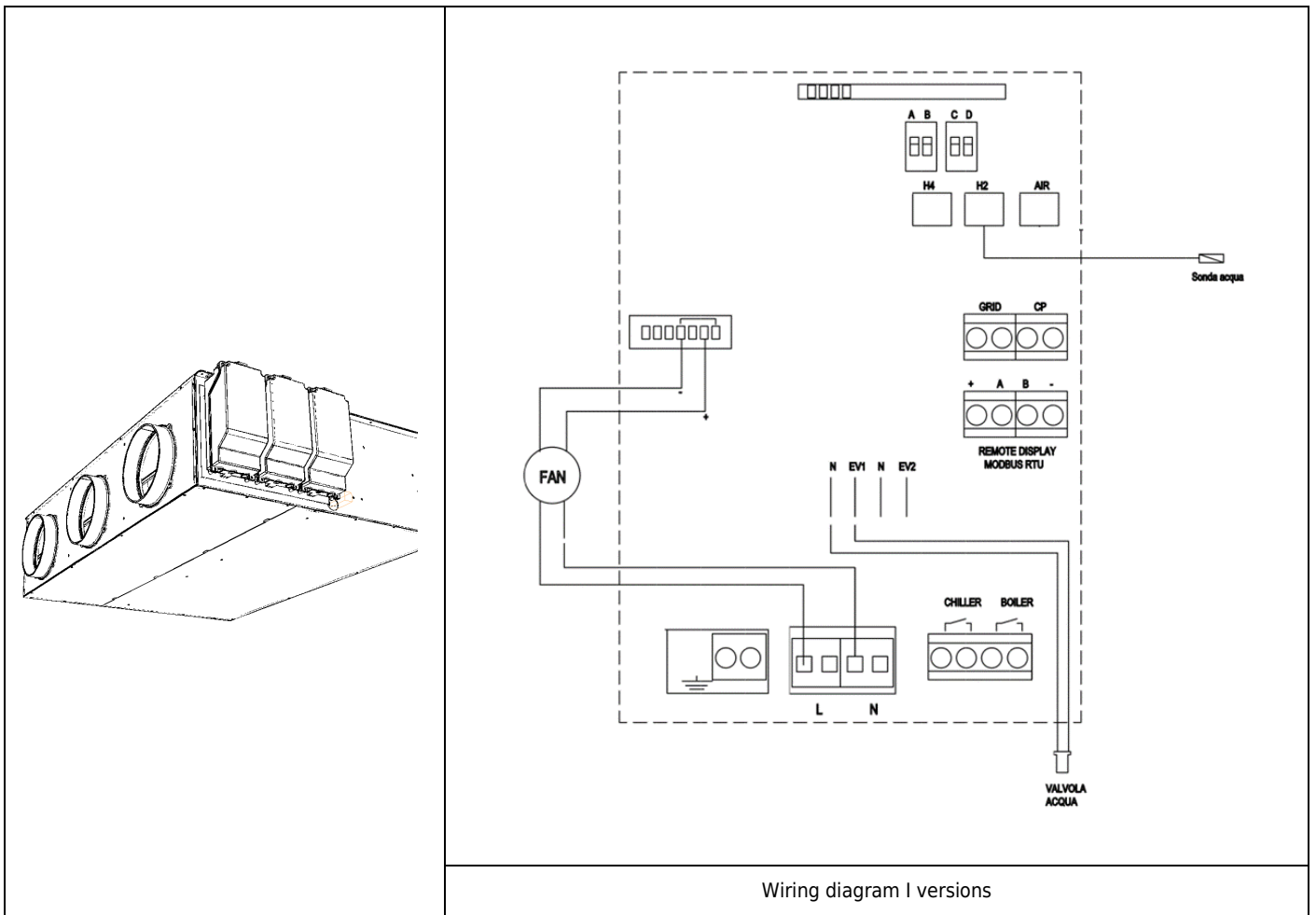


CONNECTIONS BY THE CUSTOMER		
L - N - PE	Power supply 230/1/50	Check power in the previous tables
10v	Reference voltage signal	Voltage supplied by the motor (I max = 20ma)
Y	0-10v dc signal to the zone motor	
Gnd	Reference signal	

5.4 ELECTRICAL DIAGRAMS OF UNIT VERSION I



NB: The connection must be of the "in-out" type and not "star" or "tree".

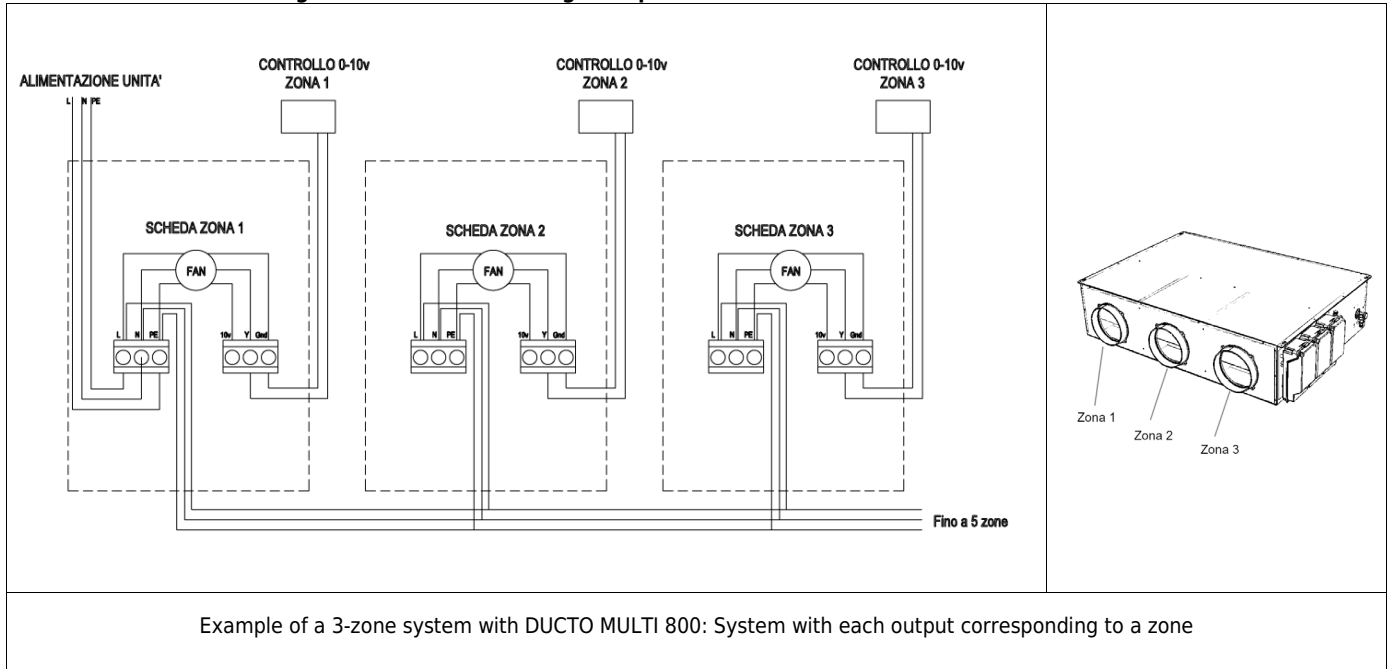


CONNECTIONS BY THE CUSTOMER		
LN-PE	Power supply 230v / 1/50	In parallel with the other areas
GRID	Window contact	Contact closed / Unit on
CP	Contact presence	Contact closed / unit off
CHILLER	Generator / pump consent	Clean Contact (cold request activation)
BOILER	Generator / pump consent	Clean Contact (hot request activation)
WATER VALVE (N-EV1)	Water valve	Live contact (230 V) In parallel with the other areas
REMOTE DISPLAY	Remote control (4 wires)	
REMOTE ON OFF (ON DISPLAY)	Remote ON OFF contact present on remote display	Contact closed / unit OFF

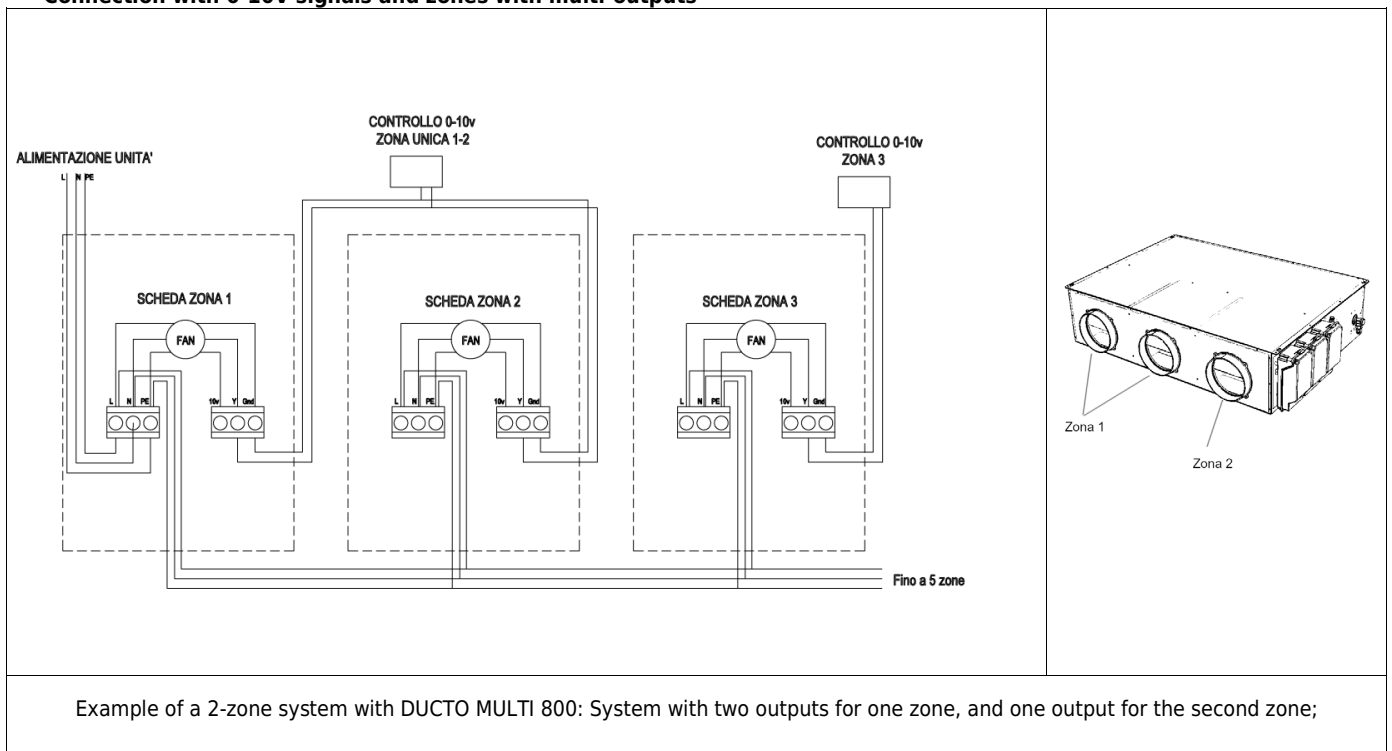
5.5 ELECTRICAL CONNECTIONS VERSION -S-



Connection with 0-10V signals and zones with single outputs



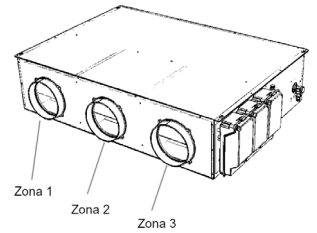
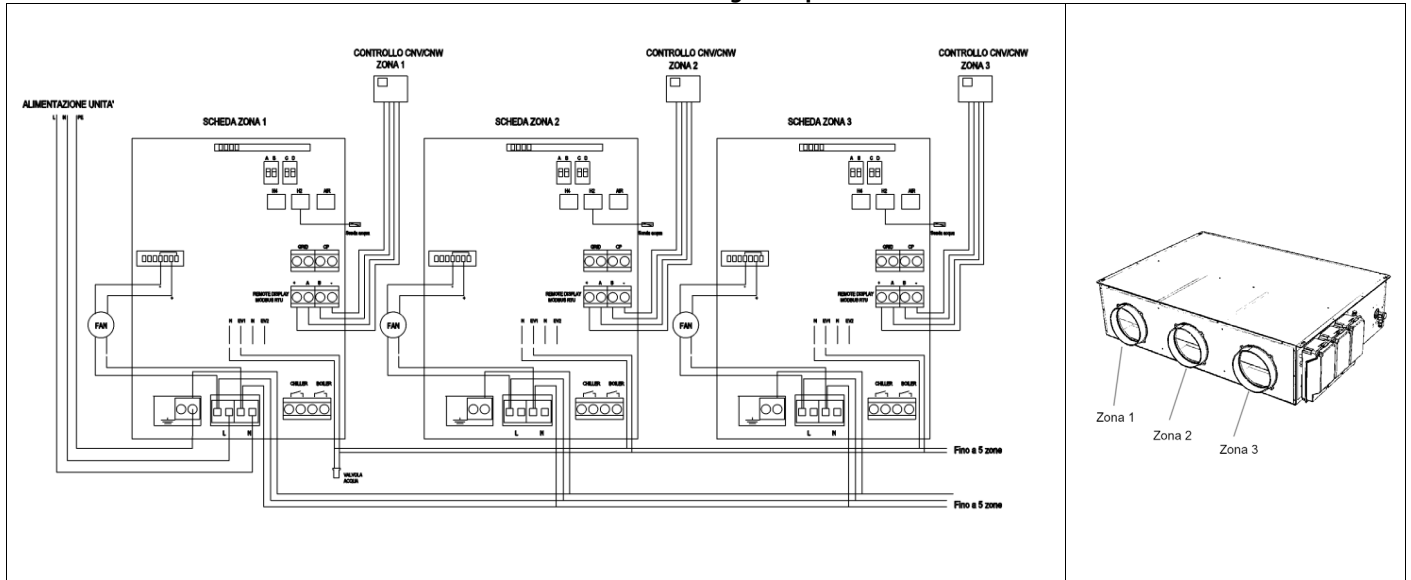
Connection with 0-10V signals and zones with multi-outputs



5.6 ELECTRICAL CONNECTIONS VERSION -I-

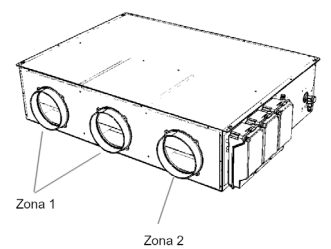
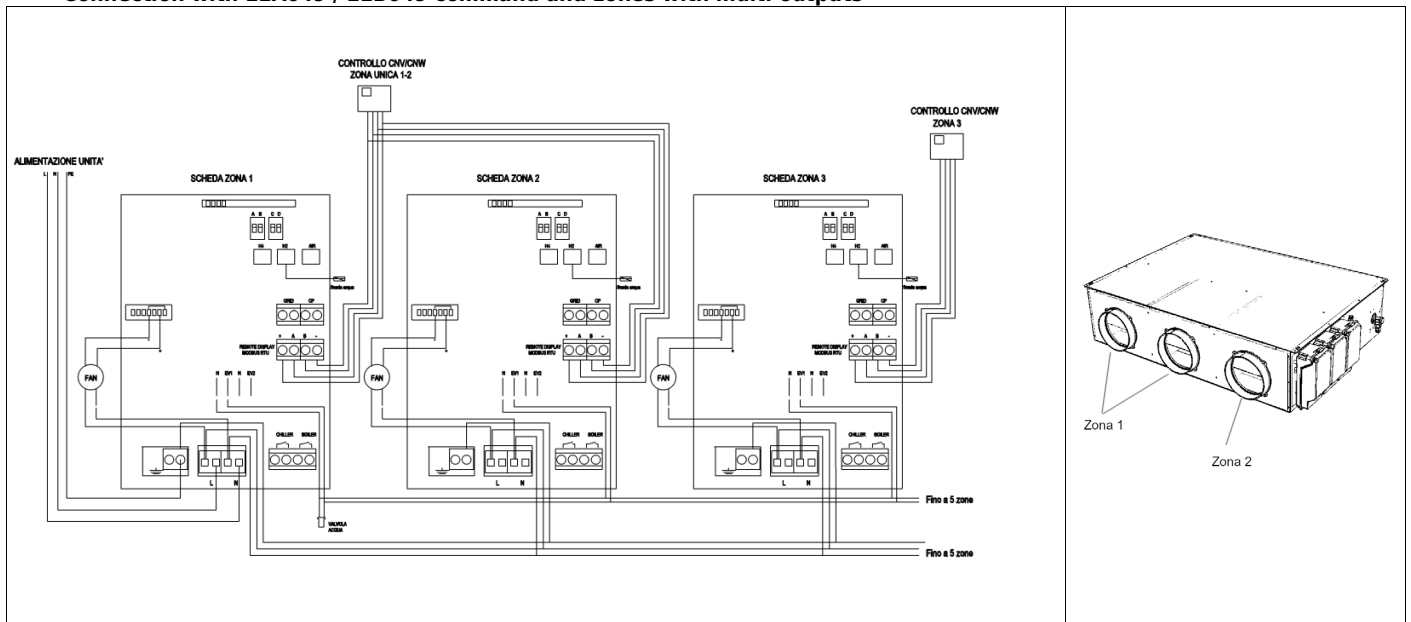


Connection with EEA649 / EEB649 command and zones with single outputs



Example of a 3-zone system with DUCTO MULTI 800: System with each output corresponding to a zone

Connection with EEA649 / EEB649 command and zones with multi outputs



Example of a 2-zone system with DUCTO MULTI 800: System with two outputs for one zone, and one output for the second zone;

Remote panel connection EEA649 / EEB649

The -I- version card provides remote controls of the capacitive Touch type to manage all the unit functions and are designed for installation on the wall or outside the 502 box.

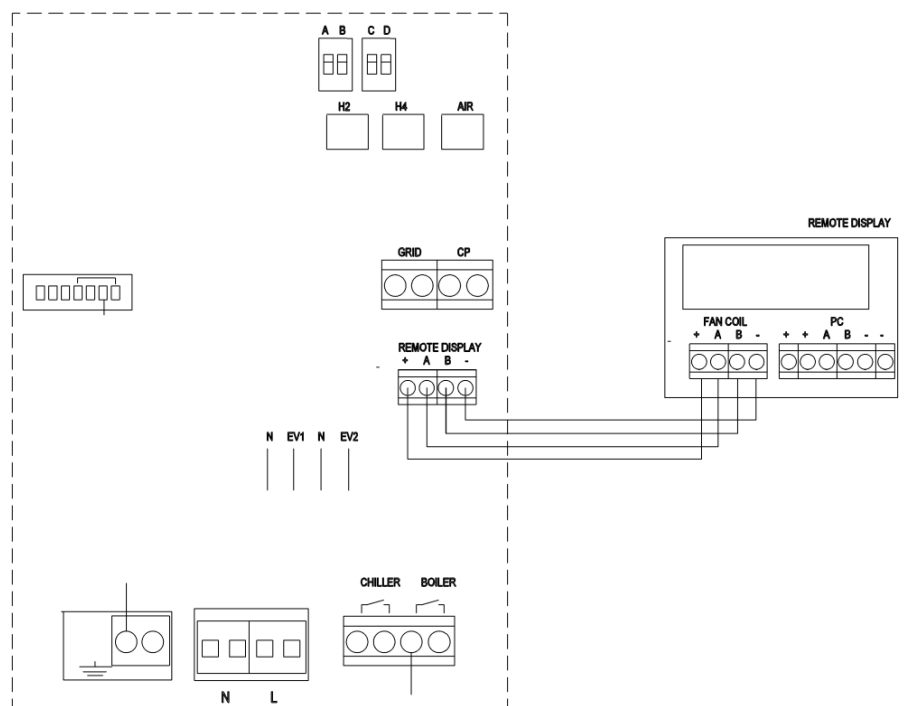
There are two families of remote commands:

- CNV - Serial control with the possibility of RS485 Modbus RTU connection;
- CNW - Serial control with the possibility of connection to a WIFI network and management of the unit through a dedicated APP.

The controls can be supplied in both White and Black colors.

The control is connected to the unit via a 0.75 / 1mm 4-conductor shielded / braided cable.

The CNV command foresees, through the other available terminals, the connection to an RS485 Modbus RTU serial network as shown below.



EEA649 / EEB649 - EFA649 / EFB649 remote panel

Auxiliary Links

The card allows the operation of the EC Brushless fan through a remote control described above;

Some auxiliary functions have been implemented in the board such as the connection of the regulators and the management of a battery / post valve;

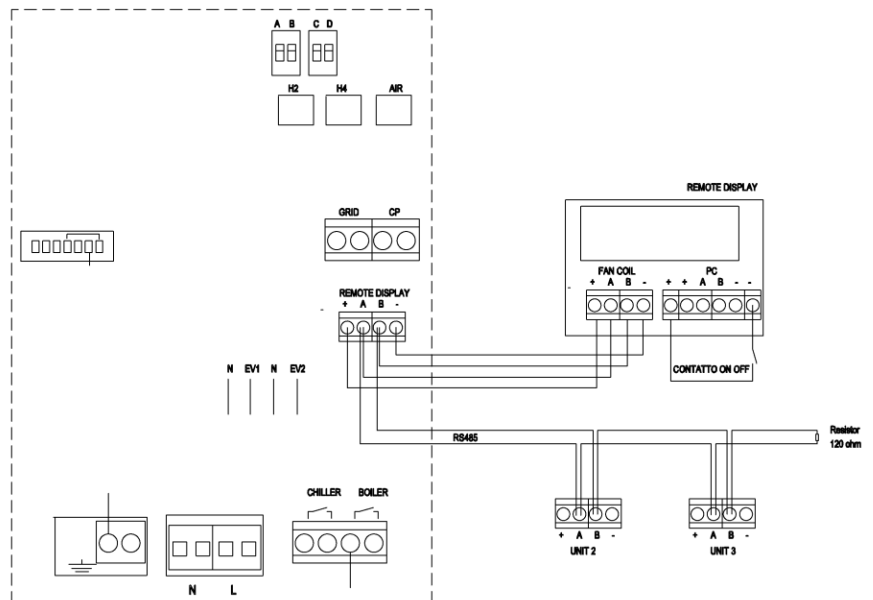
ZONE DISPLAY CONNECTION TO CONTROL MULTIPLE OUTPUTS

The CNV-CNW panel provides for the command of several outputs; it is possible to connect several outputs which will be managed by the single remote panel and therefore by a single zone;

They must be connected in series with an in and out connection on the boards of the individual units;

The network is an RS485 network; Use 2-wire shielded cable with a maximum length of 150 m;

- Carry out a layout in order to minimize the length of the leads;
- terminate the line with the supplied 120 Ω resistor;
- do not make "star" connections; - the connection with the RS485 cable is polarized,



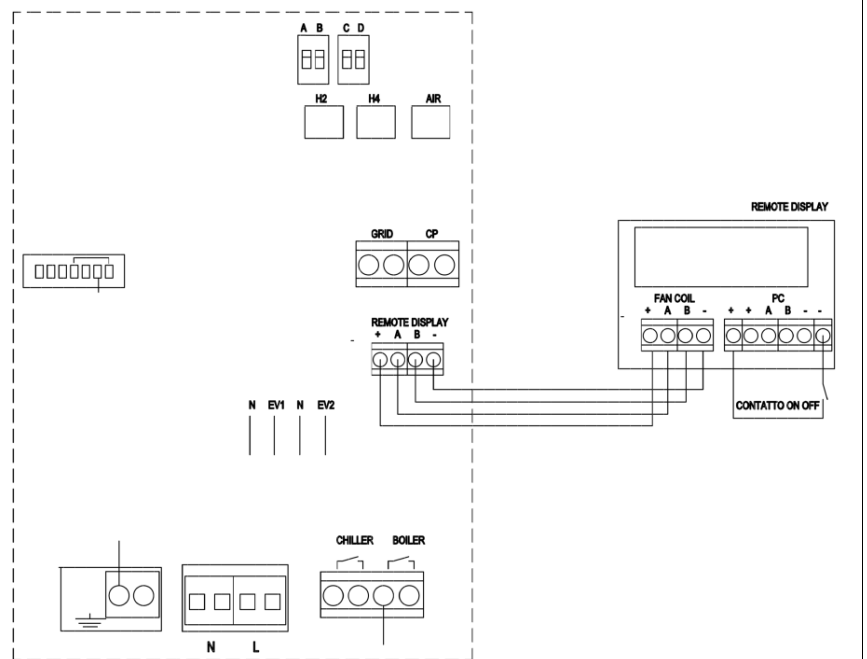
REMOTE ON OFF CONNECTION EEA649 / EEB649 COMMAND

The CNV-CNW remote panel provides an ON OFF command with which the unit can be connected through a clean contact to a device for turning the unit on / off remotely such as a switch or a timer

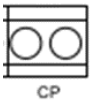

The logic provides:

Contact closed: Unit OFF


Contact open: Unit ON




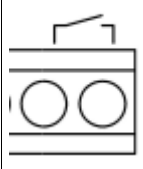

UNIT REMOTE ON OFF CONNECTION

<p>It is possible to connect an external on off contact to the unit which provides for the unit to be stopped;</p> <p>Contact Closed: unit OFF</p>		
	Screw terminals	Recommended cable = 2x0.5mm / 2 x 0.75mm
	Remote On off contact	

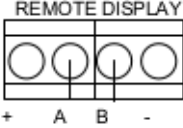

VALVE CONNECTION

<p>The unit provides for the control of a 2 or 3-way valve with dedicated cable and connector;</p> <p>The pre-wired connector is connected to the terminals on the electronic board:</p> <ul style="list-style-type: none"> • (N) - Neutral • (EV1) - Opening command 	<p>N EV1</p> 
	Water valve connection

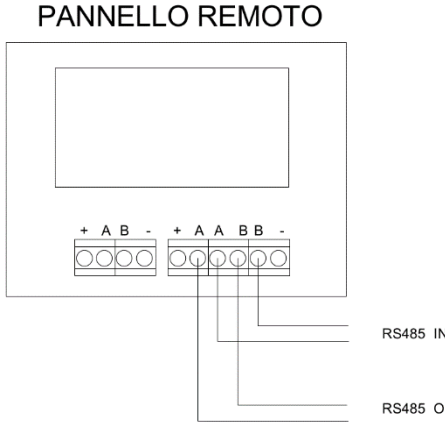

GENERATOR CONNECTION

<p>The unit provides for the control of a generator or a pump through the clean contact indicated on the side:</p> <p>Chiller - called cold generator Closed contact, generator start</p> <p>Boiler - called hot generator Closed contact, generator start</p>	<p>CHILLER</p> 	<p>BOILER</p> 	
	Screw terminals	Recommended cable = 2x0.5mm / 2 x 0.75mm	
	Generator control contact		

MODBUS RTU CONNECTION TO THE UNIT

<p>Without connecting the display, the machine can be connected to a Modbus RS485 RTU supervision system;</p> <p>The communication protocol is: RTU 9600 N 8 1;</p>		
	Screw terminals	Recommended cable = 2x0.5 mm shielded
	Modbus RTU unit connection	

MODBUS RTU CONNECTION TO REMOTE PANEL T / H

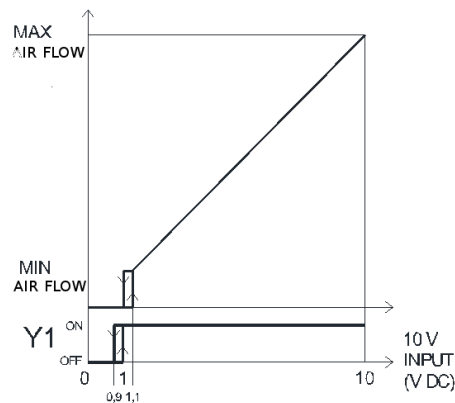
<p>With the connection of the remote panel, the machine can be connected to a supervision system directly on the control panel which becomes a slave of a supervision system;</p> <p>There are two terminals A and B in order to comfortably carry out the in and out connection;</p> <p>The communication protocol is: RTU 9600 N 8;</p>		
	Screw terminals	Recommended cable = 2x0.5 mm shielded
	Modbus RTU control panel connection	

6 COMMISSIONING AND METHOD OF USE

6.1 OPERATION VERSION -S-

The unit is completely manually controlled by the user, through an external control system;

Through the 0-10v dc input signal, the motor behaves as in the figure alongside;



Operation S versions

6.2 OPERATION VERSION -I-







The unit is completely manually controlled by the user, through the CNV-CNW wall-mounted touch control;

it is possible to connect humidity regulator and air quality regulator sensors;




The keys present in the main screen are shown below:

Meaning of the keys in the main display:


	Allows the unit to be turned on / off from the keyboard		Button for changing the temperature set
	Keys for selecting the fan speed: Quiet / nominal / maximum		Button for summer / winter selection
	Button for nominal speed and sensor operation		ALARM signal

Main screen keys display


6.3 TURNING THE UNIT ON AND OFF

<p>-The unit can be enabled and disabled using the On / Off button on the display.</p>	 Unit ON / OFF
--	--


6.4 MODIFICATION OF FANS SPEED AND BOOSTER FUNCTION

<p>-On the display there are keys for selecting the desired speed of the unit; Each time the speed is selected, the actual fan speed variation occurs after 1 second. -There are three selectable speeds: Night (minimum speed) - nominal (medium speed) - maximum (maximum speed) Each speed corresponds to an air flow that the fan will try to keep constant As the system pressure drops vary;</p>	 Fan speed management
---	---

6.5 AUTO FUNCTION

<p>-By pressing the auto key, the unit will work in automatic mode; According to the detected temperature and the set temperature, the controller will decide the season, the activation of the valves and the fan speed;</p>	 AUTO function
--	--

6.6 CHANGE OF SEASON

<p>The season change on version I must be done from the keyboard;</p> <ul style="list-style-type: none"> - Press and hold the season change button for at least 3 seconds to change the status of the season; - The operation must be carried out to activate the correct logics: - In winter the antifreeze function and in summer the bypass function; - Logic symbols: SUN - WINTER / SNOWFLAKE - SUMMER 	 Season Change
---	--

6.7 KEY LOCK

Pressing the + and - keys simultaneously for 3 seconds activates the local lock of all the keys, confirmation is given by the display of the message bL. All adjustments are disabled for the user and bL appears when any key is pressed. By repeating the sequence, the keys are unlocked.

bL

Key lock

6.8 PANEL BRIGHTNESS ADJUSTMENT

With the panel off, keep the + key pressed for 5 seconds until the message 01 appears. With the - key, bring the value to 00 and wait 20 seconds to verify the correct setting.

0/0

Brightness adjustment

7 MAINTENANCE

To always ensure correct and optimal operation of the unit, all maintenance interventions must be carried out periodically.

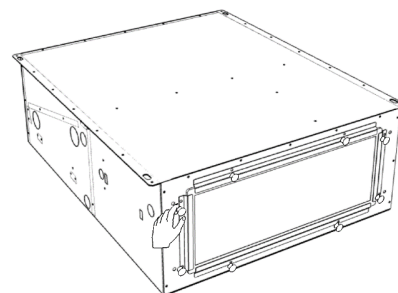
7.1 CLEANING OR REPLACING FILTERS

VERSION WITHOUT ACCESSORIES

To replace the filters or to clean them, proceed as follows:

- disconnect the unit from the power supply;
- open the filter covers using the dedicated knobs;
- remove the dirty filters;
- insert the clean or new filters carefully;
- close the lid with the dedicated knobs;

If the conditions of the filters allow it, they can be cleaned using a vacuum cleaner or a low pressure compressor.



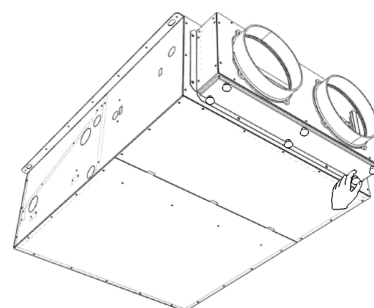
WITH AIR INTAKE PLENUM

If the air intake plenum accessory is present, the filter can be extracted as shown in the figure to the side.

To replace the filters or to clean them, proceed as follows:

- disconnect the unit from the power supply;
- open the filter covers using the dedicated knobs;
- remove the dirty filters;
- insert the clean or new filters carefully;
- close the lid with the dedicated knobs;

If the conditions of the filters allow it, they can be cleaned using a vacuum cleaner or a low pressure compressor.



View for filter extraction

7.2 GENERAL CLEANING OF THE UNIT

It is advisable to occasionally check and, if necessary, clean the fans, the condensate drain and the internal walls of the unit. These operations must only be carried out by qualified personnel (installer).

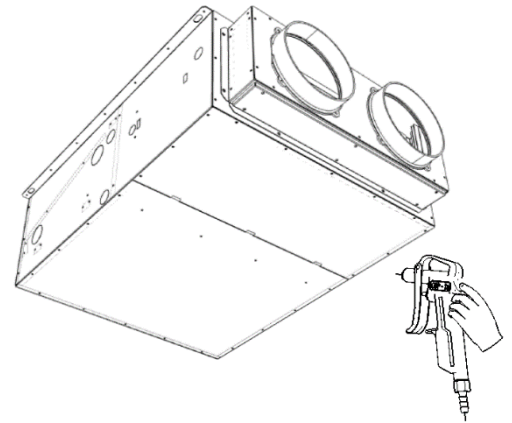
To carry out the above operations, proceed as follows:

- disconnect the unit from power supply
- in case of ceiling installation, disconnect the condensate drain pipe;
- open the unit cover by releasing the screws on it;
- check and if necessary clean the fans, the condensate drain and the walls;
- close the cover and lock it with the fixing screws;

For cleaning, you can use a vacuum cleaner, a rag dampened slightly with water, a soft bristle brush or a low pressure compressor.

Attention! There are small metal clips on the blades for balancing the blades, DO NOT remove them.

Attention! Avoid blowing high pressure compressed air on the battery; the aluminum fins could be compromised and damaged;



Unit views for general cleaning

8 ALARMS

8.1 GENERALITY

In case of problems or breakdowns, take note of any error code appearing on the display of the electronic control unit or of the remote control, take note of the model and serial number of the unit you own (present on the identification plate attached to the side of the unit) and contact the installer.

8.2 PROBLEMS WITHOUT ERROR INDICATION ON THE DISPLAY

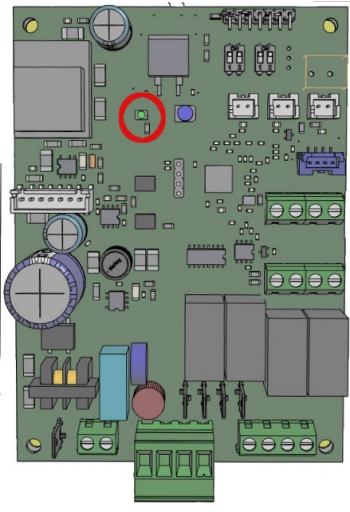

PROBLEM	CAUSE	REMEDIES
The fans are not active	<ul style="list-style-type: none"> -The power supply is not switched on - The fan speed regulation device does not work - Wrong electrical connections - Fans in thermal protection 	<ul style="list-style-type: none"> -Check the power supply on the fan - Check the fan speed adjustment device -Check that the fan is not overheated and in thermal protection
Insufficient air flow or useful pressure	<ul style="list-style-type: none"> -Clogged filters - Insufficient rotation speed - Clogged pipes or exchanger 	<ul style="list-style-type: none"> -Clean the filters -Increase the rotation speed -Clean pipes or exchanger
Insufficient efficiency of the exchanger	<ul style="list-style-type: none"> - Exchanger fins clogged - No water flow 	<ul style="list-style-type: none"> -Clean the surfaces of the exchanger - Check the correct water flow rate
Excessive vibration and noise	<ul style="list-style-type: none"> -Incorrect installation of the drive - Incorrect installation of the pipes - Imbalance of the impeller of the fans - Dirty filters or high pressure drops on the air side 	<ul style="list-style-type: none"> -Check the unit's brackets and fixings -Check brackets and pipe fastenings - Check the fan impellers status - Check the air side pressure drops
Water leaks from the unit	<ul style="list-style-type: none"> - Condensate drain blocked -Siphon not installed correctly 	<ul style="list-style-type: none"> -Clean the condensate drain -Check the correct installation of the siphon
Difficult starting	<ul style="list-style-type: none"> - Supply voltage too low Insufficient engine torque 	<ul style="list-style-type: none"> -Check that the power supply voltage is not below 10% of the rated voltage on the plate -Power the unit with partially closed dampers in order to reduce the motor starting torque. If starting correctly, replace the motor with a larger one.

8.3 ALARM SIGNAL

Below is a list of all the alarms managed by the application.

The presence of an alarm has two display modes:

- an error code present on the CNV-CNW command;
- a led on the electronic board that shows a flashing sequence with the type of alarm present.

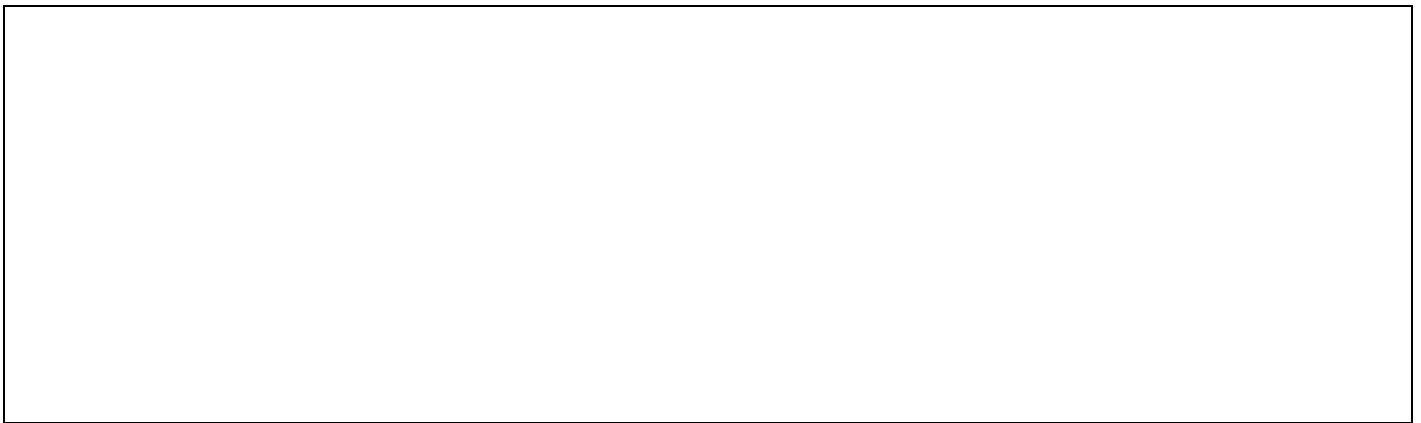
	
1 LED FOR SIGNALING THE UNIT CARD ALARMS	2 EEA649/EEbB649 - EFA649/EFB649 PANEL ALARM SIGNAL

8.4 TABLE OF ALARMS SIGNALLED BY DISPLAY - VERSIONS I -

Below is the table of the unit operating anomalies signaled, in the electronic versions I by the remote display or by the flashing of the LED on the board.

CODE	DESCRIPTION	CAUSE	REMEDY	CARD BLINKS
E1	Water temperature alarm	Water request detected by the H2 probe not satisfied (above 20 ° C in cooling, below 30 ° C in heating). It causes the fan to stop until the temperature reaches an adequate value to satisfy the request *.	Check the water temperature or the positioning of the H2 probe	1 flash - off 3 seconds
E2	Fan alarm	Faulty fan connector or no feedback signal	Check the connection of the fan connector to the board Replace the fan control cable	2 flashes - off 3 seconds
E3	Water probe alarm	Broken or missing reading of the probe	Check the connection of the probe or replace it	3 flashes - off 3 seconds
E4	GRID contact open	GRID contact open on the board	Check the presence of the bridge or of the connected closed contact	Continuous high frequency flashing
E6	Communication alarm with remote display	No communication between display and board for at least 300 seconds.	Check the filter status and keep the on off key pressed to reset the signal; Check that A and B are not reversed Check the correct insertion of the display connection board on the main board	6 flashes - off 3 seconds

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The data contained in this manual can be changed by the manufacturer without prior notice.