

Installation Manual
(Translation of original
language)

EN



innova

N420943A - Rev. 09 - 06-2025

>OSMO<

ECA844 - EWA844 - ESE845 - ESE846 - EEB749 -
EFB749 - EGB749 - B10842 - B4V842 - B3V151

First of all, we would like to thank you for having chosen a device of our production.

We are sure you will be happy with it because it represents the state of the art in the technology of home air conditioning.

By following the suggestions contained in this manual, the product you have purchased will provide trouble free operation, giving you optimum room temperatures with minimum energy costs.

INNOVA S.r.l.

Conformity

Refer to the Installation Manual of the paired unit.

Markings



TABLE OF CONTENTS

1. Coding	4
1.1 Coding accessories.	4
2. General information	6
2.1 About the manual	6
2.2 General warnings	7
2.3 Basic rules of security	7
2.4 Disposal	8
3. Preparation for touchpad connection.	9
3.1 Preliminary warnings	9
3.2 Preparation for command connection	9
4. Touchpad Code ECA844	16
4.1 Interface	16
4.2 Description	16
4.3 Electronic board ECA844	17
4.4 Connections	18
4.5 Functions	18
5. Touchpad Code EWA844	21
5.1 Interface	21
5.2 Description	21
5.3 EWA844 electronic board	22
5.4 Connections	23
5.5 Functions	23
6. Preparation for connecting the wall controls M7	26
6.1 Preliminary warnings	26
6.2 Preparation for command connection	26
7. M7 series control Part No. EEB749 + ESE845 board	31
7.1 Interface	31
7.2 Installation	31
7.3 Single connection diagram	33
7.4 Multiple connection diagram	34
7.5 Connections	35
7.6 Functions	36

8. M7 series control Part No. EFB749 + ESE845 board	41
8.1 Interface	41
8.2 Installation	41
8.3 Single connection diagram	43
8.4 Multiple connection diagram	44
8.5 Connections	45
8.6 Functions	46
9. M7 series control Code EGB749 + ESE846 board	51
9.1 Interface	51
9.2 Installation	51
9.3 Single connection diagram	53
9.4 Multiple connection diagram	54
9.5 Connections	55
9.6 Functions	56
10. On-board electronic board B4V642 + wall control B3V151	61
10.1 Interface	61
10.2 Description	61
10.3 Connection diagram	62
10.4 Connection diagram with seasonal switching.	63
10.5 Circuit board wiring diagram B4V842.	64
10.6 Connections	65
10.7 LED signal	65
11. Connection 0-10 V Code B10842	66
11.1 Installation	66
11.2 Connection diagram	66
11.3 Connections with 0-10 V thermostats	67
11.4 LED signal	67
12. Technical information	68
12.1 Operating limits	68

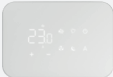
1. CODING

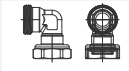
⚠ The present manual refers to the products:

- >OSMO< SL
- >OSMO< RS

1.1 Coding accessories

This instruction manual refers to the following accessory codes.

Accessory description		Combinable products	Code
Controls on the device			
M7 controls			
	M7 on-board electronic control with continuously modulating thermostat	All	ECA844II
	M7 on-board electronic control with continuously modulating thermostat, with built-in Wi-Fi module.	All	EWA844II
Wall mounted control panels M7 series			
Printed circuit board M7			
	Electronic board on board unit with continuous modulation. For connection to M7 wall control units	All	ESE845II
	Electronic board on board unit with continuous modulation. For connection to M7 wall control with Bluetooth	All	ESE846II
Control panels			
	LED electronic control panel with touch interface, wall-mounted complete with thermostat and room temperature and relative humidity probe. Cable connection. Dimensions (lxhxp): 117x80x5 mm. Colour white	All	EEB749II
	LED electronic control panel with touch interface, wall-mounted complete with thermostat and room temperature and relative humidity probe with integrated Wi-Fi module, new App. Cable connection. Dimensions (lxhxp): 117x80x5 mm. Colour white	All	EFB749II
	Electronic LED control panel with touch interface, wall installation complete with thermostat and room temperature and relative humidity probe. Bluetooth connection. Dimensions (lxhxp): 117x80x5 mm. Colour white	All	EGB749II
Built-in boxes			
	Built-in box for masonry	All	N000557A
	Built-in plasterboard box	All	N000558A
Standard controls for wall control and home automation			
PCB			
	On-board electronic printed circuit board for connection to 3-speed wall-mounted electromechanical thermostats.	All	B4V842II
Control panels			
	Wall mounted control with thermostat, summer/winter and speed selectors	All	B3V151II
Printed circuit board 0-10 V			
	On-board electronic printed circuit board for control from systems with 0-10 V analogue output.	All	B10842II

	Accessory description	Combinable products	Code
Installation accessories			
Aesthetic backrest			
	Rear aesthetic panel kit	RS 200 SL 200	LC1110II
		RS 400 SL 400	LC1111II
		RS 600 SL 600	LC1112II
		RS 800 SL 800	LC1113II
		RS 1000 SL 1000	LC1114II
Valves			
Fittings			
	Couple of EUROKONUS adapters for 1/2" female connection (male fittings)	All	AI0200II
	Couple of EUROKONUS adapters for 3/4" female connection (male fittings)	All	AI0201II
	90° bended EUROKONUS connector	All	AI0203II
	Adaptors for flat ring	All	AI0612II

2. GENERAL INFORMATION

2.1 About the manual

This manual was written to provide all the explanations for the correct management of the device.

-  This instruction manual forms an integral part of the device and therefore must be carefully preserved and must ALWAYS travel with it, even if you transfer the device to another owner or relocate it to other premises. If the manual gets damaged or lost, download a copy from the website.
-  Read this manual carefully before proceeding with any operation and follow the instructions in the individual chapters.
-  The Manufacturer accepts no liability for damages to persons or property caused by failure to follow the instructions in this manual.
-  This document is restricted in use to the terms of the law and may not be copied or transferred to third parties without the express authorisation of the Manufacturer.

2.1.1 Editorial pictograms

The pictograms in the next chapter provide the necessary information for correct and safe use of the machine in a rapid and unmistakable way.

Related to security

-  **High risk warning (bold text)**
 - The operation described above presents a risk of serious physical injury, fatality, major damage to the device and/or to the environment if not carried out in compliance with safety regulations.
-  Low risk warning (plain text)
 - The operation described above presents a risk of minor physical injury or minor damage to the device and/or to the environment if not carried out in compliance with safety regulations.
-  Prohibition (plain text)
 - Refers to prohibited actions.
-  **Important information (bold text)**
 - This indicates important information that must be taken into account during the operations.

In the texts

- procedures
- lists

In the control panels

- actions required
- Expected responses following an action.*

In the figures

- 1 The numbers indicate the individual components.
- A The capital letters indicate component assemblies.
-  The white numbers in black marks indicate a series of actions to be carried out in sequence.
-  The black letter in white identifies an image when there are several images in the same figure.

2.1.2 Pictograms on the product

Symbols are used in some parts of the device:

Related to security



Read instruction manual

Read the instructions carefully before performing any work on the device.



Instruction manual

Read the information available in the technical documentation of the device.



Caution: electrical danger

- The concerned personnel is informed to the presence of electricity and the risk of suffering an electric shock.

2.1.3 Recipients

User

Non-expert person capable of operating the product in safe conditions for people, for the product itself and the environment, interpreting an elementary diagnostic of faults and abnormal operating conditions, carrying out simple adjustment, checking and maintenance operations.

Installer

Expert person qualified to position and connect (hydraulically, electrically, etc.) the unit to the plant; this person is responsible for handling and correct installation according to the instructions provided in this manual and the national standards currently in force.

Authorized Service Center

Expert and qualified person authorised directly by the manufacturer to carry out all routine and supplementary maintenance operations, as well as every adjustment, check, repair and replacement of parts necessary during the life of the unit itself.

2.1.4 Manual organization

The manual is divided into sections each dedicated to one or more target groups.

Coding

It addresses all recipients.

It contains the list of products and/or accessories referred to in the manual.

General information

It addresses all recipients.

It contains general information and important warnings that should be known before installing and using the device.

Installation

It is addressed exclusively to the installer.

It contains specific warnings and all the information necessary for positioning, mounting and connecting the appliance.

Control panels

It is addressed only and exclusively to the Installer and the Authorised Service Centre.

These are sections dedicated to the different types of controls and electronic boards combined with the range with specific information for that combination.

Technical information

It addresses all recipients.

It contains detailed technical information about the appliance.

2.2 General warnings

- ⚠ Specific warnings are given in each chapter of the document and must be read before starting operations.
- ⚠ All personnel involved must be aware of the operations and dangers that may arise when beginning all unit installation operations.
- ⚠ Installation performed outside the warnings provided in this manual and use of the appliance outside the prescribed temperature limits will invalidate the warranty.
- ⚠ The installation and maintenance of climate control equipment can be dangerous due to live electrical components inside the appliances. The installation, initial start-up and subsequent maintenance phases must be carried out exclusively by authorized and qualified personnel (see first start-up request form enclosed with the appliance).
- ⚠ Any contractual or extra-contractual liability for damage caused to persons, animals or property, due to installation adjustment and maintenance errors, or improper use, is excluded. All uses not expressly indicated in this manual are not permitted.
- ⚠ Only suitably qualified installers are authorized to install the device. After having completed installation, the installer will issue a declaration of conformity to the plant manager, as required by the applicable standards and the guidelines provided by contractor's instruction manual supplied with the device.
- ⚠ First start-up and repair or maintenance operations must be carried out by the Technical Assistance Center or by qualified personnel following the provisions of this manual.
- ⚠ Do not modify or tamper with the appliance as this can lead to dangerous situations.
- ⚠ Use suitable personal protective clothing and equipment during installation and/or maintenance operations. The Manufacturer is not liable for the non-observance of the current safety and accident prevention regulations.
- ⚠ In the event of liquid or oil leaks, set the main switch of the plant to "OFF" and isolate water taps where applicable. Call the Authorized Service Center or professionally qualified personnel as soon as possible and do not work on the appliance yourself.
- ⚠ In case of replacement of parts, use only original parts.
- ⚠ The Manufacturer reserves the right to make changes to its models at any time to improve its product, without prejudice to the essential characteristics described in this manual. The manufacturer is not obliged to add such modifications to machines previously manufactured, already delivered or under construction.
- ⚠ The unit can be used by children over the age of 8, and by people with reduced physical, sensory or mental capabilities, or with no experience or necessary knowledge, as long as they are monitored or after they have received instructions on the safe use of the unit and have understood the dangers involved. Children must not play with the appliance. The cleaning and maintenance that must be performed by the user should not be carried out by children without supervision.

2.3 Basic rules of security

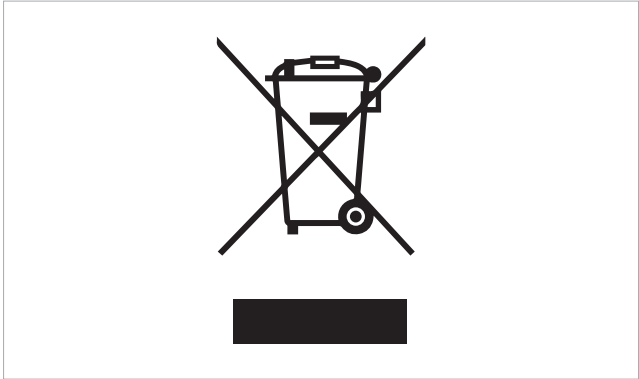
Please keep in mind that the use of products powered by electricity and water call for operators to comply with certain essential safety rules:

- ⊖ It is forbidden to touch the device with wet or damp body parts.
- ⊖ It is forbidden to carry out any operation before disconnecting the appliance from the power supply by setting the plant main switch to "OFF".
- ⊖ It is forbidden to modify the safety or adjustment devices, or adjust without authorization and indications of the Manufacturer.
- ⊖ It is forbidden to pull, unplug or twist the device's electric cables, even if it is disconnected from the mains.
- ⊖ It is forbidden to introduce objects and substances through the air inlet and outlet grilles.

⊖ It is forbidden to open the access doors of the device's internal parts without first having set main switch of the system to "OFF".

⊖ It is forbidden to incorrectly dispose of the packaging, or leave in the reach of children, which may become a source of danger.

2.4 Disposal



The symbol on the product or packaging indicates that the product must not be treated as normal household waste, but must be taken to the appropriate collection point for recycling of used electrical and electronic equipment and batteries.

Proper disposal of this product avoids harm to humans and the environment and promotes the reuse of valuable raw materials.

For more detailed information about the recycling of this product, contact your local authority, your household waste disposal service or the shop where you purchased the product.

Illegal disposal of the product by the user involves the application of the administrative sanctions provided for by the regulations in force.

This provision is valid in the EU Member States.

3. PREPARATION FOR TOUCHPAD CONNECTION

3.1 Preliminary warnings

⚠ The following procedure is required to connect the touchpad (ECA844 - EWA844).

3.2 Preparation for command connection

3.2.1 Accompanying material

Accompanying the unit, contained in a bag placed on the cover of the electrical box, are:

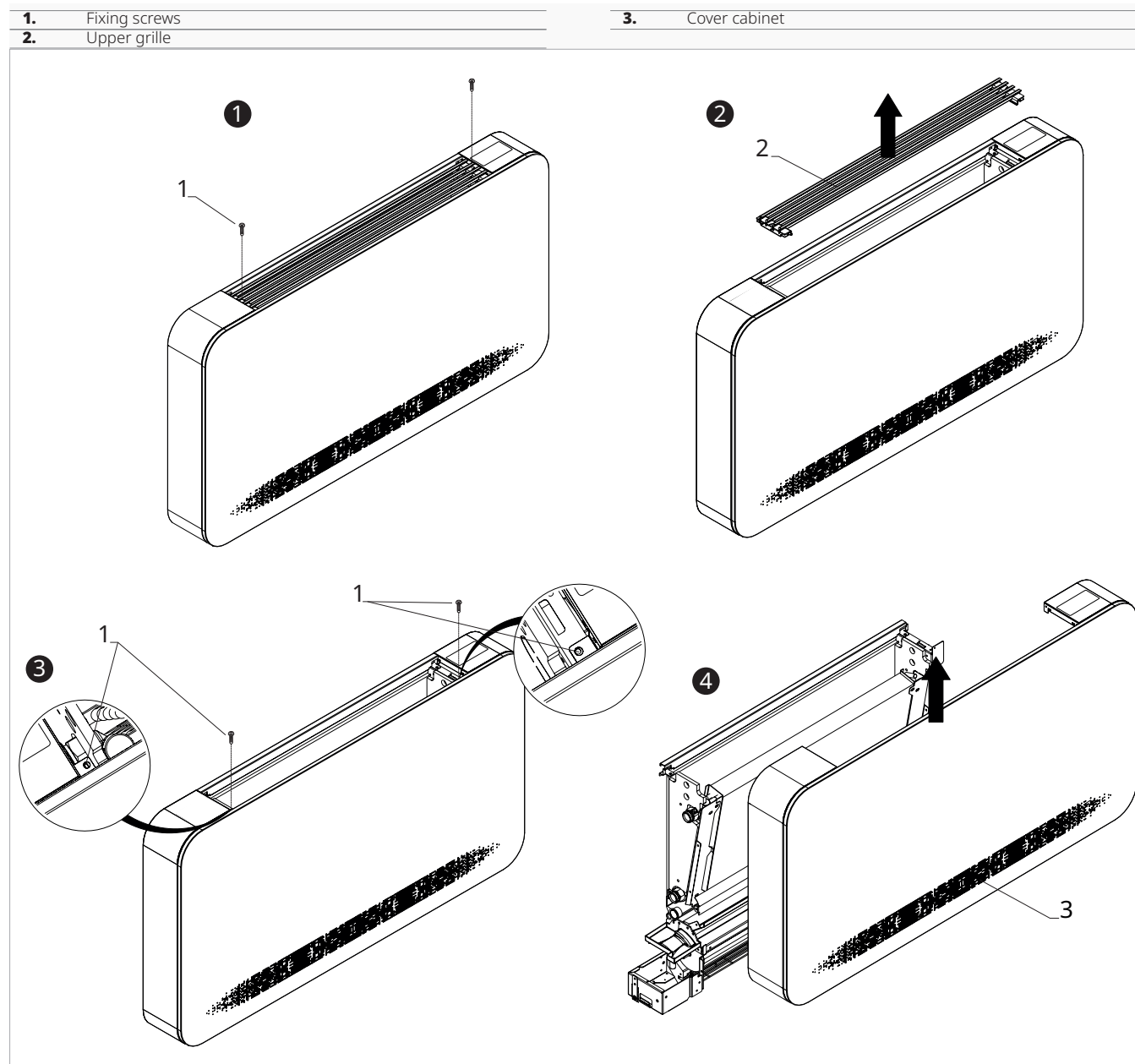
- 1 terminal for power supply connection (230V~50Hz)
- cable gland
- 1 terminal for serial connection (-BA+)
- screws

3.2.2 Preliminary warnings

- ⚠** Before carrying out any work, please ensure the power supply is disconnected.
- ⚠** All operations of an electrical nature must be carried out by qualified personnel having the necessary training, who understands the legal requirements, and is informed about the risks related to such operations.
- ⚠** All connections must be made following the regulations in force in the country of installation.
- ⚠** The unit must only be powered after work has been completed.
- ⚠** Isolate and lock off the main circuit breaker before making any electrical connections and performing any type of operation.
- ⚠** Access to the electrical panel is only permitted to qualified personnel.
- ⚠** Refer to the respective section of the control, used to make the electrical connections.
- ⚠** Disconnect the on-board control connector (if present) before removing the cover cabinet.

3.2.3 Device preparation

Before proceeding with the installation, it is necessary to remove some elements from the appliance.



To remove the grille:

- remove the fixing screws
- lift up and remove the upper grille

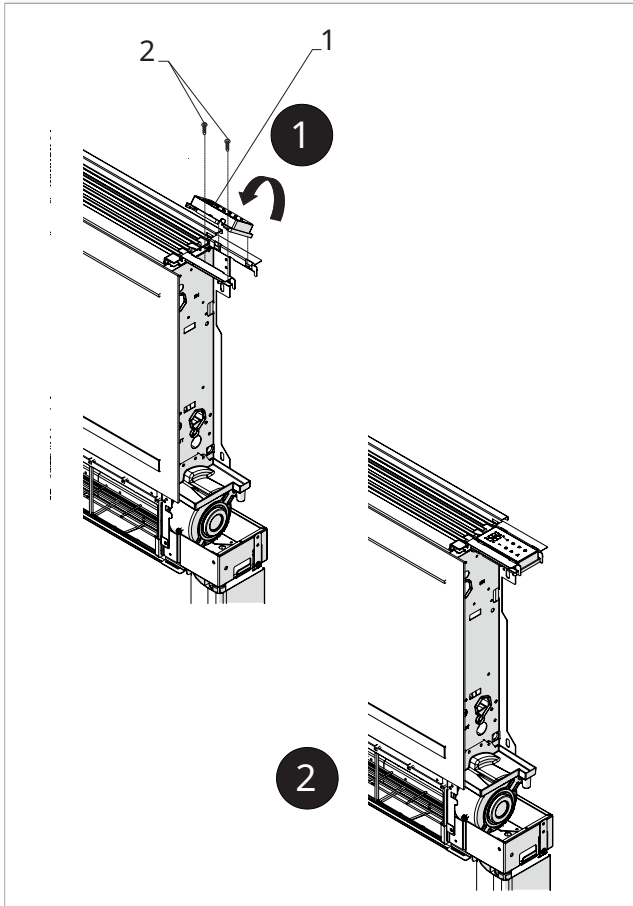
⚠ Disconnect the connector when opening the cover casing.

To remove the cover cabinet

- remove the fixing screws
- lift the cover cabinet
- disconnect the on-board display connector (if present)
- remove the cover cabinet

3.2.4 Installation of on-board control

1. On board display
2. Screws



To install the on-board control

- ▶ place the on-board control at the top of the unit
- ▶ fix with the screws provided

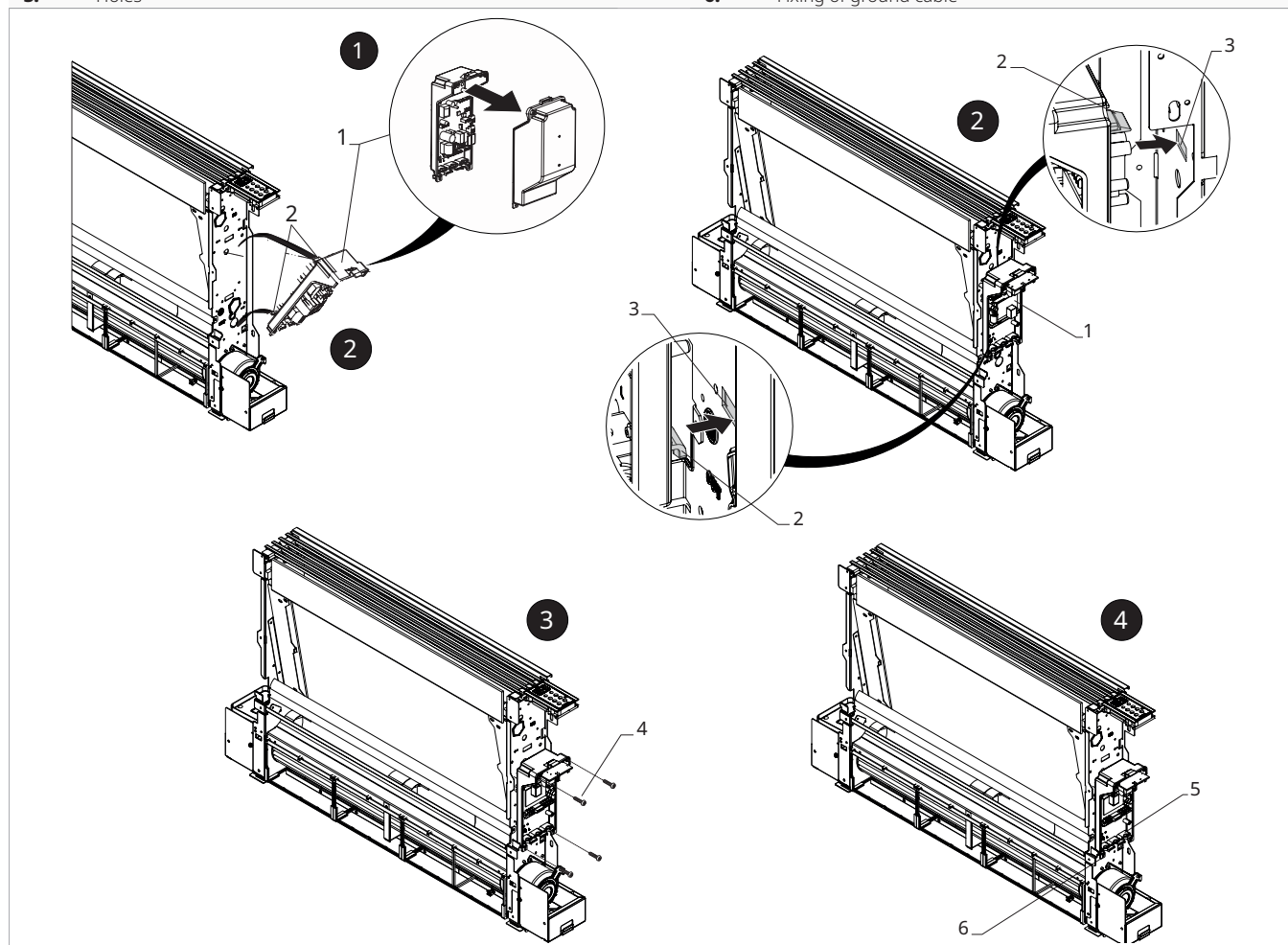
3.2.5 Installation of electrical connection box

⚠ Normally the unit leaves the factory with the electrical box mounted.

⚠ In exceptional cases, the electrical box can be installed at a later stage.

- | | |
|----|---------------------|
| 1. | Electrical back box |
| 2. | Notches |
| 3. | Holes |

- | | |
|----|---------------------------|
| 4. | Fixing screws |
| 5. | Cable strain relief clamp |
| 6. | Fixing of ground cable |



To install the electrical box:

- ▶ open the electrical box
- ▶ place the base of the electrical box on the side of the appliance
- ▶ Wedge the notches of the electrical box into the appropriate holes on the side of the appliance
- ▶ secure the electrical box with the fixing screws provided
- ▶ secure the ground cable to the structure of the appliance with the screw provided

⚠ The minimum force that must be exerted for starting is approximately 2 N.

- ▶ connect the connector to the MOTOR quick connector on the printed circuit board
- ▶ connect the water probe to the T2 connector on the device

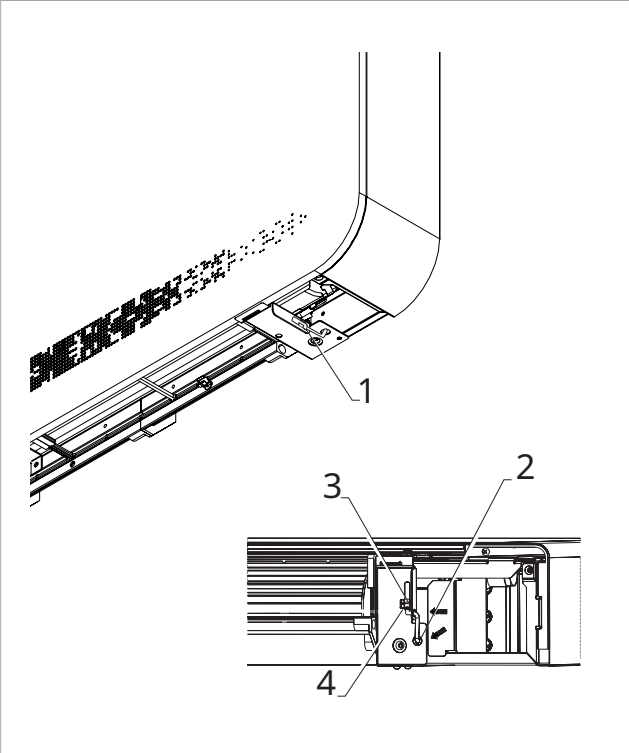
⚠ The water temperature probe monitors the temperature inside the coils and determines fan start-up according to preset parameters. (winter minimum and summer maximum functions)

⚠ Check that the probe is correctly positioned in the compartment on the coil.

- ▶ connect the electrical wiring
- ▶ tidy up the cables
- ▶ secure the cables using the grommets provided
- ▶ close the electrical box
- ▶ secure the electrical box with the fixing screws provided

3.2.6 Installation of air temperature probe

- | | |
|----|--|
| 1. | Air temperature probe |
| 2. | Prepared hole in the shoulder of the appliance |
| 3. | Lower hole |
| 4. | Hook for temperature probe |



To install the air temperature probe:

- ▶ position the temperature probe
- ▶ pass the probe through the hole in the shoulder of the appliance
- ▶ pass the probe through the lower hole
- ▶ fix the temperature probe to the relevant hook

3.2.7 Version configurations

RS versions

In RS versions to control the radiant effect of the front panel make the connections.

To make the connections

- ▶ connect the 4-pin terminal to the appropriate connector on the radiant front panel

⚠ Refer to the "Electrical Connections" sections of the specific printed circuit boards for connections.

3.2.8 Models with right-hand hydraulic connections

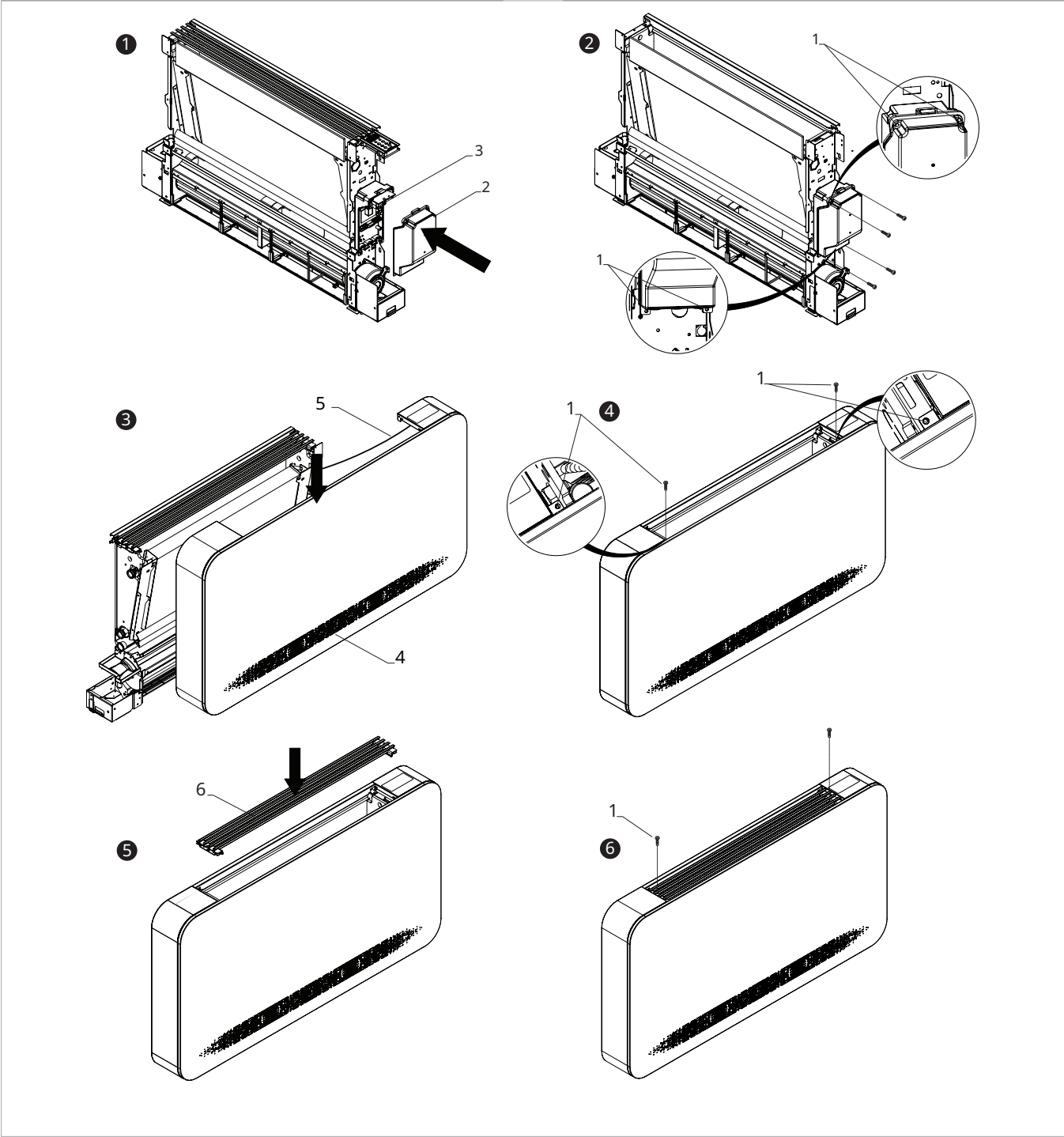
The fancoils in the >OSMO< range are designed with:

- hydraulic coil connections on the left side of the unit
- electrical connections on the right side of the unit

⚠ Should it be necessary to invert the position of the coil's hydraulic connections from the left (default) side to the right side, the hydraulic Hydraulic connection reversal kit must be used to make the electrical connections to the fan motor and the grille safety microswitch.

3.2.9 Completed assembly

1.	Fixing screws	4.	Cover cabinet
2.	Cover of the electrical box	5.	Connector of the on-board control
3.	Terminal block for wiring	6.	Upper grille

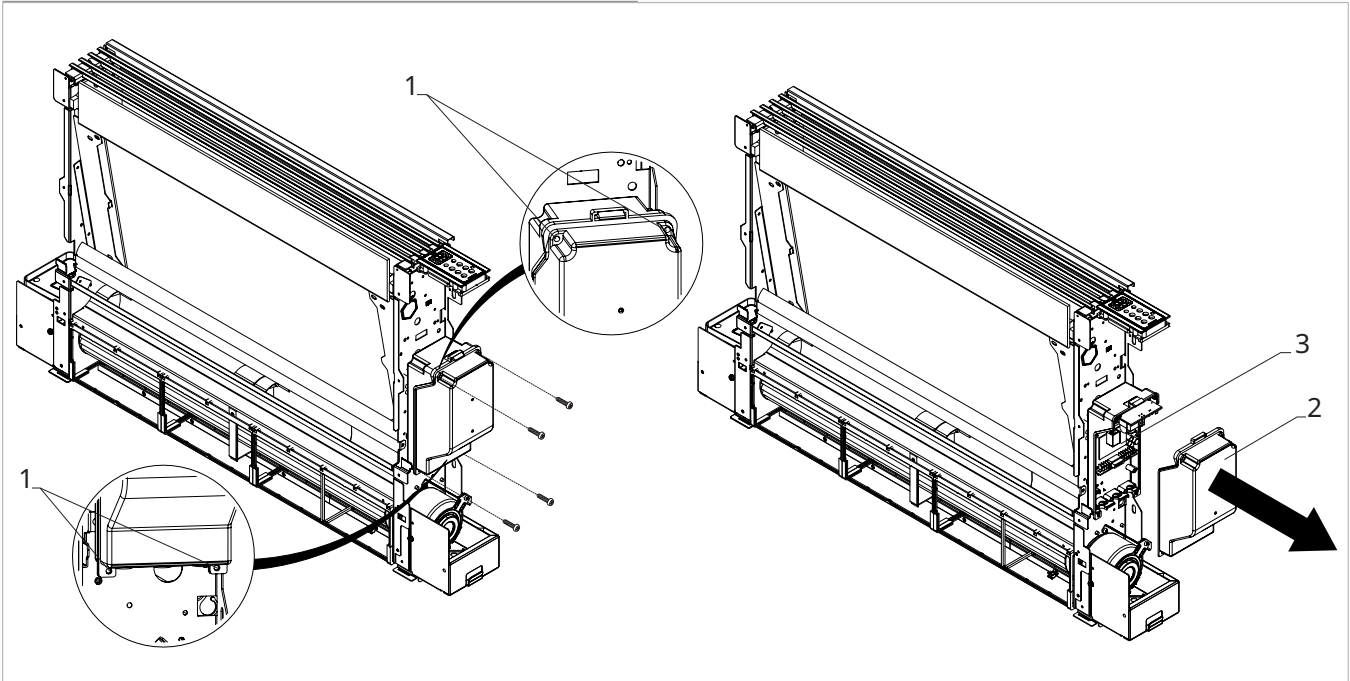


Completed assembly

- ▶ place the cover of the electrical box
- ▶ fix with screws
- ▶ reassemble the cover cabinet
- ▶ fix with screws

3.2.10 Access to the terminal block

- | | | | |
|----|-----------------------------|----|---------------------------|
| 1. | Fixing screws | 3. | Terminal block for wiring |
| 2. | Cover of the electrical box | | |



⚠ Before carrying out any work, please ensure the power supply is disconnected.

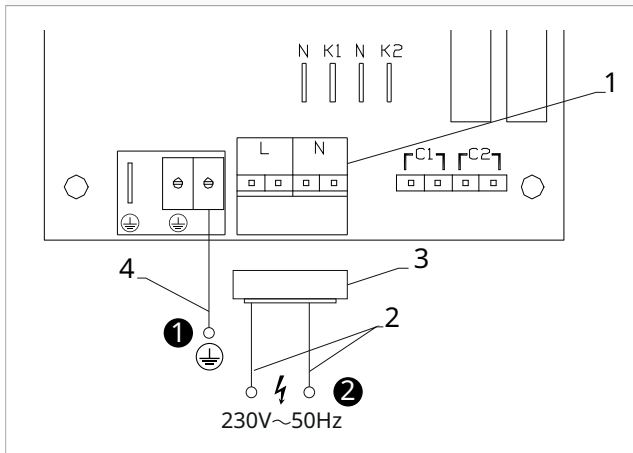
To access:

- if installed, remove the movable cover panel

To access the connections:

- ▶ unscrew the fixing screws of the electric box
- ▶ remove the lid from the junction box

1. Terminal block for wiring
2. Power supply cables
3. Quick-connect terminal
4. Earth connection



⚠ Refer to the information in the wiring diagram of the unit you are installing.

 Please refer to the sections of the respective controls for indications of electrical connections.

⚠ The electrical connection can be made by a cable recessed into the wall as indicated on the installation template (connection recommended for installation of the device at the top of the wall).

⚠ It is necessary to check that the power supply is provided with appropriate protection against electrical shorts and/or overloads

To make the connections:

- ▶ use the supplied quick terminal
- ▶ connect phase and neutral (230 V~50 Hz) to the quick terminal
- ▶ connect the quick-connect terminal to the terminal block
- ▶ Connect the earthing wire (⊕) to the terminal provided on the electrical panel

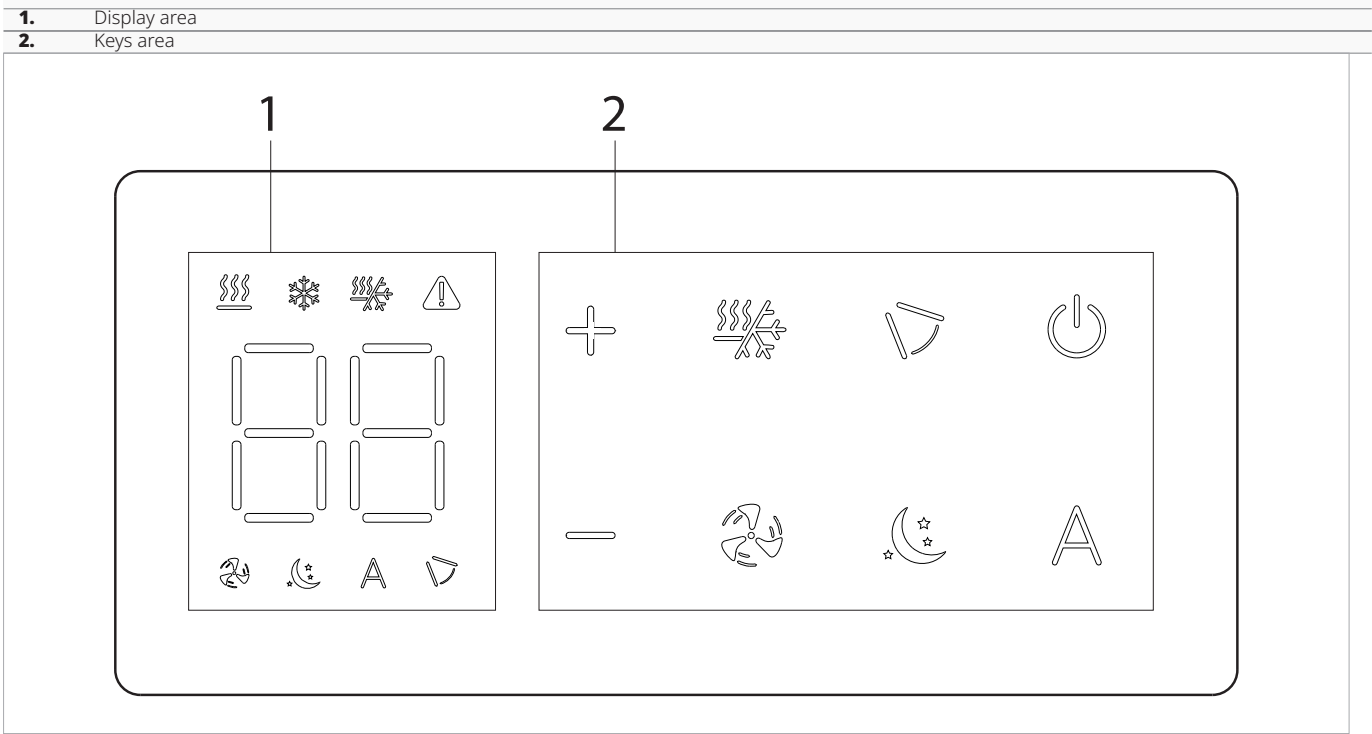
4. TOUCHPAD CODE ECA844

4.1 Interface

The touchpad control is supplied as standard on board the unit, does not require any connections and enables:

- show the operating status

- show any alarms
- select the various functions



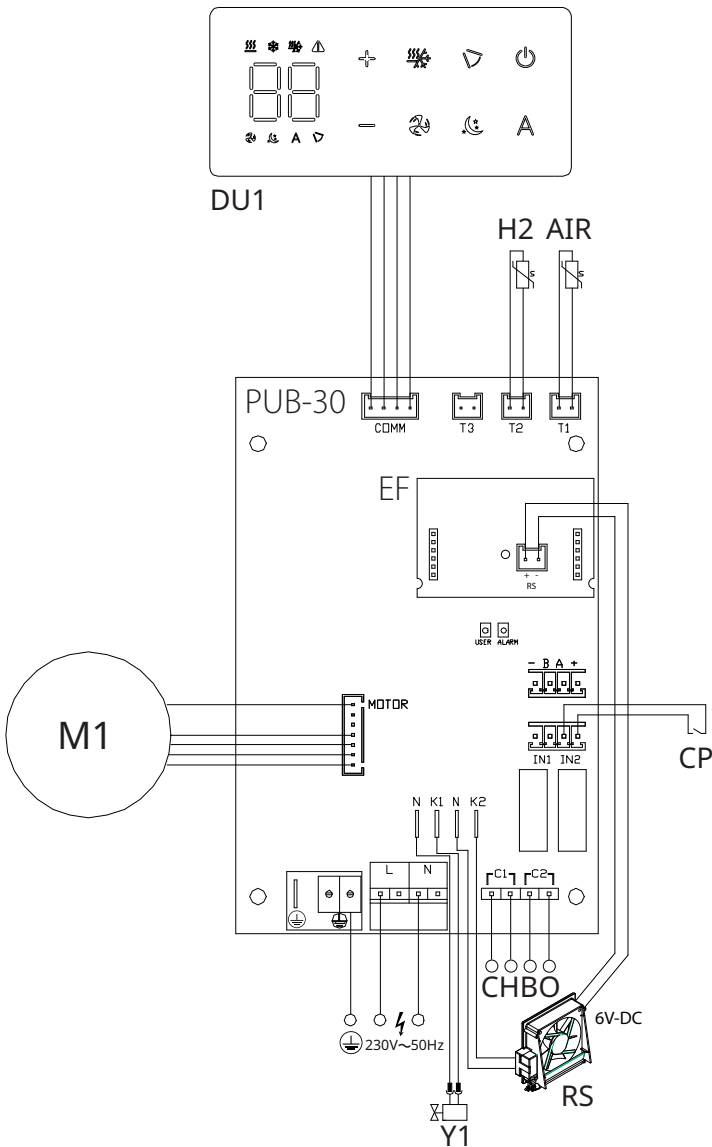
4.2 Description

ECA844- M7 on-board control, with continuously modulating thermostat.

4.3 Electronic board ECA844

The PCB is included in the supply.

M1	DC fan motor		
	Ground connection		
230~50	Power supply connection 230 V / 50 Hz / 1 A		
Y1	Water electrovalve		
CH/C1	Cooling request contact (for exemple chiller or reversible heat pump). Activated in parallel with the solenoid valve output (Y1) with 1 minute delay when the fancoil is in cooling mode and is on call (potential-free contact max. 1 A).		
BO/C2	Heating request contact (for exemple boiler or heat pump). Activated in parallel with the output of the solenoid valve (Y1)		
			with 1 minute delay when the fancoil is in heating mode and is on call (potential-free contact max. 1 A).
CP	Presence contact (normally open)		
IN1	Input for potential-free contact 1		
AIR/T1	Air temperature probe		
H2/T2	Water temperature probe		
RS	RS version wiring		
DU1	Touchpad		
PUB-30	Electronic board on the unit		
EF	RS version expansion electronic board		



Through the water temperature probe H2/T2 (10 kΩ) located in the thermowell on the unit's coil, the temperature setpoints for fan stop are controlled:

- minimum temperature in heating mode (30 °C)
- maximum temperature in cooling mode (20 °C)

 The printed circuit board provides for operation without a water probe. In this case, the fan stop thresholds are ignored.

4.4 Connections

4.4.1 Presence contact CP

Through this device it is possible to connect an external control signal that inhibits the operation of the control signal, for example:

- opening window contact
- remote on/off
- infrared presence sensor
- activation badge
- remote change of season

Function

The contact is normally open (NO).

- ▶ when closing the CP contact, connected to a potential-free contact, the device switches to stand-by mode
CP appears on the display.
- ▶ At the touch of a button on the display the symbol  flashes.

⊖ It is forbidden to connect the CP input to that of another unit electronic board. Use separate contacts.

The CP presence contact can be configured for heating and cooling operation via the "To select digital input" *p. 19* settings menu item (digital input).

4.5 Functions

4.5.1 Basic menu

To access the basic menu

- ▶ with the display off, hold down  for 10 seconds

The device turns on and  appears

- ▶ keep pressed until the indication  appears
- ▶ release 

The symbol  appears

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press the icon 
- Confirming the change takes you to the next item.*

To exit the menu

- ▶ press the icon  for 10 seconds
- ▶ or wait 30 seconds the automatic shutdown

Menu items

ot: AIR probe offset (air probe setting)

CF: Scale

ub: Buzzer volume

uu: Not used

uP: Not used

ho: Hotel Mode

Set AIR probe offset

 The set value changes by 1 °C each press of the  and  buttons.

To set the air probe offset

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
*By default it is set to 0.
The range of settings is from a minimum of -9°C to a maximum of +9°C.*

Scale

To change the temperature unit of measure

- ▶ select 
- ▶ press  to change settings
- ▶ select °C or °F
- ▶ press  to confirm
By default the temperature unit of measure is °C.

Adjusting buzzer volume

To change the volume

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
The volume setting range is from 00 (min) to 03 (max).

 The volume changes after confirming the modification.

Setting the Hotel Mode

To set the Hotel mode

- ▶ select 
 - ▶ select YS to turn on Hotel mode
 - ▶ select NO to turn off the Hotel mode
- By default the device is set to NO.*

Activating the Hotel mode:

- the Autochangeover function is deactivated
- the temperature setting range is reduced, in Cooling you can set from 22 °C to 28 °C, in Heating you can set from 16 °C to 24 °C

4.5.2 Advanced Menu

⚠ To access the setup menu, it is necessary to access the Basic menu. See section "Basic menu" p. 18.

The special functions menu can be accessed via the control panel.

To access the advanced menu

- ▶ from the basic menu press 

Appears 
- ▶ press once 

Appears 
- ▶ press  to confirm and log in

This takes you to the settings menu.

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press  for 2 seconds

Confirming the change takes you to the next item.

To exit the menu

- ▶ press  for about 10 seconds

Appears 
- ▶ press  for about 10 seconds

The display turns off.
- ▶ or wait 30 seconds after the last action

The display is switched off automatically.

⚠ After 30 seconds from the last action the control returns to the start screen and the last chosen values are memorised.

Menu items

Ad: Not used

of: Options for digital input

UC: Not used

Ac: Anti-stratification in cooling

Ah: Anti-stratification in heating

Ab: Enabling brightness sensor

Fr: Not used

To select digital input

To change the digital input

- ▶ select 
- ▶ press  to change settings
- ▶ select CP for presence contact (default)
- ▶ select CO to cooling open
- ▶ select CC to cooling close
- ▶ press  to confirm

By default digital input is set to CP.

⚠ For return to the default settings, set the digital input to "CP".

⚠ By selecting one of the other inputs (CO,CC) the seasonality is locked. It is not possible to modify it through the key  of the control.

Set the anti-stratification function to cooling

To set the anti-stratification function in cooling mode

- ▶ select 
- ▶ press  to change settings

Appears 
- ▶ press  to move within the menu
- ▶ select  to enable the function
- ▶ press  to confirm changes

By default, the anti-stratification function in cooling is set to .

⚠ The anti-stratification function in cooling is to be set for appliances installed at low floor level equipped with an active air probe.

Optical sensor

⚠ By default, the brightness sensor is set.

To disable the brightness sensor:

- ▶ select 
- ▶ press 

Appear Ys.
- ▶ press 
- ▶ select no
- ▶ press  to confirm

The brightness sensor is disabled.

⚠ The brightness sensor adapts to room lighting.

Set the anti-stratification function in heating mode

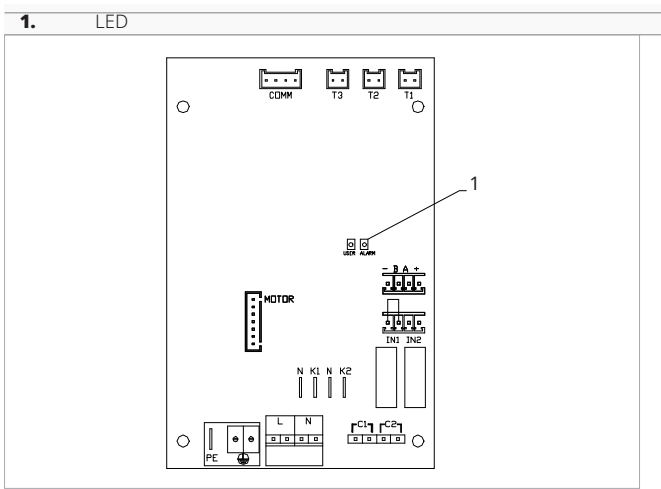
To set the anti-stratification function in heating mode

- ▶ select 
- ▶ press  to change settings
Appears 
- ▶ press  to move within the menu
- ▶ select  to enable the function
- ▶ press  to confirm changes
By default, the anti-stratification function in heating is set to 

 The anti-stratification function in heating is to be set for appliances installed high up on the wall or ceiling equipped with an active air sensor.

4.5.3 Error signals

The PCB has a status LED.



-  The flashing LED indicates errors.
-  It is possible to verify the meaning of the LEDs by means of the error code displayed on the touchpad.
-  To identify the error, please refer to "Visualisation of alarms on display" **p. 20**.
-  With the LED on and no indication on the display, it is indicated that there are no errors.

4.5.4 Visualisation of alarms on display

-  In the event of a malfunction, the display shows an alarm code.
-  In the event of an alarm, the device still maintains active functions.
- ▶ E1 Air temperature probe alarm T1 on PUB-30 board disconnected or with incorrect values (-10÷40)
The device is operating and the M7 control uses its own air probe.
- ▶ E2 Internal fan motor faulty or disconnected
None of the modes can be activated.
- ▶ E3 Water temperature sensor H2/T2 disconnected or faulty
None of the modes can be activated.

- ▶ CE Communication error
Errors in the communication between the touchpad control and the board. None of the modes can be activated.
The symbol  appears to indicate unsuitable radiant water.
- ▶ bL Key lock
To unlock the display, press  simultaneously for about 3 seconds.
- ▶  * Incorrect water temperature
In heating mode, the water temperature is below 30 °C
- ▶  * Incorrect water temperature
In cooling mode, the water temperature is above 20 °C.
** flashing*

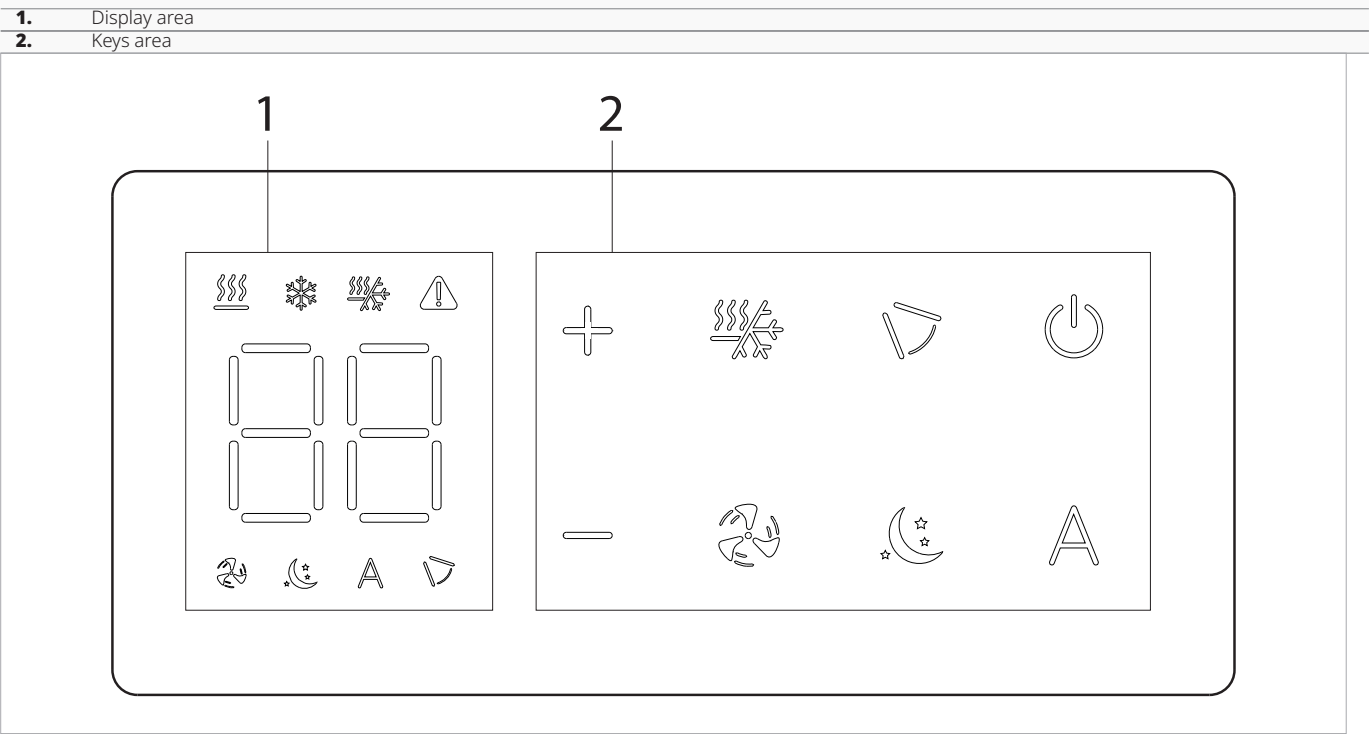
5. TOUCHPAD CODE EWA844

5.1 Interface

The touchpad control is supplied as standard on board the unit, does not require any connections and enables:

- show the operating status

- show any alarms
- select the various functions



5.2 Description

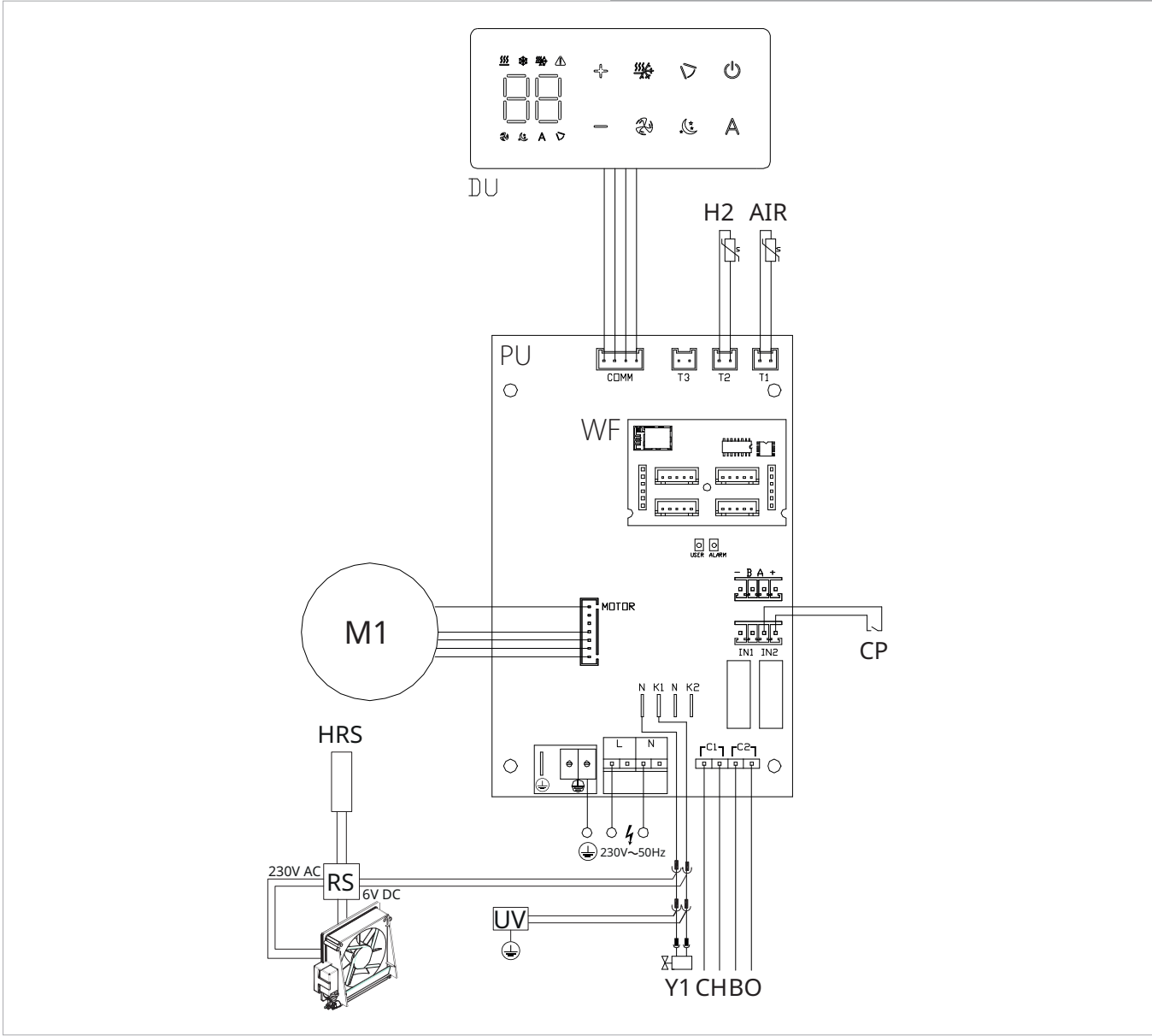
EWA044- M7 on-board control with built-in Wi-Fi module, with continuously modulating thermostat.

! The app "Innova" is available to control the following command.

5.3 EWA844 electronic board

The PCB is included in the supply.

M1	DC fan motor		
	Ground connection		
230~50	Power supply connection 230 V / 50 Hz / 1 A		
Y1	Water solenoid valve		
CH/C1	Cooling request contact (for example chiller or reversible heat pump). Activated in parallel with the solenoid valve output (Y1) with 1 minute delay when the fancoil is in cooling mode and is on call (potential-free contact max. 1 A).		
BO/C2	Heating request contact (for example boiler or heat pump). Activated in parallel with the output of the solenoid valve (Y1)		
CP	Presence contact (normally open)		with 1 minute delay when the fancoil is in heating mode and is on call (potential-free contact max. 1 A).
IN1	Input for potential-free contact 1		
AIR/T1	Air temperature probe		
H2/T2	Water temperature probe		
HRS	water probe RS version (10 kΩ)		
RS	RS version wiring		
DU	Touchpad		
PU	Electronic board on the unit		
WF	Card for Wi-Fi connection		



Through the water temperature probe H2/T2 (10 kΩ) located in the thermowell on the unit's coil, the temperature setpoints for fan stop are controlled:

- minimum temperature in heating mode (30 °C)
- maximum temperature in cooling mode (20 °C)

 The printed circuit board provides for operation without a water probe. In this case, the fan stop thresholds are ignored.

5.4 Connections

5.4.1 Presence contact CP

Through this device it is possible to connect an external control signal that inhibits the operation of the control signal, for example:

- opening window contact
- remote on/off
- infrared presence sensor
- activation badge
- remote change of season

Function

The contact is normally open (NO).

- ▶ when closing the CP contact, connected to a potential-free contact, the device switches to stand-by mode
CP appears on the display.
- ▶ At the touch of a button on the display the symbol  flashes.

 It is forbidden to connect the CP input to that of another unit electronic board. Use separate contacts.
The CP presence contact can be configured for heating and cooling operation via the "To select digital input" [p. 24](#) settings menu item (digital input).

5.5 Functions

5.5.1 Basic menu

To access the basic menu

- ▶ with the display off, hold down  for 10 seconds
The device turns on and  appears
- ▶ keep pressed until the indication  appears
- ▶ release the  key
The symbol  appears

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press the icon 
Confirming the change takes you to the next item.

To exit the menu

- ▶ press the icon  for 10 seconds
or wait 30 seconds the automatic shutdown

Menu items

ot: AIR probe offset (air probe setting)

CF: Scale

ub: Buzzer volume

uu: Wi-Fi reset

uP: Wi-Fi pairing

ho: Hotel Mode

Set AIR probe offset

 The set value changes by 1 °C each press of the  and  buttons.

To set the air probe offset

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
*By default it is set to 0.
The range of settings is from a minimum of -9°C to a maximum of +9°C.*

Scale

To change the temperature unit of measure

- ▶ select 
- ▶ press  to change settings
- ▶ select °C or °F
- ▶ press  to confirm
By default the temperature unit of measure is ° C.

Adjusting buzzer volume

To change the volume

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
The volume setting range is from 00 (min) to 03 (max).

 The volume changes after confirming the modification.

Wi-Fi reset

To reset the Wi-Fi credentials and return the device to its original configuration

- ▶ select 
- ▶ press  to change settings
- ▶ use the   icons in sequence
Appears 
- ▶ press   *appears to reset Wi-Fi credentials.*
- ▶ press  to confirm
Credentials have been reset.

Activate Wi-Fi

To activate Wi-Fi

- ▶ select 
- ▶ press  to change settings
- ▶ use the   icons in sequence
Appears 

- ▶ press   *appears to enable Wi-Fi pairing.*
- ▶ press  to confirm

⚠ The device remains visible on the App for the first 15 minutes after the device is switched on.

Setting the Hotel Mode

To set the Hotel mode

- ▶ select 
- ▶ select YES to turn on Hotel mode
- ▶ select NO to turn off the Hotel mode
By default the device is set to NO.

Activating the Hotel mode:

- the Autochangeover function is deactivated
- the temperature setting range is reduced, in Cooling you can set from 22 °C to 28 °C, in Heating you can set from 16 °C to 24 °C

5.5.2 Advanced Menu

⚠ **To access the setup menu, it is necessary to access the Basic menu. See section "Basic menu" p. 23.**

The special functions menu can be accessed via the control panel.

To access the advanced menu

- ▶ from the basic menu press 
Appears 
- ▶ press the  key once
Appears 
- ▶ press  to confirm and log in
This takes you to the settings menu.

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press  for 2 seconds
Confirming the change takes you to the next item.

To exit the menu

- ▶ press  for about 10 seconds
Appears 
- ▶ press  for about 10 seconds
The display turns off.
- ▶ or wait 30 seconds after the last action
The display is switched off automatically.

⚠ After 30 seconds from the last action the control returns to the start screen and the last chosen values are memorised.

Menu items

Ad: Not used

of: Options for digital input

UC: Not used

Ac: Anti-stratification in cooling

Ah: Anti-stratification in heating

Ab: Enabling brightness sensor

Fr: Not used

To select digital input

To change the digital input

- ▶ select 
- ▶ press  to change settings
- ▶ select CP for presence contact (default)
- ▶ select CO to cooling open
- ▶ select CC to cooling close
- ▶ press  to confirm
By default digital input is set to CP.

⚠ For return to the default settings, set the digital input to "CP".

⚠ By selecting one of the other inputs (CO,CC) the seasonality is locked. It is not possible to modify it through the key  of the control.

Set the anti-stratification function to cooling

To set the anti-stratification function in cooling mode

- ▶ select 
- ▶ press  to change settings
Appears 
- ▶ press  to move within the menu
- ▶ select  to enable the function
- ▶ press  to confirm changes
By default, the anti-stratification function in cooling is set to .

⚠ The anti-stratification function in cooling is to be set for appliances installed at low floor level equipped with an active air probe.

Optical sensor

⚠ By default, the brightness sensor is set.

To disable the brightness sensor:

- ▶ select 
- ▶ press  *Appear Ys.*
- ▶ press 
- ▶ select no
- ▶ press  to confirm
The brightness sensor is disabled.

⚠ The brightness sensor adapts to room lighting.

Set the anti-stratification function in heating mode

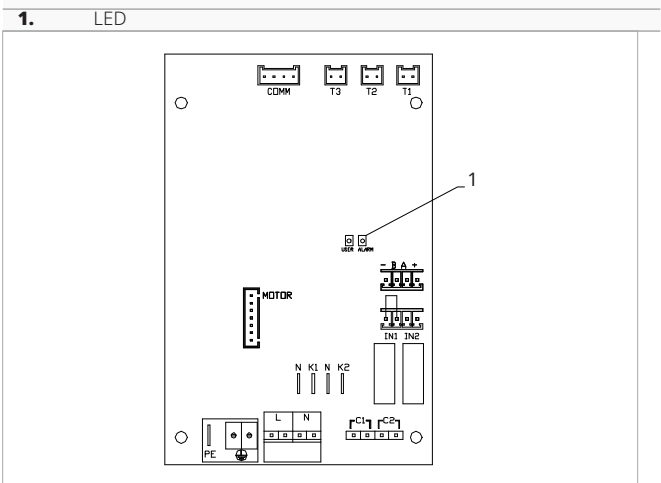
To set the anti-stratification function in heating mode

- ▶ select 
- ▶ press  to change settings
Appears .
- ▶ press  to move within the menu
- ▶ select  to enable the function
- ▶ press  to confirm changes
By default, the anti-stratification function in cooling is set to .

⚠ The anti-stratification function in heating is to be set for appliances installed high up on the wall or ceiling equipped with an active air sensor.

5.5.3 Error signals

The PCB has a status LED.



⚠ The flashing LED indicates errors.

⚠ It is possible to verify the meaning of the LEDs by means of the error code displayed on the touchpad.

⚠ To identify the error, please refer to "Visualisation of alarms on display" *p. 25*.

⚠ With the LED on and no indication on the display, it is indicated that there are no errors.

5.5.4 Visualisation of alarms on display

⚠ In the event of a malfunction, the display shows an alarm code.

⚠ In the event of an alarm, the device still maintains active functions.

- ▶ E1 Air temperature probe alarm T1 on PUB-30 board disconnected or with incorrect values (-10÷40)
The device is operating and the M7 control uses its own air probe.
- ▶ E2 Internal fan motor faulty or disconnected
None of the modes can be activated.
- ▶ E3 Water temperature sensor H2/T2 disconnected or faulty
None of the modes can be activated.
- ▶ CE Communication error
Errors in the communication between the touchpad control and the board. None of the modes can be activated.
The symbol ⚠ appears to indicate unsuitable radiant water.
- ▶ bL Key lock
To unlock the display, press   simultaneously for about 3 seconds.
- ▶  * Incorrect water temperature
In heating mode, the water temperature is below 30 °C
- ▶  * Incorrect water temperature
In cooling mode, the water temperature is above 20 °C.
** flashing*

6. PREPARATION FOR CONNECTING THE WALL CONTROLS M7

6.1 Preliminary warnings

⚠ The following procedure is required to connect the wall controls (EEB749 - EFB749 - EGB749 - B3V151 - B10842).

6.2 Preparation for command connection

6.2.1 Accompanying material

Accompanying the unit, contained in a bag placed on the cover of the electrical box, are:

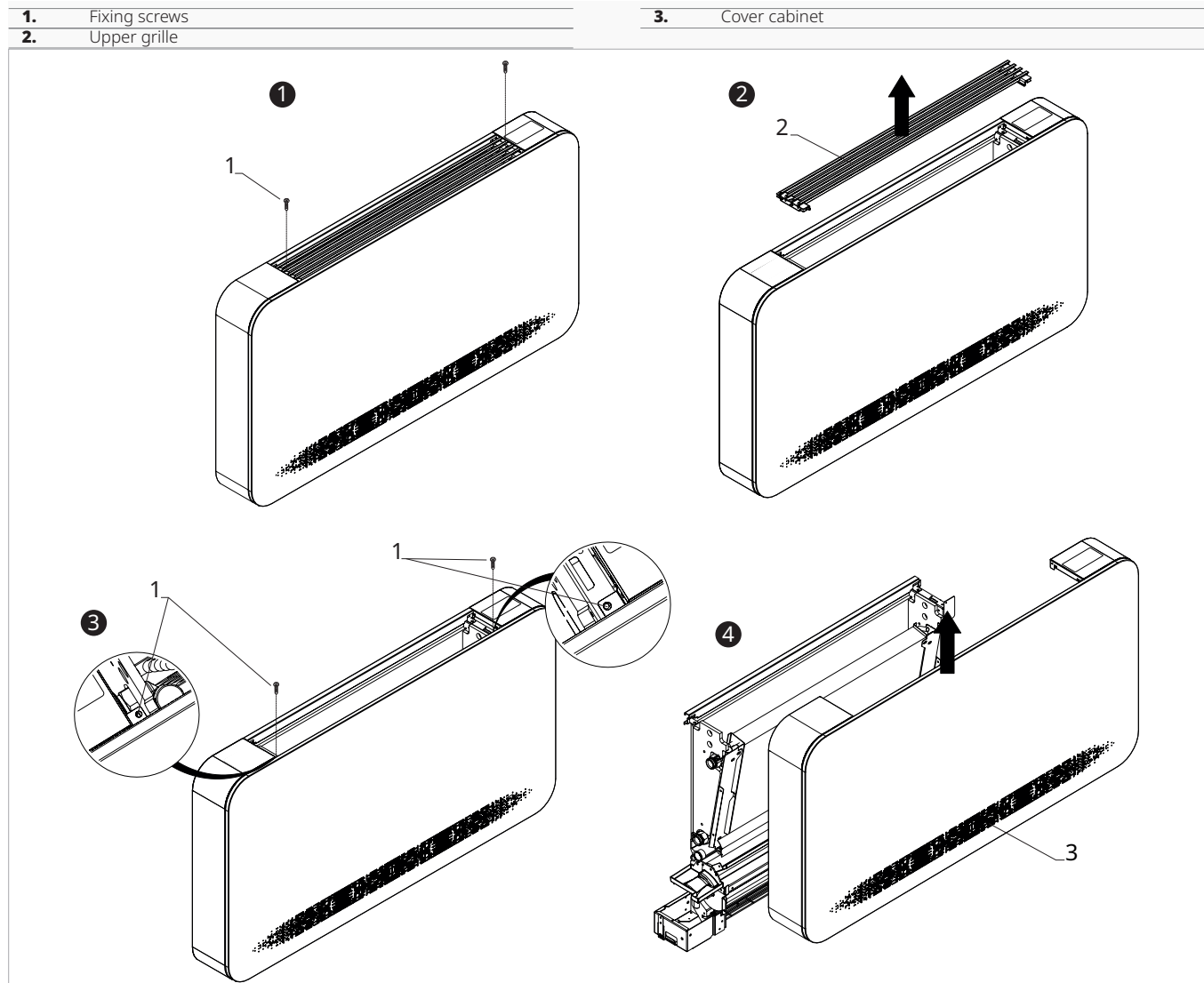
- 1 terminal for power supply connection (230V~50Hz)
- cable gland
- 1 terminal for serial connection (-BA+)
- screws

6.2.2 Preliminary warnings

- ⚠** Before carrying out any work, please ensure the power supply is disconnected.
- ⚠** All operations of an electrical nature must be carried out by qualified personnel having the necessary training, who understands the legal requirements, and is informed about the risks related to such operations.
- ⚠** All connections must be made following the regulations in force in the country of installation.
- ⚠** The unit must only be powered after work has been completed.
- ⚠** Isolate and lock off the main circuit breaker before making any electrical connections and performing any type of operation.
- ⚠** Access to the electrical panel is only permitted to qualified personnel.
- ⚠** Refer to the respective section of the control, used to make the electrical connections.

6.2.3 Device preparation

Before proceeding with the installation, it is necessary to remove some elements from the appliance.



To remove the grille:

- remove the fixing screws
- lift up and remove the upper grille

⚠ Disconnect the connector when opening the cover casing.

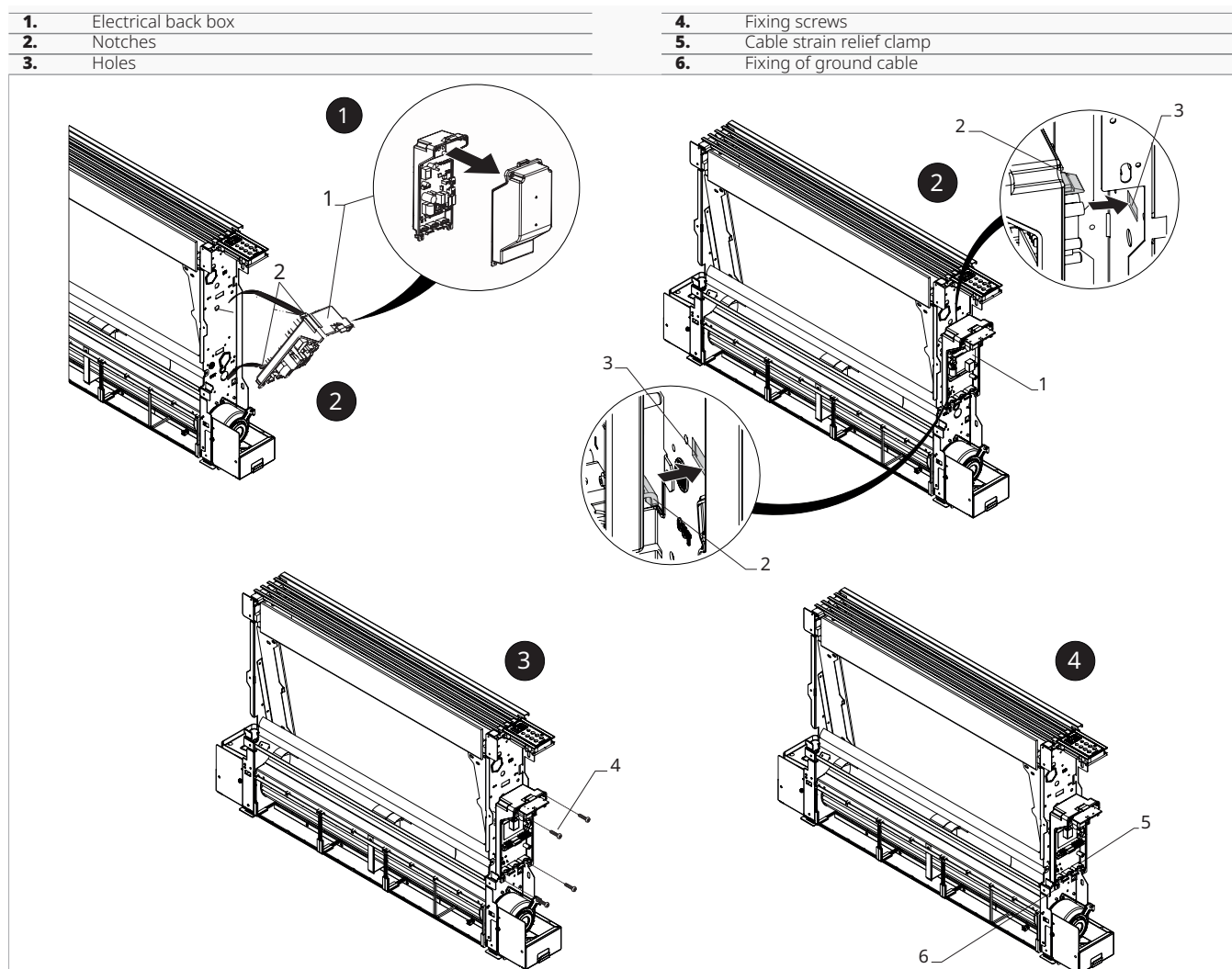
To remove the cover cabinet

- remove the fixing screws
- lift the cover cabinet
- disconnect the on-board display connector (if present)
- remove the cover cabinet

6.2.4 Installation of electrical connection box

⚠ Normally the unit leaves the factory with the electrical box mounted.

⚠ In exceptional cases, the electrical box can be installed at a later stage.



To install the electrical box:

- ▶ open the electrical box
- ▶ place the base of the electrical box on the side of the appliance
- ▶ Wedge the notches of the electrical box into the appropriate holes on the side of the appliance
- ▶ secure the electrical box with the fixing screws provided
- ▶ secure the ground cable to the structure of the appliance with the screw provided

⚠ The minimum force that must be exerted for starting is approximately 2 N.

- ▶ connect the connector to the MOTOR quick connector on the printed circuit board
- ▶ connect the water probe to the T2 connector on the device

⚠ The water temperature probe monitors the temperature inside the coils and determines fan start-up according to preset parameters. (winter minimum and summer maximum functions)

⚠ Check that the probe is correctly positioned in the compartment on the coil.

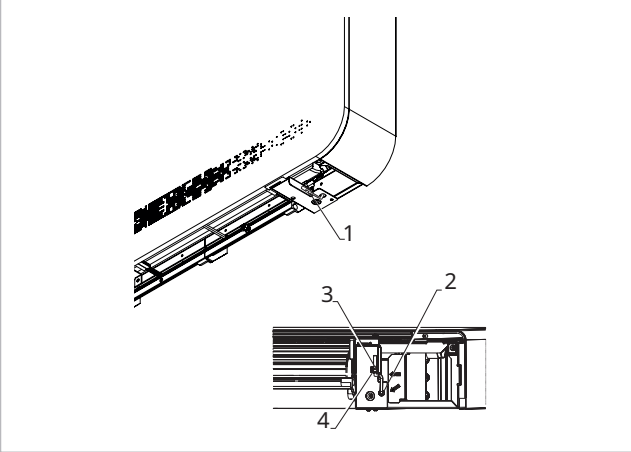
- ▶ connect the electrical wiring
- ▶ tidy up the cables
- ▶ secure the cables using the grommets provided
- ▶ close the electrical box

- ▶ secure the electrical box with the fixing screws provided

6.2.5 Installation of air temperature probe

- ▶ position the temperature probe
- ▶ pass the probe through the hole in the shoulder of the appliance
- ▶ pass the probe through the lower hole
- ▶ fix the temperature probe to the relevant hook

1. Air temperature probe
2. Prepared hole in the shoulder of the appliance
3. Lower hole
4. Hook for temperature probe



6.2.6 Version configurations

RS versions

In RS versions to control the radiant effect of the front panel make the connections.

To make the connections

- connect the appropriate connector to the expansion board and the output of the Y1 solenoid valve

⚠ Refer to the "Electrical Connections" sections of the specific printed circuit boards for connections.

6.2.7 Models with right-hand hydraulic connections

The fancoils in the >OSMO< range are designed with:

- hydraulic coil connections on the left side of the unit
- electrical connections on the right side of the unit

⚠ Should it be necessary to invert the position of the coil's hydraulic connections from the left (default) side to the right side, the hydraulic Hydraulic connection reversal kit must be used to make the electrical connections to the fan motor and the grille safety microswitch.

6.2.8 Completed assembly

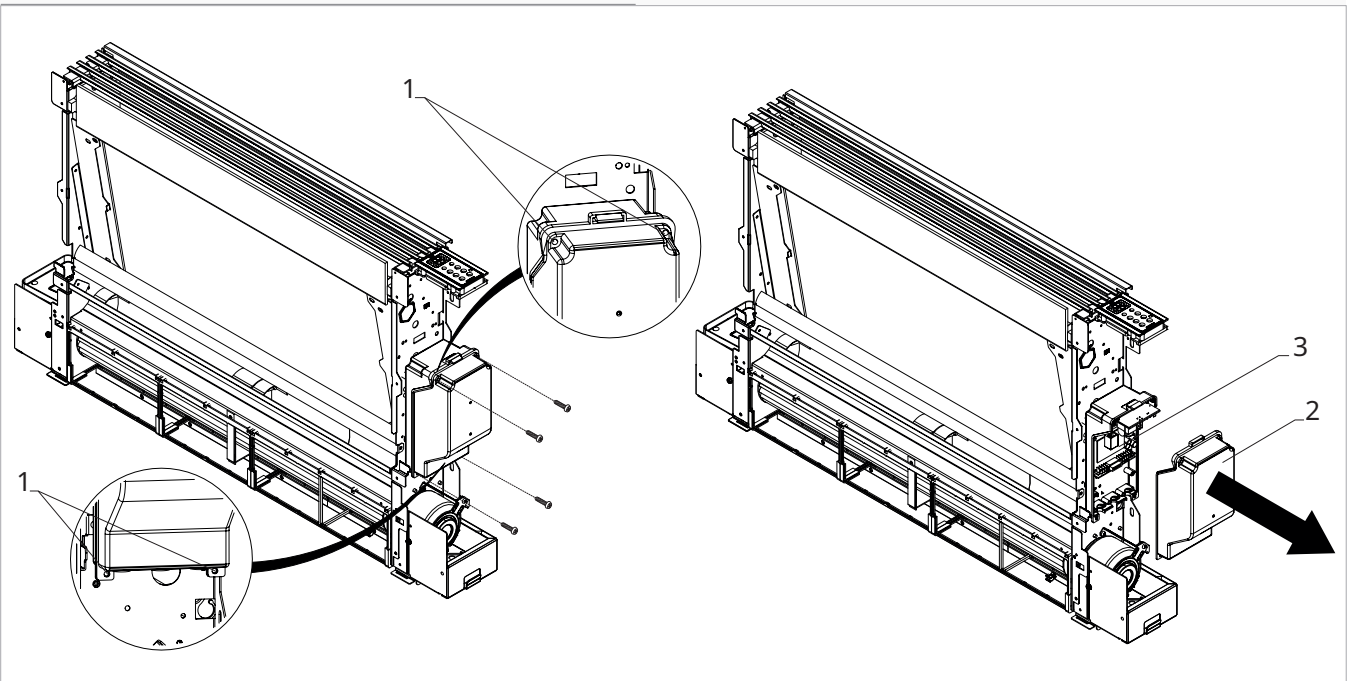
Completed assembly

- place the cover of the electrical box
- fix with screws
- reassemble the cover cabinet
- fix with screws

6.2.9 Access to the terminal block

1. Fixing screws
2. Cover of the electrical box

3. Terminal block for wiring



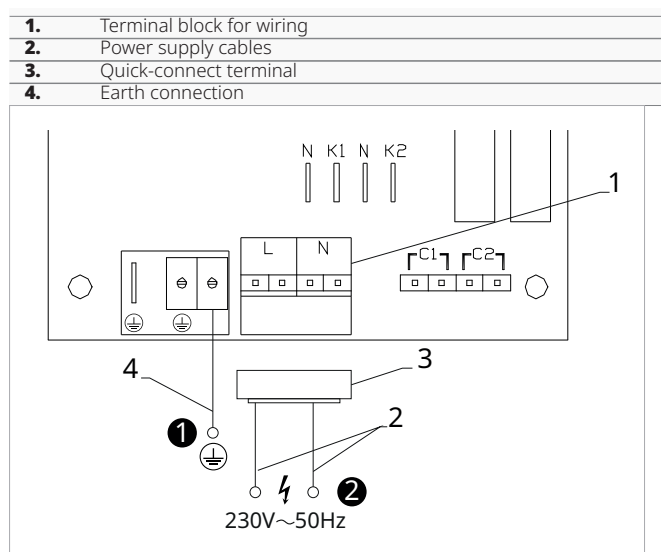
⚠ Before carrying out any work, please ensure the power supply is disconnected.

To access:

- if installed, remove the movable cover panel

To access the connections:

- unscrew the fixing screws of the electric box
- remove the lid from the junction box

**To make the connections:**

- ▶ use the supplied quick terminal
- ▶ connect phase and neutral (230 V~50 Hz) to the quick terminal
- ▶ connect the quick-connect terminal to the terminal block
- ▶ Connect the earthing wire (⊕) to the terminal provided on the electrical panel

⚠ Refer to the information in the wiring diagram of the unit you are installing.

⚠ Please refer to the sections of the respective controls for indications of electrical connections.

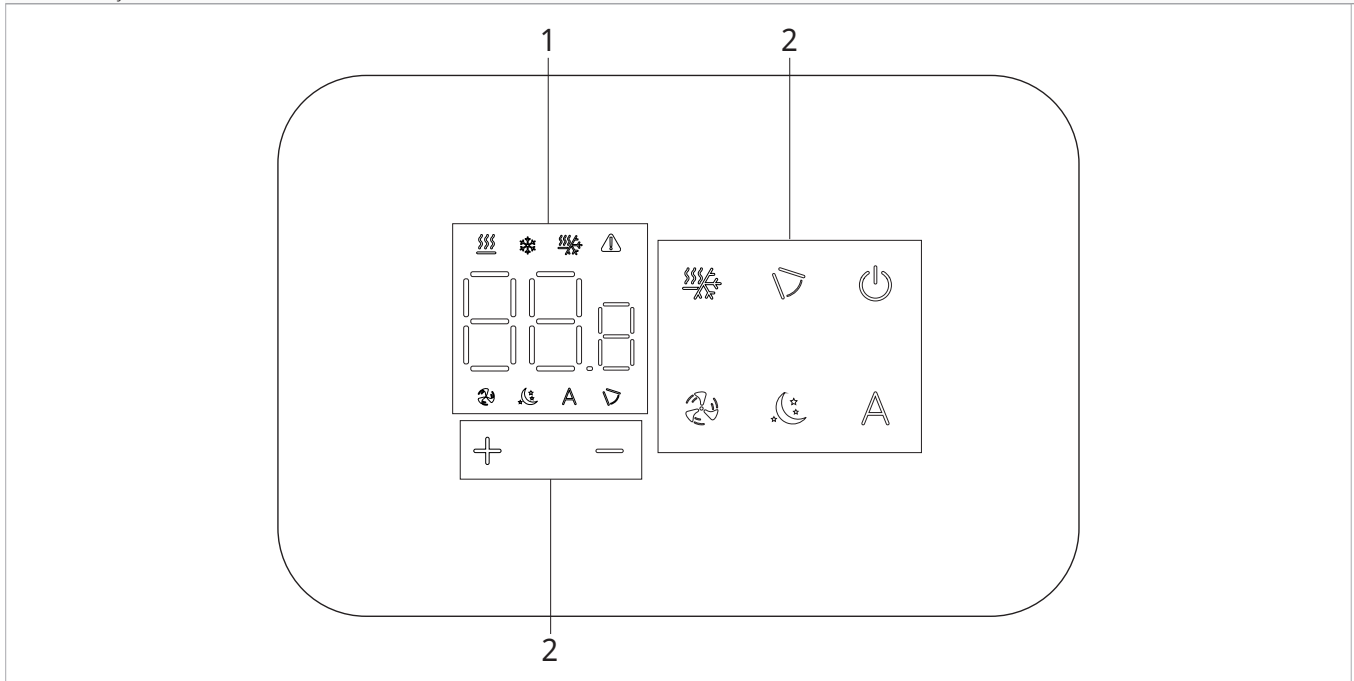
⚠ The electrical connection can be made by a cable recessed into the wall as indicated on the installation template (connection recommended for installation of the device at the top of the wall).

⚠ It is necessary to check that the power supply is provided with appropriate protection against electrical shorts and/or overloads

7. M7 SERIES CONTROL PART NO. EEB749 + ESE845 BOARD

7.1 Interface

1. Display area
2. Keys area



7.2 Installation

7.2.1 Description

The wall-mounted remote control is an electronic LED thermostat with a touch interface, with the possibility of controlling multiple appliances equipped with the same electronic board. It is equipped with a temperature and humidity probe.

⚠ The control can manage a maximum of 16 units.

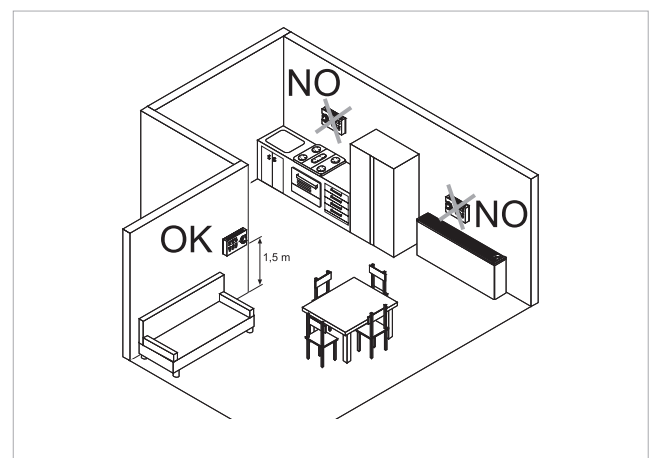
7.2.2 Mounting

⚠ The control panel for wall control is to be installed inside a 503 electrical box.

⚠ A wall must be prepared to accommodate the 503 electrical box before installing the wall control.

⚠ Ensure that:

- the wall supports the weight of the appliance
- the section of the wall does not contain piping or electrical lines
- the functionality of load-bearing elements is not compromised



The wall-mounted remote control must be installed:

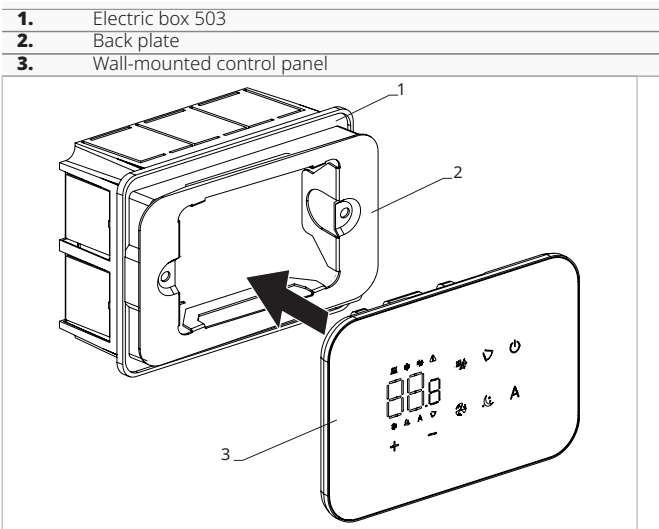
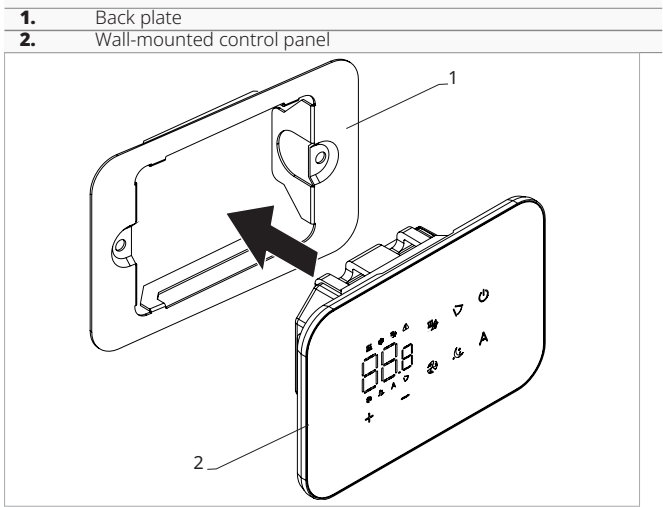
- on internal walls
- at a height of about 1,5 m from the floor

⚠ Should the control be located in an area utilised by persons with reduced physical capabilities, please refer to local regulations.

- away from doors or windows

- away from heat sources (heaters, convectors, stoves, direct sunlight)

⚠ The wall control is provided inside the package already assembled.

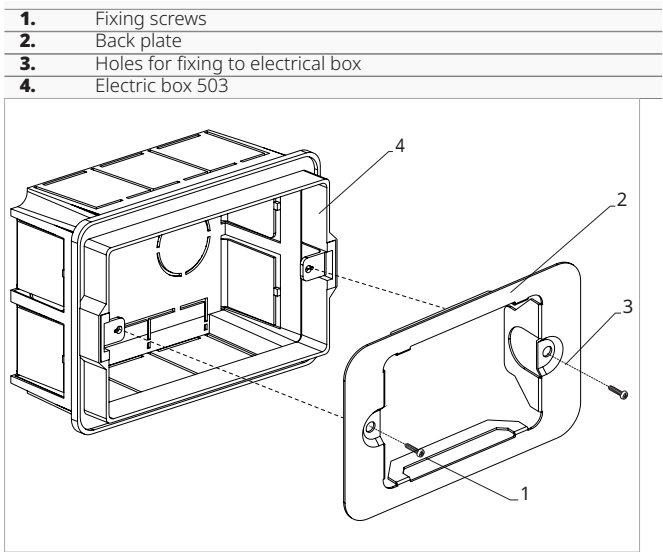


► Close the control panel

⚠ Pay attention not to crush the conductors when you close the control.

Before wall installation:

- separate the back plate from the control panel



For wall mounting of the control panel:

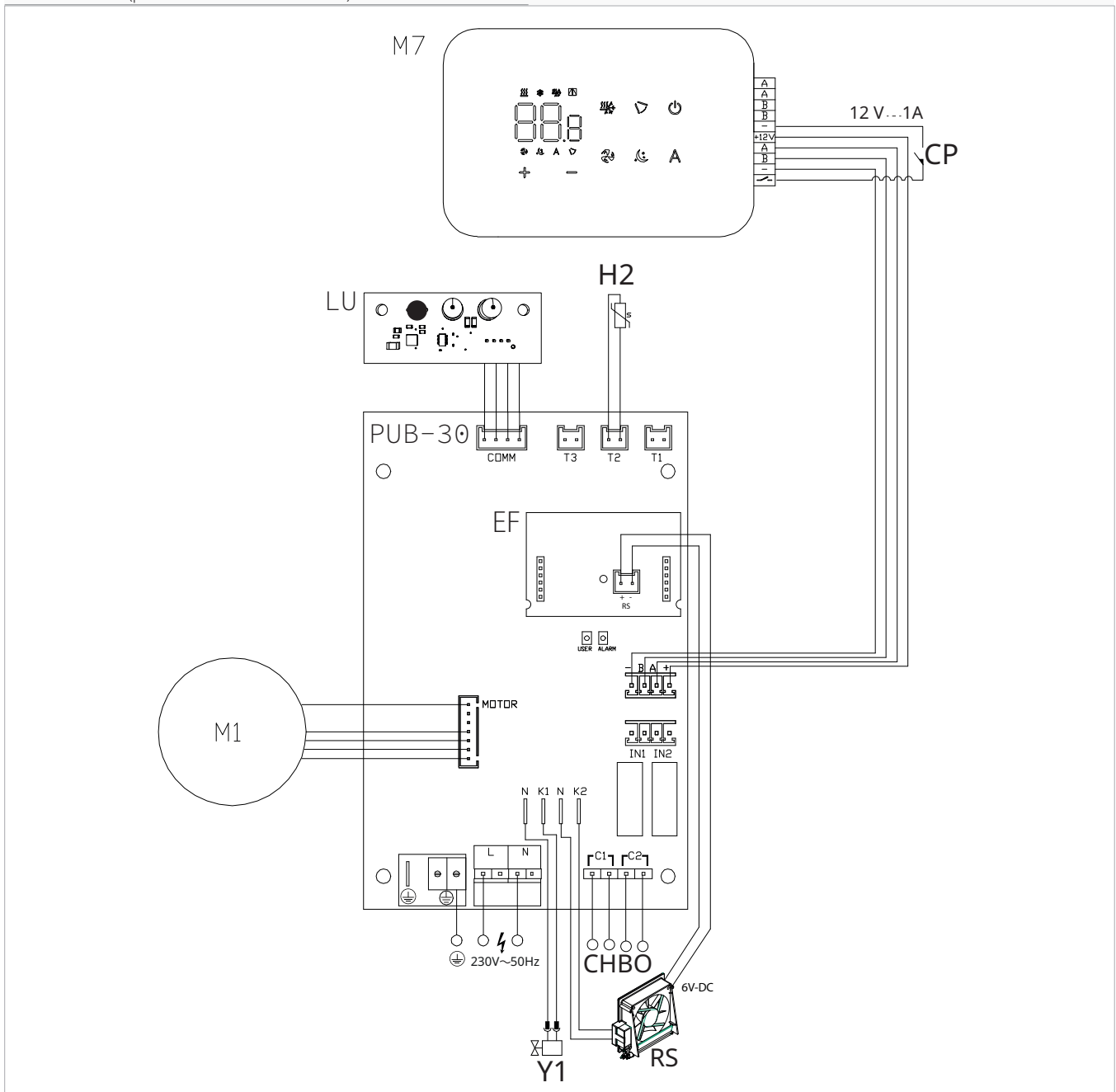
- fix the control base to the electrical box 503 with screws
- connect the electrical wiring

⚠ Before making the connections, please verify that the control terminal block is on the right-hand side.

7.3 Single connection diagram

M1	DC fan motor
	Ground connection
230~50	Power supply connection 230 V / 50 Hz / 1 A
Y1	Water solenoid valve (230 V / 50 Hz / 1 A power output)
CH/C1	Cooling request contact (for example chiller or reversible heat pump). Activated in parallel with the solenoid valve output (Y1) with 1 minute delay when the fancoil is in cooling mode and is on call (potential-free contact max. 1 A).
BO/C2	Heating request contact (for example boiler or heat pump). Activated in parallel with the output of the solenoid valve (Y1) with 1 minute delay when the fancoil is in heating mode and is on call (potential-free contact max. 1 A).

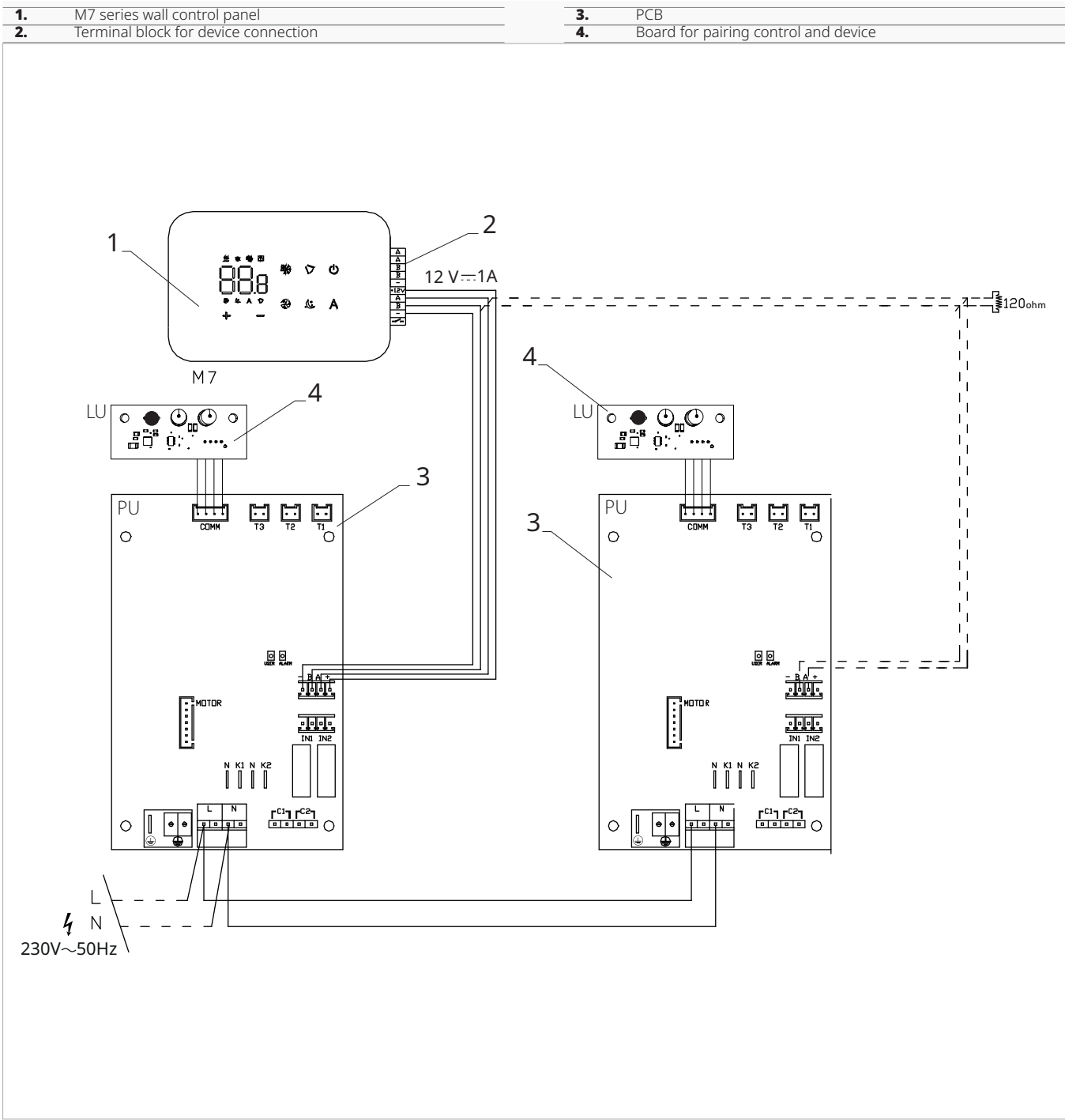
CP	Presence contact (normally open)
+BA-	Serial connection for wall-mounted remote control (respect AB polarization)
IN1	Potential-free input 1(not active)
EF	RS version expansion electronic board
H2/T2	2-pipe water temperature probe
RS	RS version wiring
LU	Electronic board for pairing control and device
PUB-30	Electronic board on the unit
M7	M7 series wall control command



⚠ For models with hydraulic connections on the right hand side, please refer to "Models with right-hand hydraulic connections" [p. 29](#) to make the connections.

⚠ For radiant panel (RS) versions, please refer to the "Version configurations" section to make the connections.

7.4 Multiple connection diagram



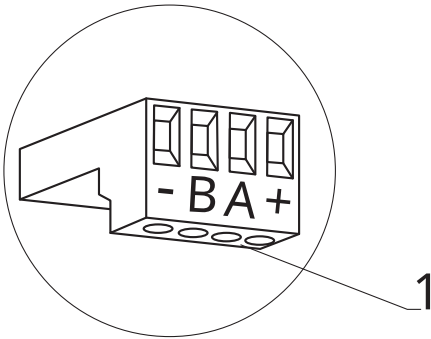
⚠ With multiple command linkage, it is mandatory to perform command-to-device matching. See section "Pairing of control and unit" p. 38.

7.5 Connections

7.5.1 Preliminary warnings

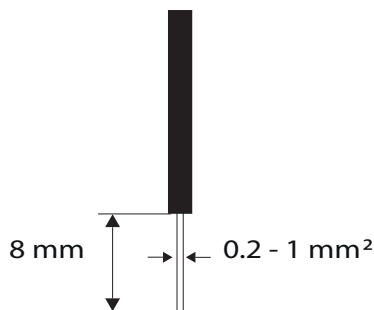
⚠ The terminals for connecting the control panel and the presence contact CP are placed in a plastic bag and positioned inside the cover of the electrical box.

1. Terminal blocks



The terminals accept:

- rigid or flexible wires with a 0.2 to 1 mm² cross-section
- rigid or flexible wires with 0,5 mm² cross-section if two wires are connected to the same terminal block
- rigid or flexible wires with 0,75 mm² cross-section If the wires have wire end ferrules with a plastic collar



To connect the cables:

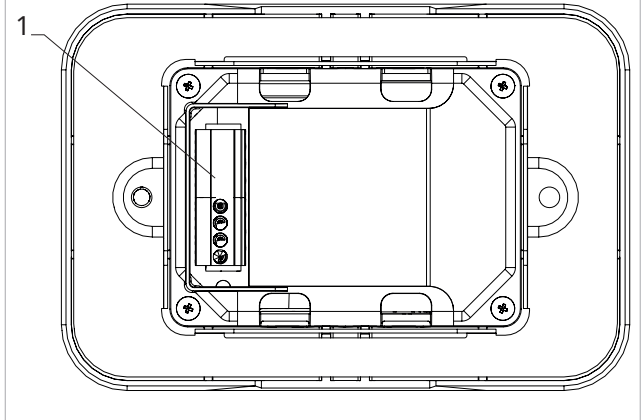
- ▶ strip 8 mm of the wire
- ▶ if the wire is rigid, you can insert it easily whereas
- ▶ if it is flexible, use appropriate crimp terminals
- ▶ push the wire in completely
- ▶ check the right fixing by pulling it gently

7.5.2 Control Panel

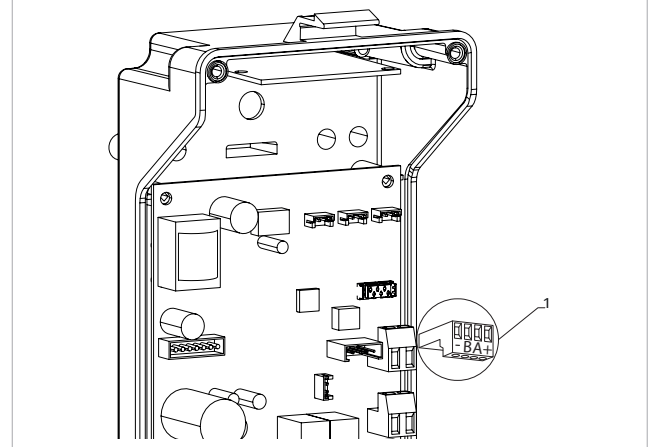
⚠ The control panel for wall control must be ordered separately.

Terminal block position:

1. Terminal block (Back view panel)



1. Terminal blocks



To connect the wall control panel to the board:

- ▶ connect the power supply cables to the + - terminals
- ▶ connect the ModBus serial connection cables to terminals A and B

7.5.3 Presence contact CP

Through this device it is possible to connect an external control signal that inhibits the operation of the control signal, for example:

- opening window contact
- remote on/off
- infrared presence sensor
- activation badge
- remote change of season

Function

The contact is normally open (NO).

- ▶ when closing the CP contact, connected to a potential-free contact, the device switches to stand-by mode
CP appears on the display.
- ▶ At the touch of a button on the display the symbol ⚠ flashes.

⚡ It is forbidden to connect the CP input to that of another unit electronic board. Use separate contacts.

The CP presence contact can be configured for heating and cooling operation via the "To select digital input" *p. 38* settings menu item (digital input).

7.5.4 RS485 Serial Connection

The wall-mounted remote control can be connected through an RS485 serial line to one or more devices, up to a maximum of 16.

The devices must be equipped with an electronic board suitable for remote control.

For the connection:

- ▶ follow the indication on the connection diagram
- ▶ connect respecting the polarity indication A and B

⚠ Use a two core cable shielded cable suitable for the RS485 serial connection with a minimum section of 0,35 mm².

⚠ Keep the two core cable separate from power supply cable by a minimum of 50 mm.

⚠ Create a wire path in order to minimize the length of the lead wire.

⚠ Complete the line with the 120 Ω resistor.

⊖ It is forbidden make star connections.

⚠ In the case of a connection between several devices, it is mandatory to carry out the matching between control and device. See section "Pairing of control and unit" *p. 38*.

7.6 Functions

7.6.1 Basic menu

To access the basic menu

- ▶ with the display off, hold down  for 10 seconds

The device turns on and  appears

- ▶ keep pressed until the indication  appears
- ▶ release 

The symbol  appears

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press the icon 
- Confirming the change takes you to the next item.*

To exit the menu

- ▶ press the icon  for 10 seconds
- ▶ or wait 30 seconds the automatic shutdown

⚠ After 30 seconds from the last action the control returns to the start screen and the last chosen values are memorised.

Menu items

ot: AIR probe offset (air probe setting)

ur: Value read by the R.H. sensor

ut: Probe Offset PT4

uS: Humidity setpoint

ui: Humidity hysteresis

CF: Scale

ub: Buzzer volume

uu: Not used

uP: Not used

ho: Hotel Mode

Set probe offset RH

⚠ Modify only after real deviations from an actual measurement has been established with professional equipment.

To set the RH probe offset

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm

Set the humidity setpoint

To set the humidity setpoint

- ▶ select 
 - ▶ press  to change settings
 - ▶ increase or decrease the value with the icons  
 - ▶ press  to confirm
- The setting range is from 20.0% to 90.0%.*

Setting the humidity hysteresis

To set the humidity hysteresis

- ▶ select 
 - ▶ press  to change settings
 - ▶ increase or decrease the value with the icons  
 - ▶ press  to confirm
- The setting range is from 1 (min) to 30 (max).*

Scale

To change the temperature unit of measure

- ▶ select 
 - ▶ press  to change settings
 - ▶ select °C or °F
 - ▶ press  to confirm
- By default the temperature unit of measure is °C.*

Adjusting the volume

To change the volume

- ▶ select 
 - ▶ press  to change settings
 - ▶ increase or decrease the value with the icons  
 - ▶ press  to confirm
- The volume setting range is from 00 (min) to 03 (max).*

 The volume changes after confirming the modification.

Set AIR probe offset

To set the air probe offset

- ▶ select 
 - ▶ press  to change settings
 - ▶ increase or decrease the value with the icons  
 - ▶ press  to confirm
- By default it is set to 0.
The setting range is from a minimum of -12.0 °C to a maximum of 12.0 °C.*

Setting the Hotel Mode

To set the Hotel mode

- ▶ select 
 - ▶ select YES to turn on Hotel mode
 - ▶ select NO to turn off the Hotel mode
- By default the device is set to NO.*

Activating the Hotel mode:

- the Autochangeover function is deactivated
- the temperature setting range is reduced, in Cooling you can set from 22 °C to 28 °C, in Heating you can set from 16 °C to 24 °C

7.6.2 Advanced Menu

 **To access the setup menu, it is necessary to access the Basic menu. See section "Basic menu" p. 36.**

The special functions menu can be accessed via the control panel.

To access the advanced menu

- ▶ from the basic menu press 
 - Appears *
 - ▶ press once 
 - Appears *
 - ▶ press  to confirm and log in
- The advanced menu is accessed.*

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press  for 2 seconds
- Confirming the change takes you to the next item.*

To exit the menu

- ▶ press  for about 10 seconds
- Appears *
- ▶ press  for about 10 seconds
- The display turns off.*
- ▶ or wait 30 seconds after the last action
- The display is switched off automatically.*

 After 30 seconds from the last action the control returns to the start screen and the last chosen values are memorised.

of: Options for digital input

t1: Select air probe M7/PU

rH: Radiant heating options with R20

rC: Radiant cooling options with R20

UC: Not used

Ac: Anti-stratification in cooling

Ah: Anti-stratification in heating

Ed: Not used

Ab: Enabling brightness sensor

Fr: Not used

Set device address for communication

To set the Modbus address

- ▶ select 
 - ▶ press  to change settings
 - ▶ press  to confirm
 - ▶ increase or decrease the value with the icons  
 - ▶ press  to confirm
- By default the ModBus address is set to 01.
The setting range is from 01 (min) to 99 (max).*

Menu items

Ad: Options for Modbus address

To select digital input

To change the digital input

- ▶ select 
 - ▶ press  to change settings
 - ▶ select CP for presence contact (default)
 - ▶ select CO to cooling open
 - ▶ select CC to cooling close
 - ▶ press  to confirm
- By default digital input is set to CP.*

⚠ For return to the default settings, set the digital input to "CP".

⚠ By selecting one of the other inputs (CO,CC) the seasonality is locked. It is not possible to modify it through the key  of the control.

Select air probe M7/PU

To select the M7/PU air probe

- ▶ select t1
 - ▶ press  to change settings
 - ▶ select 0 to use air probe M7
 - ▶ select 1 to obtain the values of the T1 probes of the connected PU boards
 - ▶ press  to confirm
- By default, the digital input is set to 0.*

⚠ In the case of paired PU boards, the M7 series control unit takes an average of the probe values.

Set radiant options in heating with R20

⚠ To change the rH function, it is necessary to have the accessory MZS - Single zone module for radiant system, code. EG1028.

⚠ To change the settings, please refer to the Instruction Sheet of the accessory MZS - Single zone module for radiant system, code. EG1028.

Set radiant options to cooling with R20

⚠ To change the rC function, it is necessary to have the accessory MZS - Single zone module for radiant system, code. EG1028.

⚠ To change the settings, please refer to the Instruction Sheet of the accessory MZS - Single zone module for radiant system, code. EG1028.

7.6.3 Pairing of control and unit

⚠ The matching procedure between control and luminaire is mandatory and allows the reception of any alarms.

⚠ In the case of a failed pairing between control and device, and the related appearance of error E8, after 10 minutes, the control enables broadcast communication. The E8 error is then eliminated and the control sends signals to all devices without receiving any feedback.

Set the anti-stratification function to cooling

To set the anti-stratification function in cooling mode

- ▶ select 
 - ▶ press  to change settings
 - Appears .*
 - ▶ press  to move within the menu
 - ▶ select  to enable the function
 - ▶ press  to confirm changes
- By default, the anti-stratification function in cooling is set to .*

⚠ The anti-stratification function in cooling is to be set for appliances installed at low floor level equipped with an active air probe.

Optical sensor

⚠ By default, the brightness sensor is set.

To disable the brightness sensor:

- ▶ select 
 - ▶ press 
 - Appear Ys.*
 - ▶ press 
 - ▶ select no
 - ▶ press  to confirm
- The brightness sensor is disabled.*

⚠ The brightness sensor adapts to room lighting.

Set the anti-stratification function in heating mode

To set the anti-stratification function in heating mode

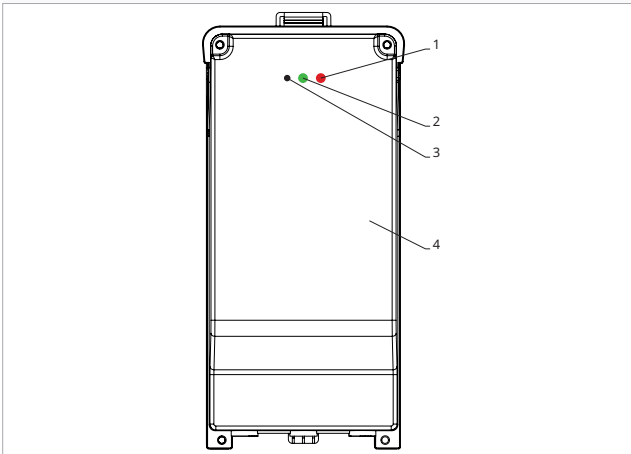
- ▶ select 
 - ▶ press  to change settings
 - Appears .*
 - ▶ press  to move within the menu
 - ▶ select  to enable the function
 - ▶ press  to confirm changes
- By default, the anti-stratification function in heating is set to .*

⚠ The anti-stratification function in heating is to be set for appliances installed high up on the wall or ceiling equipped with an active air sensor.

To pair the control with the unit

- ▶ with control switched on, at the same time press  and  for about 10 seconds
- In the display area, where the setpoint is indicated, appears the number of connected devices.
The displayed value flashes.*

1. Red LED
2. Green LED
3. Black button
4. Electrical back box



On the electrical box on the unit

- ▶ press the black button for 3 seconds
*The green LED flashes.
The red LED is on.*
- ▶ wait for the procedure to complete
The green LED stops flashing.

On the wall mounted control panel

- ▶ *Appear the number assigned to the fancoil.
Then appears the number of connected devices.*
- ▶ press to exit the menu

⚠ To reset the pairing settings, it is first necessary to access the basic menu. See section "Basic menu" p. 36.

To reset pairing settings

- ▶ access the basic menu
- ▶ press
- ▶ press
- ▶ *All the way to the menu.*
- ▶ press

To reset a single fancoil

- ▶ *Appears .*
- ▶ press
- ▶ *Appears .*
- ▶ press to log in
- ▶ use the icons to move inside the menu
The assignment numbers assigned to the fancoils appears.
- ▶ select the fancoil to be reset
- ▶ press to confirm
 *appears, with an acoustic signal.
The device is removed.*

To exit the setting

- ▶ press for 5 seconds
*Exit the setting.
Back to menu 02.*

To reset all fancoils

- ▶ *Appears .*
- ▶ press until appears
Appears .

- ▶ press to confirm
- ▶ use the icons to move inside the menu
- ▶ select No to maintain all fancoils
- ▶ select Yes to reset the fancoils
- ▶ press to confirm

LED interface operation on the electrical box

If the device is being paired

The green LED flashes.

If the device is paired and functioning

The green LED is on.

If the device has not been paired and is not functional

*The green LED is off.
The red LED is on.*

If the device is in alarm status

The red LED flashes.

⚠ The red LED flashes according to the type of alarm. To check the alarm type, please refer to the following "Error signals" p. 39 section.

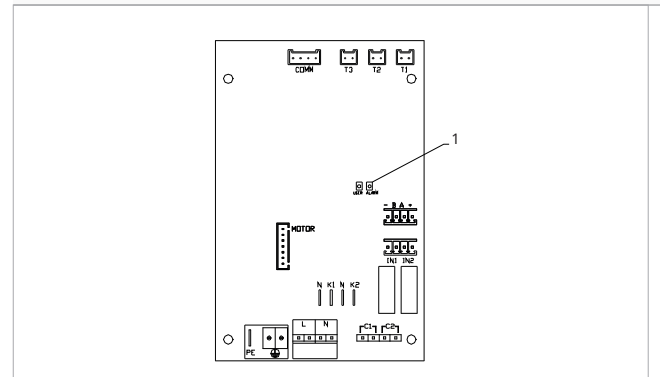
If communication with the board is missing

The green and red LEDs will flash once every second.

7.6.4 Error signals

The PCB has a status LED.

1. LED



⚠ The LED on the cover of the electrical box performs the same functions as the LED on the machine board.

⚠ The flashing LED indicates errors.

⚠ With the LED on and no indication on the display, it is indicated that there are no errors.

LED signals

- ▶ Led flashing
Errors to be shown on the display.
- ▶ LED off
Remote control switched off.
- ▶ LED continuous flashing with pause between flashes
Unsuitable water temperature alarm.
- ▶ LED on
Wall control on and no alarm present.

- ▶ LED 2 flashes / pause
Alarms when the internal fan motor is faulty or disconnected.
- ▶ LED 3 flashes / pause
Alarm for water temperature probe H2/T2 disconnected or faulty.
- ▶ LED 6 flashes / pause
Communication error alarm with wall control panel.

7.6.5 Alarm display on wall control panel

⚠ In the event of an alarm, the device still maintains active functions.

⚠ The symbol  is displayed on the wall control panel to indicate alarms.

⚠ **To access the setup menu, it is necessary to access the Basic menu. See section "Basic menu" p. 36.**

To visualise errors on the wall control panel

- ▶ press 
Appears .
- ▶ press 
Then the number assigned to the fancoil appears and then the error is displayed.

Displayed alarms

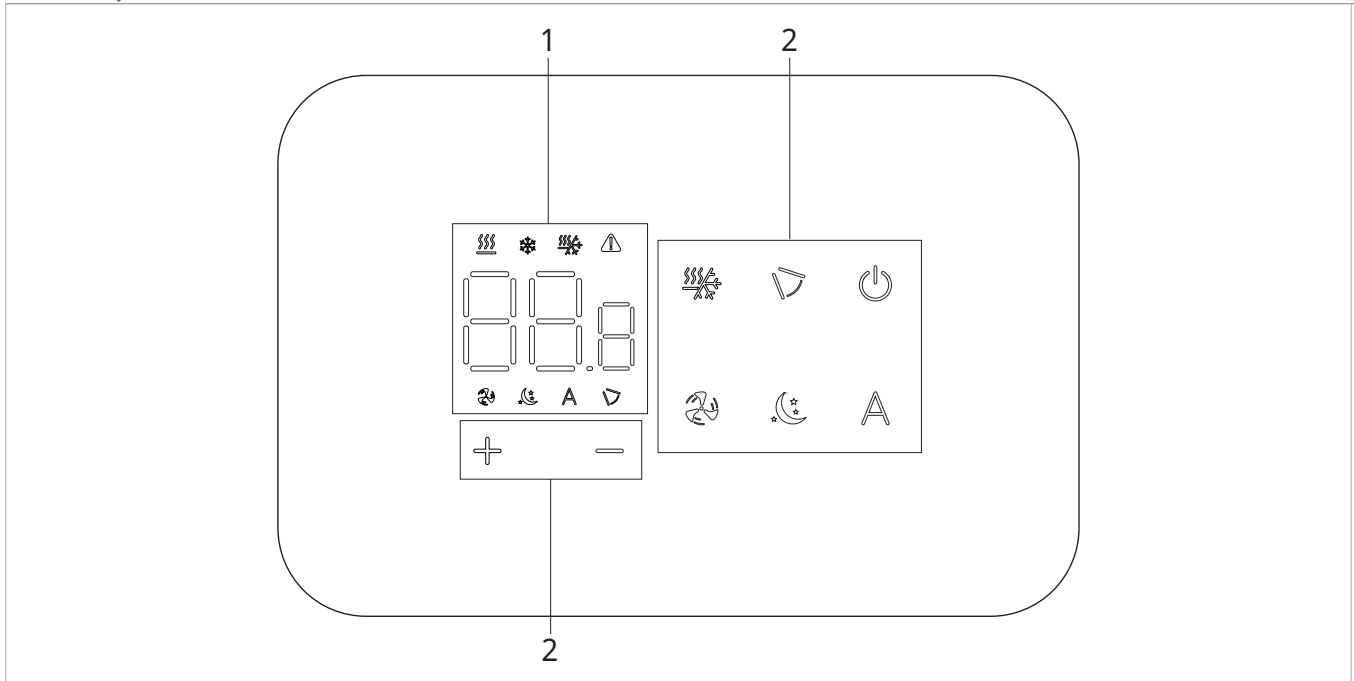
- ▶ E1 Air temperature probe alarm T1 on PUB-30 board disconnected or with incorrect values (-10÷40)
The device is operating and the M7 control uses its own air probe.
- ▶ E2 Internal fan motor faulty or disconnected
None of the modes can be activated.
- ▶ E3 Water temperature sensor H2/T2 disconnected or faulty
None of the modes can be activated.
- ▶ E5 H4/T3 heating water probe disconnected or faulty
None of the modes can be activated.
- ▶ E6 Invalid water temperature detected when remote season change function is active
The fancoil is performing heating and cooling functions incorrectly. None of the unit's functions can be activated.
- ▶ E8 Communication error
Communication error between the wall control panel and the fancoil.
- ▶ bL Key lock
To unlock the display, press   simultaneously for about 3 seconds.
- ▶ h2o Incorrect water temperature
*In heating mode, the water temperature is below 30 °C
In cooling mode, the water temperature is above 20 °C.*

⚠ Error E8 is displayed without the error display procedure on the wall control panel.

8. M7 SERIES CONTROL PART NO. EFB749 + ESE845 BOARD

8.1 Interface

1. Display area
2. Keys area



8.2 Installation

8.2.1 Description

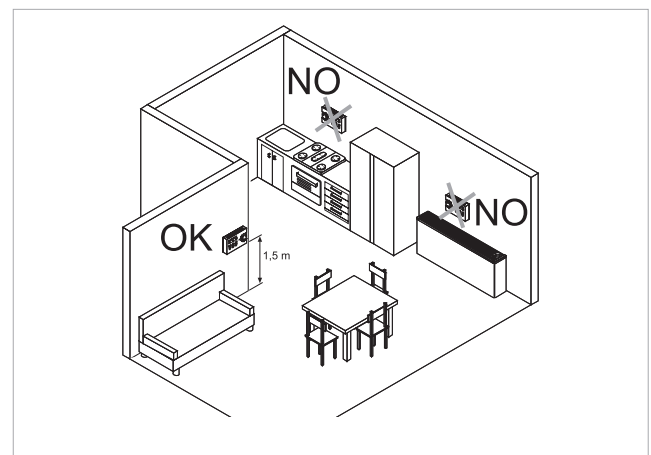
The wall-mounted remote control is an electronic LED thermostat with a touch interface, with the possibility of controlling multiple appliances equipped with the same electronic board. It is equipped with a temperature and humidity probe.

- ⚠ The control can manage a maximum of 16 units.
- ⚠ The app "Innova" is available to control the following command.

8.2.2 Mounting

- ⚠ The control panel for wall control is to be installed inside a 503 electrical box.
- ⚠ A wall must be prepared to accommodate the 503 electrical box before installing the wall control.
- ⚠ Ensure that:
 - the wall supports the weight of the appliance
 - the section of the wall does not contain piping or electrical lines

- the functionality of load-bearing elements is not compromised

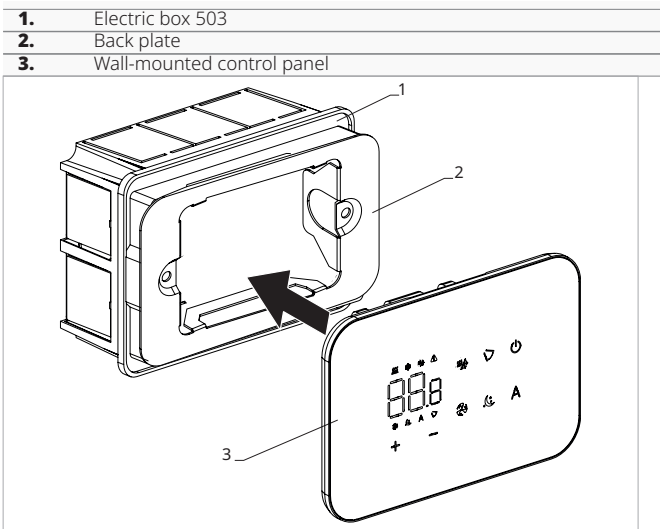
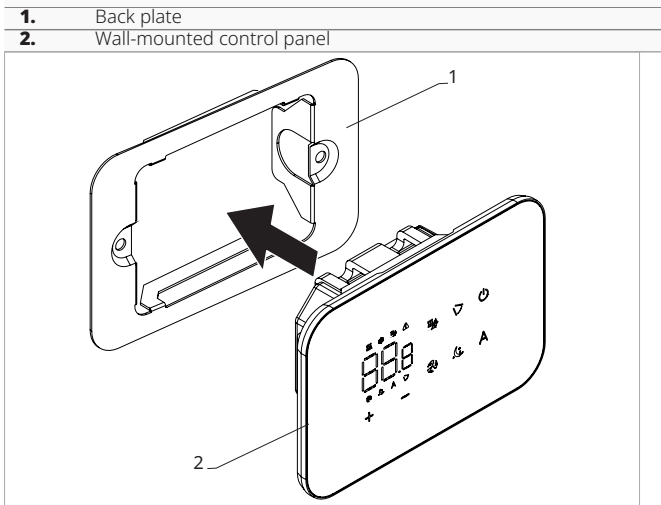


The wall-mounted remote control must be installed:

- on internal walls
- at a height of about 1,5 m from the floor

- ⚠ Should the control be located in an area utilised by persons with reduced physical capabilities, please refer to local regulations.
- away from doors or windows
 - away from heat sources (heaters, convectors, stoves, direct sunlight)

- ⚠ The wall control is provided inside the package already assembled.

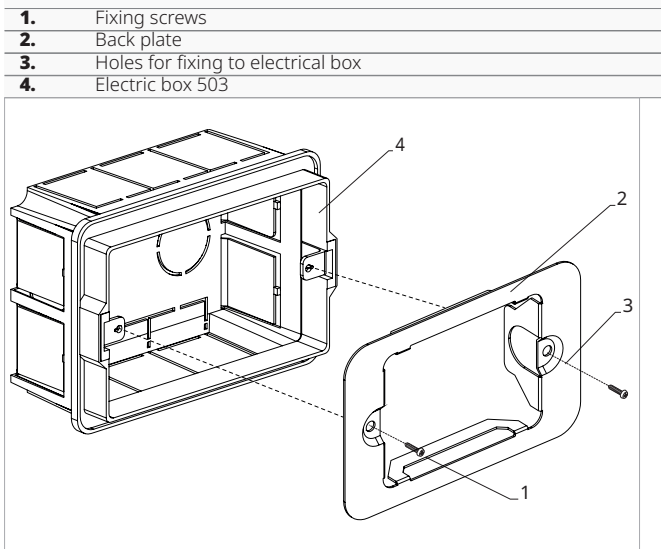


► Close the control panel

- ⚠ Pay attention not to crush the conductors when you close the control.

Before wall installation:

► separate the back plate from the control panel



For wall mounting of the control panel:

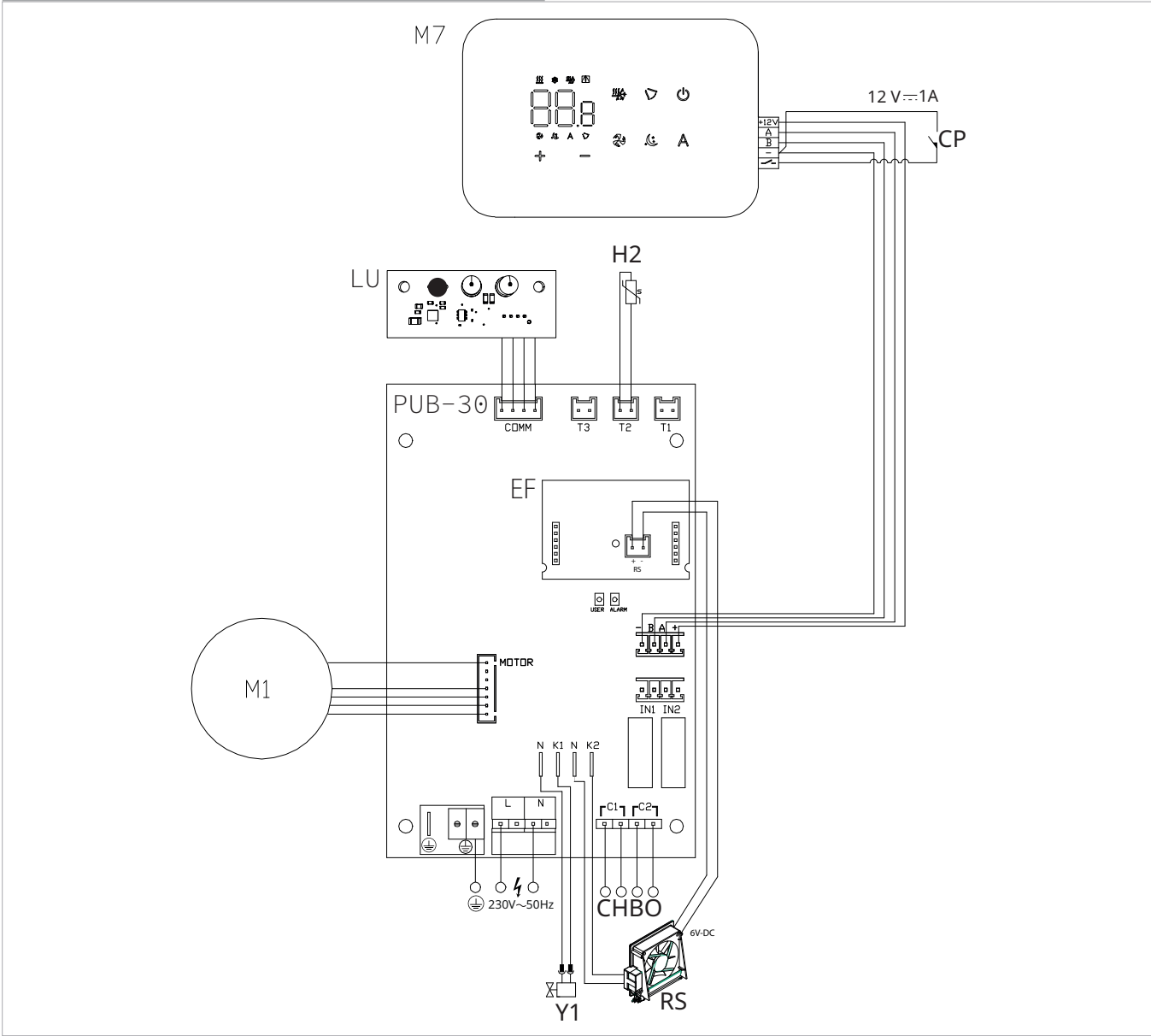
► fix the control base to the electrical box 503 with screws

► connect the electrical wiring

- ⚠ Before making the connections, please verify that the control terminal block is on the right-hand side.

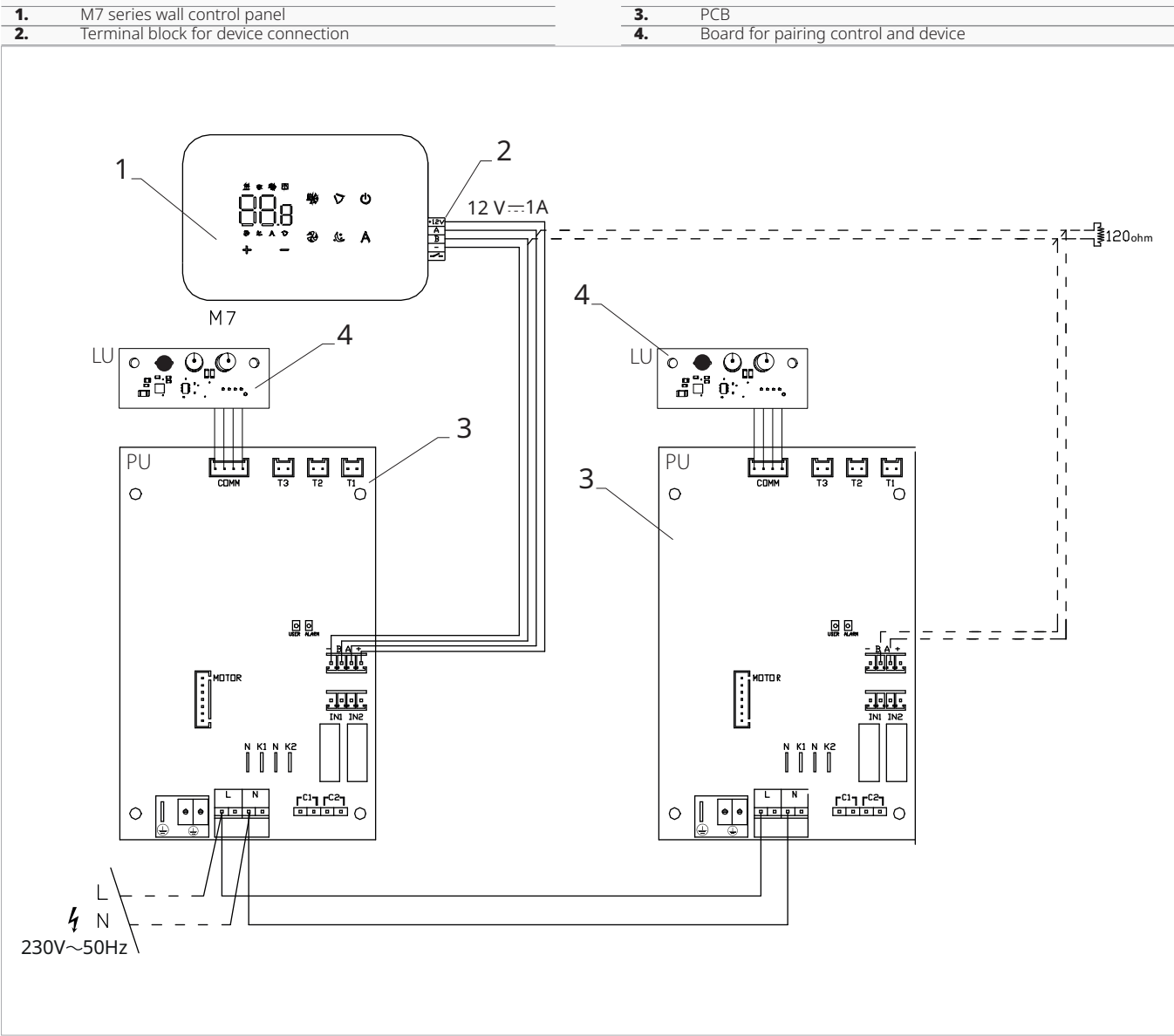
8.3 Single connection diagram

M1	DC fan motor	CP	Presence contact (normally open)
	Ground connection	+BA-	Serial connection for wall-mounted remote control (respect AB polarization)
230~50	Power supply connection 230 V / 50 Hz / 1 A	IN1	Potential-free input 1(not active)
Y1	Water solenoid valve (230 V / 50 Hz / 1 A power output)	H2/T2	2-pipe water temperature probe
CH/C1	Cooling request contact (for example chiller or reversible heat pump). Activated in parallel with the solenoid valve output (Y1) with 1 minute delay when the fancoil is in cooling mode and is on call (potential-free contact max. 1 A).	RS	RS version wiring
BO/C2	Heating request contact (for example boiler or heat pump). Activated in parallel with the output of the solenoid valve (Y1) with 1 minute delay when the fancoil is in heating mode and is on call (potential-free contact max. 1 A).	EF	RS version expansion electronic board
		LU	Electronic board for pairing control and device
		PUB-30	Electronic board on the unit
		M7	M7 series wall control command



- ⚠ For models with hydraulic connections on the right hand side, please refer to "Models with right-hand hydraulic connections" [p. 29](#) to make the connections.
- ⚠ For radiant panel (RS) versions, please refer to the "Version configurations" section to make the connections.
- ⚠ The app "Innova" is available to control the following command.

8.4 Multiple connection diagram



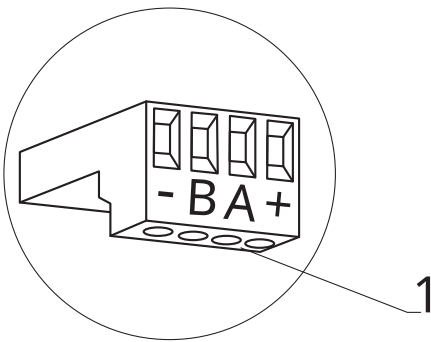
With multiple command linkage, it is mandatory to perform command-to-device matching. See section "Pairing of control and unit" *p. 48*.

8.5 Connections

8.5.1 Preliminary warnings

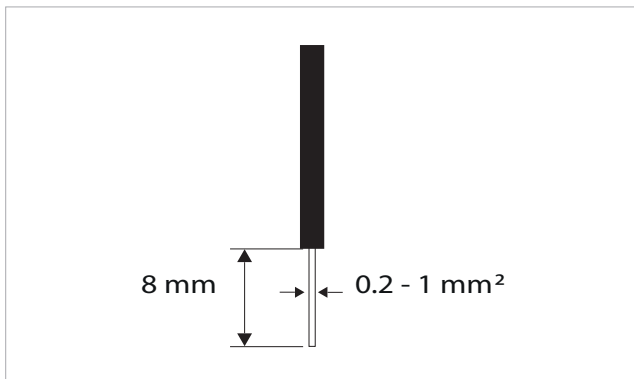
⚠ The terminals for connecting the control panel and the presence contact CP are placed in a plastic bag and positioned inside the cover of the electrical box.

1. Terminal blocks



The terminals accept:

- rigid or flexible wires with a 0.2 to 1 mm² cross-section
- rigid or flexible wires with 0,5 mm² cross-section if two wires are connected to the same terminal block
- rigid or flexible wires with 0,75 mm² cross-section If the wires have wire end ferrules with a plastic collar



To connect the cables:

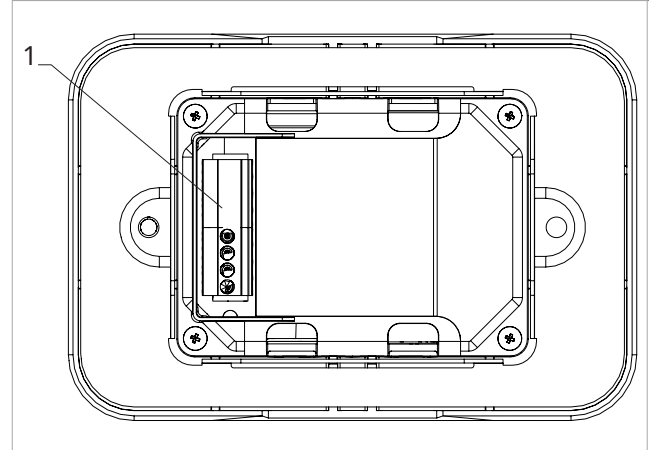
- ▶ strip 8 mm of the wire
- ▶ if the wire is rigid, you can insert it easily whereas
- ▶ if it is flexible, use appropriate crimp terminals
- ▶ push the wire in completely
- ▶ check the right fixing by pulling it gently

8.5.2 Control Panel

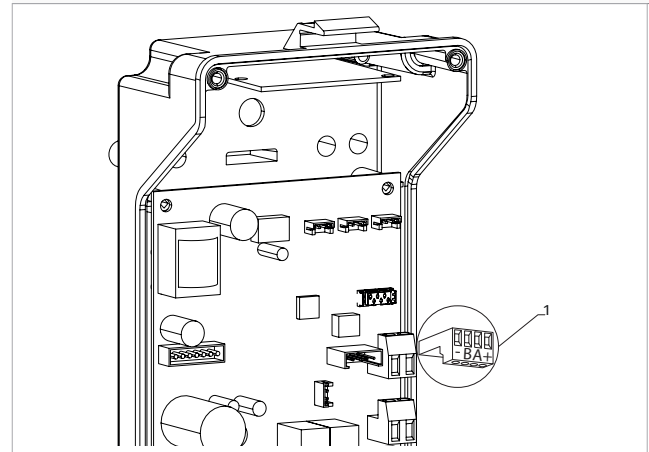
⚠ The control panel for wall control must be ordered separately.

Terminal block position:

1. Terminal block (Back view panel)



1. Terminal blocks



To connect the wall control panel to the board:

- ▶ connect the power supply cables to the + - terminals
- ▶ connect the ModBus serial connection cables to terminals A and B

8.5.3 Presence contact CP

Through this device it is possible to connect an external control signal that inhibits the operation of the control signal, for example:

- opening window contact
- remote on/off
- infrared presence sensor
- activation badge
- remote change of season

Function

The contact is normally open (NO).

- ▶ when closing the CP contact, connected to a potential-free contact, the device switches to stand-by mode
CP appears on the display.
- ▶ At the touch of a button on the display the symbol ⚠ flashes.

⚡ It is forbidden to connect the CP input to that of another unit electronic board. Use separate contacts.

The CP presence contact can be configured for heating and cooling operation via the "To select digital input" *p. 48* settings menu item (digital input).

8.5.4 RS485 Serial Connection

The wall-mounted remote control can be connected through an RS485 serial line to one or more devices, up to a maximum of 16.

The devices must be equipped with an electronic board suitable for remote control.

For the connection:

- ▶ follow the indication on the connection diagram
- ▶ connect respecting the polarity indication A and B

⚠ Use a two core cable shielded cable suitable for the RS485 serial connection with a minimum section of 0,35 mm².

⚠ Keep the two core cable separate from power supply cable by a minimum of 50 mm.

⚠ Create a wire path in order to minimize the length of the lead wire.

⚠ Complete the line with the 120 Ω resistor.

⊖ It is forbidden make star connections.

⚠ In the case of a connection between several devices, it is mandatory to carry out the matching between control and device. See section "Pairing of control and unit" *p. 48*.

8.6 Functions

8.6.1 Basic menu

To access the basic menu

- ▶ with the display off, hold down  for 10 seconds

The device turns on and  appears

- ▶ keep pressed until the indication  appears
- ▶ release 

The symbol  appears

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press the icon 
Confirming the change takes you to the next item.

To exit the menu

- ▶ press the icon  for 10 seconds
- ▶ or wait 30 seconds the automatic shutdown

⚠ After 30 seconds from the last action the control returns to the start screen and the last chosen values are memorised.

Menu items

ot: AIR probe offset (air probe setting)

ur: Value read by the R.H. sensor

ut: Probe Offset PT4

uS: Humidity setpoint

ui: Humidity hysteresis

CF: Scale

ub: Buzzer volume

uu: Wi-Fi reset

uP: Wi-Fi pairing

ho: Hotel Mode

ho: Hotel Mode

Set AIR probe offset

To set the air probe offset

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
*By default it is set to 0.
The setting range is from a minimum of -12.0 °C to a maximum of 12.0 °C.*

Set probe offset RH

⚠ Modify only after real deviations from an actual measurement has been established with professional equipment.

To set the RH probe offset

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm

Set the humidity setpoint

To set the humidity setpoint

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
The setting range is from 20.0% to 90.0%.

Setting the humidity hysteresis

To set the humidity hysteresis

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
The setting range is from 1 (min) to 30 (max).

Scale

To change the temperature unit of measure

- ▶ select 
- ▶ press  to change settings
- ▶ select °C or °F
- ▶ press  to confirm
By default the temperature unit of measure is °C.

Adjusting the volume

To change the volume

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
The volume setting range is from 00 (min) to 03 (max).

⚠ The volume changes after confirming the modification.

Wi-Fi reset

To reset the Wi-Fi credentials and return the device to its original configuration

- ▶ select 
- ▶ press  to change settings
- ▶ use the   icons in sequence
Appears .
- ▶ press 
- ▶  appears to reset Wi-Fi credentials.
- ▶ press  to confirm
Credentials have been reset.

Activate Wi-Fi

To activate Wi-Fi

- ▶ select 
- ▶ press  to change settings
- ▶ use the   icons in sequence
Appears .
- ▶ press 
- ▶  appears to enable Wi-Fi pairing.
- ▶ press  to confirm

⚠ The device remains visible on the App for the first 15 minutes after the device is switched on.

Setting the Hotel Mode

To set the Hotel mode

- ▶ select 
- ▶ select YS to turn on Hotel mode
- ▶ select NO to turn off the Hotel mode
By default the device is set to NO.

Activating the Hotel mode:

- the Autochangeover function is deactivated
- the temperature setting range is reduced, in Cooling you can set from 22 °C to 28 °C, in Heating you can set from 16 °C to 24 °C

8.6.2 Advanced Menu

⚠ To access the setup menu, it is necessary to access the Basic menu. See section "Basic menu" p. 46.

The special functions menu can be accessed via the control panel.

To access the advanced menu

- ▶ from the basic menu press 
- Appears .*
- ▶ press once 
- Appears .*
- ▶ press  to confirm and log in
The advanced menu is accessed.

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press  for 2 seconds
Confirming the change takes you to the next item.

To exit the menu

- ▶ press  for about 10 seconds
Appears .
- ▶ press  for about 10 seconds
The display turns off.
- ▶ or wait 30 seconds after the last action
The display is switched off automatically.

⚠ After 30 seconds from the last action the control returns to the start screen and the last chosen values are memorised.

Menu items

Ad: Not used

of: Options for digital input

rH: Radiant heating options with R20

rC: Radiant cooling options with R20

UC: Not used

Ac: Anti-stratification in cooling

Ah: Anti-stratification in heating

Ed: Not used

Ab: Enabling brightness sensor

Fr: Not used

To select digital input

To change the digital input

- ▶ select 
 - ▶ press  to change settings
 - ▶ select CP for presence contact (default)
 - ▶ select CO to cooling open
 - ▶ select CC to cooling close
 - ▶ press  to confirm
- By default digital input is set to CP.*

⚠ For return to the default settings, set the digital input to "CP".

⚠ By selecting one of the other inputs (CO,CC) the seasonality is locked. It is not possible to modify it through the key  of the control.

Set radiant options in heating with R20

⚠ To change the rH function, it is necessary to have the accessory MZS - Single zone module for radiant system, code. EG1028.

⚠ To change the settings, please refer to the Instruction Sheet of the accessory MZS - Single zone module for radiant system, code. EG1028.

Set radiant options to cooling with R20

⚠ To change the rC function, it is necessary to have the accessory MZS - Single zone module for radiant system, code. EG1028.

⚠ To change the settings, please refer to the Instruction Sheet of the accessory MZS - Single zone module for radiant system, code. EG1028.

8.6.3 Pairing of control and unit

⚠ The matching procedure between control and luminaire is mandatory and allows the reception of any alarms.

⚠ In the case of a failed pairing between control and device, and the related appearance of error E8, after 10 minutes, the control enables broadcast communication. The E8 error is then eliminated and the control sends signals to all devices without receiving any feedback.

Set the anti-stratification function to cooling

To set the anti-stratification function in cooling mode

- ▶ select 
- ▶ press  to change settings
Appears .
- ▶ press  to move within the menu
- ▶ select  to enable the function
- ▶ press  to confirm changes
By default, the anti-stratification function in cooling is set to .

⚠ The anti-stratification function in cooling is to be set for appliances installed at low floor level equipped with an active air probe.

Optical sensor

⚠ By default, the brightness sensor is set.

To disable the brightness sensor:

- ▶ select 
- ▶ press 
Appear Ys.
- ▶ press 
- ▶ select no
- ▶ press  to confirm
The brightness sensor is disabled.

⚠ The brightness sensor adapts to room lighting.

Set the anti-stratification function in heating mode

To set the anti-stratification function in heating mode

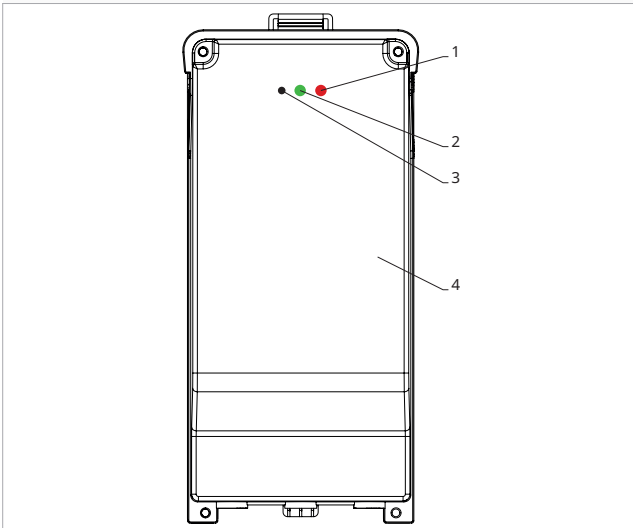
- ▶ select 
- ▶ press  to change settings
Appears .
- ▶ press  to move within the menu
- ▶ select  to enable the function
- ▶ press  to confirm changes
By default, the anti-stratification function in cooling is set to .

⚠ The anti-stratification function in heating is to be set for appliances installed high up on the wall or ceiling equipped with an active air sensor.

To pair the control with the unit

- ▶ with control switched on, at the same time press  and  for about 10 seconds
*In the display area, where the setpoint is indicated, appears the number of connected devices.
The displayed value flashes.*

1. Red LED
2. Green LED
3. Black button
4. Electrical back box



On the electrical box on the unit

- ▶ press the black button for 3 seconds
The green LED flashes.
The red LED is on.
- ▶ wait for the procedure to complete
The green LED stops flashing.

On the wall mounted control panel

Appear the number assigned to the fancoil.
Then appears the number of connected devices.

- ▶ press to exit the menu

⚠ To reset the pairing settings, it is first necessary to access the basic menu. See section "Basic menu" p. 46.

To reset pairing settings

- ▶ access the basic menu
- ▶ press
- ▶ press
- All the way to the menu.*
- ▶ press

To reset a single fancoil

Appears .

- ▶ press
- Appears .*
- ▶ press to log in
- ▶ use the icons to move inside the menu
The assignment numbers assigned to the fancoils appears.
- ▶ select the fancoil to be reset
- ▶ press to confirm
-- appears, with an acoustic signal.
The device is removed.

To exit the setting

- ▶ press for 5 seconds
Exit the setting.
Back to menu 02.

To reset all fancoils

Appears .

- ▶ press until appears
Appears .
- ▶ press to confirm
- ▶ use the icons to move inside the menu
- ▶ select No to maintain all fancoils
- ▶ select Yes to reset the fancoils
- ▶ press to confirm

LED interface operation on the electrical box

If the device is being paired

The green LED flashes.

If the device is paired and functioning

The green LED is on.

If the device has not been paired and is not functional

The green LED is off.
The red LED is on.

If the device is in alarm status

The red LED flashes.

⚠ The red LED flashes according to the type of alarm. To check the alarm type, please refer to the following "Error signals" p. 49 section.

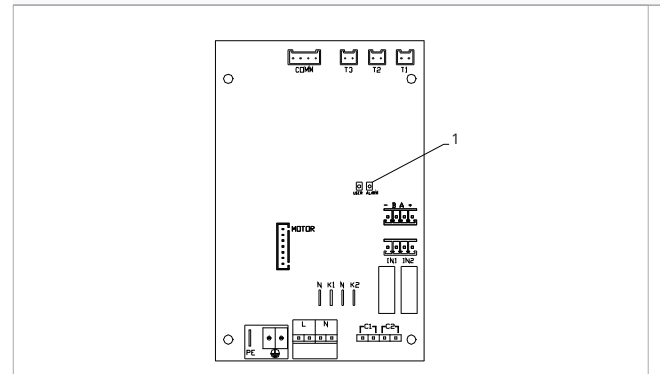
If communication with the board is missing

The green and red LEDs will flash once every second.

8.6.4 Error signals

The PCB has a status LED.

1. LED



⚠ The LED on the cover of the electrical box performs the same functions as the LED on the machine board.

⚠ The flashing LED indicates errors.

⚠ With the LED on and no indication on the display, it is indicated that there are no errors.

LED signals

- ▶ Led flashing
Errors to be shown on the display.
- ▶ LED off
Remote control switched off.
- ▶ LED continuous flashing with pause between flashes
Unsuitable water temperature alarm.

- ▶ LED on
Wall control on and no alarm present.
- ▶ LED 2 flashes / pause
Alarms when the internal fan motor is faulty or disconnected.
- ▶ LED 3 flashes / pause
Alarm for water temperature probe H2/T2 disconnected or faulty.
- ▶ LED 6 flashes / pause
Communication error alarm with wall control panel.

8.6.5 Alarm display on wall control panel

⚠ In the event of an alarm, the device still maintains active functions.

⚠ The symbol  is displayed on the wall control panel to indicate alarms.

⚠ **To access the setup menu, it is necessary to access the Basic menu. See section "Basic menu" p. 46.**

To visualise errors on the wall control panel

- ▶ press 
Appears .
- ▶ press 
Then the number assigned to the fancoil appears and then the error is displayed.

Displayed alarms

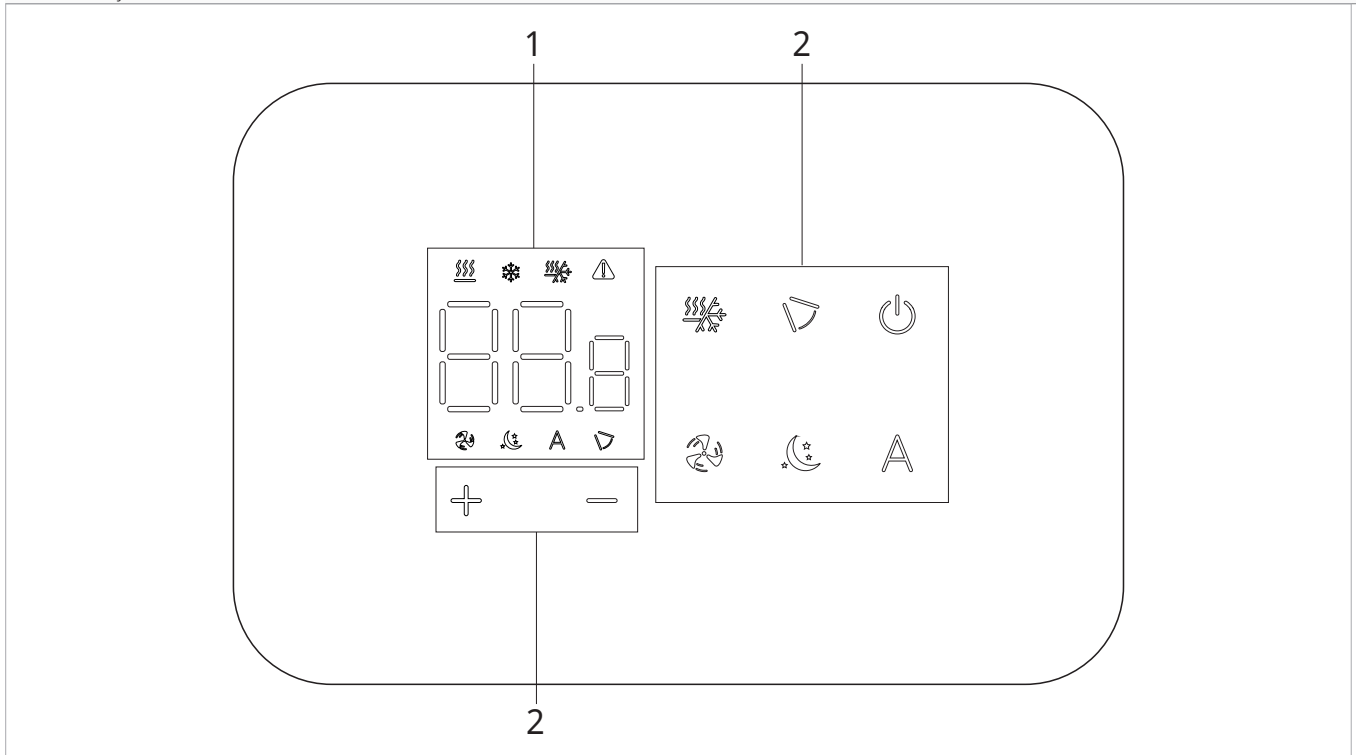
- ▶ E1 Air temperature probe alarm T1 on PUB-30 board disconnected or with incorrect values (-10÷40)
The device is operating and the M7 control uses its own air probe.
- ▶ E2 Internal fan motor faulty or disconnected
None of the modes can be activated.
- ▶ E3 Water temperature sensor H2/T2 disconnected or faulty
None of the modes can be activated.
- ▶ E5 H4/T3 heating water probe disconnected or faulty
None of the modes can be activated.
- ▶ E6 Invalid water temperature detected when remote season change function is active
The fancoil is performing heating and cooling functions incorrectly. None of the unit's functions can be activated.
- ▶ E8 Communication error
Communication error between the wall control panel and the fancoil.
- ▶ bL Key lock
To unlock the display, press   simultaneously for about 3 seconds.
- ▶ h2o Incorrect water temperature
*In heating mode, the water temperature is below 30 °C
In cooling mode, the water temperature is above 20 °C.*

⚠ Error E8 is displayed without the error display procedure on the wall control panel.

9. M7 SERIES CONTROL CODE EGB749 + ESE846 BOARD

9.1 Interface

1. Display area
2. Keys area



9.2 Installation

9.2.1 Description

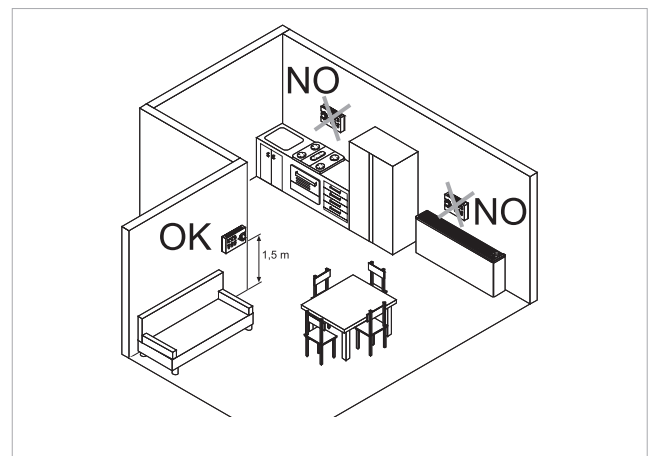
The wall-mounted remote control is an electronic LED thermostat with a touch interface, with the possibility of controlling multiple appliances equipped with the same electronic board. It is equipped with a temperature and humidity probe.

- ⚠ The maximum distance between the control and the device is 10 m.
- ⚠ The control can manage a maximum of 16 units.

9.2.2 Mounting

- ⚠ The control panel for wall control is to be installed inside a 503 electrical box.
- ⚠ A wall must be prepared to accommodate the 503 electrical box before installing the wall control.
- ⚠ Ensure that:
 - the wall supports the weight of the appliance

- the section of the wall does not contain piping or electrical lines
- the functionality of load-bearing elements is not compromised



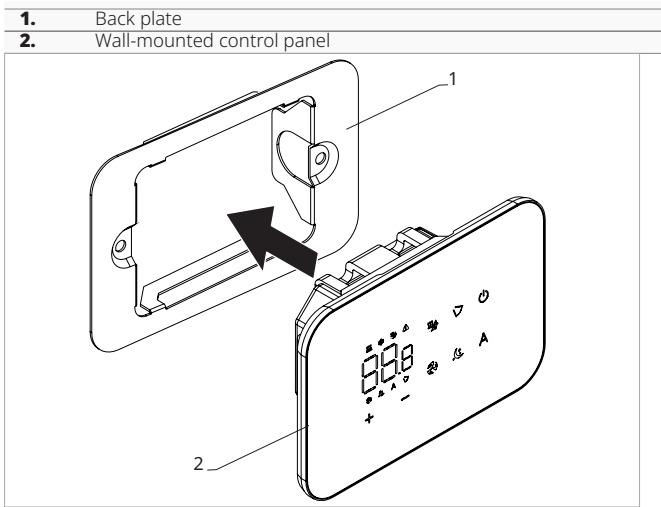
The wall-mounted remote control must be installed:

- on internal walls
- at a height of about 1,5 m from the floor

⚠ Should the control be located in an area utilised by persons with reduced physical capabilities, please refer to local regulations.

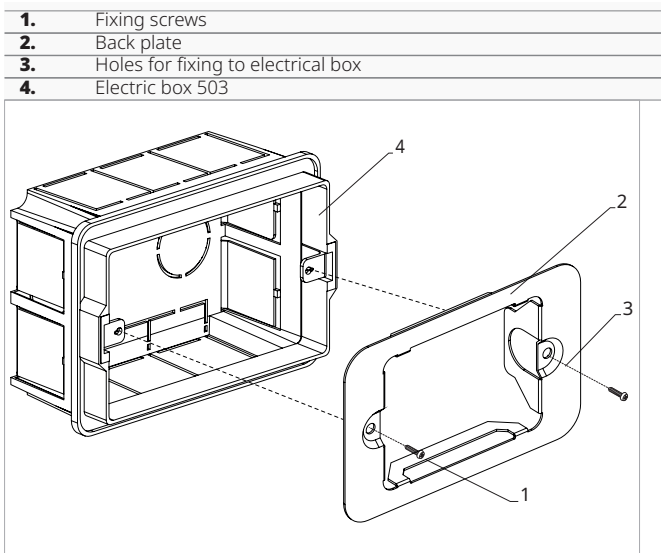
- away from doors or windows
- away from heat sources (heaters, convectors, stoves, direct sunlight)

⚠ The wall control is provided inside the package already assembled.



Before wall installation:

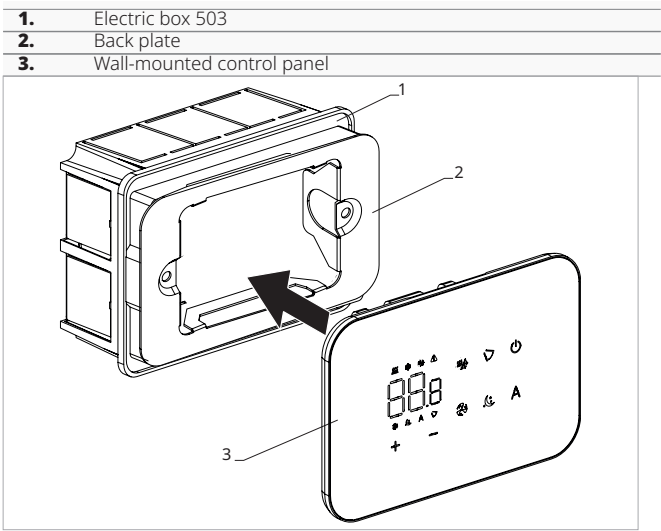
- separate the base of the control consisting of a plate from the control panel



For wall mounting of the control panel:

- fix the control base to the electrical box 503 with screws
- connect the electrical wiring

⚠ Before making the connections, please verify that the control terminal block is on the right-hand side.



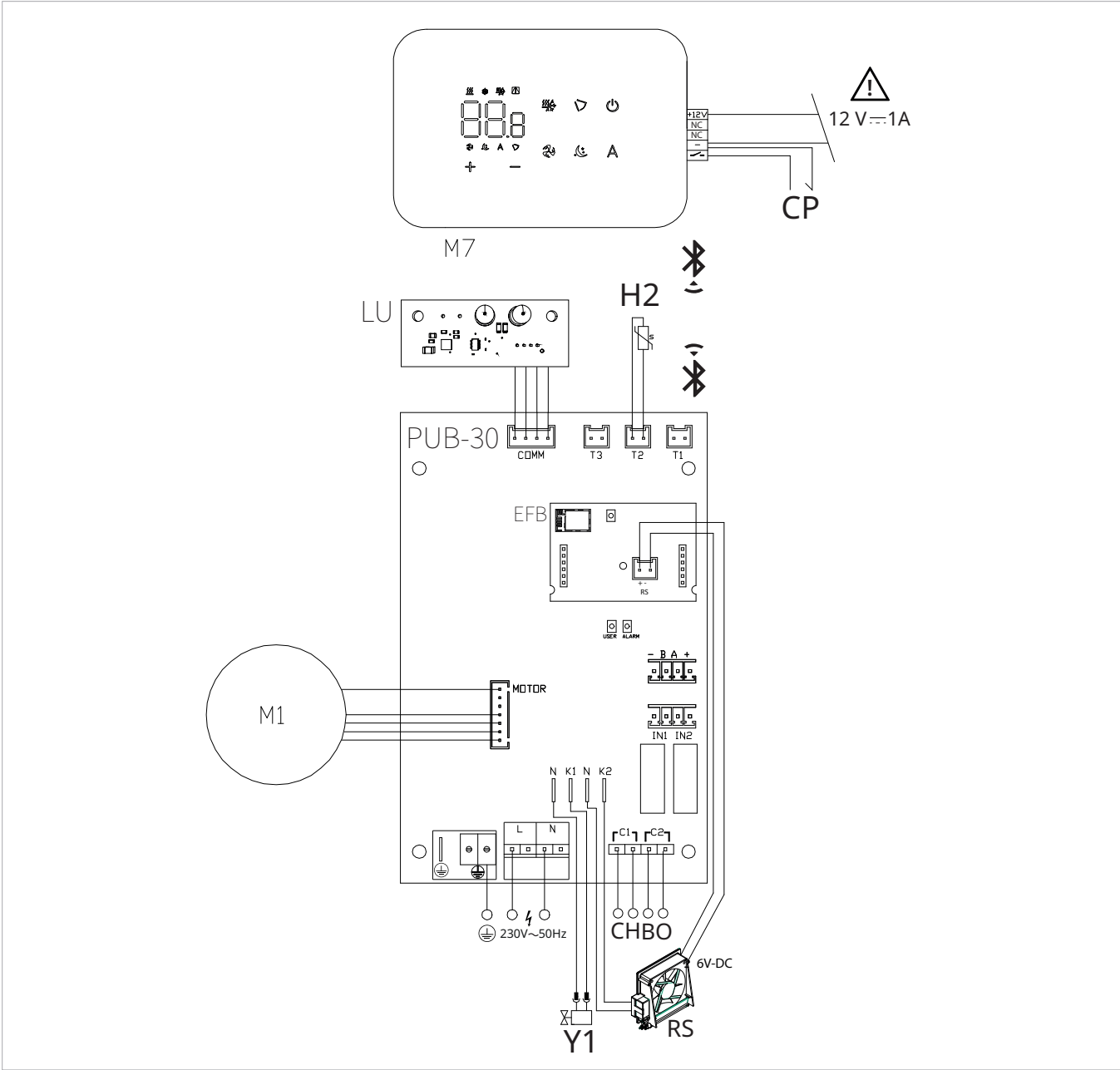
- Close the control panel

⚠ Pay attention not to crush the conductors when you close the control.

9.3 Single connection diagram

M1	DC fan motor
	Ground connection
230~50	Power supply connection 230 V / 50 Hz / 1 A
Y1	Water solenoid valve (230 V / 50 Hz / 1 A power output)
CH/C1	Cooling request contact (for example chiller or reversible heat pump). Activated in parallel with the solenoid valve output (Y1) with 1 minute delay when the fancoil is in cooling mode and is on call (potential-free contact max. 1 A).
BO/C2	Heating request contact (for example boiler or heat pump). Activated in parallel with the output of the solenoid valve (Y1)

	with 1 minute delay when the fancoil is in heating mode and is on call (potential-free contact max. 1 A).
CP	Presence contact (normally open)
IN1	Potential-free input 1(not active)
H2/T2	2-pipe water temperature probe
RS	RS version wiring
EFB	RS version expansion electronic board
PUB-30	Electronic board on the unit
LU	Electronic board for pairing control and device



⚠ It is possible to power the control unit either via a separate 12 V-DC power supply (not supplied) or by connection to the - + contacts on the PU board.

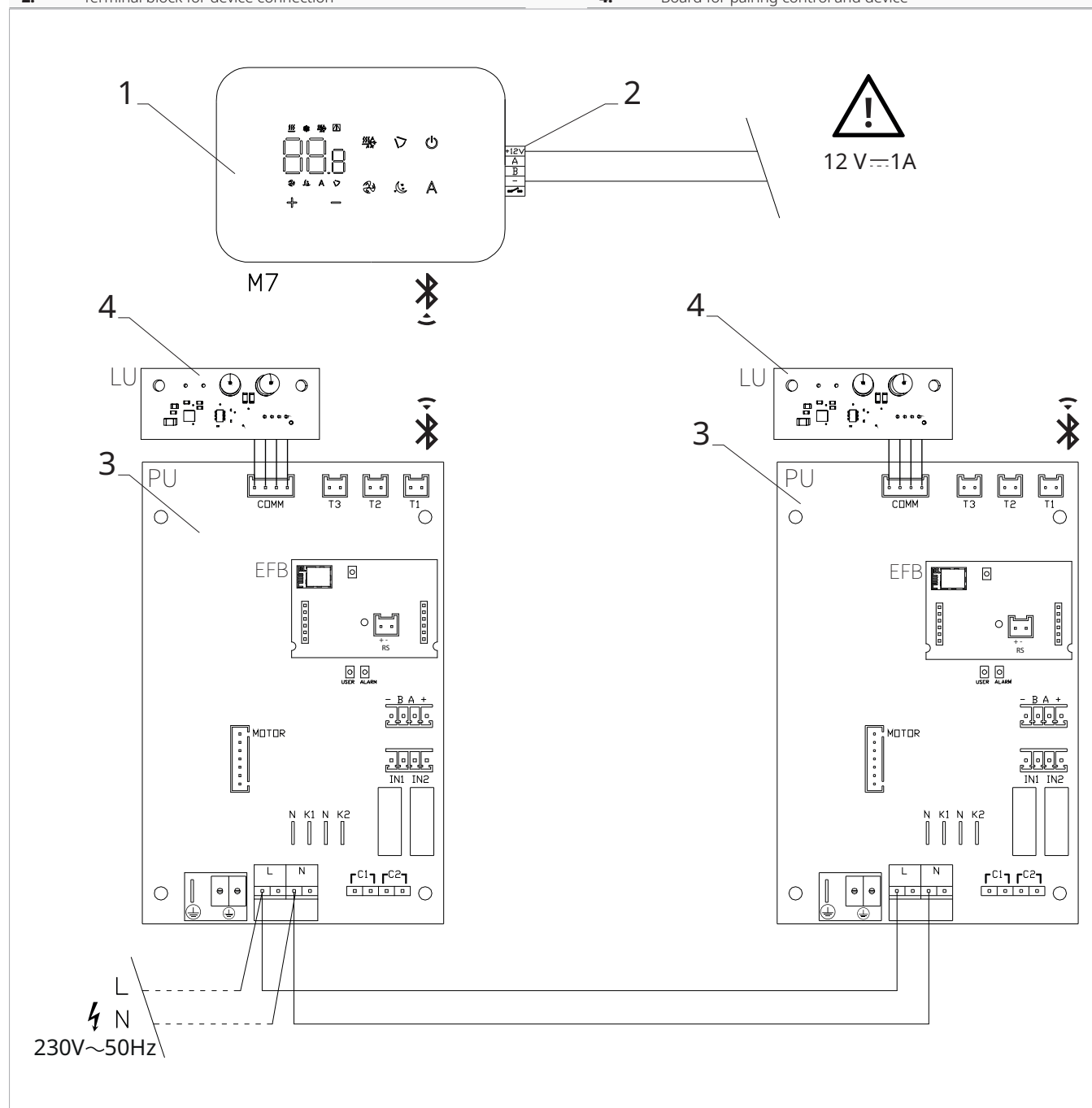
⚠ For models with hydraulic connections on the right hand side, please refer to "Models with right-hand hydraulic connections" to make the connections.

⚠ For radiant panel (RS) versions, please refer to the "Version configurations" section to make the connections.

⚠ The matching procedure between command and device is mandatory. See section "Pairing of control and unit" p. 58.

9.4 Multiple connection diagram

1.	M7 series wall control panel	3.	PCB
2.	Terminal block for device connection	4.	Board for pairing control and device



⚠ It is possible to power the control unit either via a separate 12 V-DC power supply (not supplied) or by connection to the - + contacts on the PU board.

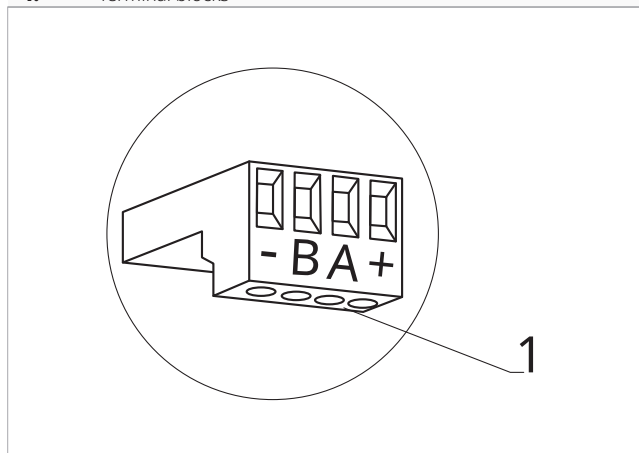
! The matching procedure between command and device is mandatory. See section "Pairing of control and unit" *p. 58*.

9.5 Connections

9.5.1 Preliminary warnings

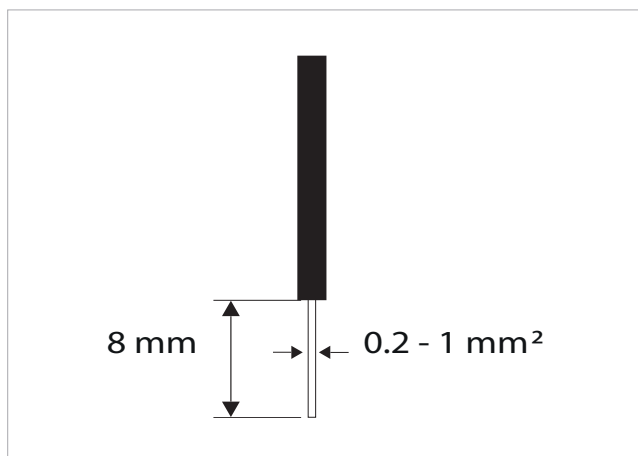
⚠ The terminals for connecting the control panel and the presence contact CP are placed in a plastic bag and positioned inside the cover of the electrical box.

1. Terminal blocks



The terminals accept:

- rigid or flexible wires with a 0.2 to 1 mm² cross-section
- rigid or flexible wires with 0,5 mm² cross-section if two wires are connected to the same terminal block
- rigid or flexible wires with 0,75 mm² cross-section If the wires have wire end ferrules with a plastic collar



To connect the cables:

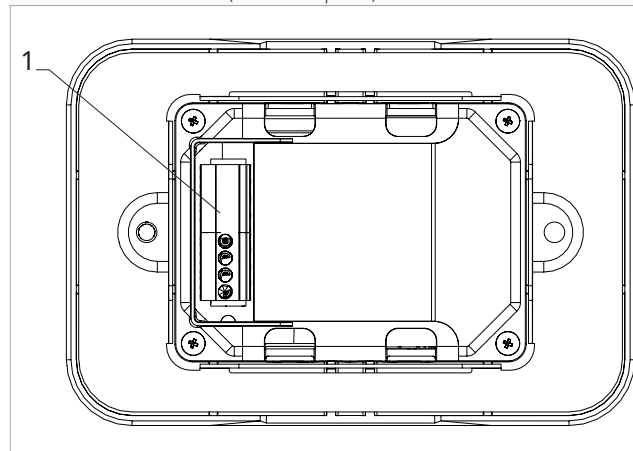
- ▶ strip the wire
- ▶ if the wire is rigid, you can insert it easily whereas
- ▶ if it is flexible, use appropriate crimp terminals
- ▶ push the wire in completely
- ▶ check the right fixing by pulling it gently

9.5.2 Control Panel

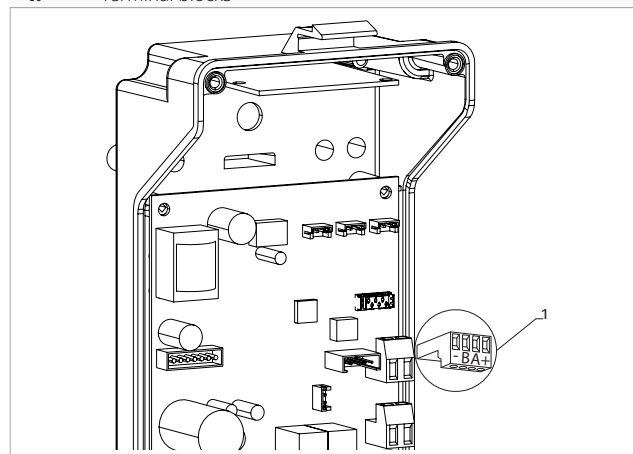
⚠ The control panel for wall control must be ordered separately.

Terminal block position:

1. Terminal block (Back view panel)



1. Terminal blocks



To connect the wall control panel to the board:

- ▶ connect the power supply cables to a 12 V-dc power supply

9.5.3 Presence contact CP

Through this device it is possible to connect an external control signal that inhibits the operation of the control signal, for example:

- opening window contact
- remote on/off
- infrared presence sensor
- activation badge
- remote change of season

Function

The contact is normally open (NO).

- ▶ when closing the CP contact, connected to a potential-free contact, the device switches to stand-by mode

CP appears on the display.

- ▶ At the touch of a button on the display the symbol ⚠ flashes.

⚡ It is forbidden to connect the CP input to that of another unit electronic board. Use separate contacts.

The CP presence contact can be configured for heating and cooling operation via the "To select digital input" *p. 57* settings menu item (digital input).

9.5.4 Bluetooth connection

The wall-mounted remote control can be connected via Bluetooth to one or more devices, for a maximum of 16. The devices must be equipped with an electronic board suitable for remote control.

9.6 Functions

9.6.1 Basic menu

To access the basic menu

- ▶ with the display off, hold down  for 10 seconds
The device turns on and  appears
- ▶ keep pressed until the indication  appears
- ▶ release 
The symbol  appears

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press the icon 
Confirming the change takes you to the next item.

To exit the menu

- ▶ press the icon  for 10 seconds
- ▶ or wait 30 seconds the automatic shutdown

 After 30 seconds from the last action the control returns to the start screen and the last chosen values are memorised.

Menu items

ot: AIR probe offset (air probe setting)

ur: Value read by the R.H. sensor

ut: Probe Offset PT4

uS: Humidity setpoint

ui: Humidity hysteresis

CF: Scale

ub: Buzzer volume

uu: Not used

uP: Not used

ho: Hotel Mode

Set AIR probe offset

To set the air probe offset

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
*By default it is set to 0.
The setting range is from a minimum of -12.0 °C to a maximum of 12.0 °C.*

Set probe offset RH

 Modify only after real deviations from an actual measurement has been established with professional equipment.

To set the RH probe offset

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm

Set the humidity setpoint

To set the humidity setpoint

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
The setting range is from 20.0% to 90.0%.

Setting the humidity hysteresis

To set the humidity hysteresis

- ▶ select 
- ▶ press  to change settings
- ▶ increase or decrease the value with the icons  
- ▶ press  to confirm
The setting range is from 1 (min) to 30 (max).

Scale

To change the temperature unit of measure

- ▶ select 
 - ▶ press  to change settings
 - ▶ select °C or °F
 - ▶ press  to confirm
- By default the temperature unit of measure is ° C.*

Adjusting buzzer volume

To change the volume

- ▶ select 
 - ▶ press  to change settings
 - ▶ increase or decrease the value with the icons  
 - ▶ press  to confirm
- The volume setting range is from 00 (min) to 03 (max).*

 The volume changes after confirming the modification.

Setting the Hotel Mode

To set the Hotel mode

- ▶ select 
 - ▶ select YS to turn on Hotel mode
 - ▶ select NO to turn off the Hotel mode
- By default the device is set to NO.*

Activating the Hotel mode:

- the Autochangeover function is deactivated
- the temperature setting range is reduced, in Cooling you can set from 22 °C to 28 °C, in Heating you can set from 16 °C to 24 °C

9.6.2 Advanced Menu

 **To access the setup menu, it is necessary to access the Basic menu. See section "Basic menu" p. 56.**

The special functions menu can be accessed via the control panel.

To access the advanced menu

- ▶ from the basic menu press 
 - Appears 
 - ▶ press once 
 - Appears 
 - ▶ press  to confirm and log in
- The advanced menu is accessed.*

To navigate in the menu

- ▶ use the icons  

To select a menu item and to confirm the changes made

- ▶ press  for 2 seconds
- Confirming the change takes you to the next item.*

To exit the menu

- ▶ press  for about 10 seconds
- Appears 
- ▶ press  for about 10 seconds
- The display turns off.*
- ▶ or wait 30 seconds after the last action
- The display is switched off automatically.*

 After a period of 30 seconds from the last action, the display turns off.

Menu items

Ad: Not used

of: Options for digital input

rH: Radiant heating options with R20

rC: Radiant cooling options with R20

UC: Not used

Ac: Anti-stratification in cooling

Ah: Anti-stratification in heating

Ed: Not used

Ab: Enabling brightness sensor

Fr: Not used

To select digital input

To change the digital input

- ▶ select 
 - ▶ press  to change settings
 - ▶ select CP for presence contact (default)
 - ▶ select CO to cooling open
 - ▶ select CC to cooling close
 - ▶ press  to confirm
- By default digital input is set to CP.*

 For return to the default settings, set the digital input to "CP".

 By selecting one of the other inputs (CO,CC) the seasonality is locked. It is not possible to modify it through the key  of the control.

Set radiant options in heating with R20

 To change the rH function, it is necessary to have the accessory MZS - Single zone module for radiant system, code. EG1028.

 To change the settings, please refer to the Instruction Sheet of the accessory MZS - Single zone module for radiant system, code. EG1028.

Set radiant options to cooling with R20

- ⚠ To change the rC function, it is necessary to have the accessory MZS - Single zone module for radiant system, code. EG1028.
- ⚠ To change the settings, please refer to the Instruction Sheet of the accessory MZS - Single zone module for radiant system, code. EG1028.

Set the anti-stratification function to cooling

To set the anti-stratification function in cooling mode

- ▶ select 
- ▶ press  to change settings
Appears 
- ▶ press  to move within the menu
- ▶ select  to enable the function
- ▶ press  to confirm changes
By default, the anti-stratification function in cooling is set to 

- ⚠ The anti-stratification function in cooling is to be set for appliances installed at low floor level equipped with an active air probe.

Optical sensor

- ⚠ By default, the brightness sensor is set.

To disable the brightness sensor:

- ▶ select 
- ▶ press  *Appear Ys.*
- ▶ press 
- ▶ select no
- ▶ press  to confirm
The brightness sensor is disabled.

- ⚠ The brightness sensor adapts to room lighting.

Set the anti-stratification function in heating mode

To set the anti-stratification function in heating mode

- ▶ select 
- ▶ press  to change settings
Appears 
- ▶ press  to move within the menu
- ▶ select  to enable the function
- ▶ press  to confirm changes
By default, the anti-stratification function in heating is set to 

- ⚠ The anti-stratification function in heating is to be set for appliances installed high up on the wall or ceiling equipped with an active air sensor.

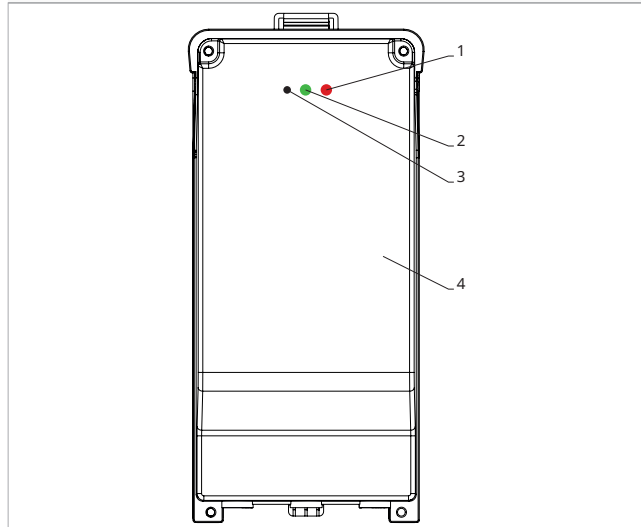
9.6.3 Pairing of control and unit

- ⚠ The pairing procedure between control and device is compulsory and enables the reception of any alarms.
- ⚠ In the case of a failed pairing between control and device, and the related appearance of error E8, after 10 minutes, the control enables broadcast communication. The E8 error is then eliminated and the control sends signals to all devices without receiving any feedback.

To pair the control with the unit

- ▶ with control switched on, at the same time press  and  for about 10 seconds
*In the display area, where the setpoint is indicated, appears the number of connected devices.
The displayed value flashes.*

- | | |
|----|---------------------|
| 1. | Red LED |
| 2. | Green LED |
| 3. | Black button |
| 4. | Electrical back box |



On the electrical box on the unit

- ▶ press the black button for 3 seconds
*The green LED flashes.
The red LED is on.*
- ▶ wait for the procedure to complete
The green LED stops flashing.

On the wall mounted control panel

Appear the number assigned to the fancoil.

Then appears the number of connected devices.

- ▶ press  to exit the menu

⚠ To reset the pairing settings, it is first necessary to access the basic menu. See section "Basic menu" p. 56.

To reset pairing settings

- ▶ access the basic menu
- ▶ press 
- ▶ press 
- ▶ All the way to the  menu.
- ▶ press 

To reset a single fancoil

Appears .

- ▶ press 
- ▶ Appears .
- ▶ press  to log in
- ▶ use the  icons to move inside the menu
The assignment numbers assigned to the fancoils appears.
- ▶ select the fancoil to be reset
- ▶ press  to confirm
 appears, with an acoustic signal.
The device is removed.

To exit the setting

- ▶ press  for 5 seconds
Exit the  setting.
Back to menu 02.

To reset all fancoils

Appears .

- ▶ press  until  appears
Appears .
- ▶ press  to confirm
- ▶ use the  icons to move inside the menu
- ▶ select No to maintain all fancoils
- ▶ select Yes to reset the fancoils
- ▶ press  to confirm

LED interface operation on the electrical box

If the device is being paired

The green LED flashes.

If the device is paired and functioning

The green LED is on.

If the device has not been paired and is not functional

The green LED is off.
The red LED is on.

If the device is in alarm status

The red LED flashes.

⚠ The red LED flashes according to the type of alarm. To check the alarm type, please refer to the following "Error signals" p. 59 section.

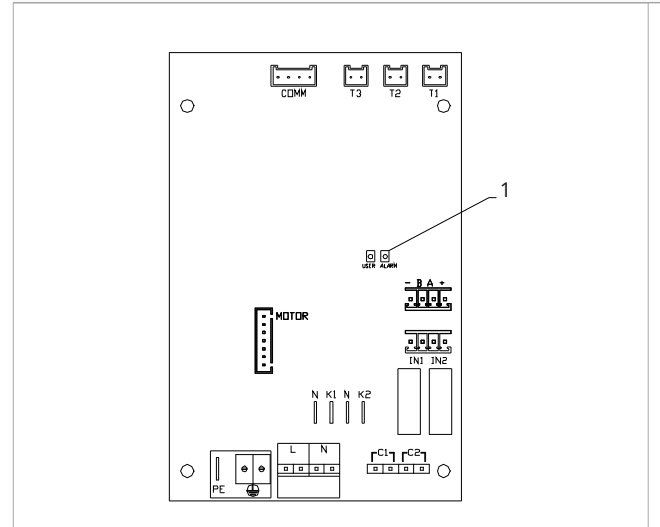
If communication with the board is missing

The green and red LEDs will flash once every second.

9.6.4 Error signals

The PCB has a status LED.

1. LED



⚠ Once the pairing has been completed, the red LED on the cover of the electrical box performs the same functions as the LED on the board on the unit.

⚠ The flashing LED indicates errors.

⚠ With the LED on, it is indicated that there aren't errors.

LED signals

- ▶ Led flashing
Errors to be shown on the display.
- ▶ LED off
Remote control switched off.
- ▶ LED continuous flashing with pause between flashes
Unsuitable water temperature alarm.
- ▶ LED on
Wall control panel on and no alarm.
- ▶ LED 2 flashes / pause
Alarms when the internal fan motor is faulty or disconnected.
- ▶ LED 3 flashes / pause
Alarm for water temperature probe H2/T2 disconnected or faulty.
- ▶ LED 6 flashes / pause
Communication error alarm with wall control panel.

9.6.5 Visualisation of alarms on display

⚠ In the event of an alarm, the device still maintains active functions.

⚠ The symbol  is displayed to indicate alarms on the wall control panel.

⚠ To access the setup menu, it is necessary to access the Basic menu. See section "Basic menu" p. 56.

To visualise errors on the wall control panel

- ▶ press 
- ▶ Appears .
- ▶ press 
- ▶ Then the number assigned to the fancoil appears and then the error is displayed.

Displayed alarms

- ▶ E1 Air temperature probe alarm T1 on PUB-30 board disconnected or with incorrect values (-10÷40)
The device is operating and the M7 control uses its own air probe.
- ▶ E2 Internal fan motor faulty or disconnected
None of the modes can be activated.
- ▶ E3 Water temperature sensor H2/T2 disconnected or faulty
None of the modes can be activated.
- ▶ E5 H4/T3 heating water probe disconnected or faulty
None of the modes can be activated.
- ▶ E6 Invalid water temperature detected when remote season change function is active
The fancoil is performing heating and cooling functions incorrectly. None of the unit's functions can be activated.
- ▶ E7 Module Communication Alarm
Bluetooth communication not functioning.
- ▶ E8 Communication error
Communication error between the wall control panel and the fancoil.
- ▶ bL Key lock
To unlock the display, press  simultaneously for about 3 seconds.
- ▶ h2o Incorrect water temperature
*In heating mode, the water temperature is below 30 °C
In cooling mode, the water temperature is above 20 °C.*

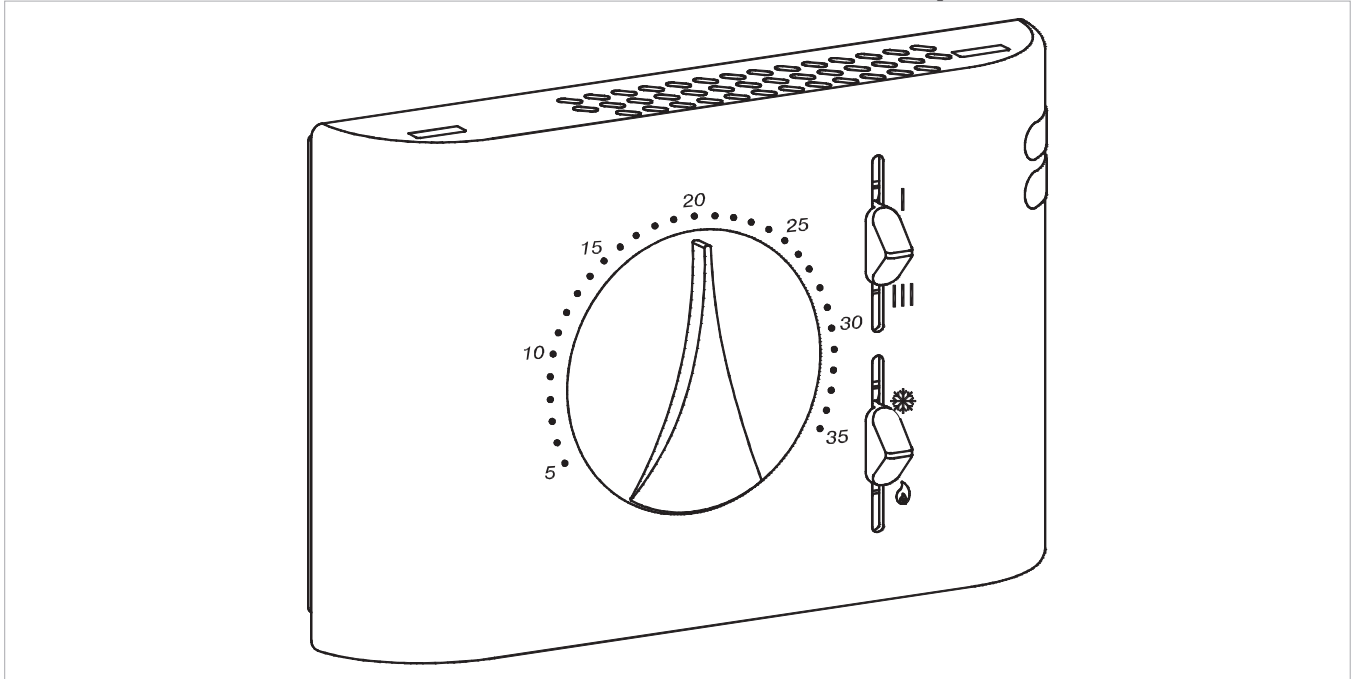
⚠ Errors E7 and E8 are displayed without the error display procedure on the wall control panel.

⚠ Alarm E7 is an error that only appears with the control panel for wall control with Bluetooth connection (Code EGB749).

10. ON-BOARD ELECTRONIC BOARD B4V642 + WALL CONTROL B3V151

10.1 Interface

Wall mounted control with thermostat, summer/winter and speed selectors.



10.2 Description

Wall mounted control with thermostat, summer/winter and speed selectors, in connection with B4V842.

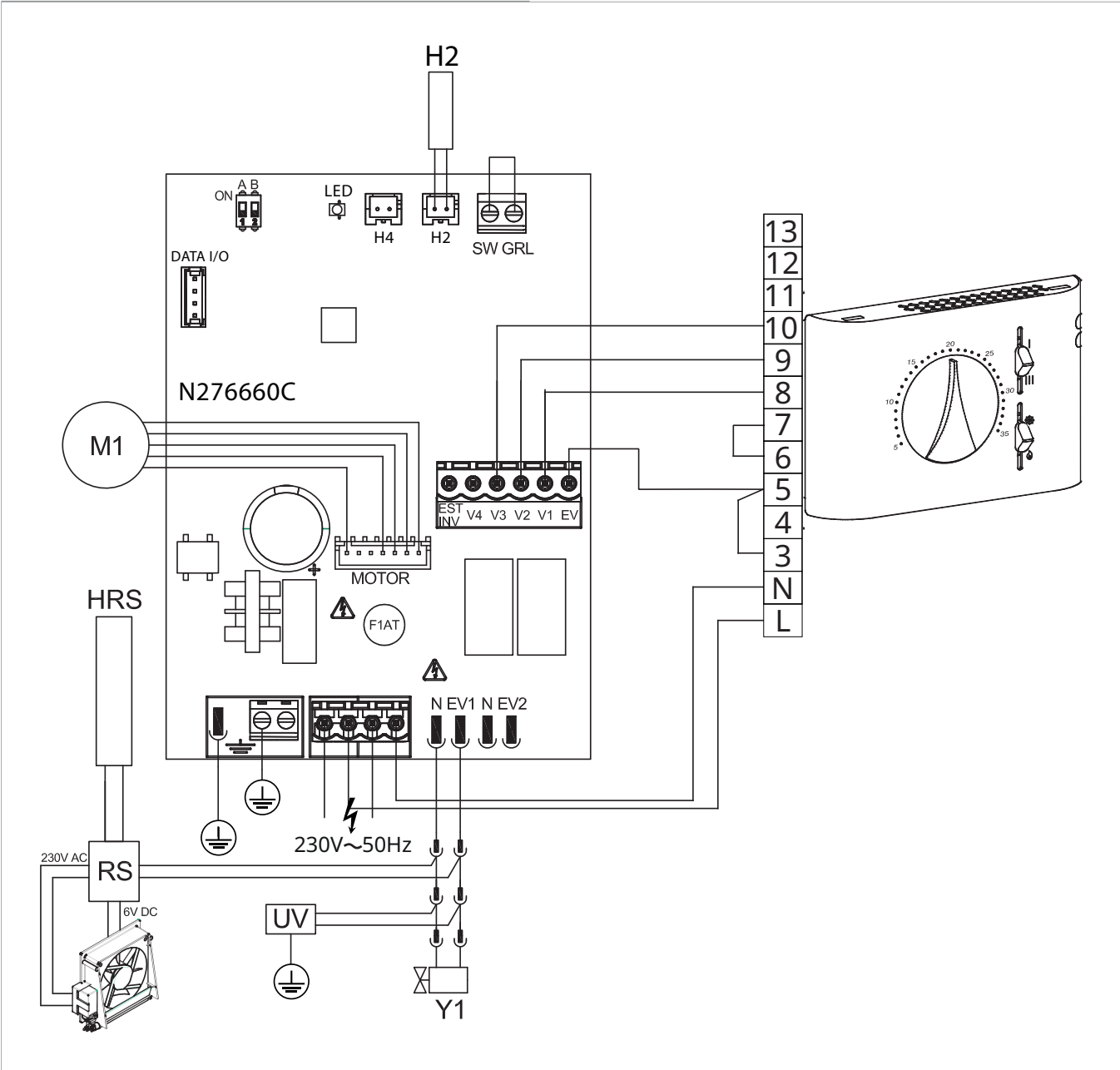
⚠ For 2 pipe units

⚠ For models with hydraulic connections on the right hand side, please refer to "Models with right-hand hydraulic connections" *p. 29* to make the connections.

⚠ For radiant panel (RS) versions, please refer to the "Version configurations" *p. 29* section to make the connections.

10.3 Connection diagram

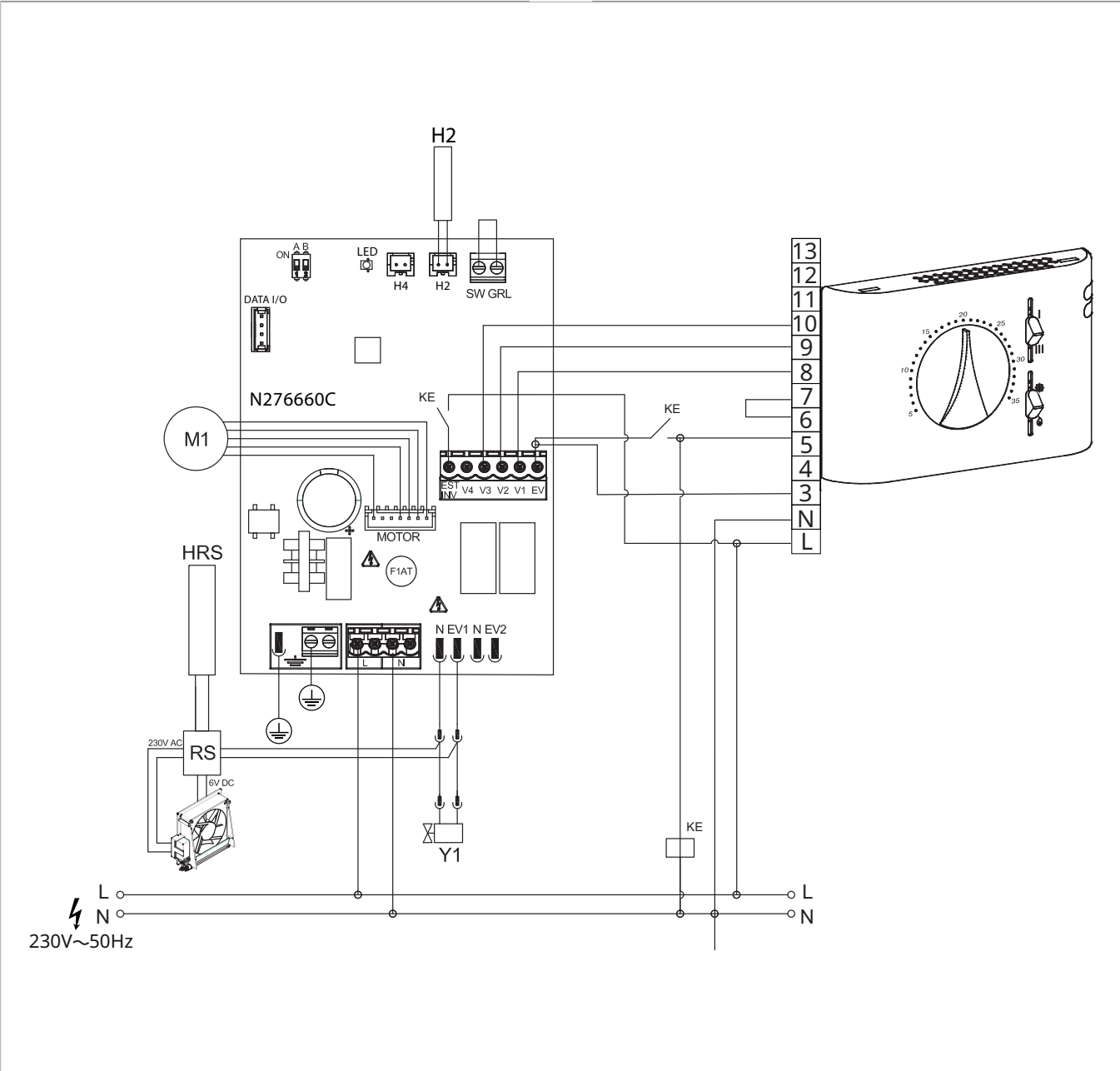
230~50	Power supply connection 230 V/50 Hz	Y1	Water solenoid valve (230 V/50 Hz 1 A power output)
EV	Solenoid valve permission input	HRS	Water temperature probe 10 kΩ for RS models
V1	Maximum fan speed	RS	Wiring for RS model
V2	Medium fan speed	M1	DC fan motor
V3	Minimum fan speed	H2	Water temperature probe 10 kΩ
V4	Supersilent speed		



10.4 Connection diagram with seasonal switching

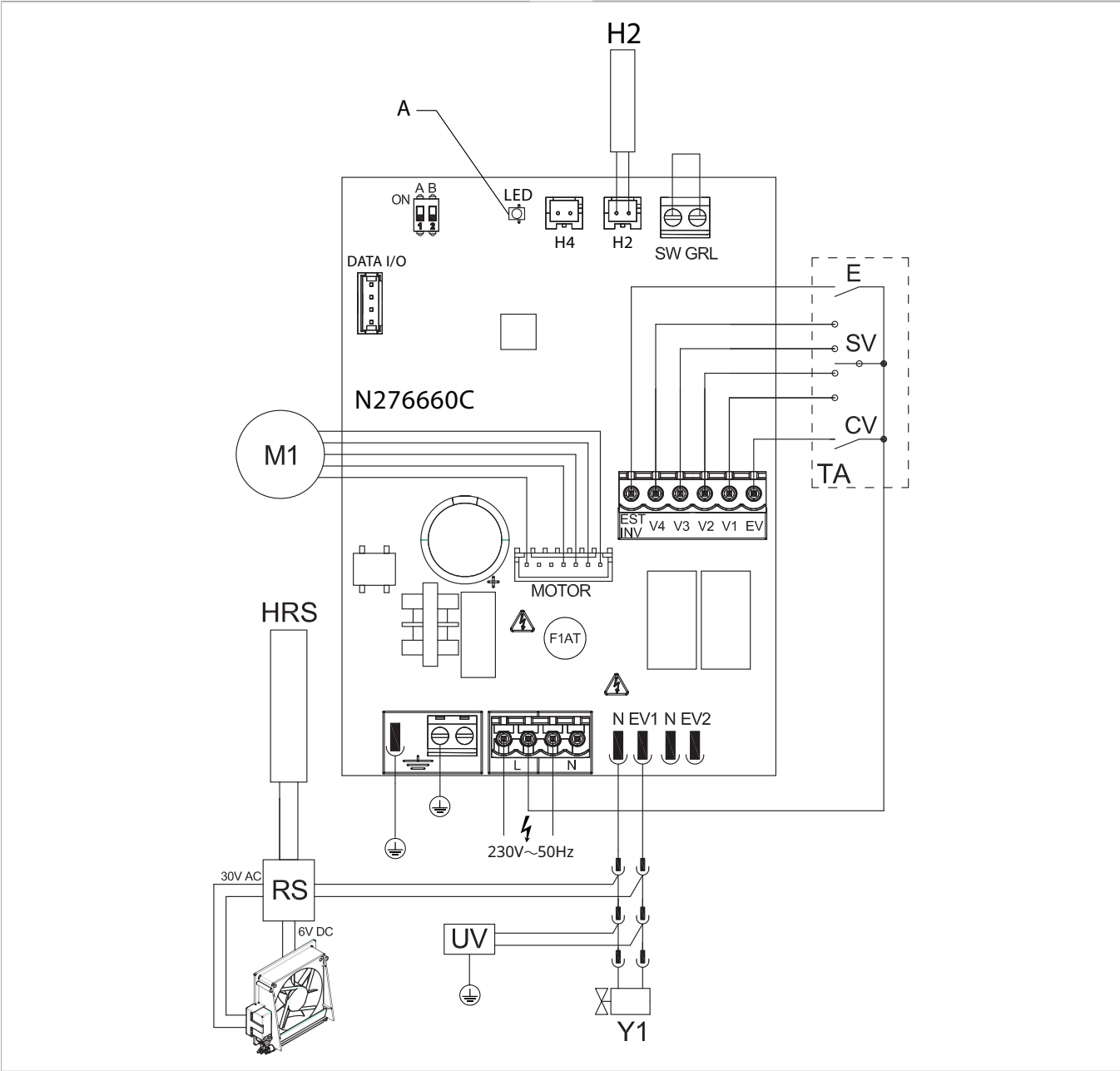
230~50	Power supply connection 230 V/50 Hz
EV	Solenoid valve permission input
V1	Maximum fan speed
V2	Medium fan speed
V3	Minimum fan speed
V4	Supersilent speed

Y1	Water solenoid valve (230 V/50 Hz 1 A power output)
HRS	Water temperature probe 10 kΩ for RS models
RS	Wiring for RS model
M1	DC fan motor
KE	Auxiliary relay (not included in supply)
H2	Water temperature probe 10 kΩ



10.5 Circuit board wiring diagram B4V842

230~50	Power supply connection 230 V/50 Hz	HRS	Water temperature probe 10 kΩ for RS models
EV	Solenoid valve permission input	RS	Wiring for RS model
V1	Maximum fan speed	M1	DC fan motor
V2	Medium fan speed	TA	3 speed room thermostat (to buy, install and connect by the installer)
V3	Minimum fan speed	CV	Thermostat consent
V4	Supersilent speed	SV	Speed selector
E	Input selection heating/cooling	H2	Water temperature probe 10 kΩ
Y1	Water solenoid valve (230 V/50 Hz 1 A power output)	A	Led
UV	UV lamp accessory connection		



10.6 Connections

10.6.1 Connection with 3 speed thermostats

CV input

The CV input is the ON/OFF of the board.

- in case of open input, the circuit board goes into stand-by mode
- in case of closed input, the circuit board is in operation

⚠ Please refer to the sections of the electrical diagrams for connection indications.

To activate solenoid valve Y1

- ▶ Connect the CV input to the terminal L of the 230 V power supply

Speed inputs V1, V2, V3, V4

Inputs V1, V2, V3, V4 regulate the ventilation speed.

The printed circuit board has 4 speed inputs:

- V1 maximum speed (1500 rpm)
- V2 - medium speed (1100 rpm)
- V3 - minimum speed (680 rpm)
- V4 supersilent speed (550 rpm)

⚠ Connect the 3 speeds of the thermostat to three of the four available inputs based on the characteristics and use of the location.

Examples:

- to residential application where maximum silence is required, connect V2, V3 e V4
- for a residential application where heating capacity is a priority, connect V1, V2, V3

In the event of simultaneous closure of several inputs, the motor will run at a number of revolutions equal to that set by the connection with the highest speed.

⚠ You can connect several boards in parallel to a single thermostat, even using different speed.

10.7 LED signal

The PCB has a status LED.

LED signals

- ▶ LED off
CV input open. Device switched off or without power supply.
- ▶ LED on
CV input closed. Normal operation of the device.
- ▶ LED 1 flash / pause
Fan stop activation for unsuitable water. Alarm can be activated with connected water probe.
- ▶ LED 2 flashes / pause
Motor alarm (for example jamming due to foreign bodies or fault in the rotation sensor).
- ▶ LED 3 flashes / pause
Water probe alarm disconnected or faulty.

11. CONNECTION 0-10 V CODE B10842

11.1 Installation

11.1.1 Description

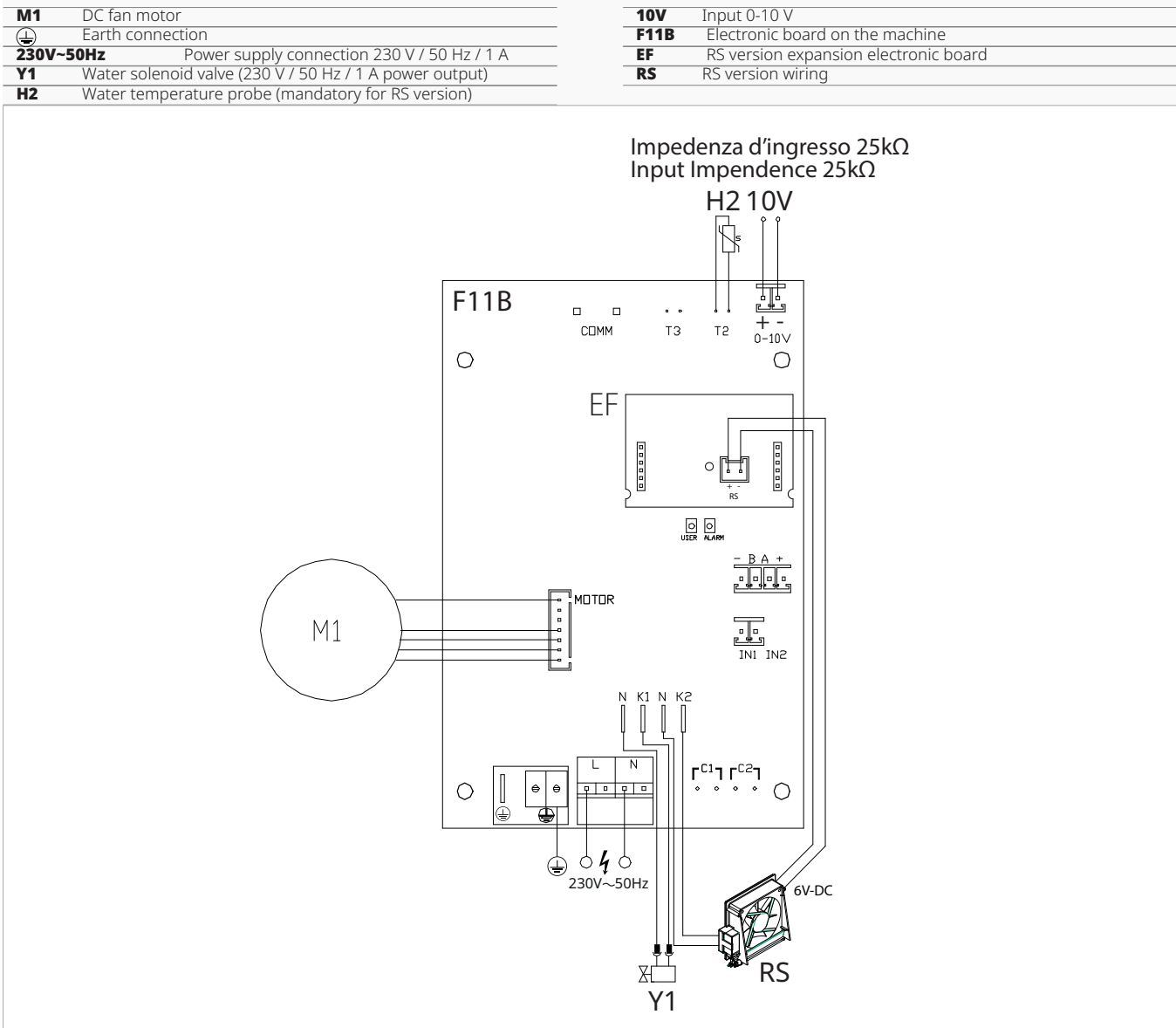
On-board electronic printed circuit board for control from systems with 0-10 V analogue output.
Mounted on the unit, it allows the motor to be managed with modulating speed.

Motor regulation can be made through a 0-10 V analogue input with an input impedance of 25 kΩ.

⚠ Consider the impedance value, especially when controlling several units in parallel.

It has a 230 V output for controlling a solenoid valve.

11.2 Connection diagram



⚠ For models with hydraulic connections on the right hand side, please refer to "Models with right-hand hydraulic connections" **p. 29** to make the connections.

⚠ For radiant panel (RS) versions, please refer to the "Version configurations" **p. 29** section to make the connections.

11.3 Connections with 0-10 V thermostats

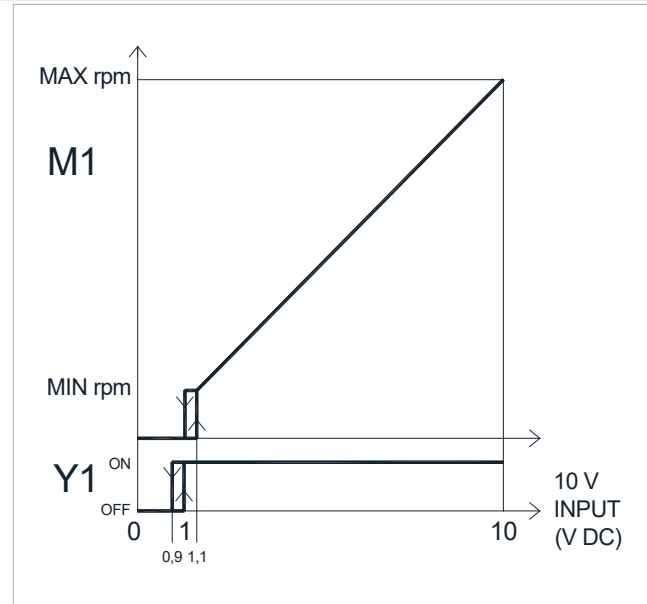
The 10 V input

- activates solenoid valve Y1
- regulates the fan speed

Linear speed regulation is possible, from a minimum value (400 rpm) to a maximum value (1500 rpm) for voltage values ≥ 1.1 V to 10 V DC.

⚠ The motor is switched off for values below 1 V.

⚠ The Y1 solenoid valve is switched on for voltage values greater than 1 V. The Y1 solenoid valve is switched off at values below 0.9 V.



11.4 LED signal

The PCB has a status LED.

LED signals

- ▶ LED off
Input signal below 0.9 V. Device switched off or without power supply.
- ▶ LED on
Input signal more than 1 V. Normal operation of the device.
- ▶ LED frequent flashing
Activation of grille safety microswitch S1, due to the filter cleaning operation.
- ▶ LED 2 flashes / pause
Motor alarm (for example jamming due to foreign bodies or fault in the rotation sensor).

12. TECHNICAL INFORMATION

12.1 Operating limits

Limits of operation of the control

	u.d.m.	Heating	Cooling
Minimum room relative humidity	%	15	15
Maximum room relative humidity	%	80	80
Minimum room air temperature	°C	-10	-10
Maximum room air temperature	°C	50	50



innova

INNOVA S.r.l.
Via I Maggio 8 - 38089 Storo (TN) - ITALY
tel. +39.0465.670104 - fax +39.0465.674965
info@innovaenergie.com