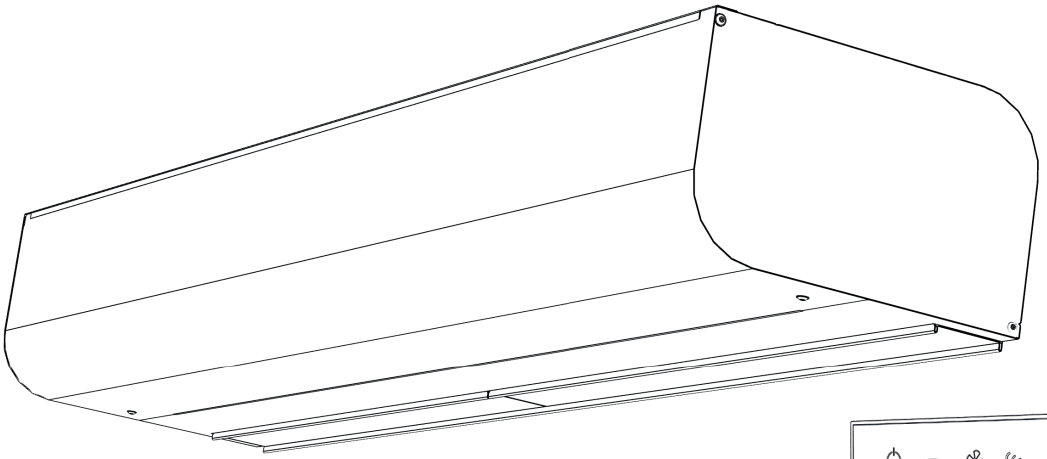
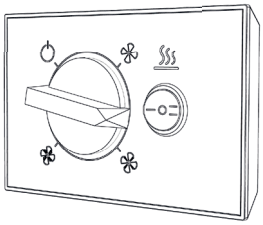
PARTNER
IN VENTILATION
2VV.CZ

EN

ESSENSSE NEO AC/EC

BASIC





INSTALLATION

VCES4 B-xxx-BA- AC / EC

CE

04.03.2025 v-01

ABOUT THE MANUAL

SYMBOL	MEANING
ATTENTION!	Warning or notice
READ CAREFULLY!	Important instructions
YOU WILL NEED	Practical tips and information
TECHNICAL INFORMATION	Detailed technical information
	Reference to another point/section of the manual

Before installing, read carefully the section **Safe use of the air curtains**, where you will find all the instructions for the safe and proper use of the product.

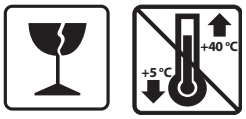
This manual includes important instructions for the appropriate installation of the air curtains. Before installing, read carefully all the following instructions and observe them. The manufacturer reserves the right to change, including the technical documentation, without prior notice. Keep the manual for future use. The instructions herein are part of the product

Declaration of conformity
Details can be found at **www.2vv.cz/en/**

CHECK DELIVERY

DON‘T OVERLOOK

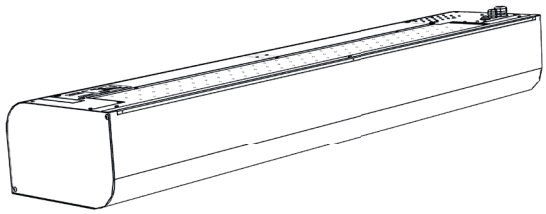
- Upon delivery, check the packaged product immediately for damage. If the packaging is damaged, call the carrier. If a claim is not made in time, any future claims cannot be made.
- Check that the type of product received matches your order. In the event of a mismatch, report the defect to the supplier immediately.
- After unpacking, check that the regulation and other components are in order. If in doubt, contact the supplier.
- Never install a damaged product!
- If you do not unpack the control immediately after delivery, it must be stored in a dry indoor environment with an ambient temperature of **+5 °C to +40 °C.**



All packaging materials used are environmentally friendly and can be reused or recycled. Make an active contribution to environmental protection by ensuring proper disposal and reuse of packaging materials.

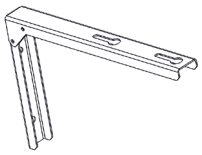
PACKAGING CONTENT

1x



1x

2x



4x M8x20

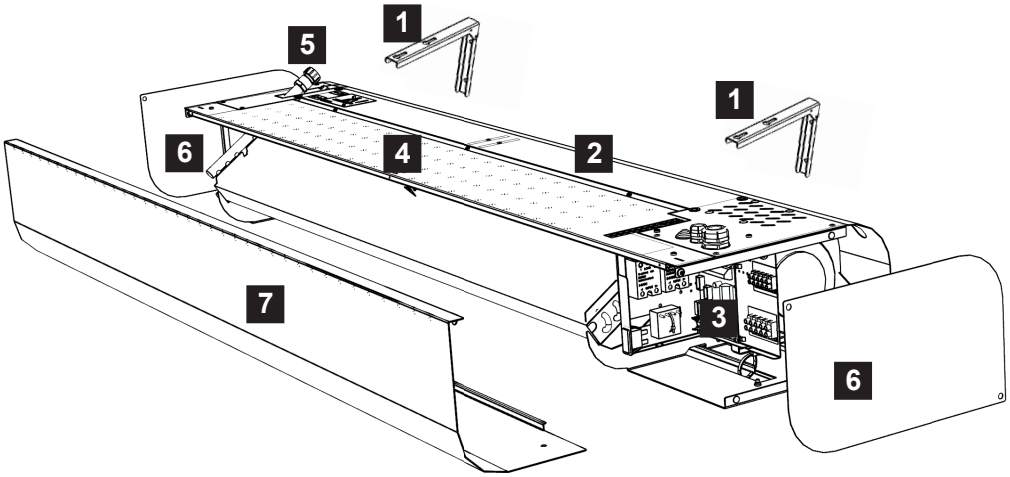
1x

DON‘T OVERLOOK

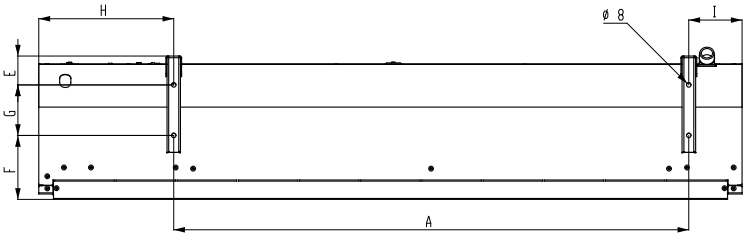
- If the product has been transported in temperatures below 0 °C, it must be left in working conditions for at least 2 hours without switching on after unpacking.

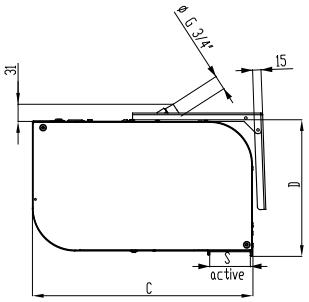
MAIN COMPONENTS

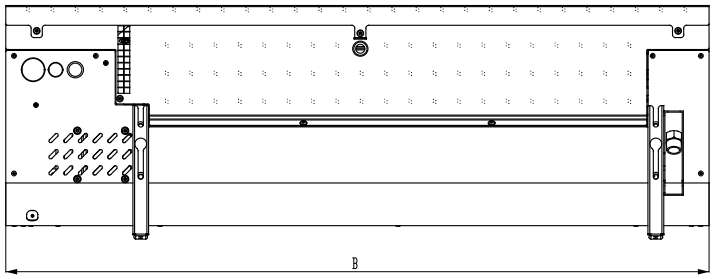
1. Mounting brackets (2pcs)
2. Curtain body
3. Area to connect the control panel and main power supply
4. Suction cover
5. Connection of water exchanger (only water model)
6. Side cover
7. Front cover



DIMENSIONS







	A	B	C	D	E	F	G	H	I
	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)	(mm)
VCES4 B 100	916	1252	392	244	51	111	90	240	95
VCES4 B 150	1325	1660	392	244	51	111	90	240	95
VCES4 B 200	1825	2160	392	244	51	111	90	240	95
VCES4 B 250	2235	2570	392	244	51	111	90	240	95

TECHNICAL PARAMETERS

AC MOTOR

Type	Heater power output [kW] (*LPHW 90/70°C)		Total power input [kW]	Total voltage/ current [V/A]	Motor voltage/ current [V/A]	Temperature increase Δt [°C]	Frequency [Hz]	Weight [kg]
	1st level	2nd level						
VCES4 B 100-E0 AC	3.2	4.7	4.90	400 / 7.6	230 / 0.6	10	50	24.1
VCES4 B 150-E0 AC	3.8	7.5	7.70	400 / 11.4	230 / 0.9	10		30.1
VCES4 B 200-E0 AC	4.8	9.5	9.80	400 / 15.4	230 / 1.4	9		38.1
VCES4 B 250-E0 AC	7.0	12.0	12.40	400 / 19.0	230 / 1.4	10		45.1
VCES4 B 100-E1 AC	3.2	6.3	6.50	400 / 14.0	230 / 0.6	14		24.1
VCES4 B 150-E1 AC	5.0	10.0	10.20	400 / 20.5	230 / 0.9	14		30.1
VCES4 B 200-E1 AC	6.3	12.6	12.90	400 / 26.5	230 / 1.4	13		38.1
VCES4 B 250-E1 AC	8.0	16.0	16.40	400 / 24.0	230 / 1.4	14		45.1
VCES4 B 100-E2 AC	4.7	9.5	9.70	400 / 14.2	230 / 0.6	21		24.1
VCES4 B 150-E2 AC	7.5	15.0	15.20	400 / 21.6	230 / 0.9	20		30.1
VCES4 B 200-E2 AC	9.5	19.0	19.30	400 / 28.8	230 / 1.4	19		38.1
VCES4 B 250-E2 AC	12.2	24.5	24.90	400 / 36.8	230 / 1.4	21		45.1
VCES4 B 100-V2 AC	16.0		0.20	230 / 0.6	230 / 0.6	37		25.5
VCES4 B 150-V2 AC	23.6		0.20	230 / 0.9	230 / 0.9	35		32.0
VCES4 B 200-V2 AC	34.0		0.30	230 / 1.4	230 / 1.4	34		41.5
VCES4 B 250-V2 AC	42.9		0.40	230 / 1.4	230 / 1.4	35		48.5
VCES4 B 100-S0 AC	-	-	0.10	230 / 0.6	230 / 0.6	-		22.5
VCES4 B 150-S0 AC	-	-	0.20	230 / 0.9	230 / 0.9	-		28.5
VCES4 B 200-S0 AC	-	-	0.30	230 / 1.4	230 / 1.4	-		36.5
VCES4 B 250-S0 AC	-	-	0.40	230/ 1.4	230/ 1.4	-		42.5

*Intake air temperature +18 °C, at maximum heating level and highest fan speed.

EC MOTOR

Type	Heater power output [kW] (*LPHW 90/70°C)		Total power input [kW]	Total voltage/ current [V/A]	Motor voltage/ current [V/A]	Temperature increase Δt [°C]	Frequency [Hz]	Weight [kg]
	1st level	2nd level						
VCES4 B 100-E0 EC	3.2	4.7	5.10	400 / 9.6	230 / 2.8	7	50/60	22.9
VCES4 B 150-E0 EC	3.8	7.5	7.90	400 / 13.5	230 / 3.0	8		29.3
VCES4 B 200-E0 EC	4.8	9.5	9.94	400 / 17.2	230 / 3.4	7		34.2
VCES4 B 250-E0 EC	7.0	12.0	12.44	400 / 19.0	230 / 3.5	8		41.2
VCES4 B 100-E1 EC	3.2	6.3	6.70	400 / 14.0	230 / 2.8	9		22.9
VCES4 B 150-E1 EC	5.0	10.0	10.40	400 / 20.5	230 / 3.0	11		29.3
VCES4 B 200-E1 EC	6.3	12.6	13.04	400 / 26.5	230 / 3.4	10		34.2
VCES4 B 250-E1 EC	8.0	16.0	16.44	400 / 24.0	230 / 3.5	10		41.2
VCES4 B 100-E2 EC	4.7	9.5	9.90	400 / 16.1	230 / 2.8	14		22.9
VCES4 B 150-E2 EC	7.5	15.0	15.40	400 / 23.7	230 / 3.0	17		29.3
VCES4 B 200-E2 EC	9.5	19.0	19.44	400 / 30.8	230 / 3.4	14		34.2
VCES4 B 250-E2 EC	12.2	24.5	24.94	400 / 38.5	230 / 3.5	15		41.2
VCES4 B 100-V2 EC	18.7		0.30	230 / 2.4	230 / 2.4	32		24.3
VCES4 B 150-V2 EC	26.3		0.40	230 / 3.0	230 / 3.0	32		31.2
VCES4 B 200-V2 EC	37.4		0.44	230 / 3.4	230 / 3.4	31		37.6
VCES4 B 250-V2 EC	45.8		0.44	230 / 3.4	230 / 3.4	33		44.6
VCES4 B 100-S0 EC	-	-	0.40	230 / 2.8	230 / 2.8	-		21.3
VCES4 B 150-S0 EC	-	-	0.40	230 / 3.0	230 / 3.0	-		27.7
VCES4 B 200-S0 EC	-	-	0.44	230 / 3.4	230 / 3.4	-		32.6
VCES4 B 250-S0 EC	-	-	0.44	230 / 3.5	230 / 3.5	-		38.6

*Intake air temperature +18 °C, at maximum heating level and highest fan speed.

The other technical parameters can be found in the corresponding technical sheet of the product

INSTALLATION

6.1 OPERATIONAL CONDITIONS:

The air curtain is designed to be used in an indoor, dry environment, with ambient temperatures between **5°C to +40°C**, a maximum relative humidity of 80%, and to transport air free of coarse dust, grease, chemical fumes and other contamination. The electrical protection is IP 20 (against particles larger than 12.5 mm, not protected against water).

Curtains with electric heater are fitted with an operational thermostat with automatic reset (located on each heater) and an emergency thermostat with manual reset.

The water exchangers are designed for a maximum water temperature of +100°C and maximum pressure of 1.6 MPa.

6.2 INSTALLATION CONDITIONS

The installation and assembly of the unit may be carried out only by a suitably qualified person who has the adequate tools!

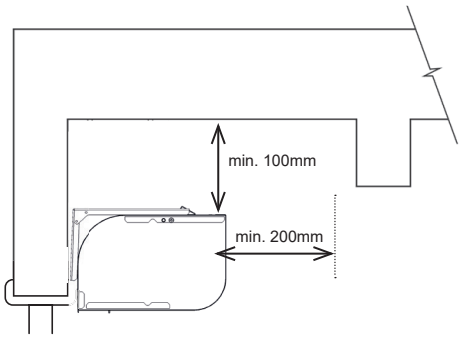
2 mounting brackets and 4 bolts are supplied with the product as standard.

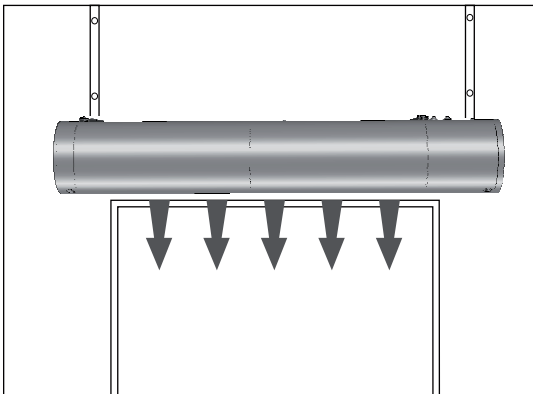
If the unit is to be mounted on threaded rods, they have to be ordered separately. The following rules should be observed for the proper function of the unit.

PLEASE NOTE

- minimum clearances must be observed (see fig. clearances) with respect to the flammability of materials.
- the clearances with respect to the flammability of materials are determined by the architect with regards to the regulations applicable at the place of installation
- the unit may be installed only in horizontal position
- there must be at least 200 mm of free space in front of the suction cover for the proper functioning of the unit
- the exhaust should be located as near as possible to the door or the curtain opening
- the curtain should extend beyond both sides of the opening by at least 100 mm
- if the curtain is to be installed above a door, place it as near as possible to the upper border of the door. See that the intake and exhaust are not blocked and that the air can flow freely, see fig.

6.3 SUSPENSION:





If there is a window above the door or another material preventing the installation on the brackets, the unit may be hanged from the ceiling with threaded rods, directly onto dowels (see below).

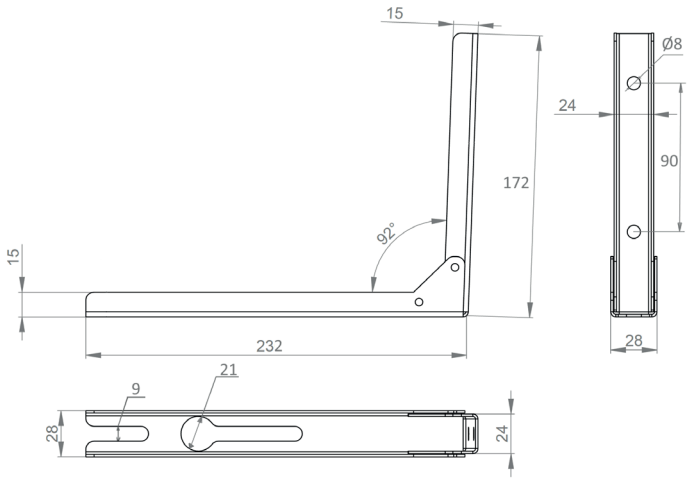
Installation with mounting brackets

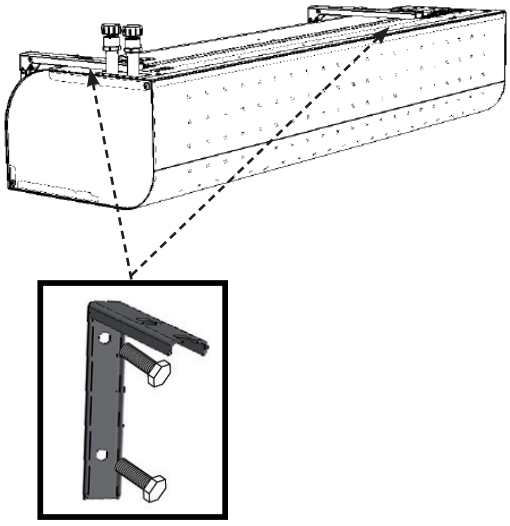
YOU WILL NEED

4x dowels (not included)
4x bolts (not included)

Measure the holes on the wall according to the dimension chart (see “Dimensions”) (observe the installation rules) Do not forget to choose whether the unit will be installed according to A or B and to set the height of the opening according to that! Insert back in the opening in the curtain (and only partially in the curtain) the screws that held the brackets and hang the curtain from them. **Check that the curtain is fastened properly to prevent it falling**

INSTALLATION

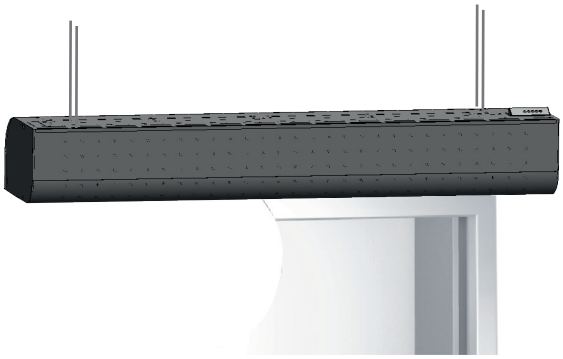




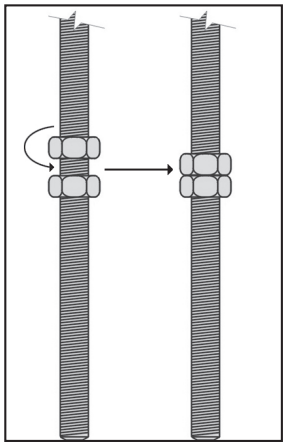
Installation with threaded rods

YOU WILL NEED

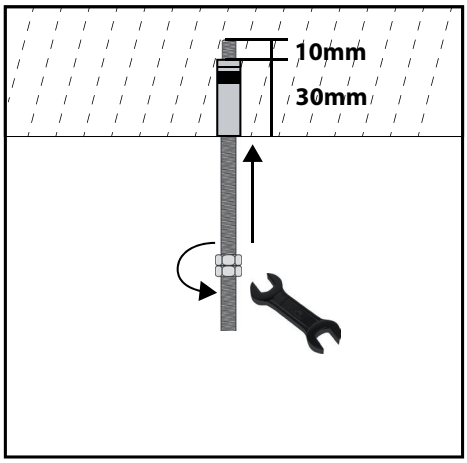
4 8mm anchors (not included)
4 M8 threaded rods (not included)
8 M8 nuts (not included)



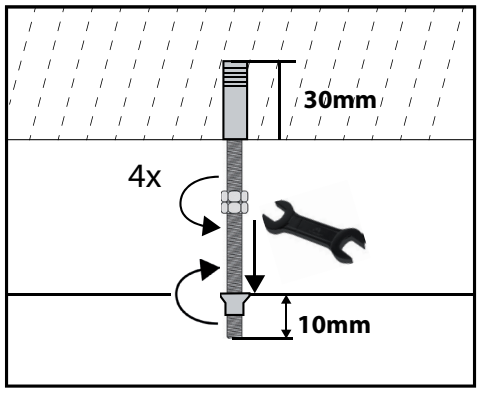
Before installing, check that the ceiling can bear the weight of the unit. Install according to the following figures.



1. Fastening to the ceiling



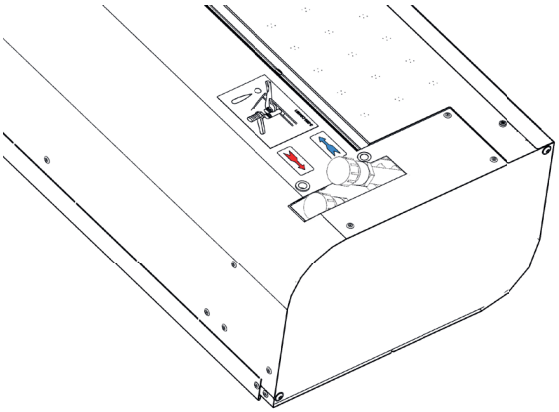
2. Fastening to the curtain



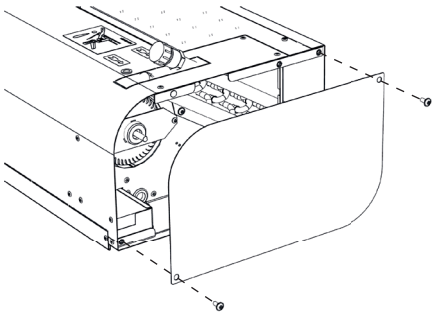
6.4 Connecting the water heater

(only for the curtain with LPHW)

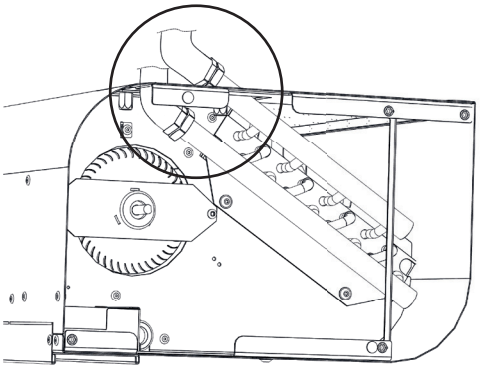
- flexible hoses are recommended to connect the water heater
- the connection and pressure tests of the heater must be carried out by a person with qualifications in plumbing and in compliance with the applicable regulations
- the diameters of the pipes to connect the water heater are listed in the section DIMENSIONS
- the heater is designed for water with a maximum pressure of 1.6 MPa and a maximum temperature of +100°C.



Open the side cover.



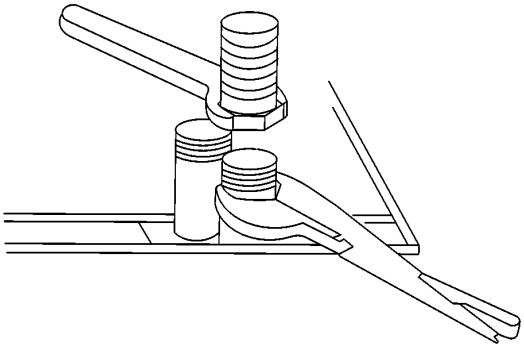
Connect the pipes.



PLEASE NOTE

- connect the pipes in the countercurrent connection, the hot water connection and the return heating water are shown in the figure above
- it is advisable to install a shut-off valve at the inlet and the outlet of the heater to interrupt the water supply

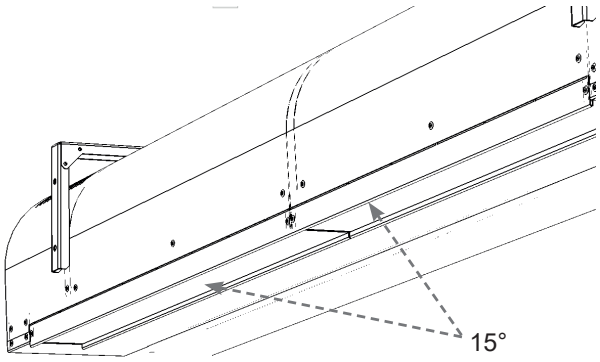
⚠ When connecting the heater, hold the outlet with pliers to prevent damages (see figure)



6.5 Setting the direction of the exhaust air

⚠ ***CAUTION!***

Deflect the exhaust in the desired direction during the installation of the unit The exhausts of the Essensse air curtain can blow air at a maximum angle of 15°

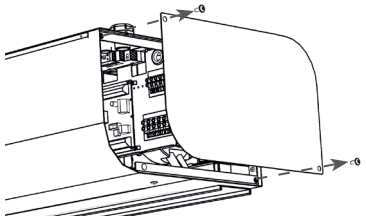


INSTALLATION

6.6 Connecting the supply cables

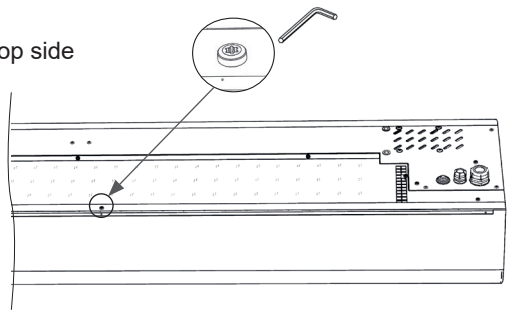
The following procedure requires the removal of the suction cover and remove the side cove.

Side cover fastened with two M5 screws

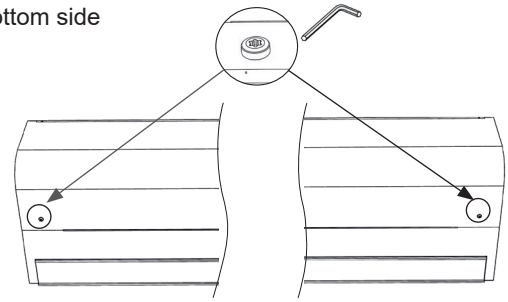


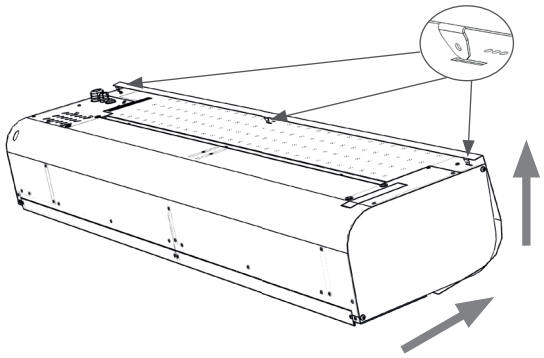
Opening the front cover
- unscrew one M5 screw on the top of the cover side
- unscrew two M5 screws on the bottom of the cover side

Top side



Bottom side



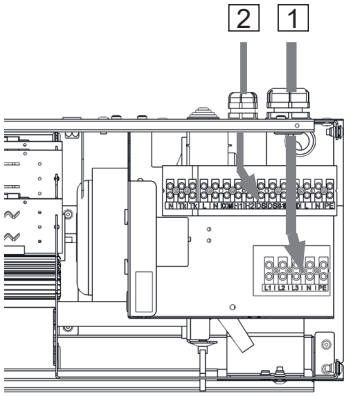


All phases of the electric power supply must be connected through the corresponding type of circuit breaker. It must be possible to disconnect the unit from the electric power supply with a single power switch.

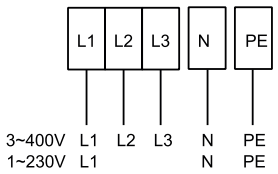
- The power cable is not included.
- Pull the regulator's communication cable.
- Pull the cables to the accessories, if applicable

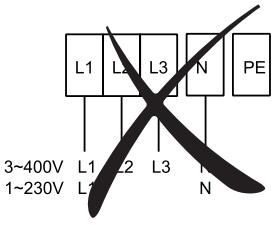
CAUTION!

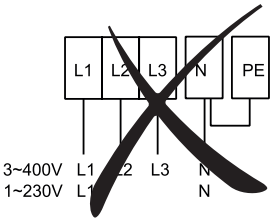
The supply must be determined by the relevant designer, it must comply with the applicable regulations and take into account the power an installation parameters of the air curtain



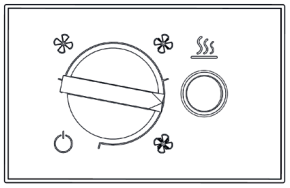
1 - Power supply connection



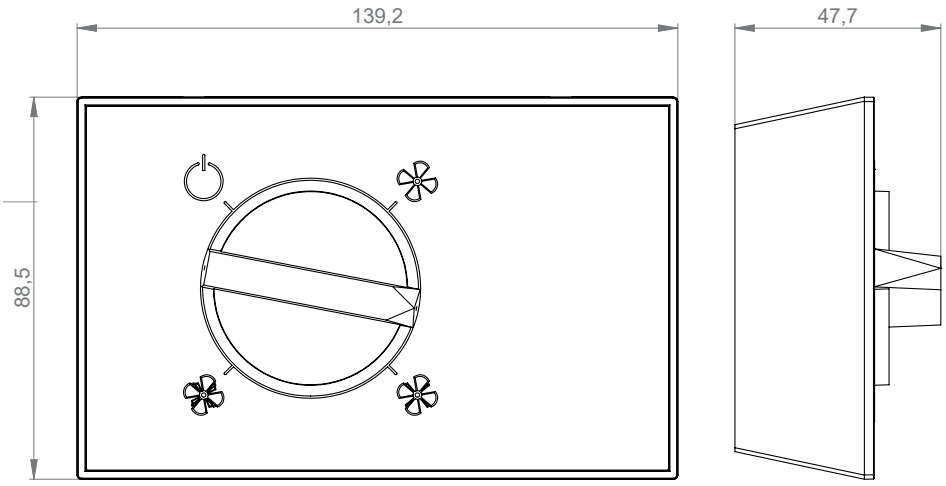




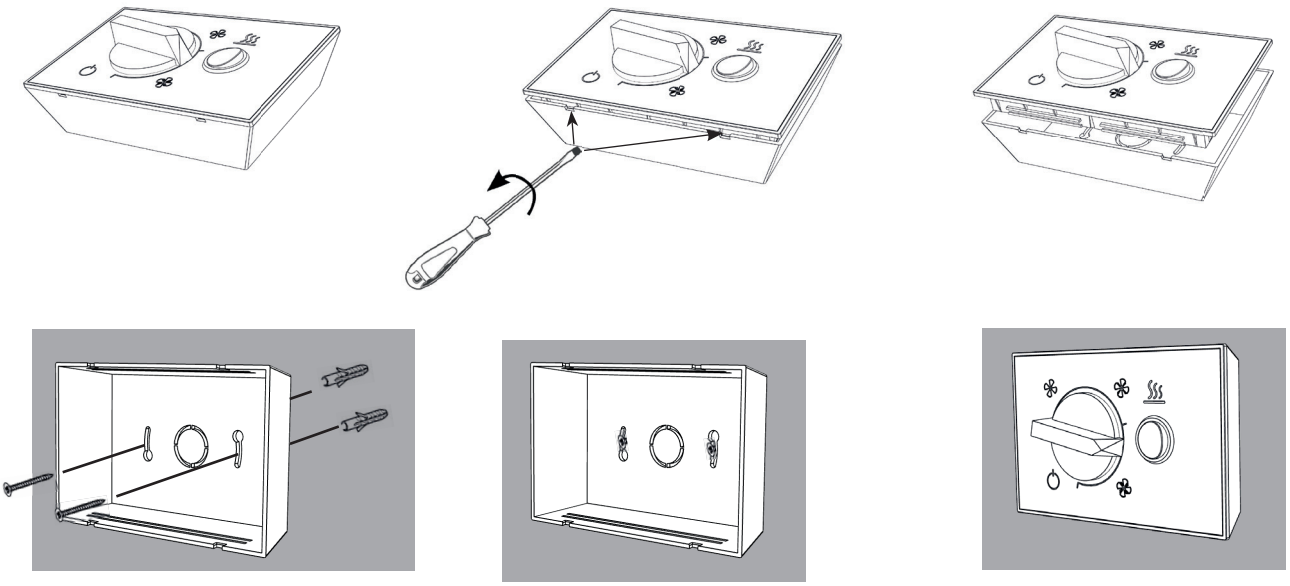
2 - Control panel connection



DIMENSION

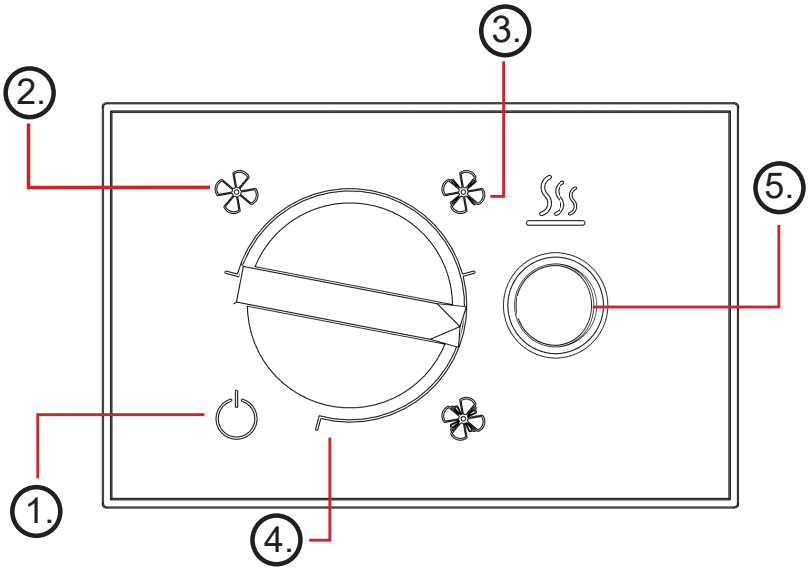


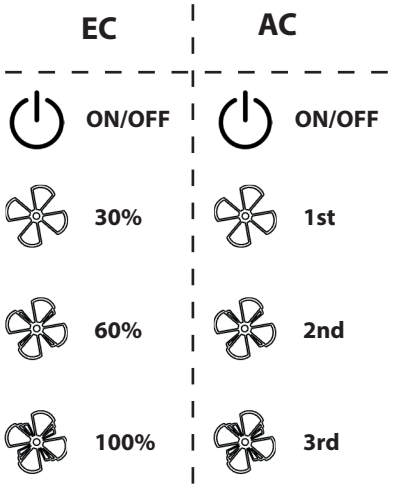
INSTALLATION OF CONTROL PANEL



The controller can only be installed on a wall or on a fixed non-portable object.
The cable must be secured against being pulled out of the controller.

CONTROL



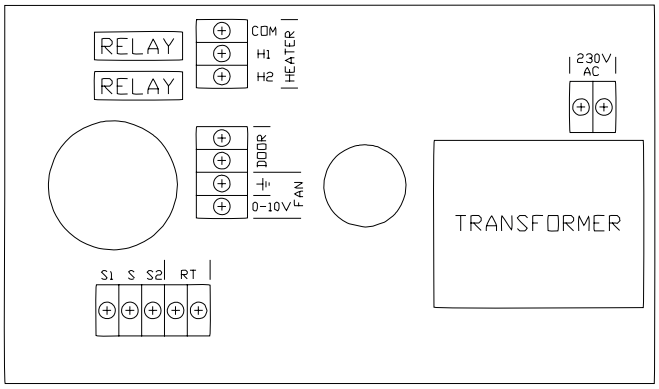


1	OFF - fan OFF, heating not active
2	Low fan speed, heating enabled (heating level 1 enabled)
3	Medium fan speed, heating enabled (heating level 1 and 2 enabled)
4	High fan speed, heating is enabled (heating level 1 and 2 enabled)
5	Heating switch (water heater = heating level 1, electric heater = heating level 1 and 2)

BASIC EC DESCRIPTION

Controls description:

- Control EC motors with 0-10V continuous output
- Control heating output in the range of OFF / Stage 1 / Stage 2 using potential-free relay outputs with a maximum relay load of 230V / 5A. NOTE: Not available for the non-heating version
- Connect a door contact or external switch (by switching off the whole product when the contact is opened)
- Connect room thermostat (switch off heating when contact is opened) - NOTE: Not available for version without heating



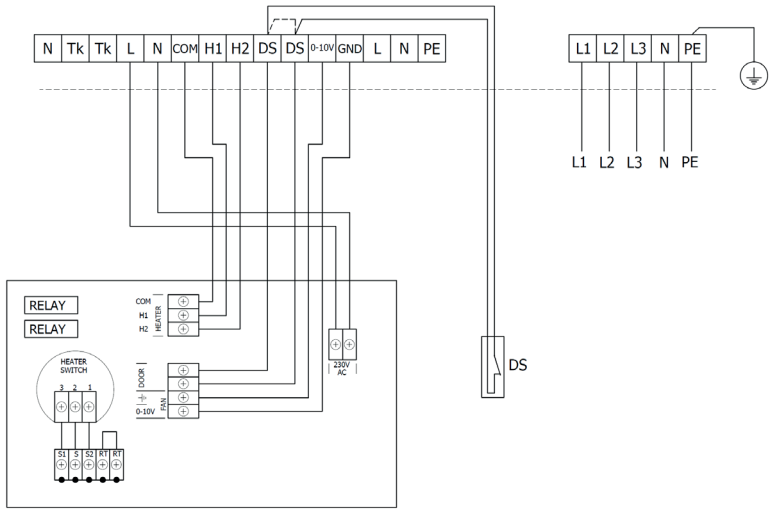
TERMINAL	FUNCTIONALITY	DESCRIPTION
S1	ENTRY TO THE INTERNAL HEAT CONTROLLER SWITCH	SWITCH FOR 1ST HEATING STAGE (FACTORY WIRED)
S		COM INTERNAL HEATING SWITCH (FACTORY WIRED)
S2		SWITCH FOR 2ND HEATING STAGE (FACTORY WIRED)
RT	ROOM THERMOSTAT	DI SWITCHES ONLY THE THERMAL OUTPUTS ON/OFF (FACTORY WIRED = ELECTRICALLY CONNECTED)
COM	COM HEATING	INPUT FOR HEATING CONTROL SIGNAL (MAX. LOAD 230V/5A)
H1	1. HEATING STAGE	OUTPUT OF THE 1ST HEATING STAGE
H2	2. HEATING STAGE	OUTPUT OF THE 2ND HEATING STAGE
DOOR	DOOR CONTACT (EXT CTRL, ROOM THERMOSTAT)	DI SWITCHING ON/OFF COMPLETE CONTROLLER (FAN AND HEATER)
0-10V DC	0-10V MOTOR CONTROL	OUTPUT FOR MOTOR CONTROL (MAX. 10 MOTORS)
GND	GND MOTOR CONTROL	
~230V	L - 230VAC	MAIN POWER SUPPLY 230V
	N - 230VAC	

NOTE: Terminals S1, S, S2, RT, COM, H1, H2 are not used for the non-heated screen. The non-heated version only supports fan control and connection of an external contact to the DOOR terminals (door switch, external control switch, ...).

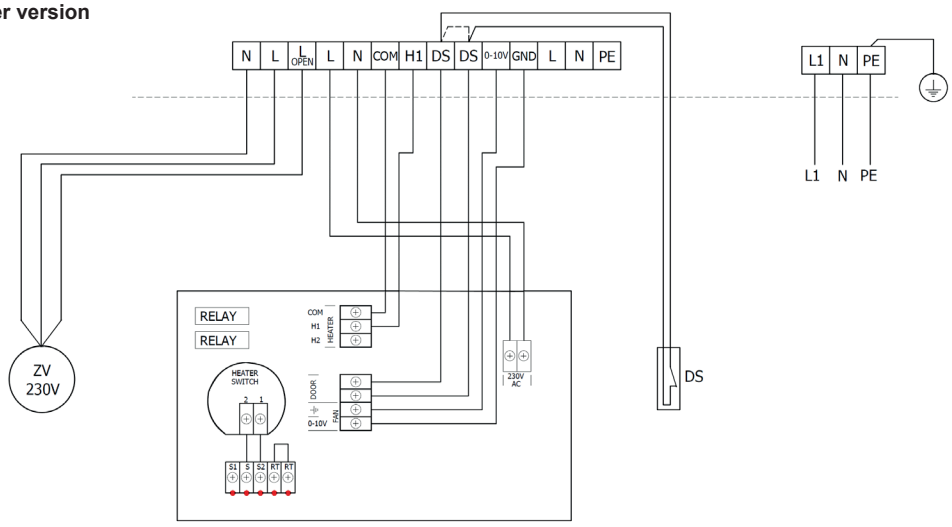
WIRING OF THE CONTROLLER AND ACCESSORIES

BASIC EC

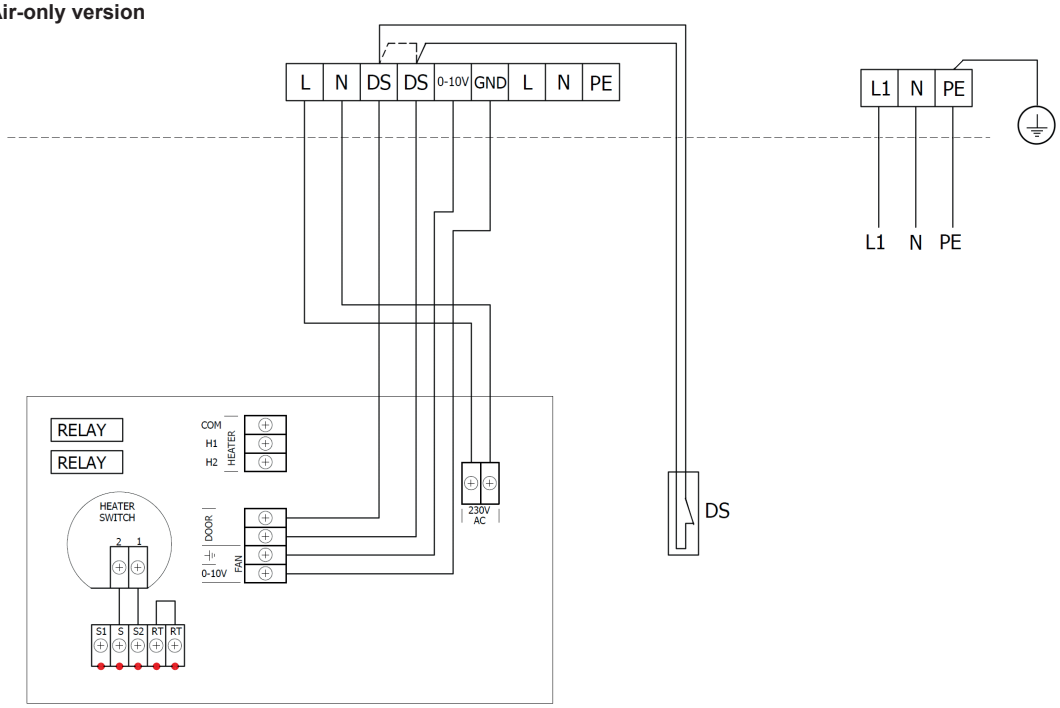
Electric version



Whater version



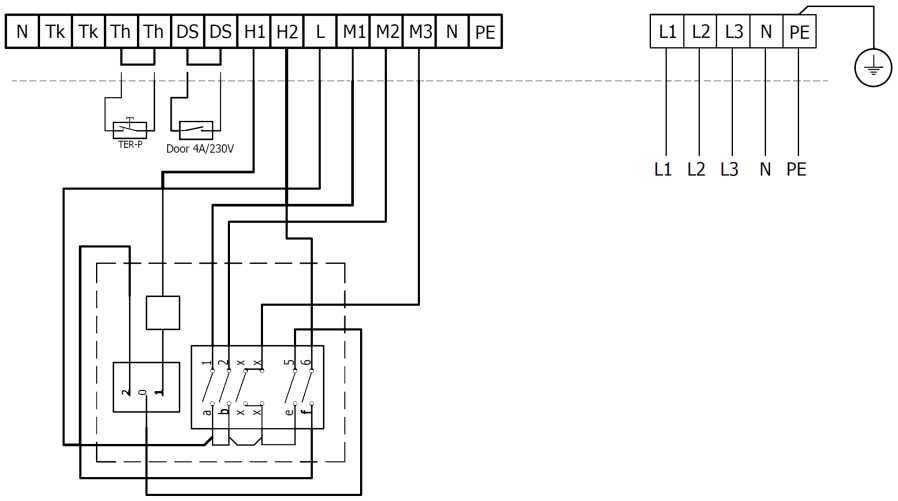
Air-only version



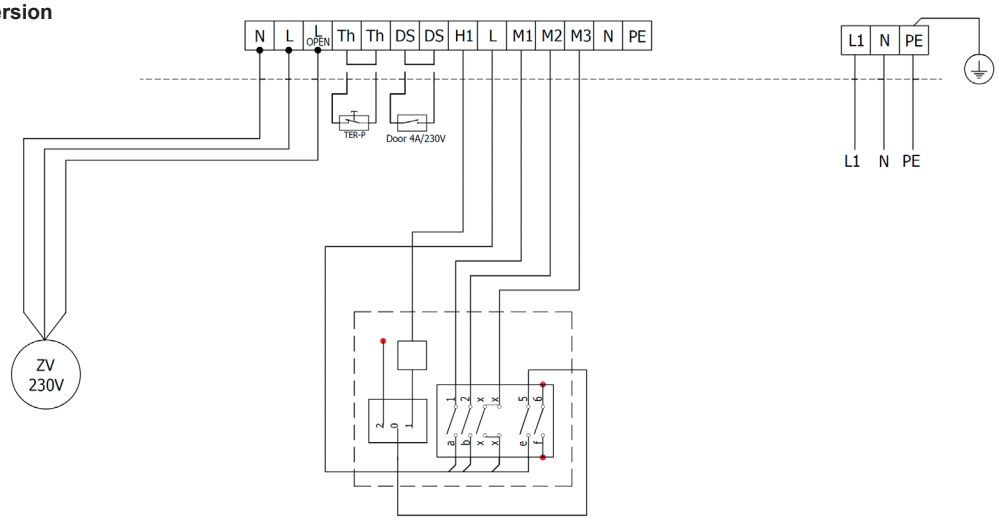
WIRING OF THE CONTROLLER AND ACCESSORIES

BASIC AC

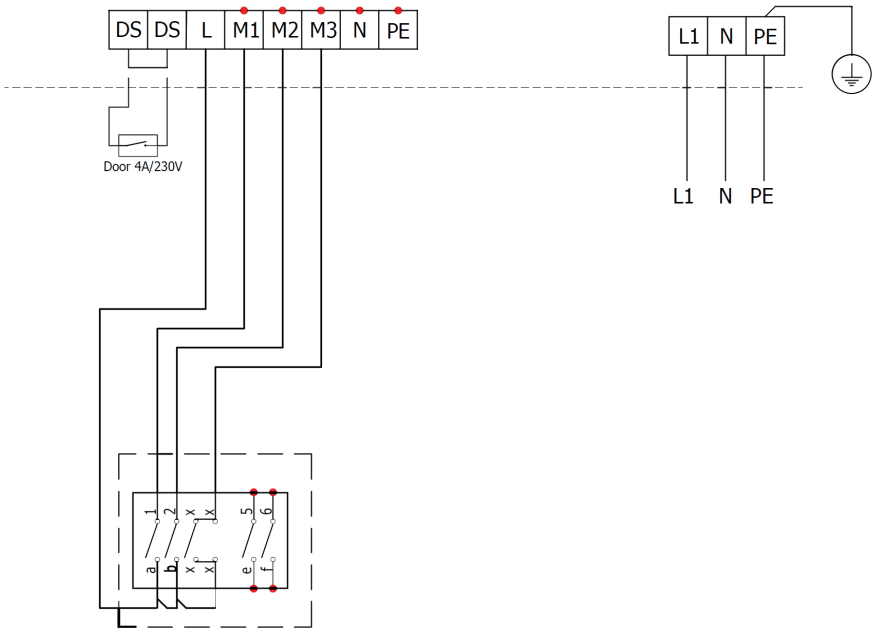
Electric version



Whater version



Air-only version



ACCESSORIES

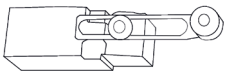
CONNECTION OF EXTERNAL ACCESSORIES

DON'T OVERLOOK

When connecting external accessories, the air curtain must be disconnected from the power supply. The air vent must be disconnected from the mains.
All external control components must be wired according to the wiring diagram.
Connectors must be plugged into the electrical board with adequate force and always perpendicular to the base.

Door switch DS (for **Basic AC / EC** controls)

TECHNICAL INFORMATION



- Suitable for all BASIC controls
- Isolated opening contact with maximum voltage 230V, 6A
- IP67, can be connected as a switching or opening contact

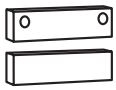
Connectors on control modules: DS / DS

ATTENTION!

Not supplied with the product.

Door switch DK-B3 (for **Basic EC** control only)

TECHNICAL INFORMATION



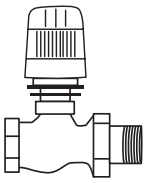
- Isolated door contact with maximum voltage 12V.
- Cable: Maximum length: 50 m

ATTENTION!

Not supplied with the product.

Thermostatic valve– TV1/1

TECHNICAL INFORMATION



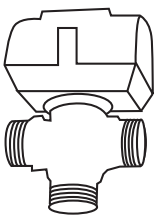
- Thermostatic valve for water exchanger control
- Suitable for all types of screens with water heat exchanger

ATTENTION!

Not supplied with the product.

Zone valve ZV-xx-230 / RT-3-xx

TECHNICAL INFORMATION

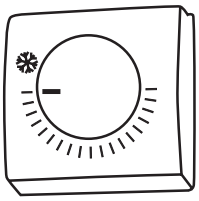


- Zone valve for water heat exchanger control
- Cable: Three-conductor cable with a cross-section of 1.5 mm2, 230 V/ 50 Hz.

ATTENTION!

Not supplied with the product.

Room thermostat -TER-P



TECHNICAL INFORMATION

- Room thermostat for heating control
- Cable: Two-core cable with a cross section of 0.5 mm2, 230 V/ 50 Hz.

ATTENTION!

Not supplied with the product.

COMMISSIONING

DON'T OVERLOOK

Before starting the air curtain, check the following:

- Have you left any tools or objects inside the panel, causing damage to it?
- Is there an adequate supply of electricity and, if necessary, heating water?
- Have you closed the air curtain correctly?
- Has the control module been connected correctly?
- Does the air curtain have adequate protection according to the applicable standards?
- that the equipment is correctly secured to the supporting structure
- that the equipment is properly sealed
- that the electrical supply is properly connected, including grounding and protection of external triggers.
- that all elements of the electrical components are properly connected
- that the installation conforms to all instructions in this manual
- that no tool or other object that could damage it is left in the equipment

ATTENTION!

- Any tampering or changes to the internal interconnection are prohibited and will void the warranty.
- We recommend using the accessories supplied by 2VV or its authorized distributors. If in doubt about the possibility of using non-original accessories, please contact your supplier.

When the main power supply is turned on, turn the switch to one of the three fan speed settings to bring the unit into operation.

TROUBLESHOTING

In case of any intervention on the air curtain, the main power supply must be disconnected. If you are not sure about the correctness of the steps, never proceed with any repair and call a professional service !!!

Device behaviour	Anticipated problem	Solution
The device is not working	Interrupted power supply	Check that the power supply is not interrupted
	Cracked fuse	Check the fuse located on the control module
Heating switches off spontaneously	The heater is overheating	The electric heater overheats due to insufficient air flow. Check that the fans are running at full speed and that the air supply to the unit is not restricted.

ATTENTION!

The main electrical supply must be switched off before any tampering with the inside of the air curtain. The air curtain must be allowed to cool down!

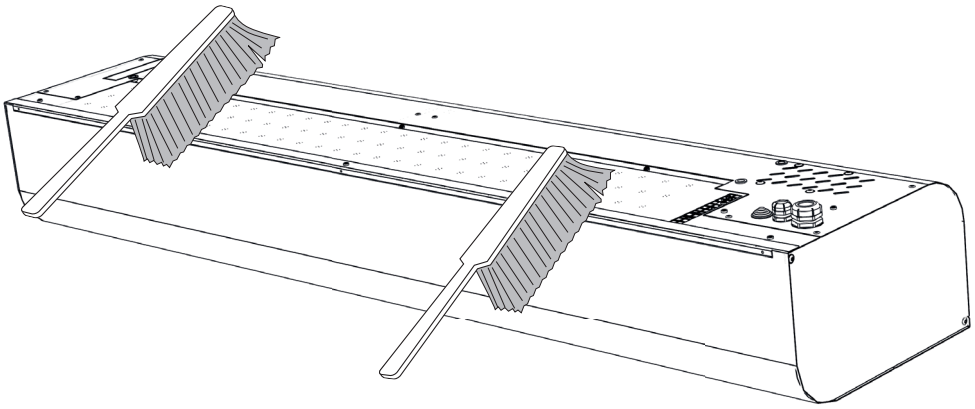
MAINTENANCE

CLEANING

ATTENTION!

Before carrying out any work inside the air curtain, the main power input must be disconnected. The air curtain must be allowed to cool down!

- Clean as necessary, it is recommended that cleaning should be performed at least once every 3 months.
- It is forbidden to use compressed air, aggressive chemicals, solvents or water for cleaning.
- Clean using a damp cloth, fine brush or vacuum cleaner.
- Clean the surface of the air curtain including the suction inlet part.
- Adhere to workplace safety and use protective aids.



SERVICE

IF YOU CAN‘T FIX THE FAULT YOURSELF

If you have not been able to resolve the problem, please contact your supplier or 2VV‘s exclusive representative. Warranty and post-warranty service is provided by the supplier or by one of the authorised service organisations, a list of which is available from the supplier.

Please provide the supplier or service centre with the information below:
- the type designation of the air curtain,
- the accessories used,
- Installation location,
- serial number,
- Installation conditions (including electrical),
- running time,
- detailed description of the fault.

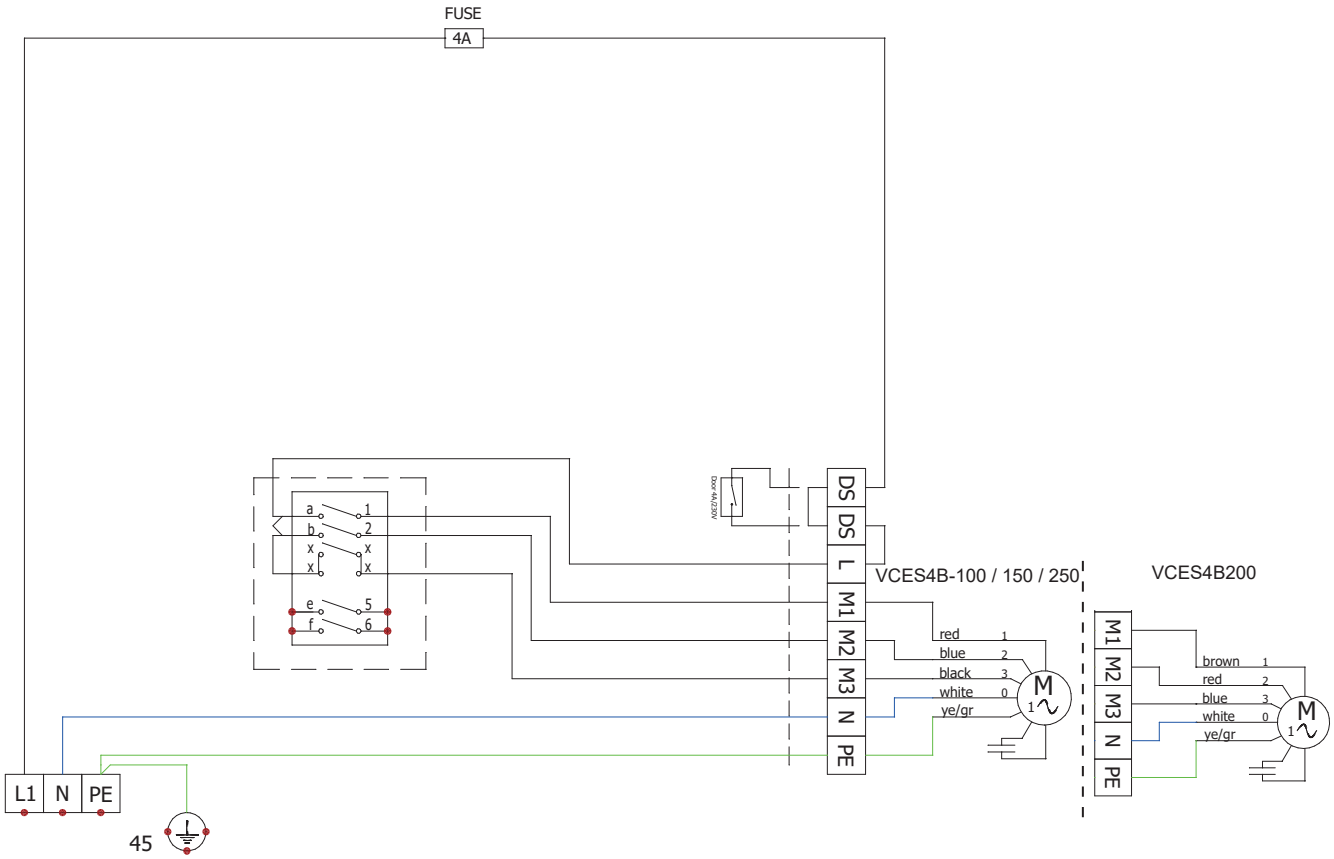
PRODUCT DECOMMISSIONING - DISPOSAL

Make the product unusable before disposing of it. Even old products contain raw materials that can be reused. Take these to a recycling collection centre. It is better to have the product disposed of in a place that specialises in this, so that recyclable materials can be used further. Dispose of unusable parts of the product in a controlled landfill.

The disposal of materials must comply with the relevant national waste disposal regulations.

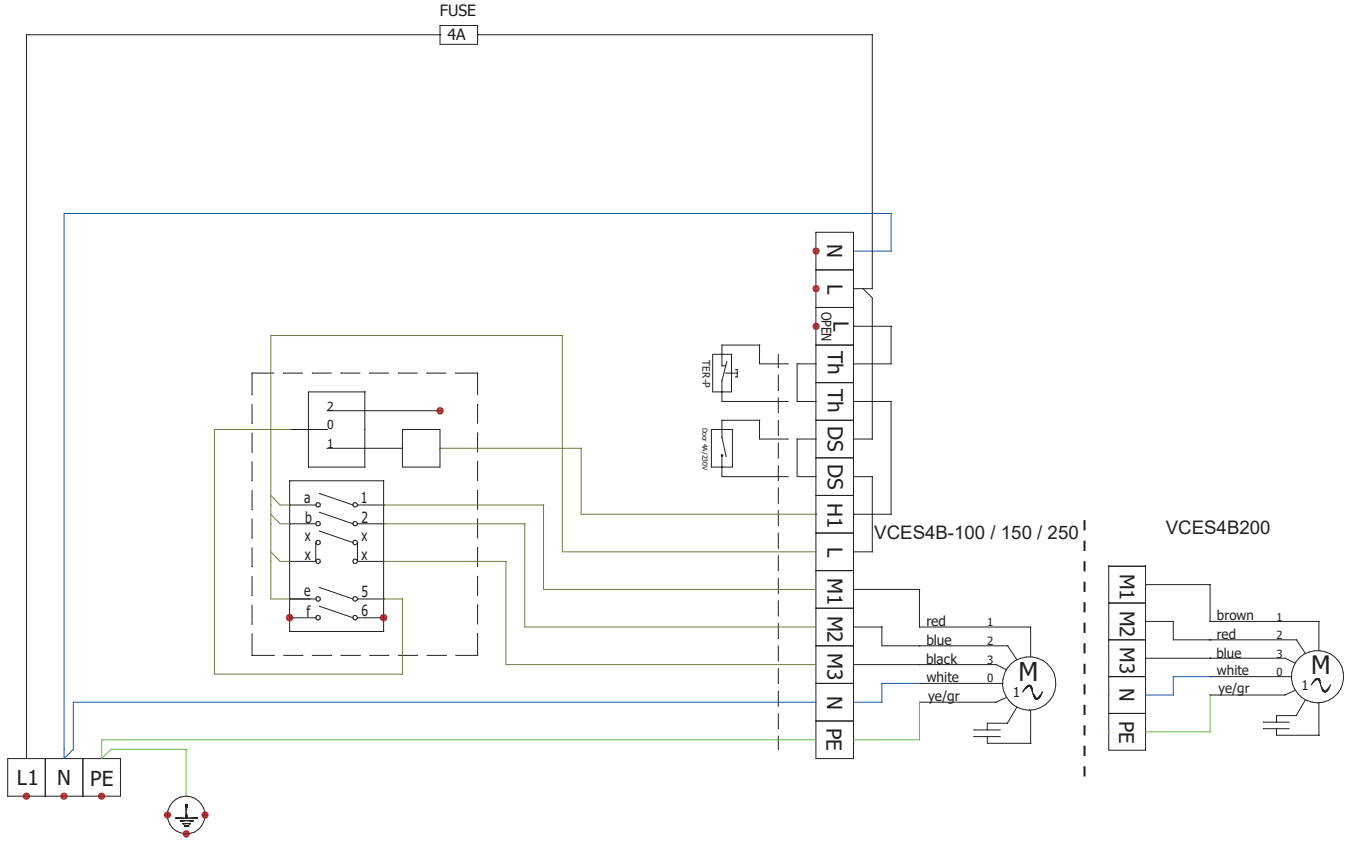
ELECTRICAL DIAGRAMS

VCES4Bxxx-S0AC-BA



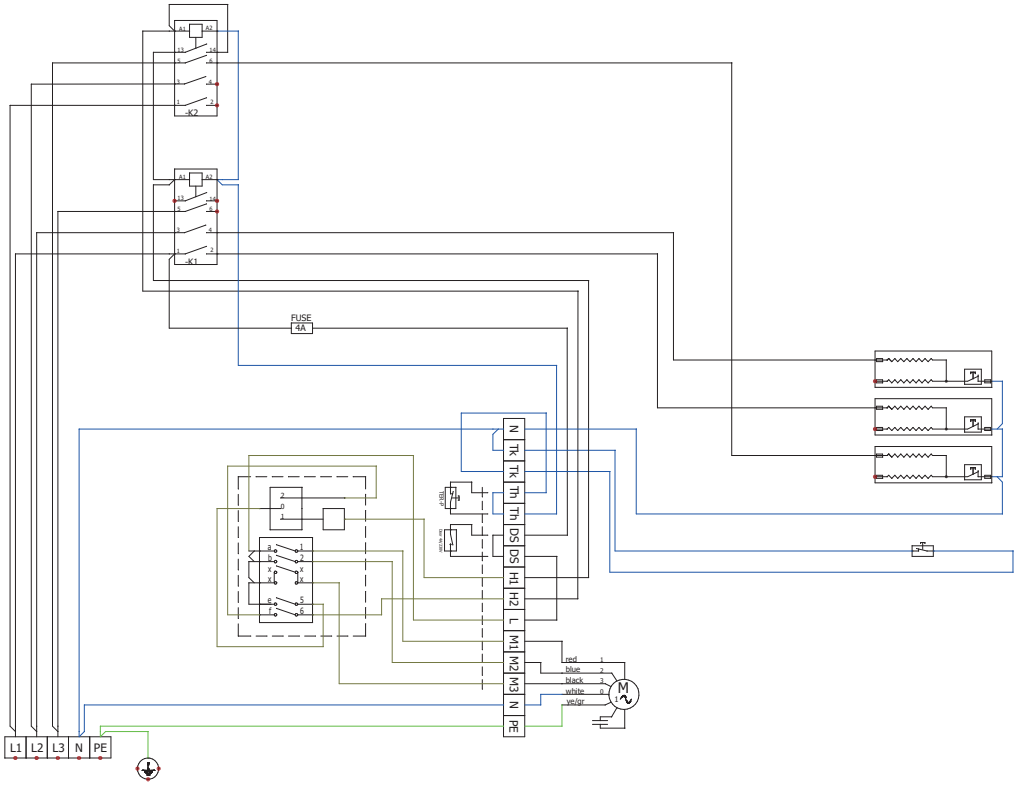
AC MOTEUR

VCES4Bxxx-V2AC-BA



ELECTRICAL DIAGRAMS

VCES4B100-E0AC-BA



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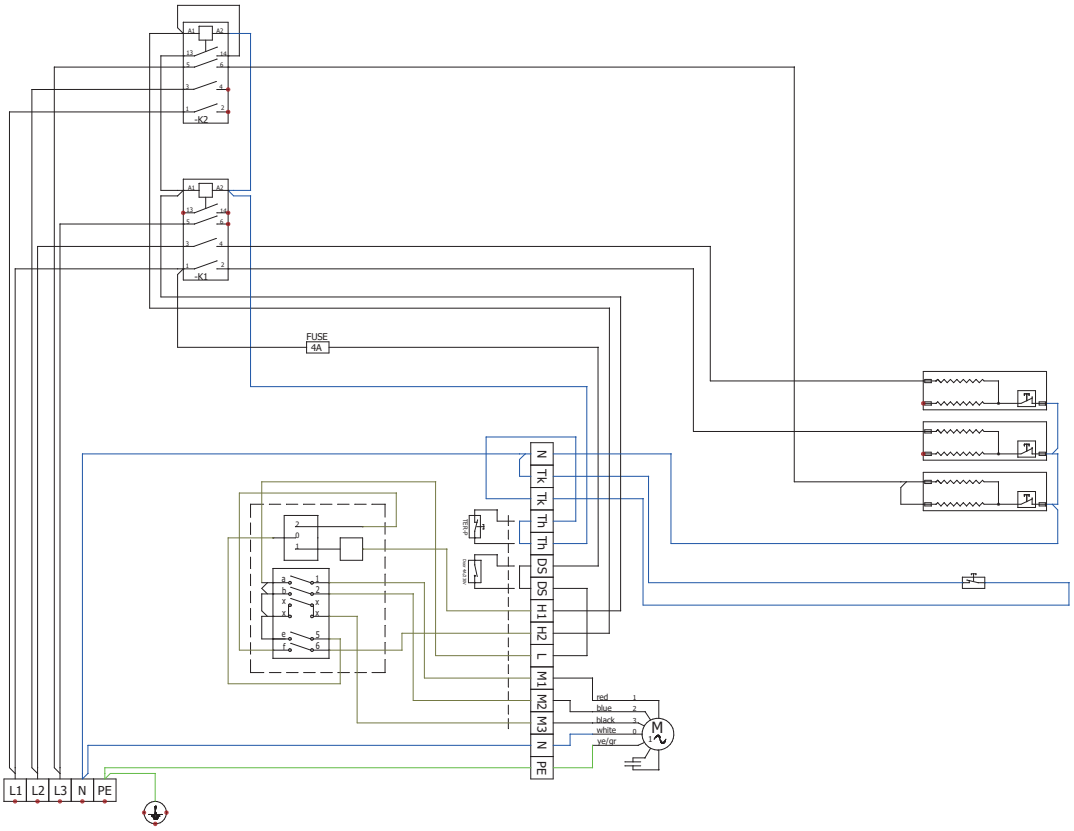
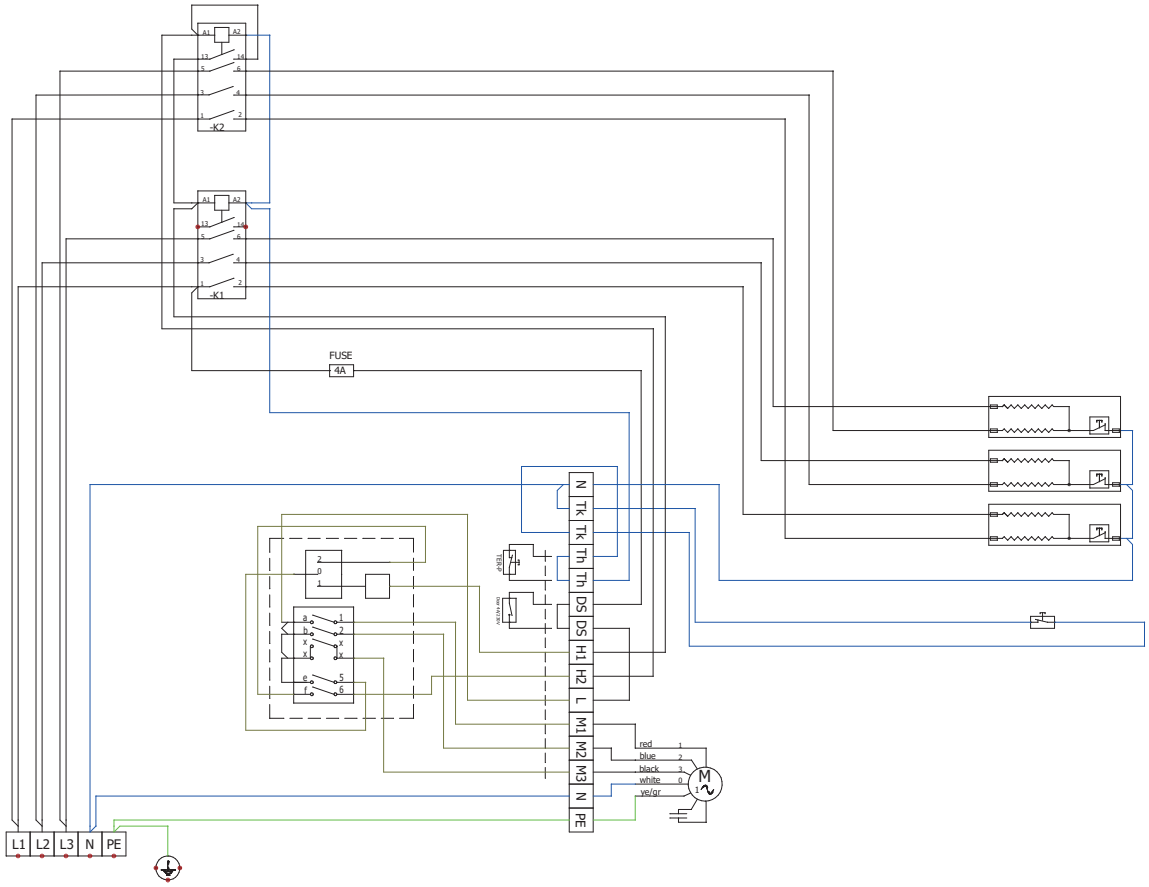


AC MOTOR

ELECTRICAL DIAGRAMS

AC MOTEUR

VCES4B100-E2AC-BA



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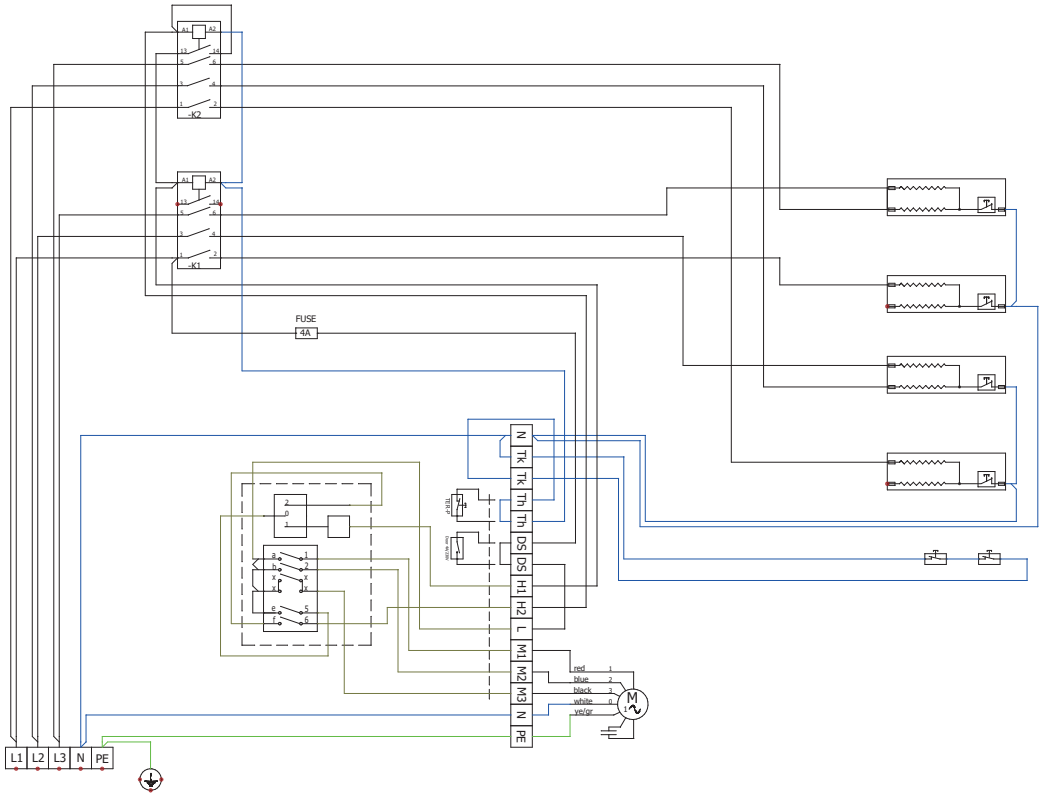
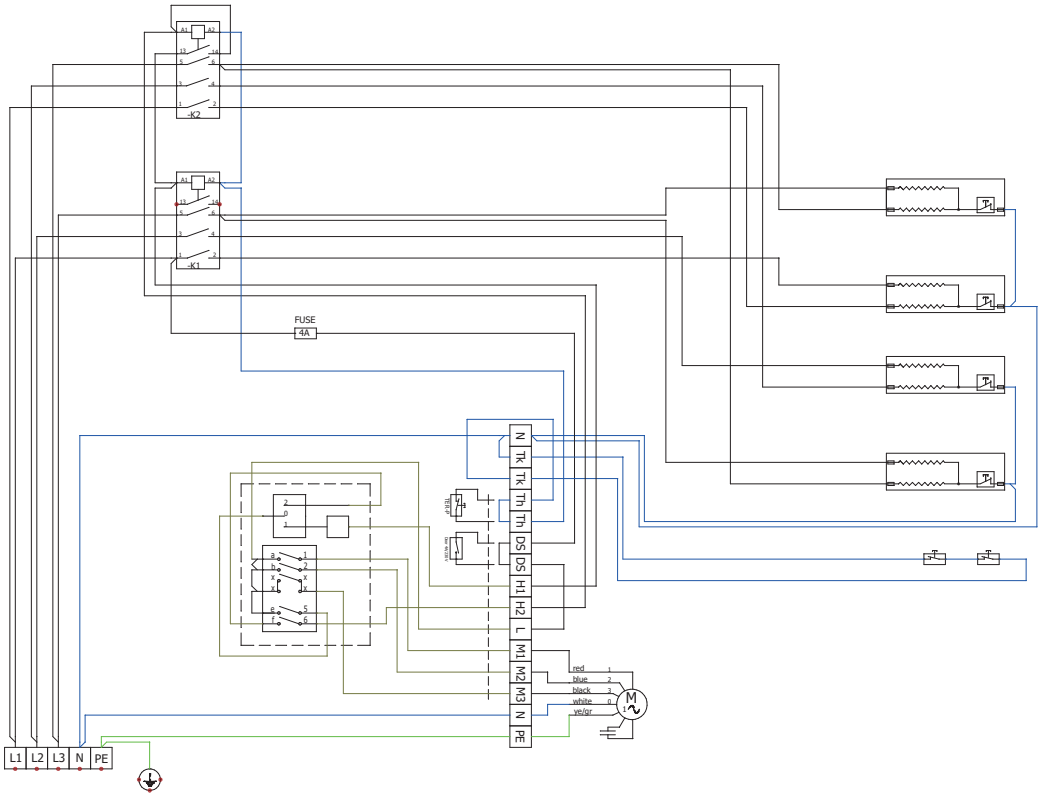


ELECTRICAL DIAGRAMS

VCES4B150-E1AC-BA



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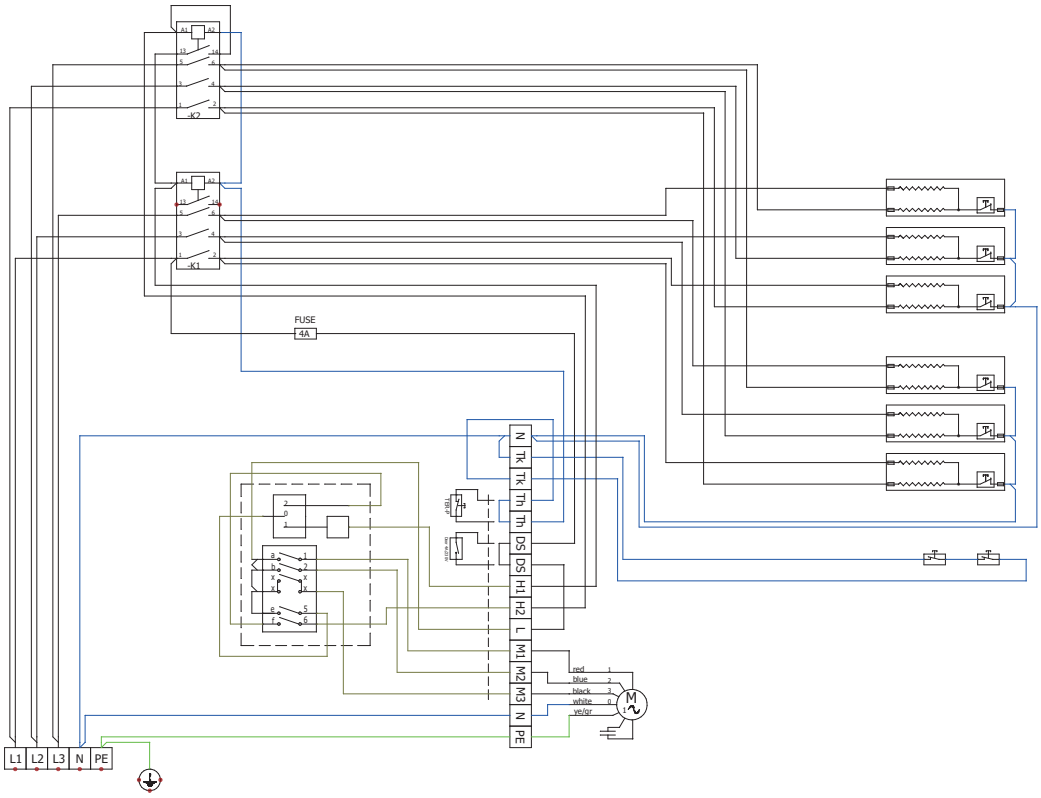
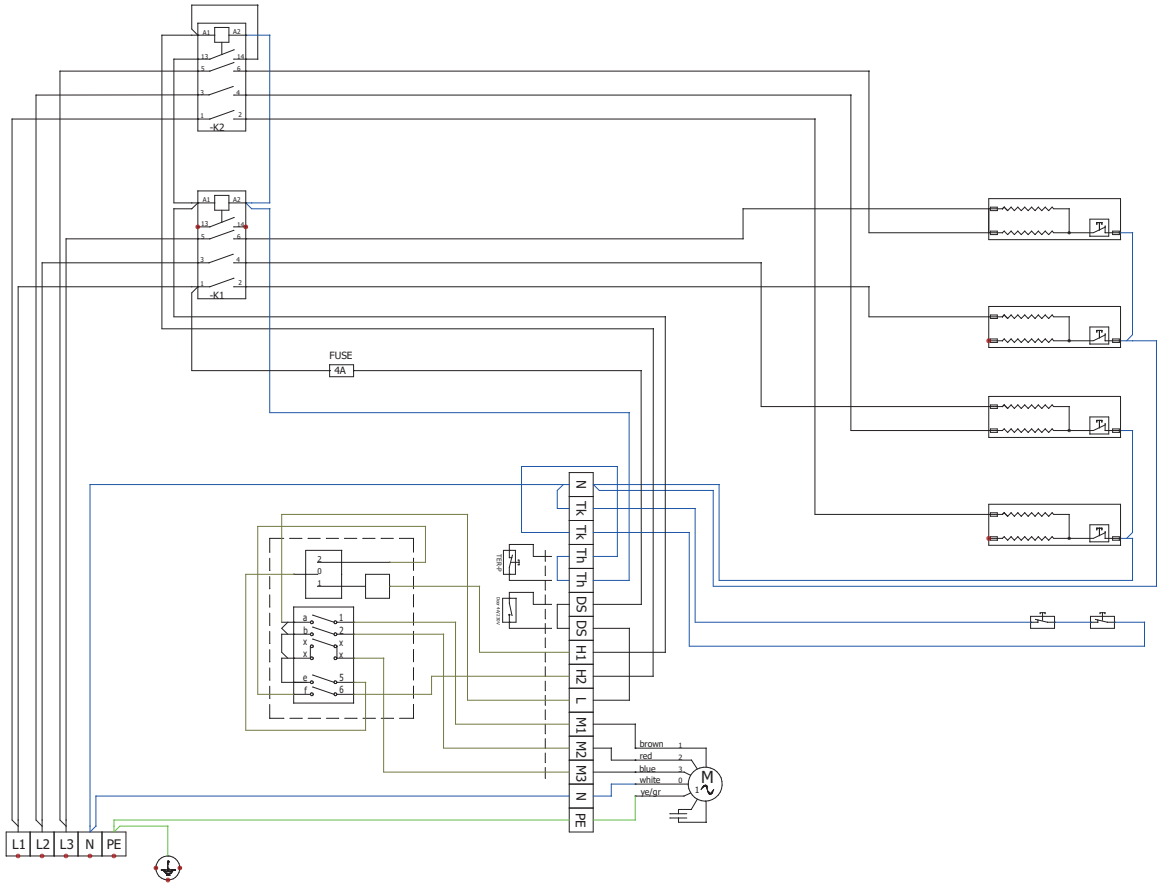


ELECTRICAL DIAGRAMS

AC MOTEUR

VCES4B200-E0AC-BA



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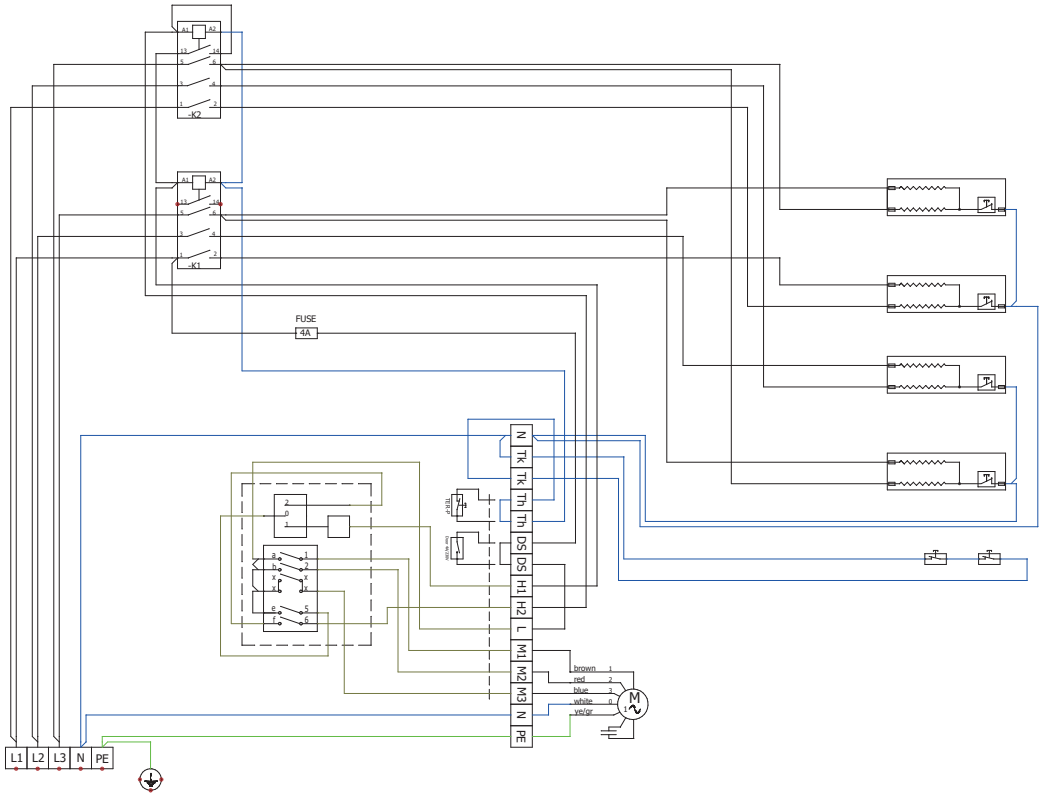
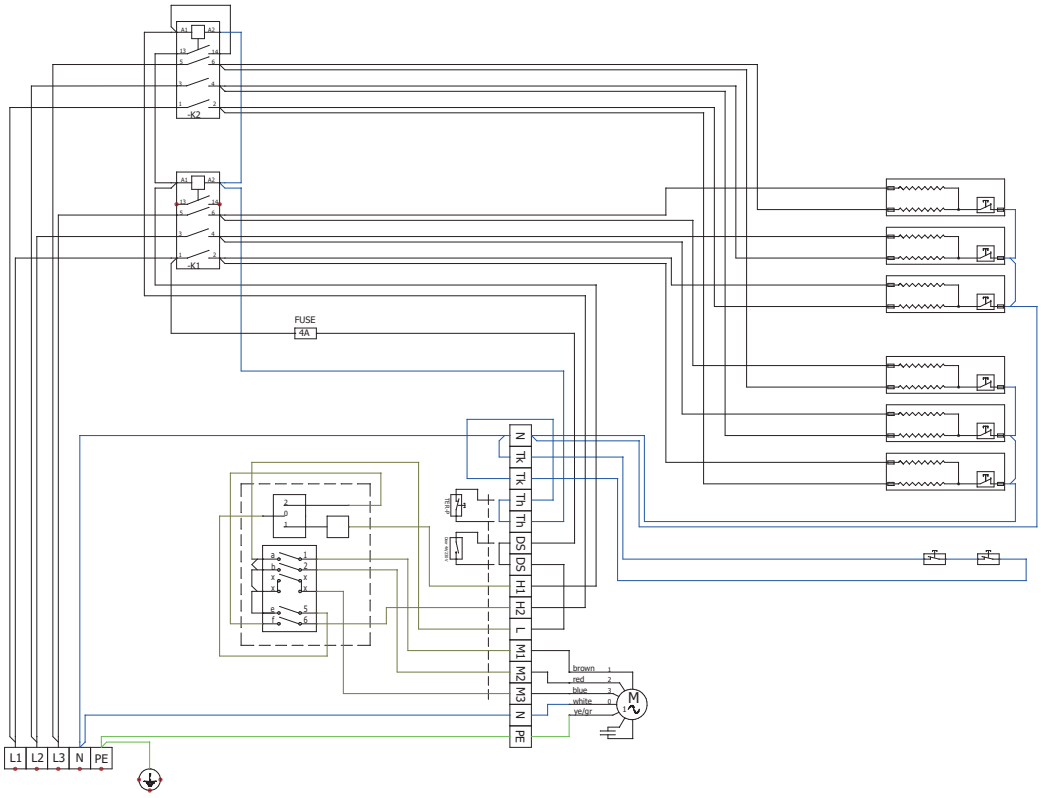


ELECTRICAL DIAGRAMS

VCES4B200-E2AC-BA



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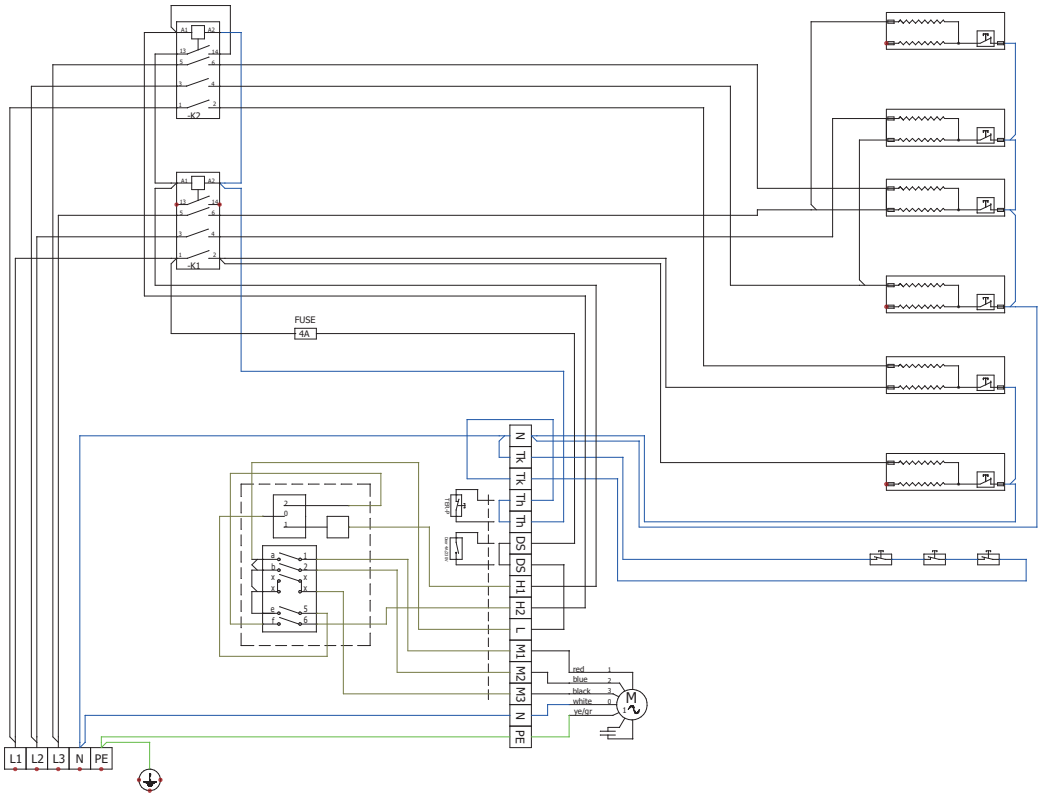
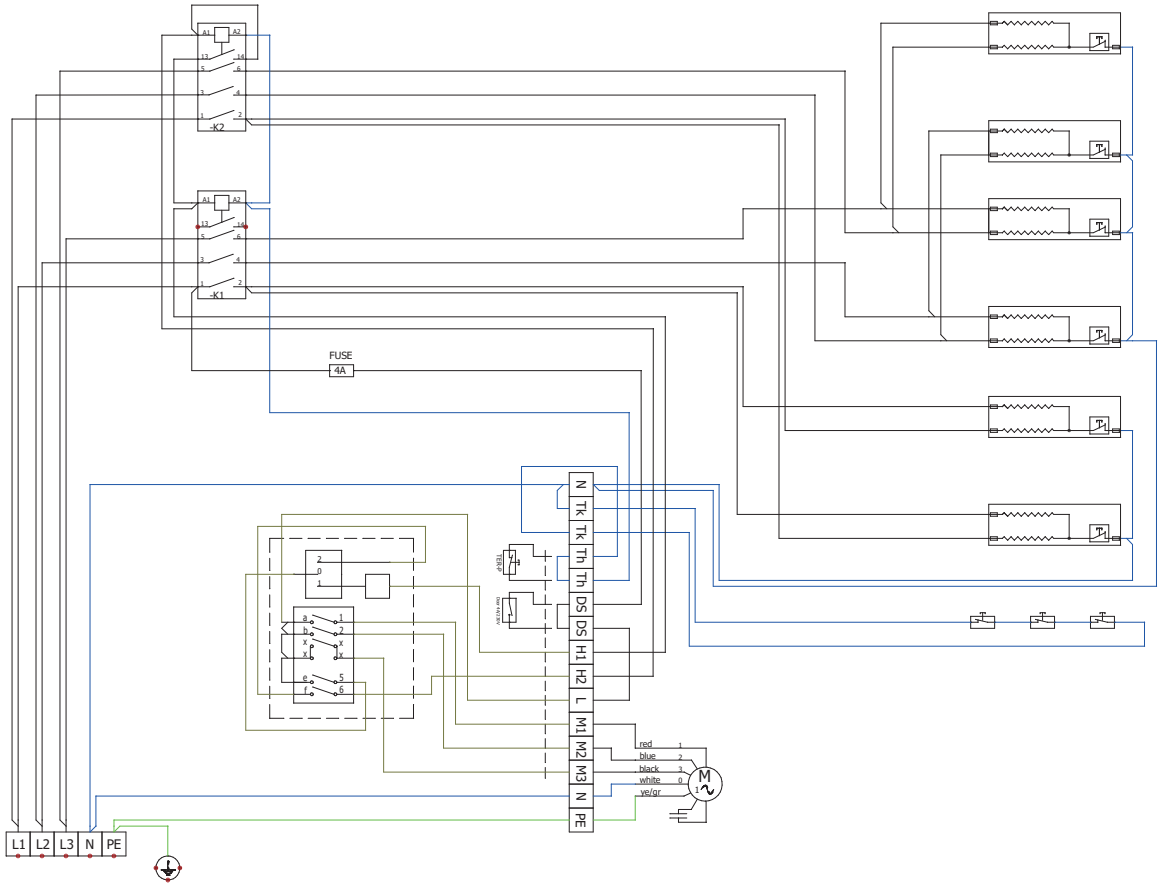


ELECTRICAL DIAGRAMS

VCES4B250-E1AC-BA



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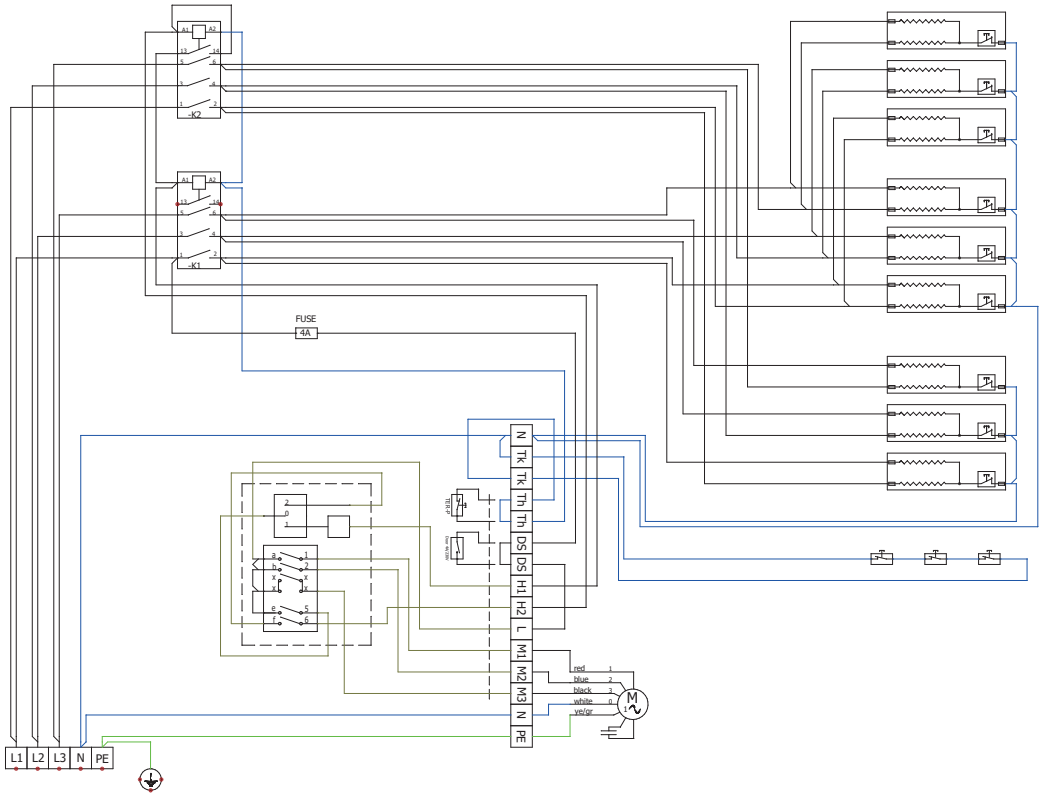
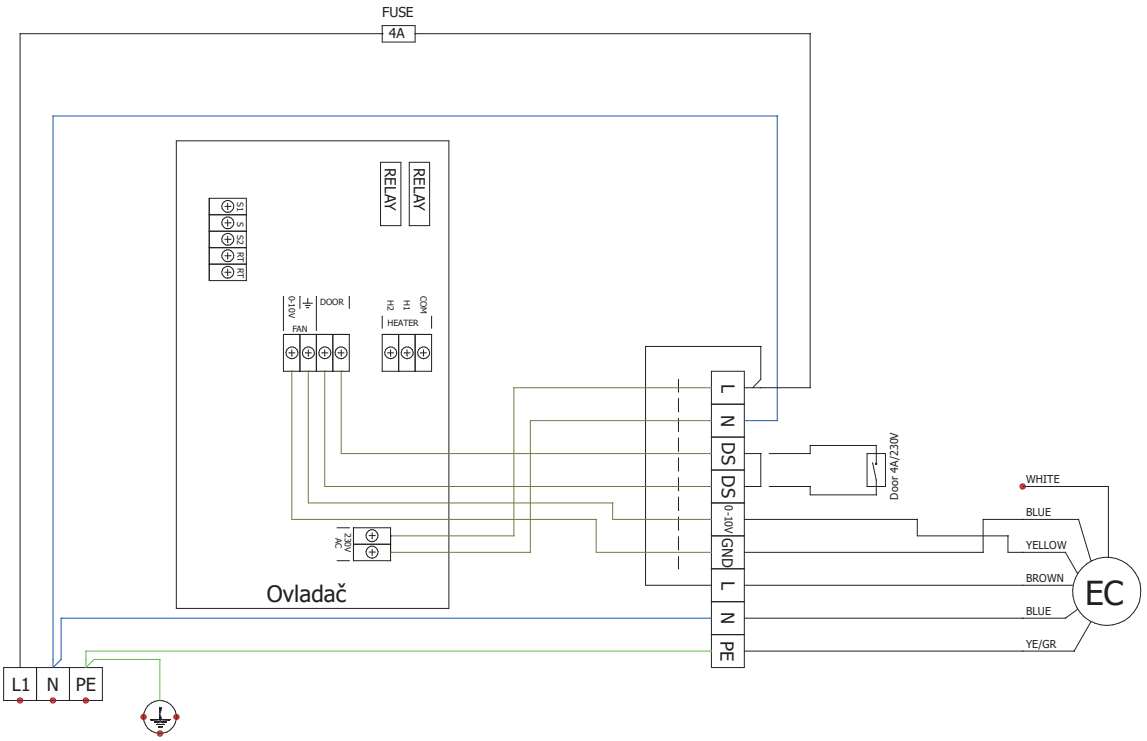


ELECTRICAL DIAGRAMS

VCES4Bxx-S0EC-BA



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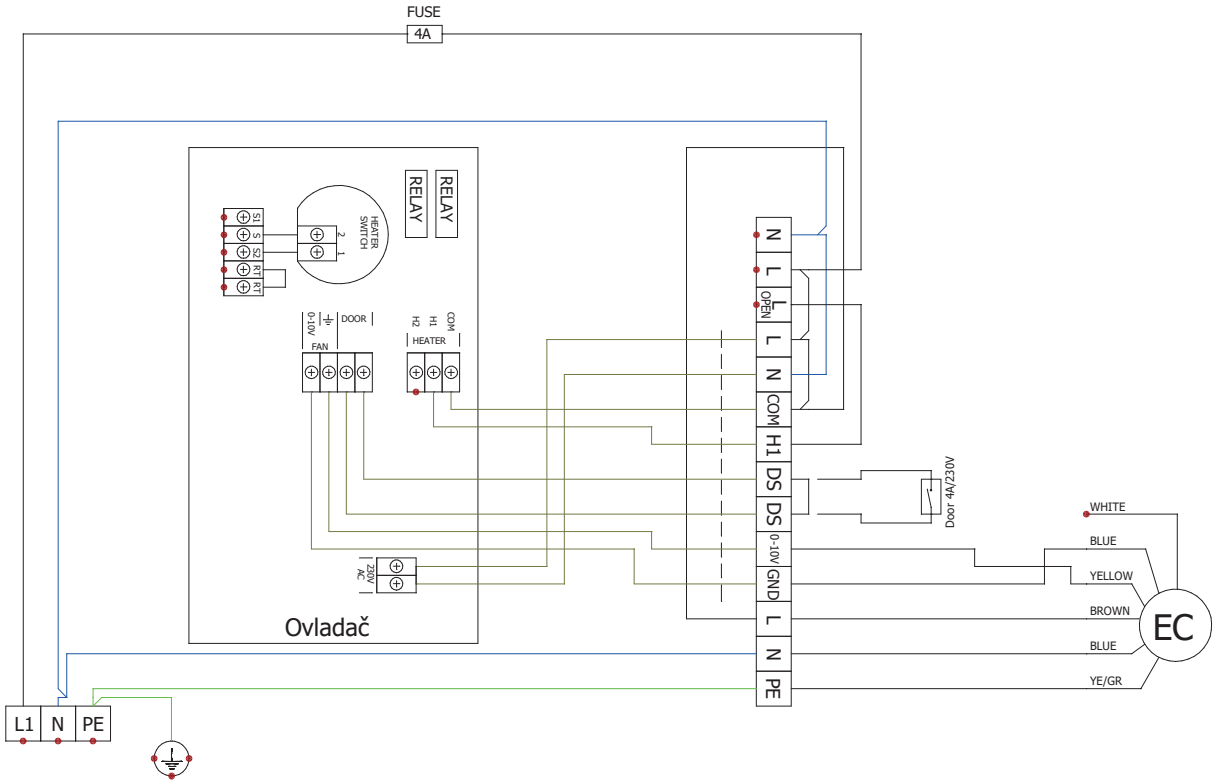
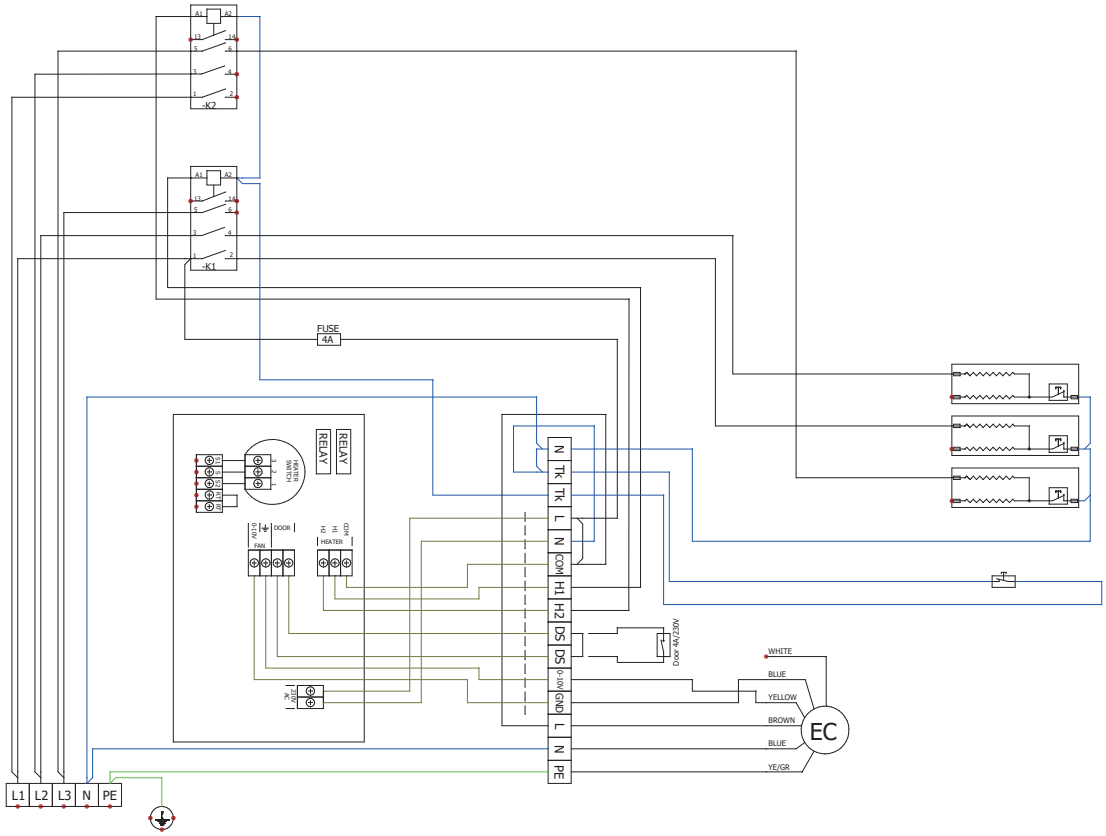


ELECTRICAL DIAGRAMS

EC MOTEUR

VCES4B100-E0EC-BA



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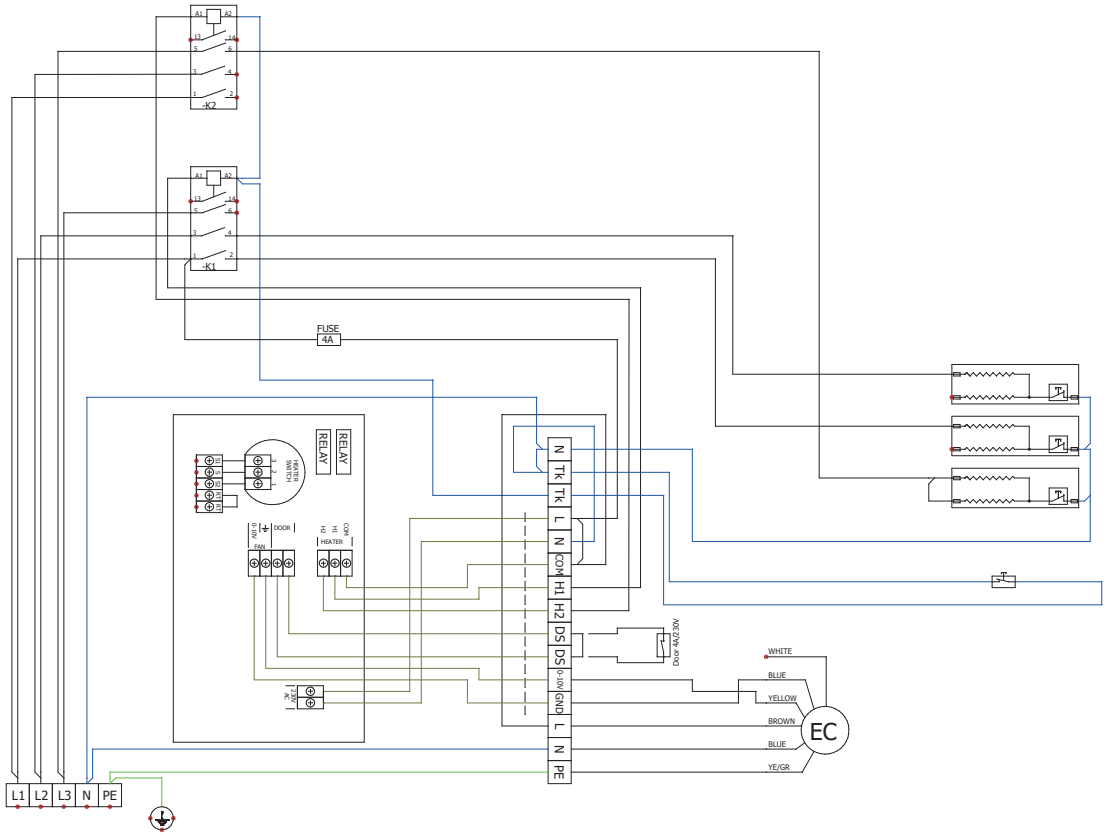
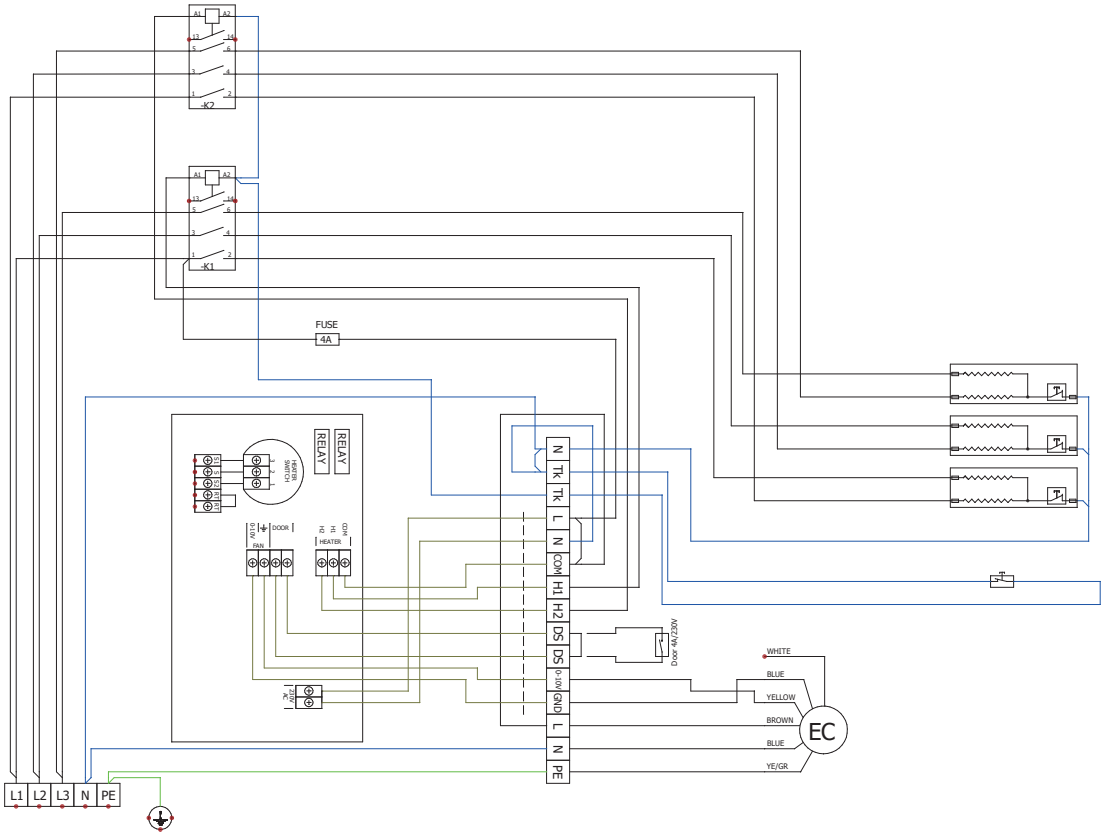


ELECTRICAL DIAGRAMS

VCES4B100-E2EC-BA



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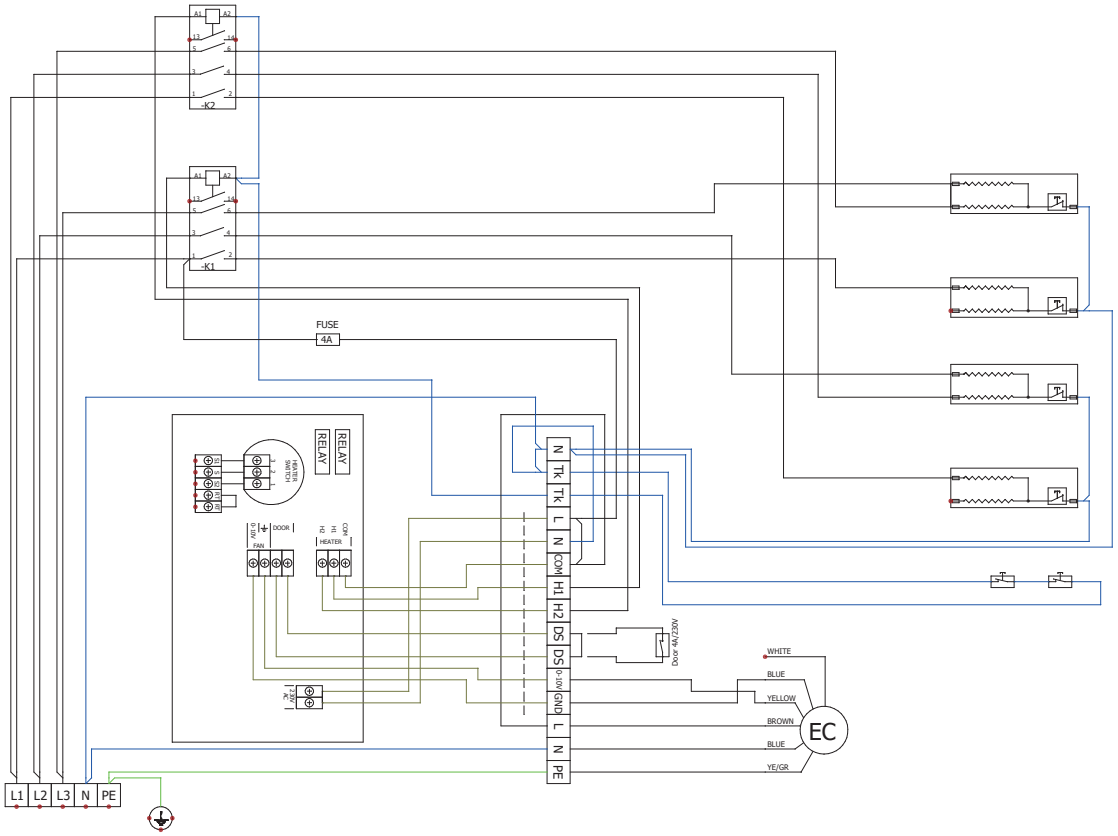
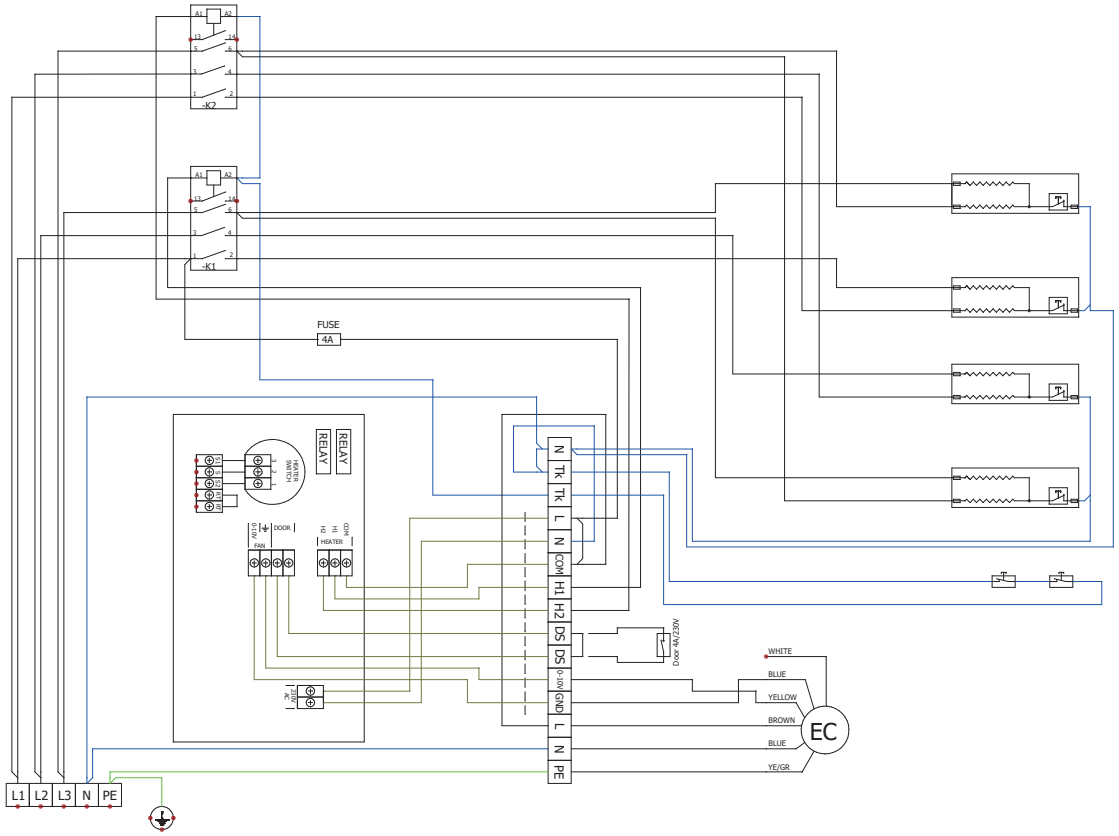


ELECTRICAL DIAGRAMS

EC MOTEUR

VCES4B150-E1EC-BA



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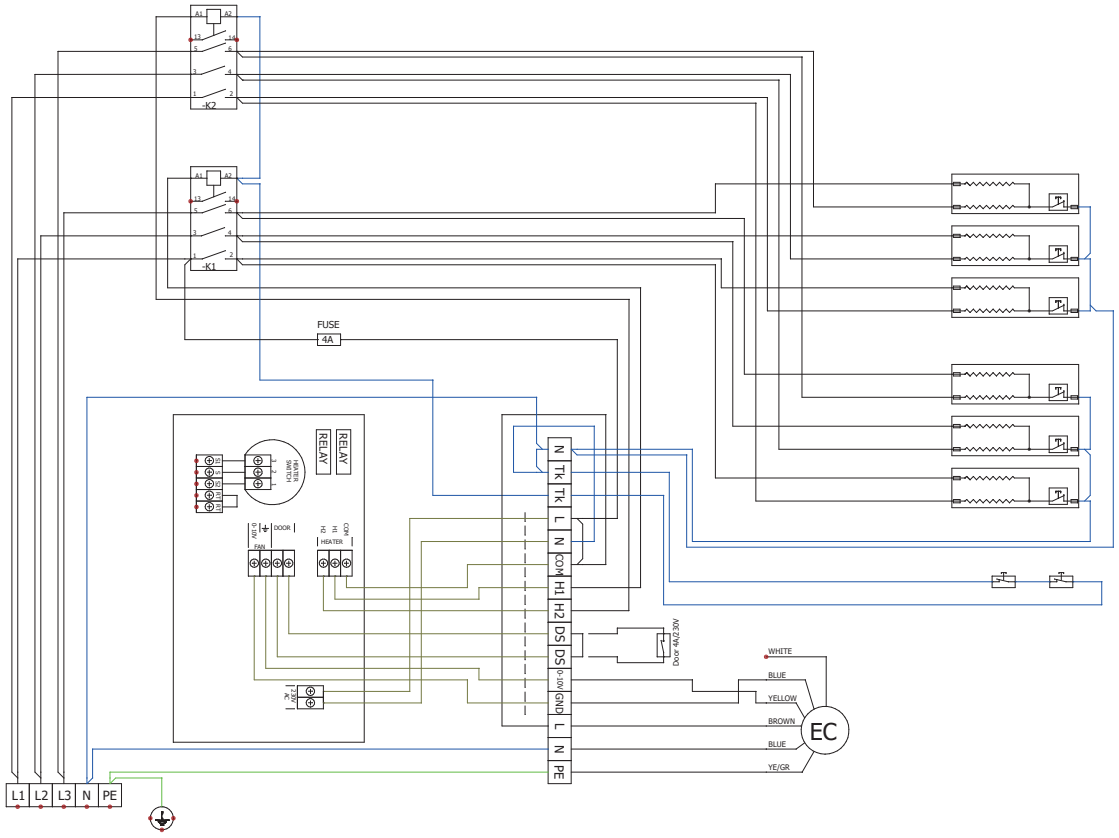
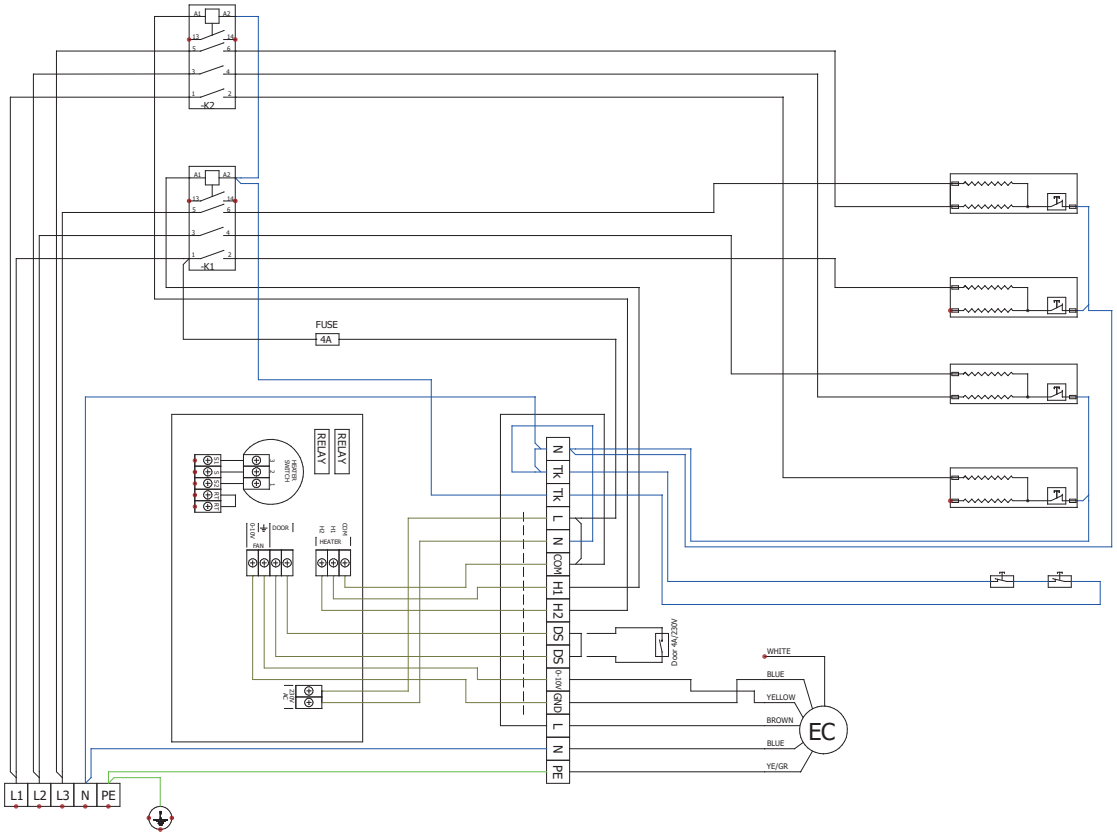


ELECTRICAL DIAGRAMS

VCES4B200-E0EC-BA



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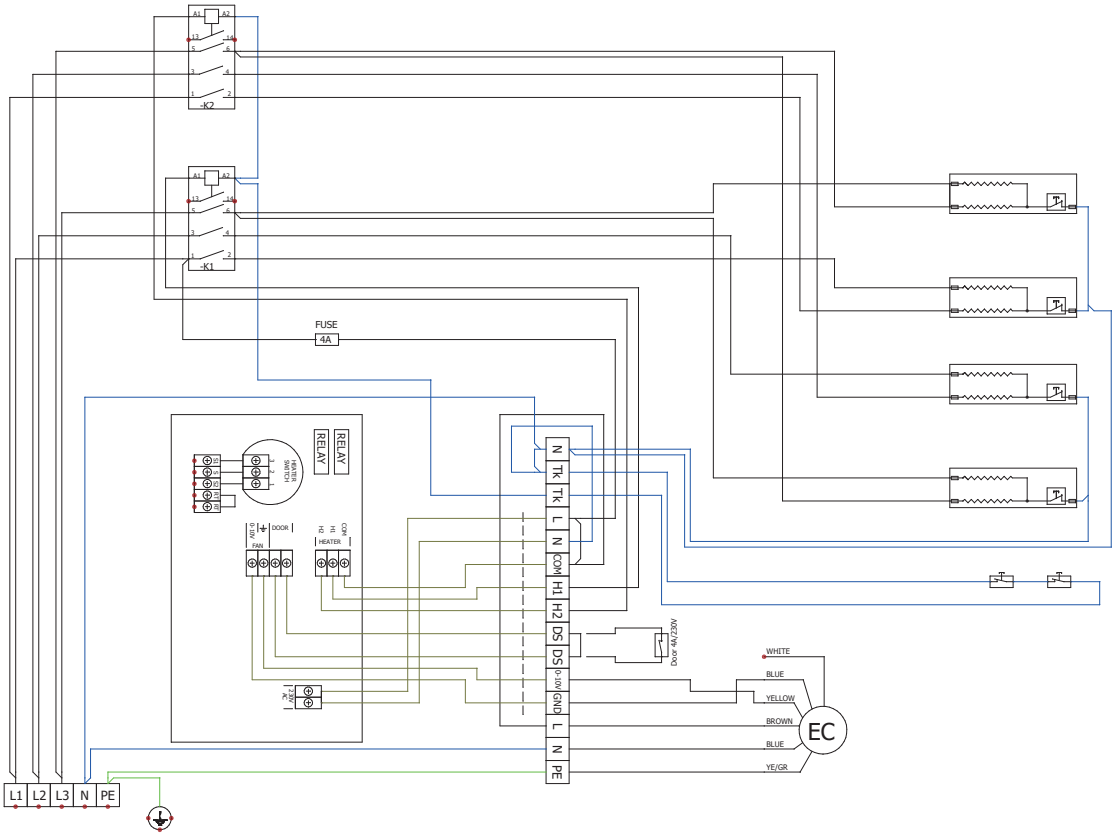
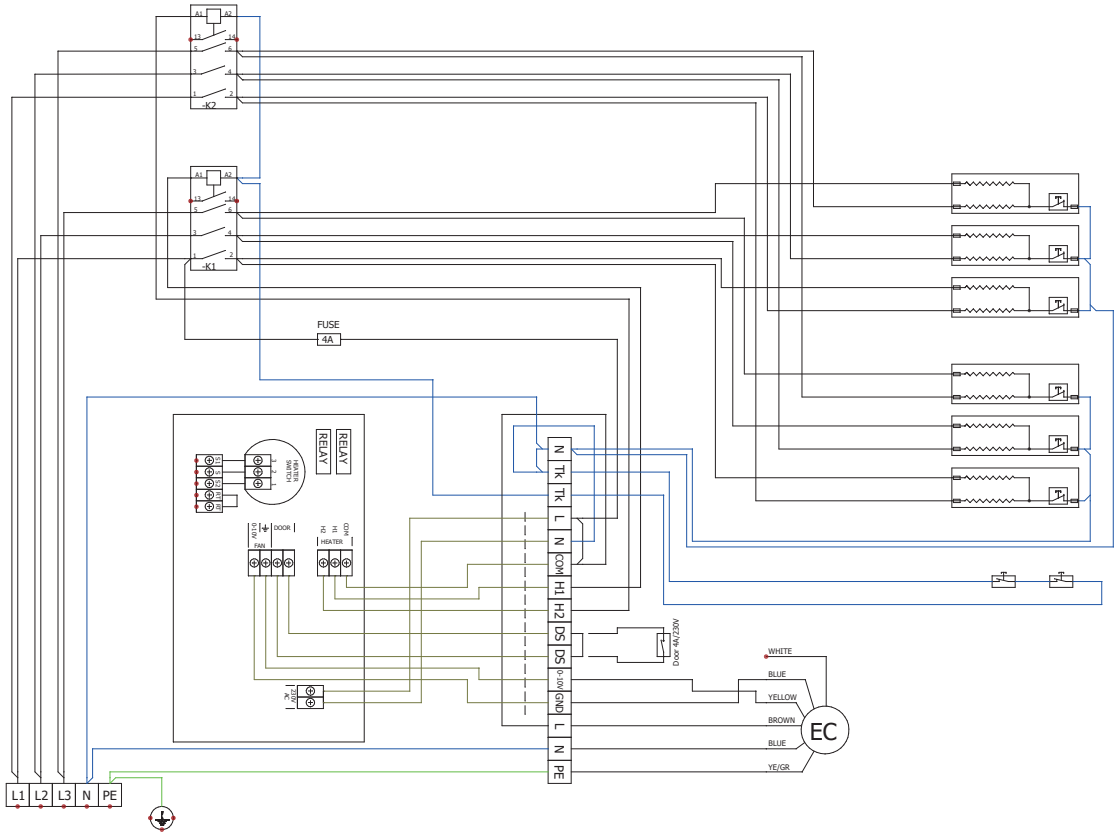


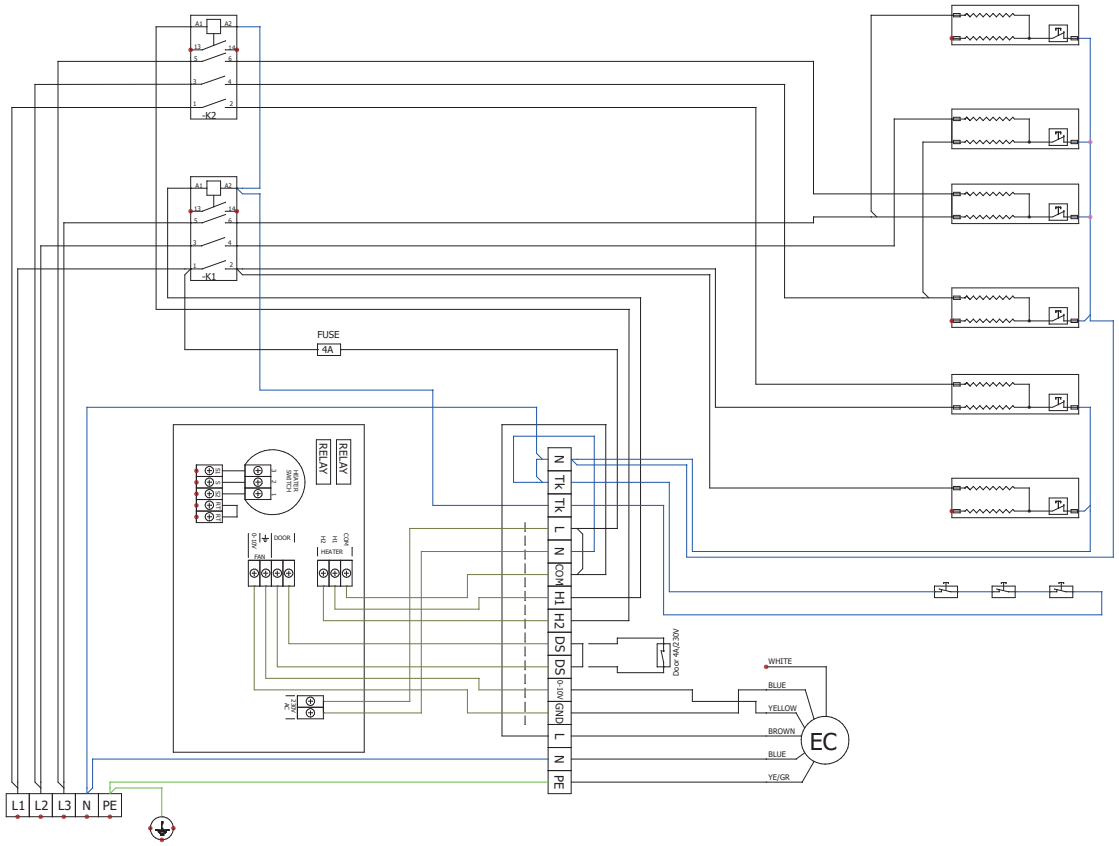
ELECTRICAL DIAGRAMS

EC MOTEUR

VCES4B200-E2EC-BA

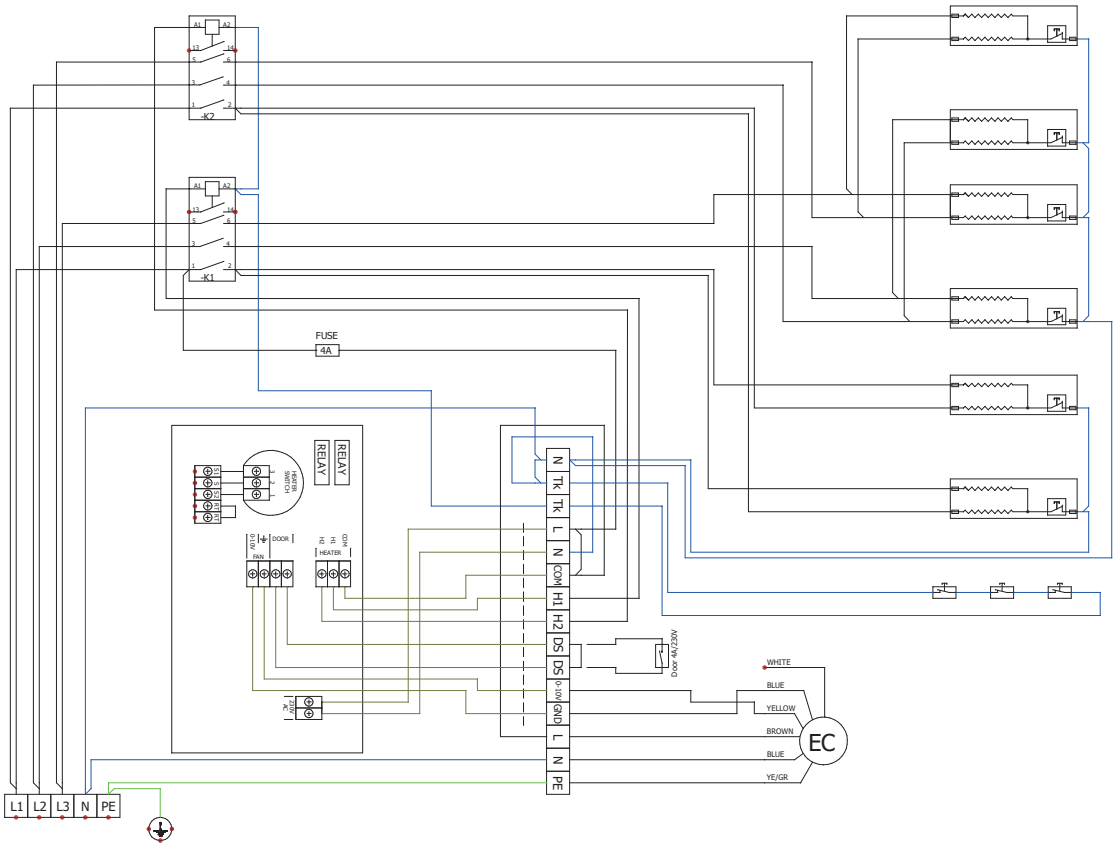


VCES4B250-E0EC-BA



ELECTRICAL DIAGRAMS

VCES4B200-E1EC-BA



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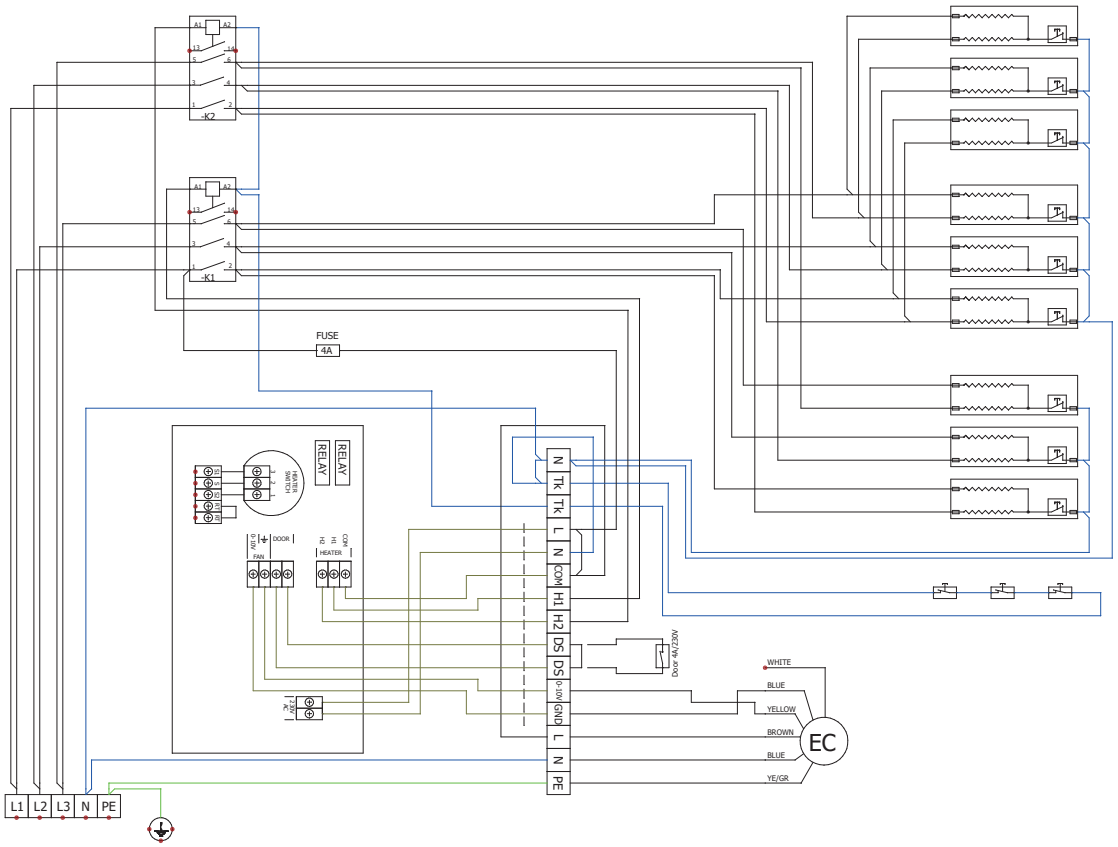

CONCLUSION

If you have any doubts or questions, please do not hesitate to contact our sales or technical support department.

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533 51 Pardubice - Rosice
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