

Automation upgrade

LTR-2 eco EDA -> eAir

NOTE!

Fan rotation guards must be disabled in the new eAir settings.

Warning!

According to regulations, an ordinary electricity consumer is only allowed to perform some minor service tasks.

**According to Finnish regulations,
a list of the allowed tasks can be found at the Tukes home page (www.tukes.fi).**

Always make sure that the power supply is turned off before opening the service door.

Wait two minutes before beginning the maintenance work. The fans rotate for some time by themselves, and the heating element may be hot even if the power supply of the ventilation unit is switched off. Electrical housing may be opened only by a trained electrician.

Electrical installations must comply with local regulations.

**Continuously check and compare the electrical diagrams at the end
of this instruction as the upgrade progresses!**

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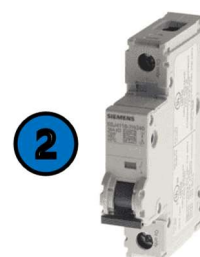
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Remove **the service door (1)** by releasing the locks.



Cut **the power to the unit (2)** (and other power supplies if available).

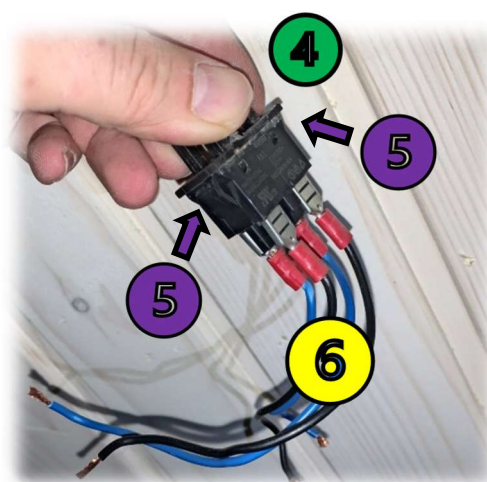


Remove **the cover to the electrical box (3)**.

NOTE! Ensure that no voltage is occurring in the electrical box before proceeding!

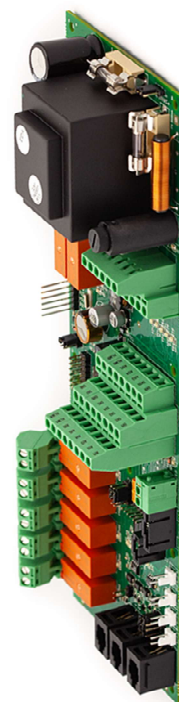


Remove **the main switch (4)** by pressing **the clips (5)**.
Disconnect and remove **the wires (6)** from the main switch.

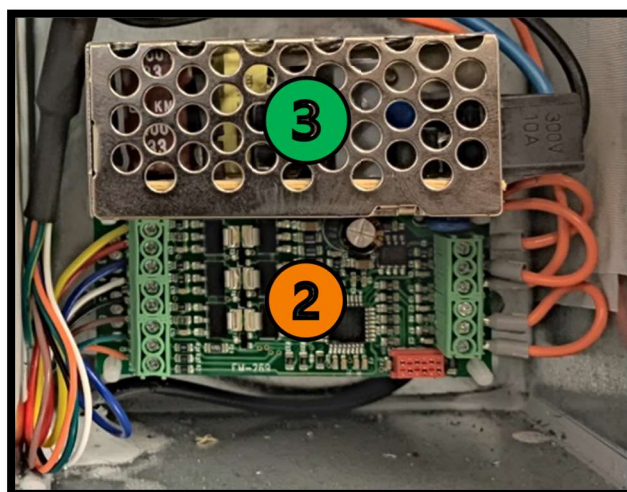


Mark all wires/sensors according to the markings and disconnect them from the **EDA main board (1)**.

1

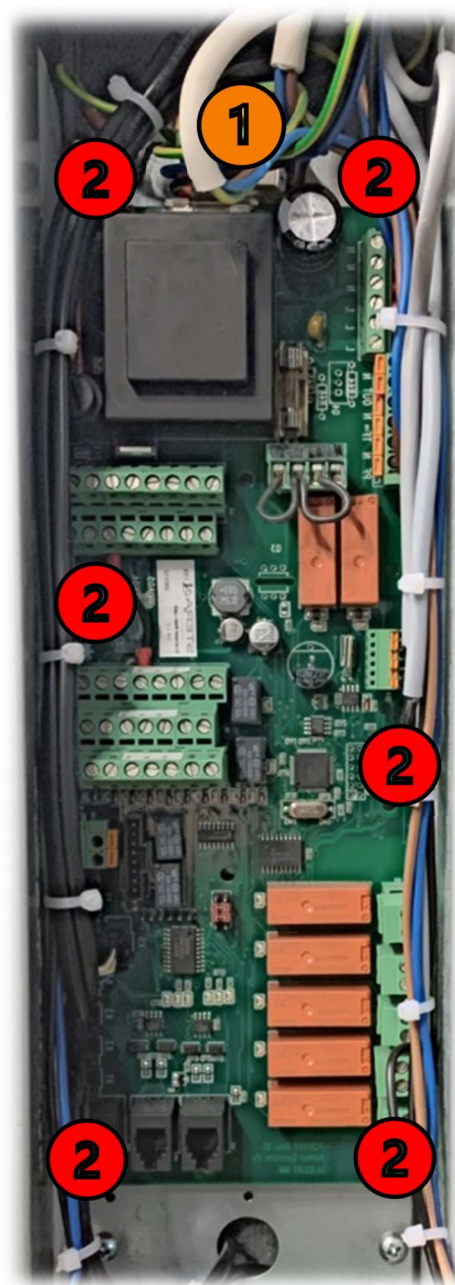
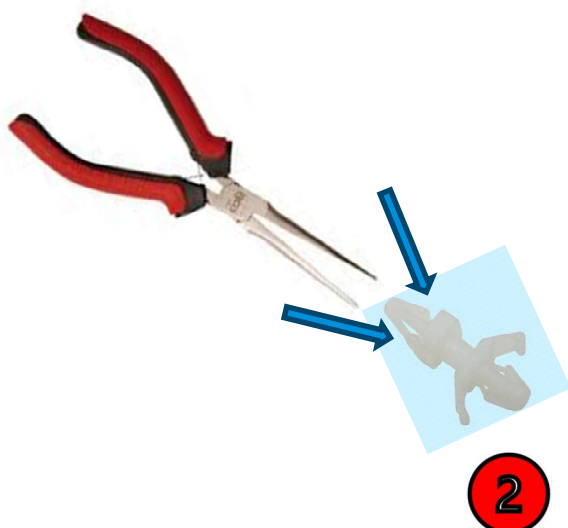


Disconnect the wires (that were connected to the EDA main board) from **the HRW circuit board (2)** and **the transformer (3)**.



Disconnect the main power wires from **the terminals (1)**.

Remove the EDA main board, by pressing **the PCB supports (2)** with pliers and by pulling.



Release **the after heater (1)**, by releasing the screws, and remove the cover.

Ignore if the unit has a water coil after heater installed.



Remove the old triac control cable and install **the new triac control cable (2)** (40030313).

Ignore if the unit has a water coil after heater installed.

Re-install **the after heater (1)**.

Ignore if the unit has a water coil after heater installed.



Remove **the old extract air sensor (3)** and the cable (two screws).

3



Install **the new extract air sensor (4)** (40029224).

4



Drill new 4,5mm holes in the electrical box for **the PCB supports (1)** (40030936) for the **eAir main board (2)** (40031093).



Install the **eAir main board (2)** (40031093) in the electrical box.

Install the **terminal package (3)** (40029344) in the electrical box.

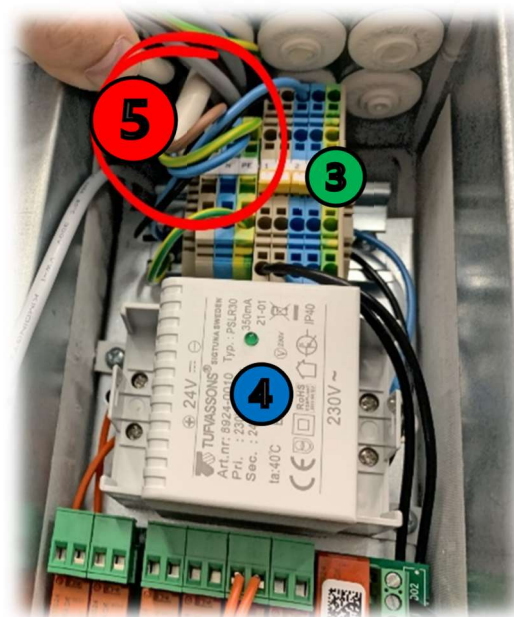
Install the **power supply (4)** (40029195) in the electrical box.

Connect **the main power cable to the terminals (5)**.

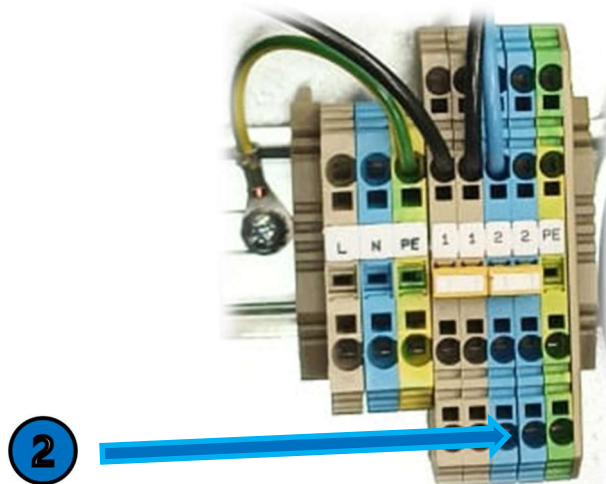
L: Brown

PE: Green/yellow

N: Blue



Connect **the blue wire** from the electrical after heater to **the blue "2" connection terminal (2)**.
Ignore if the unit has a water coil after heater installed.

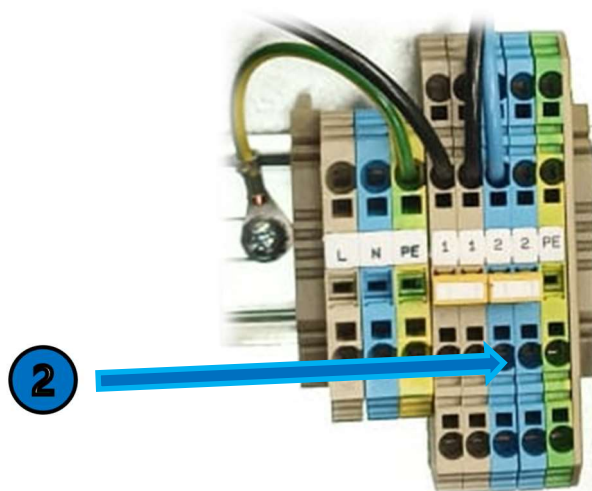


Connect **the brown wire** from the electrical after heater to **"DO2" (3)**.
If there is a water coil after heater installed, the circulation pump power wire (L) would be connected here.

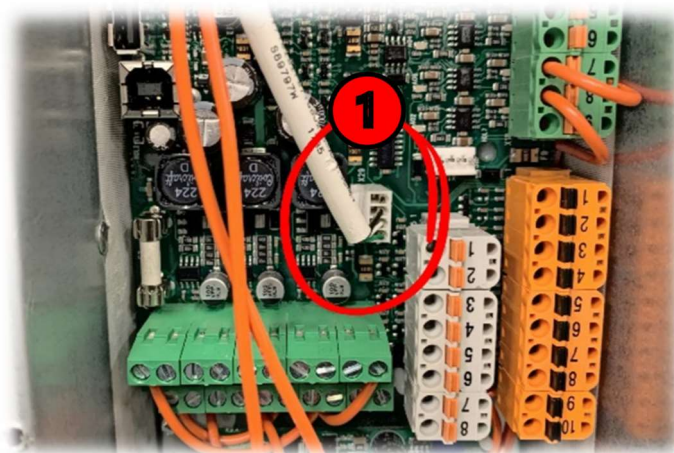


Connect **the wires marked "1"** in the fan power cables to **"DO1" (1)**.

Connect **the wires marked "2"** from the fan power cables to **the blue "2" connection terminal (2)**.



Connect **the extract air sensor (1)** (40029224) to the main board (X29).



Connect **the sensors (2)** to the main board according to the markings.

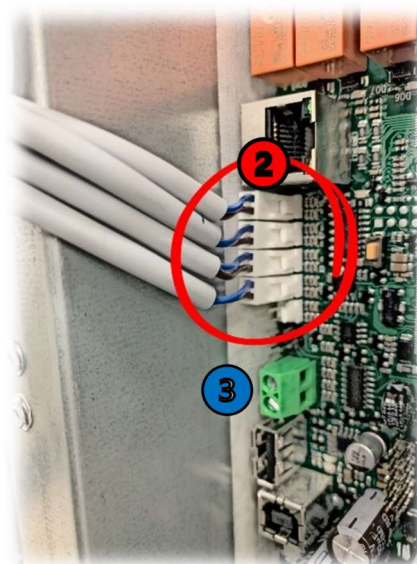
X1, TE01: Outside air

X2, TE05: HRW supply air

X3, TE10: Supply air

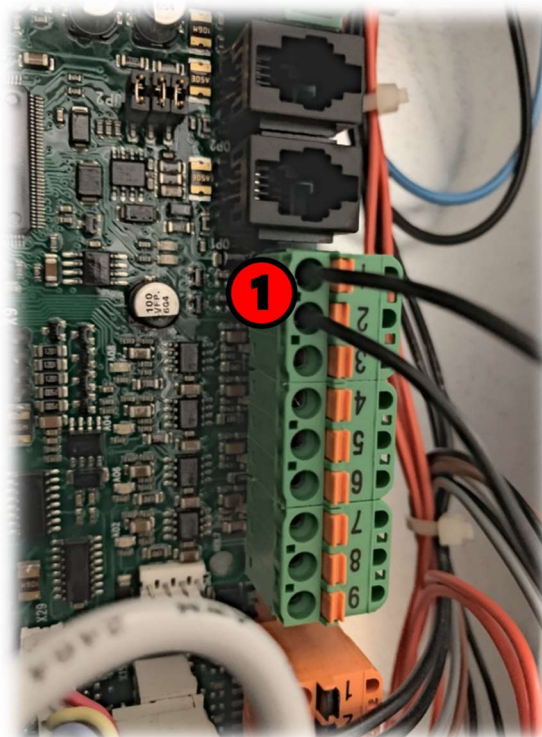
X4, TE32: Waste air

X12, TE45: Return water sensor (3),
if the unit has a water coil after heater installed.



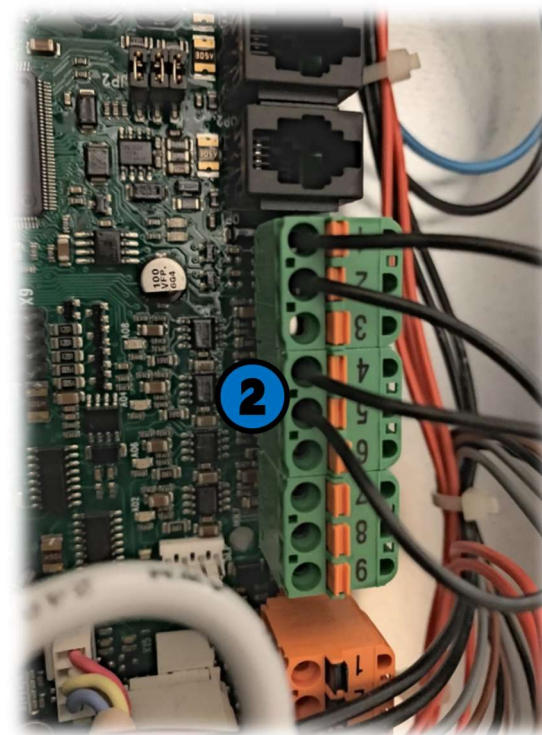
Connect **the wires from the supply air fan control cable (1)** to the main board.

- 1: 1 (brown)
- 2: 2 (black)



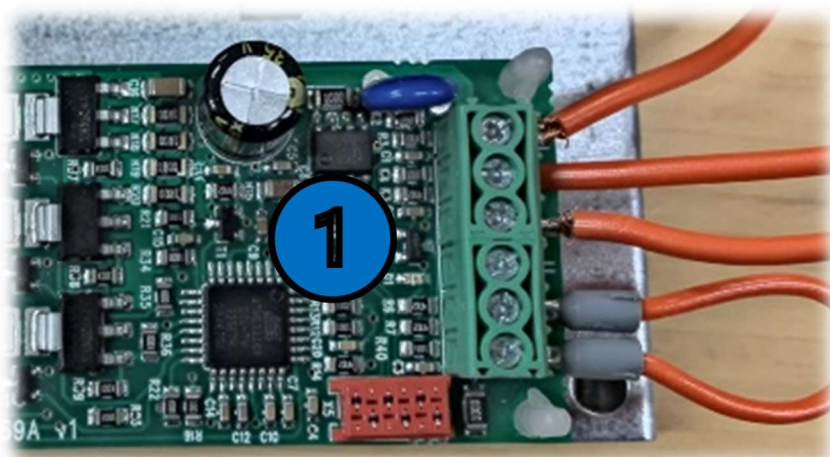
Connect **the wires from the extract air fan control cable (2)** to the main board.

- 4: 1 (brown)
- 5: 2 (black)



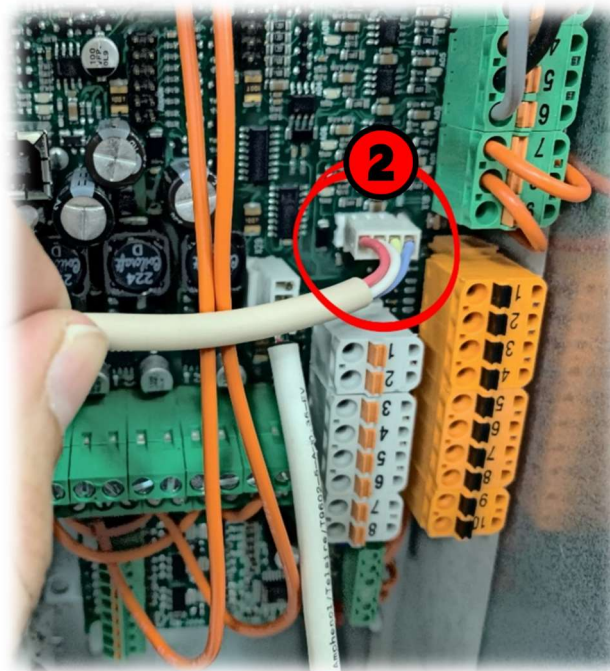
Connect **the HRW circuit board (1)** to the eAir main board according to the electrical diagram (**page 18**).

The old transformer won't be used anymore!

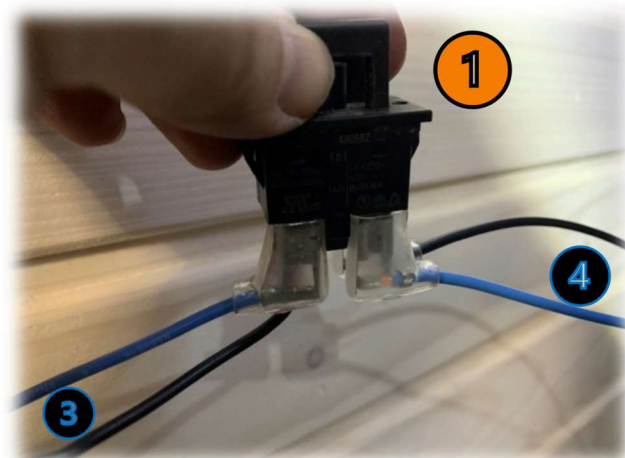


Connect **the after heater control cable (2)** to the main board (X17).
Ignore if no electrical after heater installed.

Connect internal and other components (for example actuator for water heating coil or cooling coil) according to the electrical diagrams (pages 17-20).

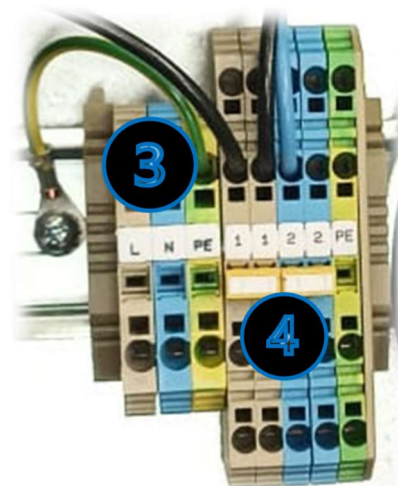


Connect the pairs of wires with flat connectors, (40028776, 40028777) to **the main switch (1)**, install the main switch and connect the wires to **the connection terminals (2)**.

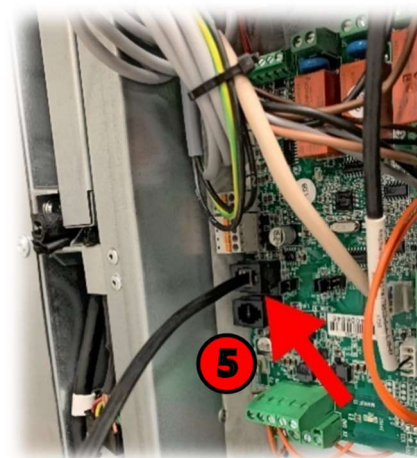


L: Black (3)
N: Blue (3)

1: Black (4)
2: Blue (4)



Connect **the display cable (5)** to the main board. Close the cover to the electrical box.



Replace the old display with **the new display (1)** (40031114).



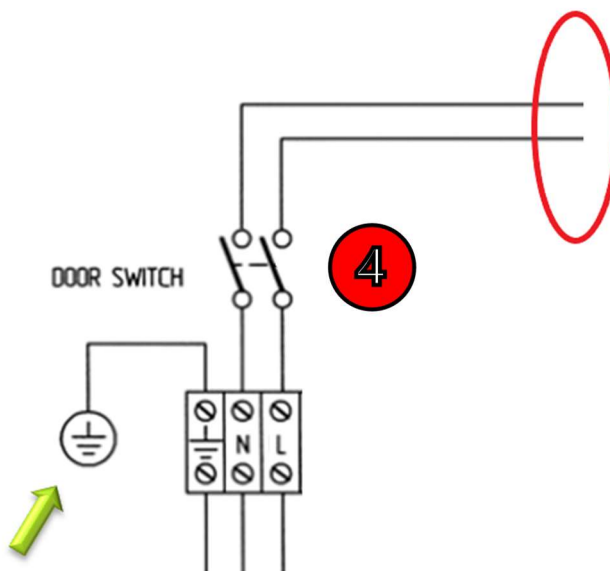
Install the **WiFi module (2)** (10025202).

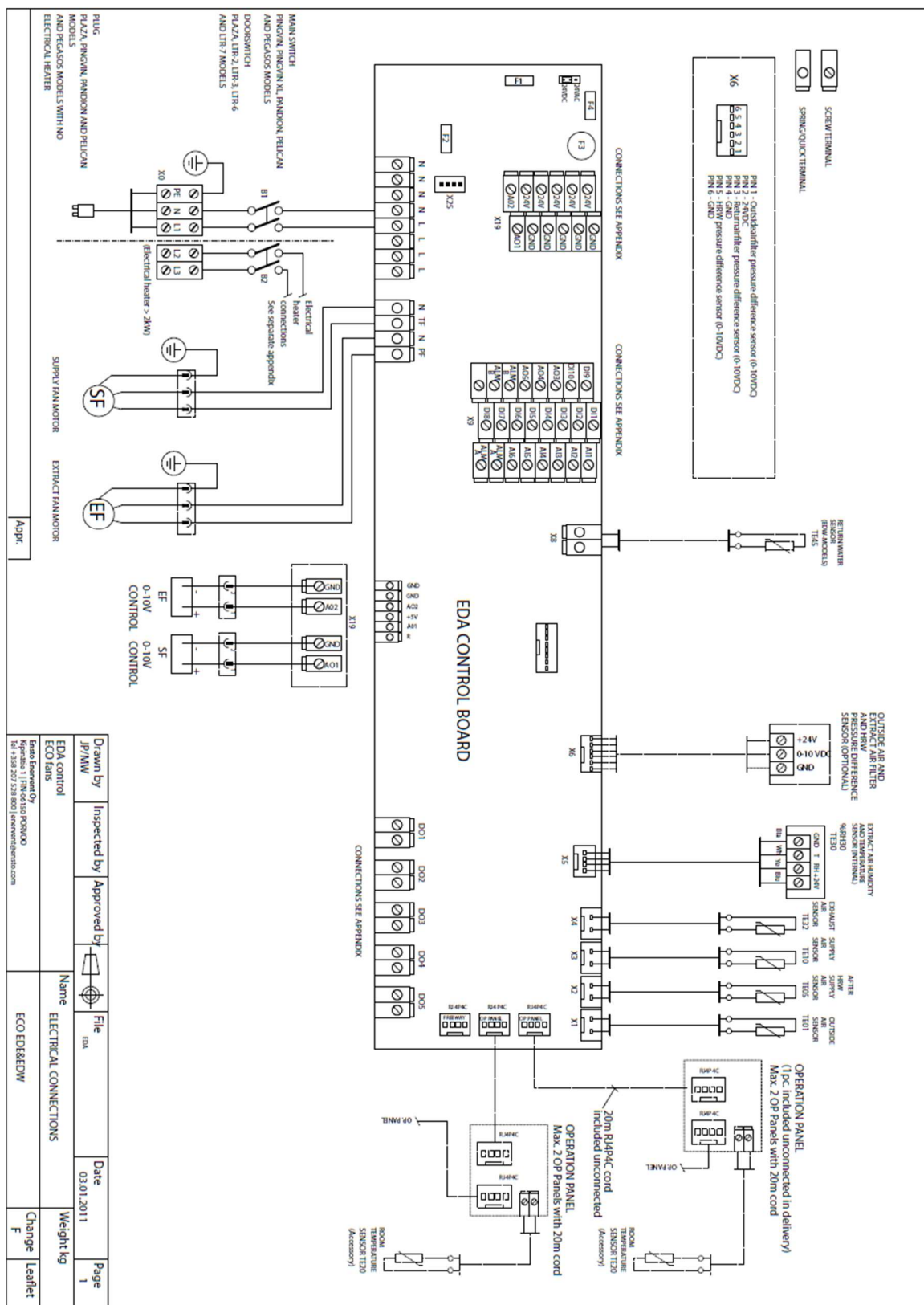


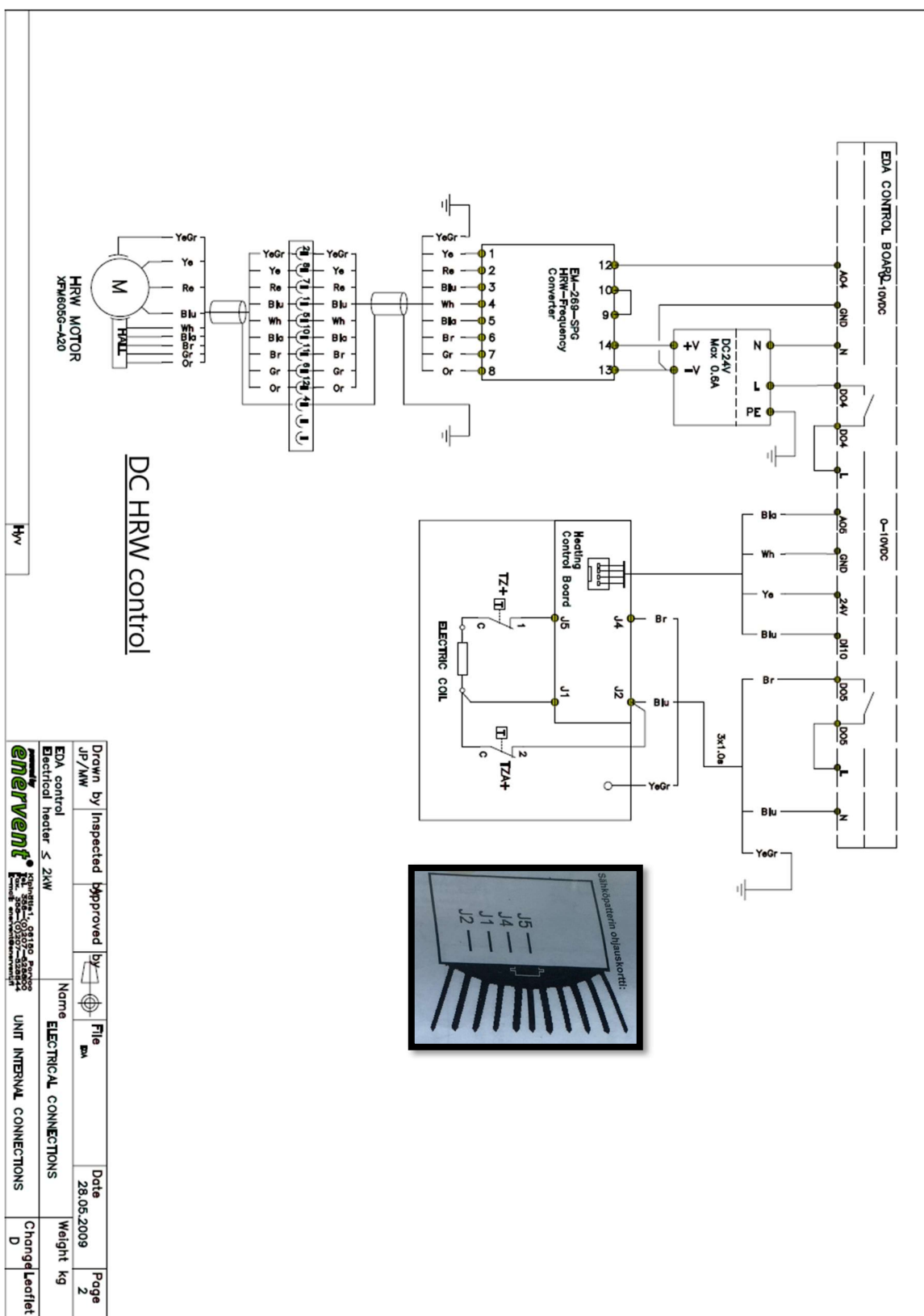
Install **the new type plate sticker (3)**.



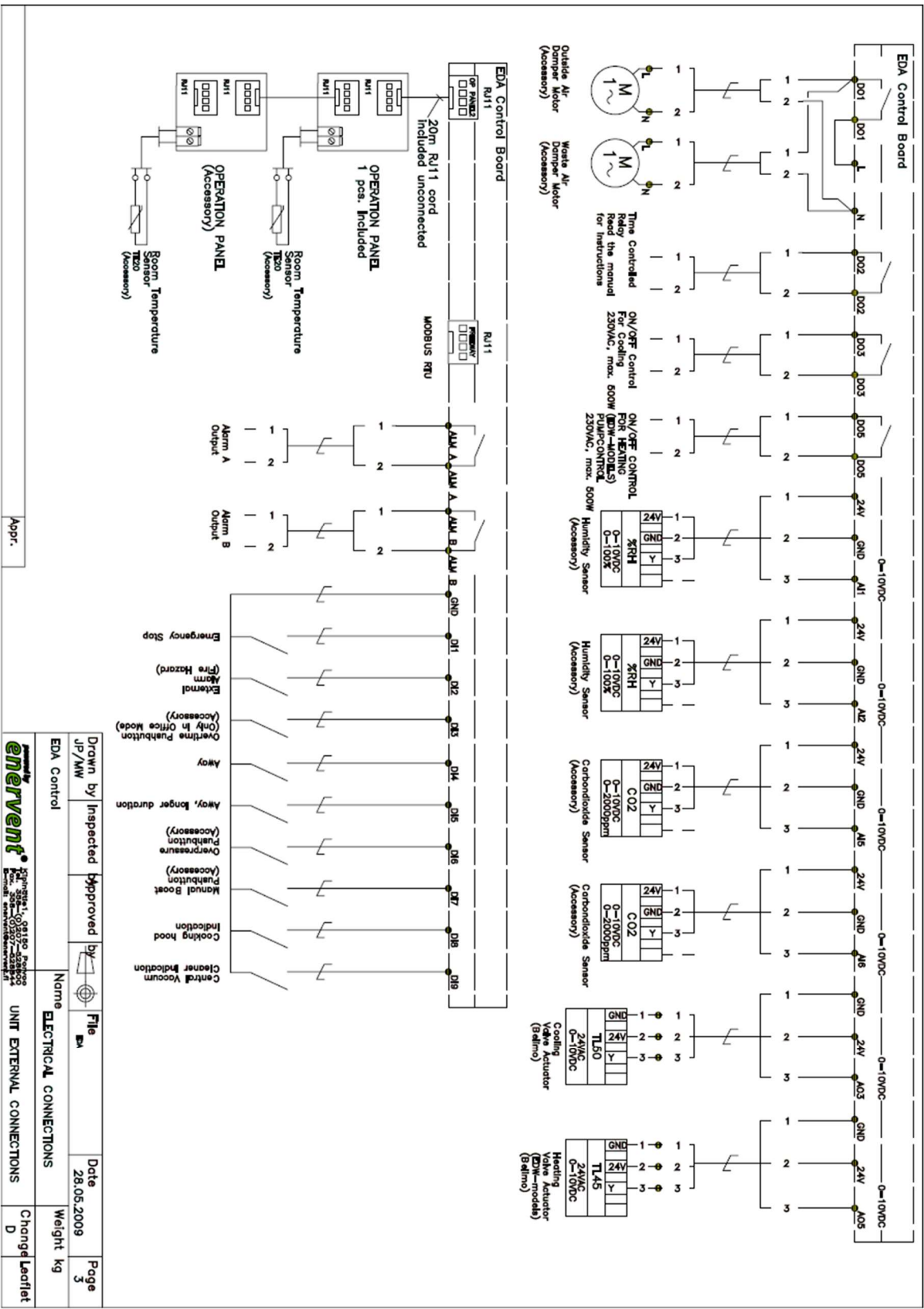
Press down **the main switch (4)** and perform insulation and ground continuity test according to regulations.



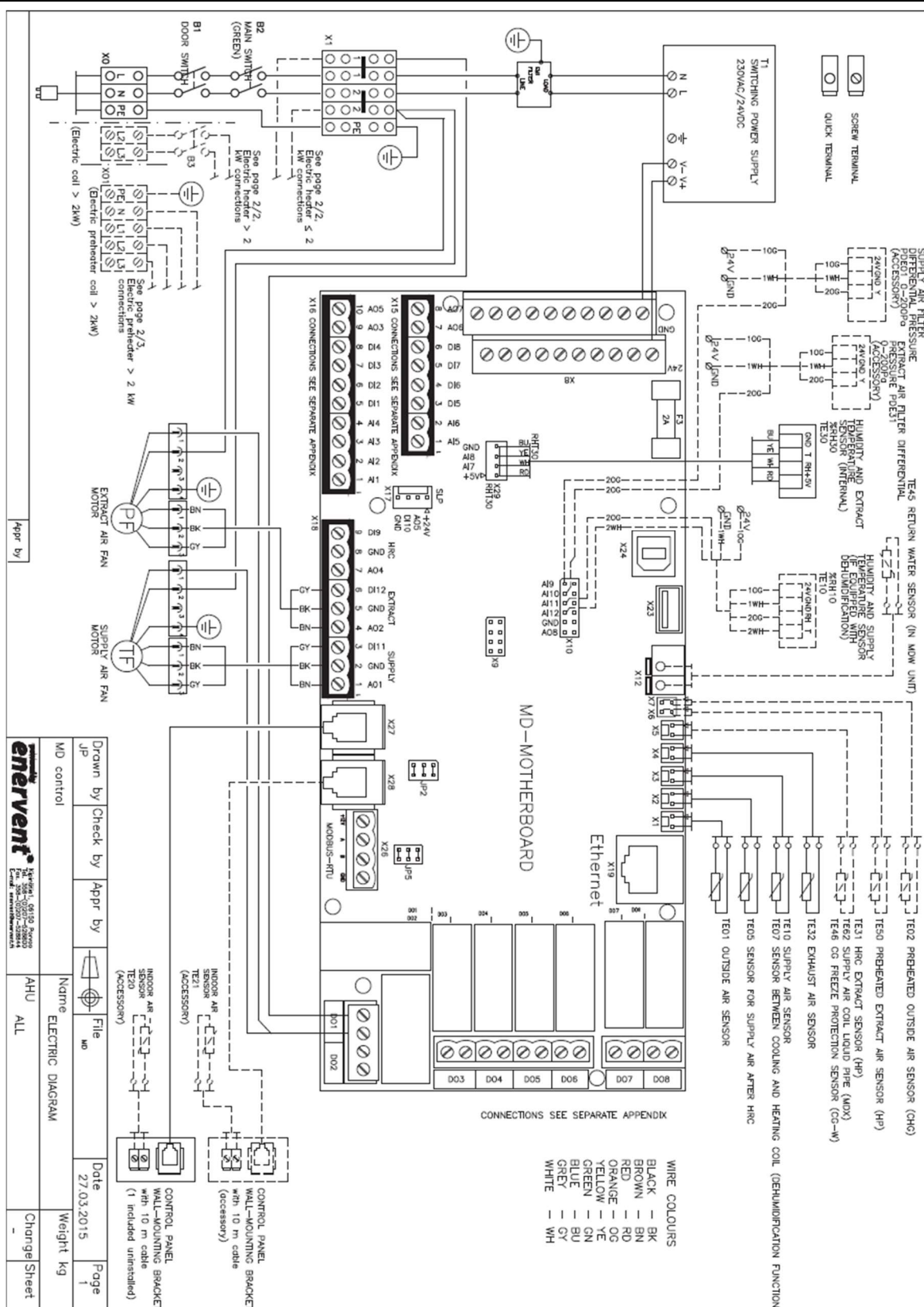


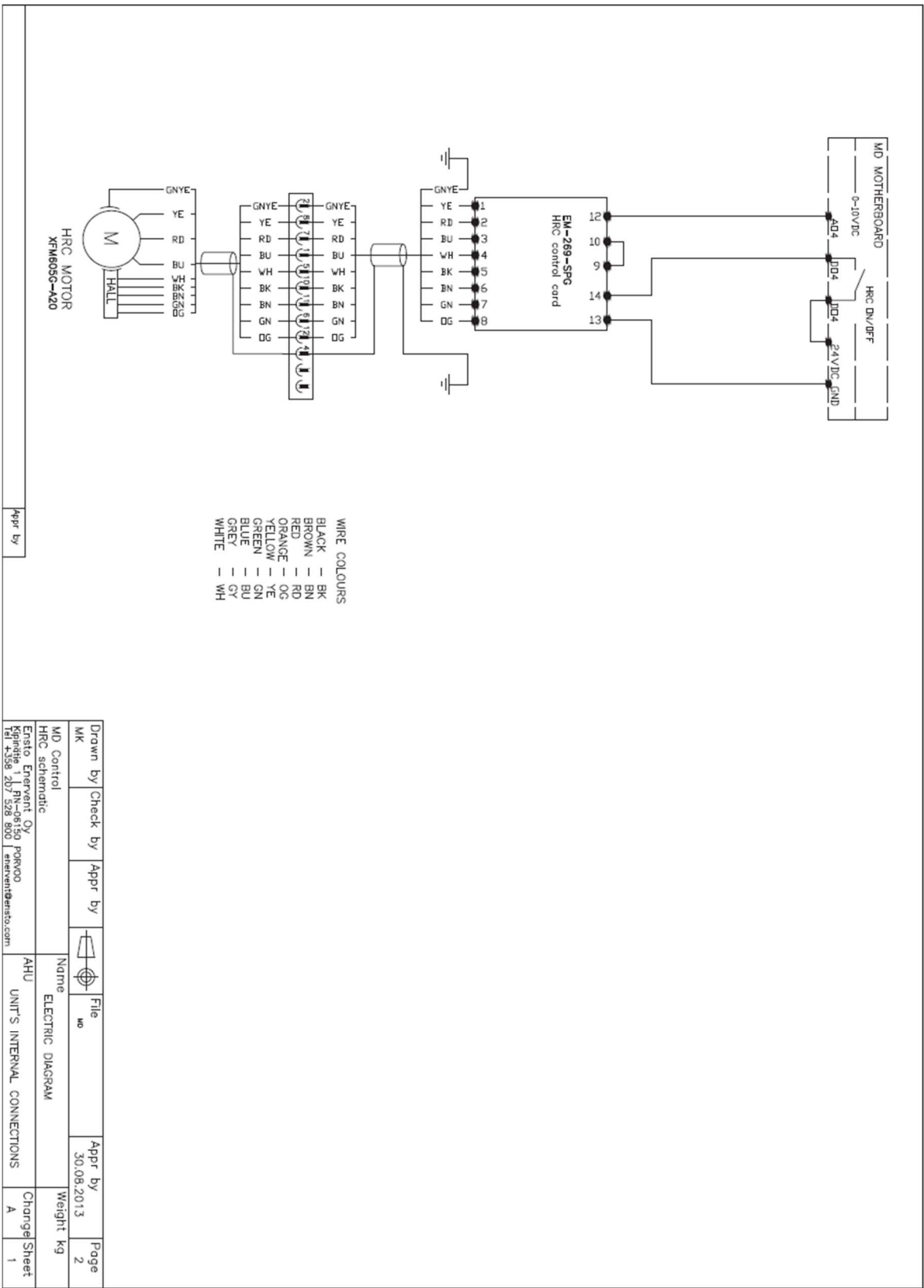


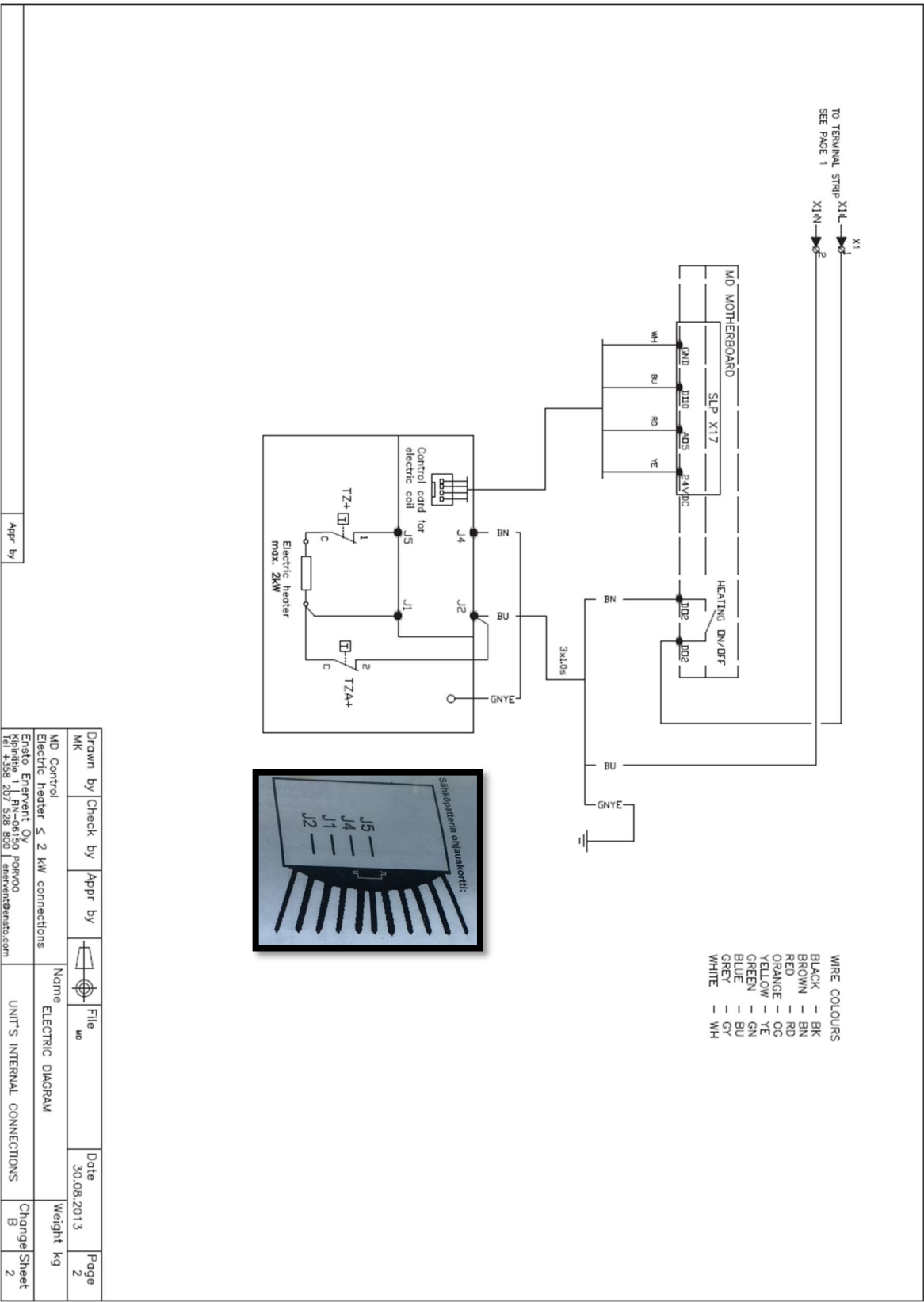
Drawn by	Inspected	Approved	by	File	Date	Page
JF/MW				EDA	28.05.2009	2
Name						
ELECTRICAL CONNECTIONS						
UNIT INTERNAL CONNECTIONS						
Change/offset						
D						

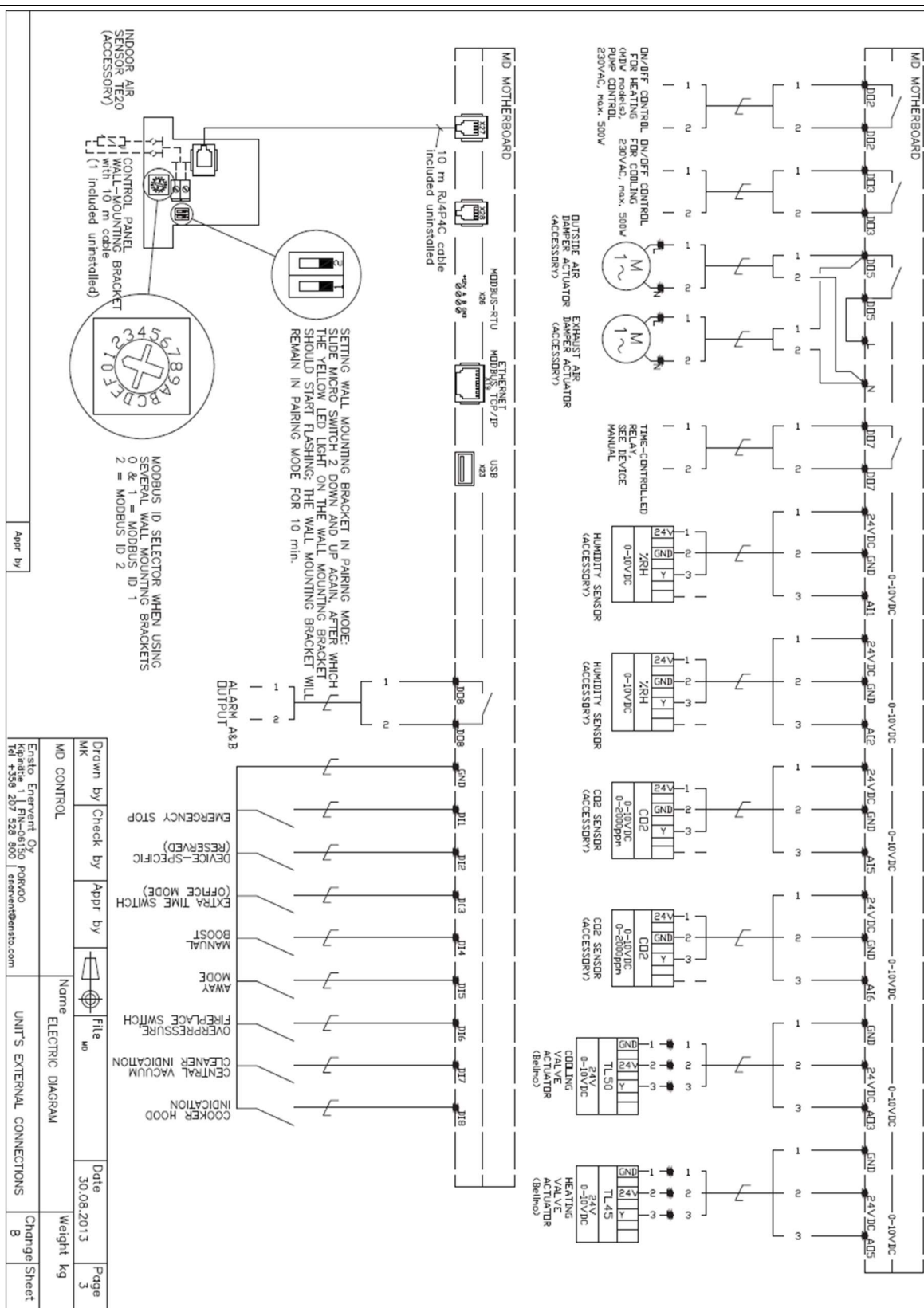


Drawn by	Inspected	Approved	by	File	Date	Page
JP/MW				EDA Control	28.05.2009	3
Name					ELECTRICAL CONNECTIONS	
UNIT EXTERNAL CONNECTIONS					Weight kg	
D					Change Laotlet	









MANDATORY PARTS

10024050	CONTROL UPDATE KIT LTR2 ECO EDE → EAIR E	1
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<u>Code</u>	<u>Description</u>	<u>Pcs.</u>
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10024050	CONTROL UPDATE KIT LTR2 ECO EDE → EAIR E	
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40030936	KGLS-6S, skrewless nylon card spacer (PCB support)	6
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40028773	340mm orange 0,75mm ² (wire)	6
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40028774	255mm 1mm ² black (wire)	4
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40028779	255mm 1mm ² blue (wire)	1
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40031093	eAir main board	1
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40029985	eAir main board connectors	1
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40029195	Tufvassons PSLR24 (power supply)	1
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40029344	Terminal package	1
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40029224	Humidity/temperature sensor Amphenol 600mm (extract air sensor)	1
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40028776	250mm black (wire with flat connector)	2
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40028777	250mm blue (wire with flat connector)	2
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40030997	Cable tie 2,5x200mm	10
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40031114	eAir panel package	1
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40030313	eAir/eWind triac cable (after heater control cable)	1
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40034288	WiFi module package	1
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Manuals etc. (depends on model)

eAir installation manual	1
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eAir user manual	1
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eAir electrical diagrams	1
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MANDATORY PARTS

10024048 CONTROL UPDATE KIT LTR2 ECO EDW → EAIR W 1

<u>Code</u>	<u>Description</u>	<u>Pcs.</u>
10024048	CONTROL UPDATE KIT LTR2 ECO EDW → EAIR W	

40030936	KGLS-6S, skrewless nylon card spacer (PCB support)	6
----------	--	---

40028773	340mm orange 0,75 mm ² (wire)	6
----------	--	---

40028774	255mm 1mm ² black (wire)	4
----------	-------------------------------------	---

40028779	255mm 1mm ² blue (wire)	1
----------	------------------------------------	---

40031093	eAir main board	1
----------	-----------------	---

40029985	eAir main board connectors	1
----------	----------------------------	---

40029195	Tufvassons PSLR24 (power supply)	1
----------	----------------------------------	---

40029344	Terminal package	1
----------	------------------	---

40029224	Humidity/temperature sensor Amphenol 600mm (extract air sensor)	1
----------	---	---

40028776	250mm black (wire with flat connector)	2
----------	--	---

40028777	250mm blue (wire with flat connector)	2
----------	---------------------------------------	---

40030997	Cable tie 2,5x200mm	10
----------	---------------------	----

40031114	eAir panel package	1
----------	--------------------	---

40034288	WiFi module package	1
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Manuals etc. (depends on model)

eAir installation manual	1
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eAir user manual	1
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eAir electrical diagrams	1
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Notes: