

Automation upgrade

Pelican EDA HP -> eAir HP

NOTE!

The new fans will deliver about -25% less airflow compared to the old fans.

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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Open **the small door (1)** by pressing on it.



Disconnect **the power cable (2)**
(+ other possible power supplies if available).



Open the service door by turning **the handle (3)**.



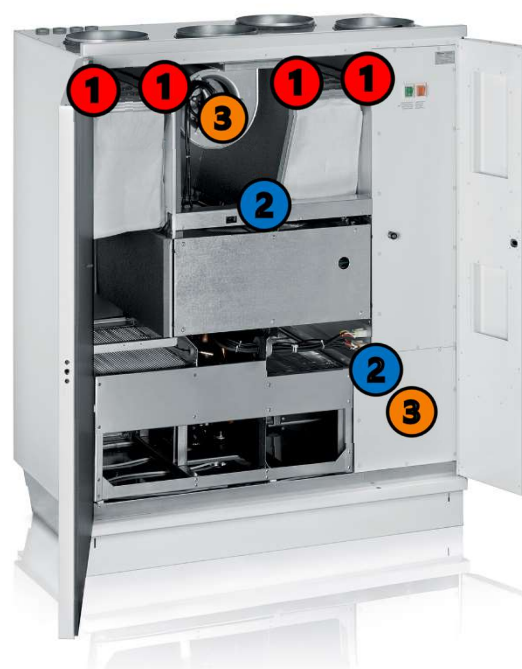
Remove **the cover to the electrical box (1)** and **the supply air fan chamber (1)** by removing the screws.

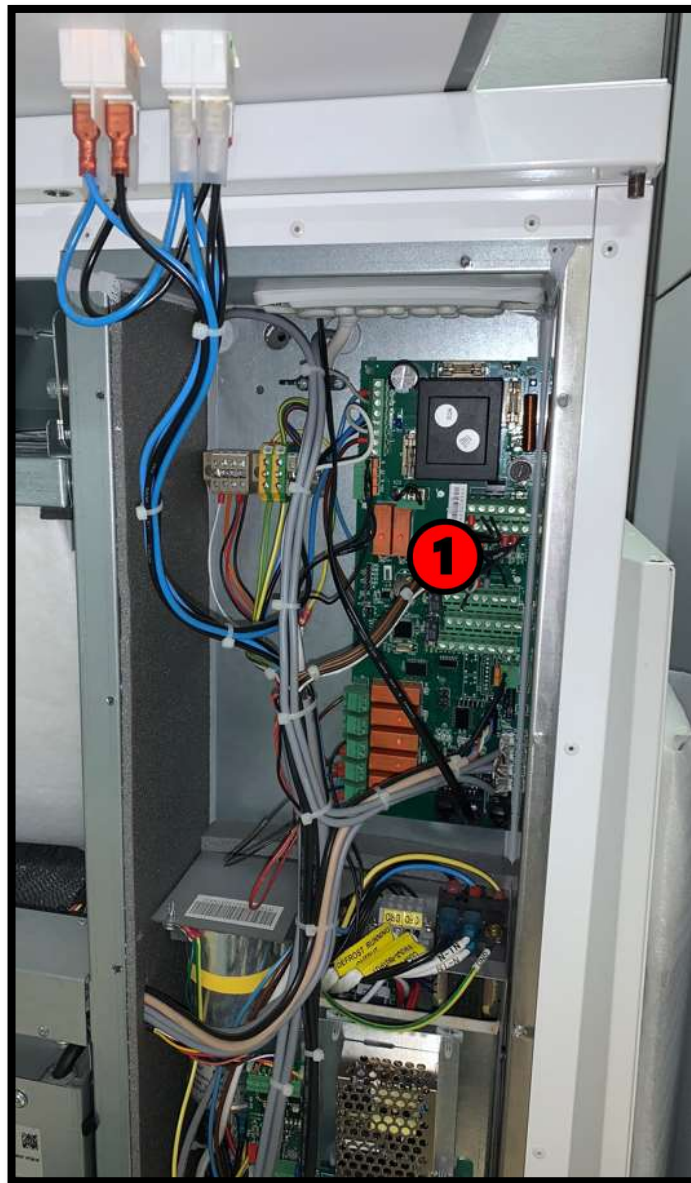
NOTE! Ensure that no voltage is occurring in the electrical box before proceeding!

Remove **the POP rivets** from **the cable rail (2)** by drilling and remove the cover.



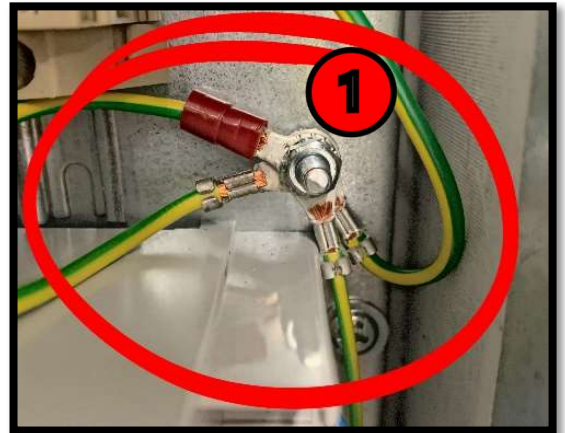
Release **the filter locks (1)** and remove the filters by pulling.
Disconnect **the fan connectors (2)**.
Remove **the fans (3)** by pulling.



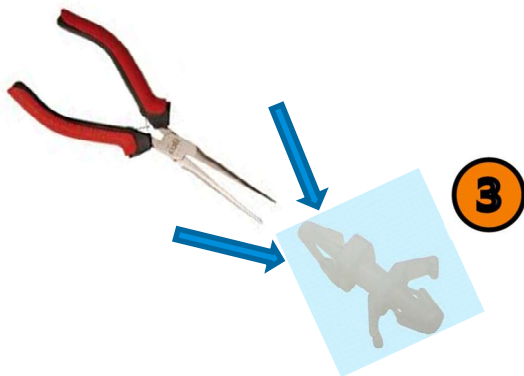


Mark all wires/sensors according to the marking on the main board and disconnect them from **the EDA main board (1)**.

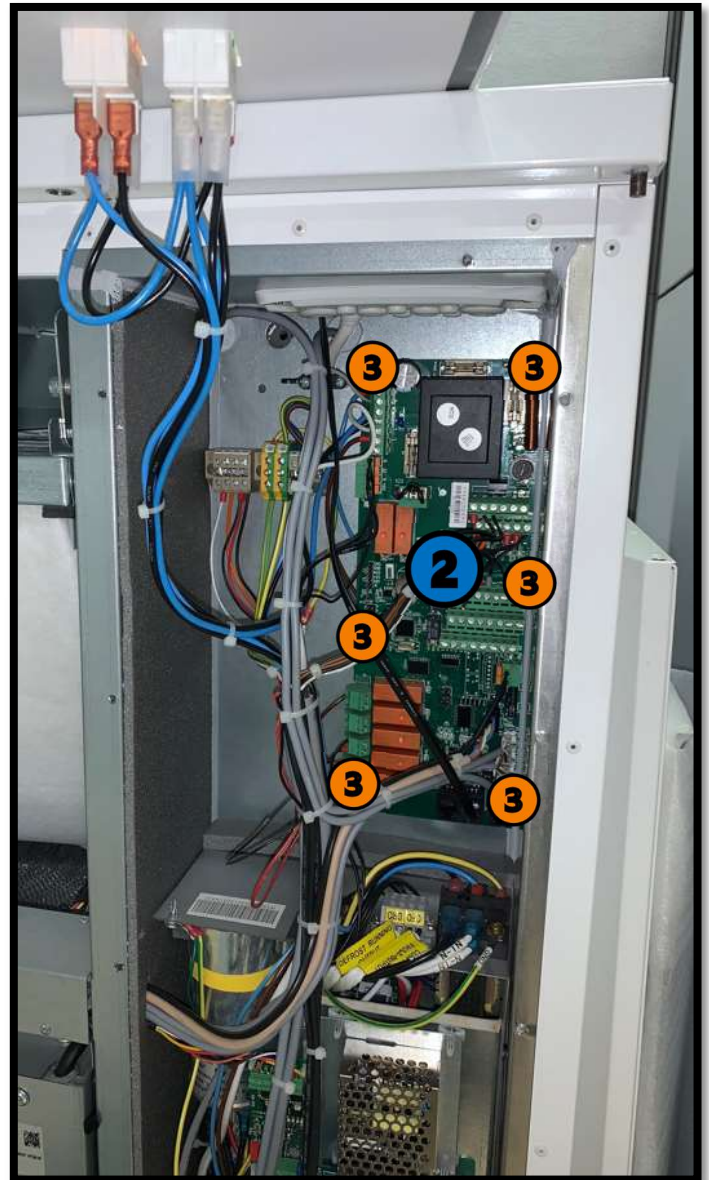
Disconnect **all ground wires (1)** from the automation base ground point.



Remove **the EDA main board (2)**, by pressing **the PCB supports (3)** with pliers and by pulling.



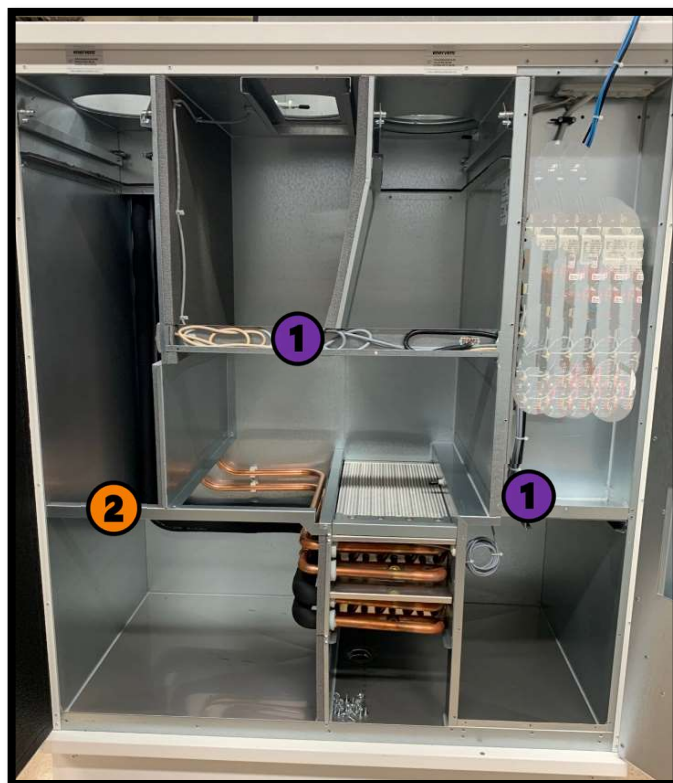
Remove **the transformer (4)** and **the capacitors (5)**.



If there is a **blue relay (4)** installed in the electrical box; remove the relay along with the wires.

Remove **the fan cables (1)**.

Remove **the extract air sensor cable (2)**.



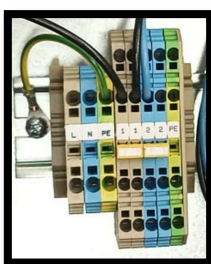
Install **the new extract air sensor (3)** (40029225) and attach it with cable ties (40030997) on top of the old sensor. The old sensor won't be used anymore.



Cut a gap in the insulation and install the extract air sensor cable into **the gap (1)** and through the cable rail into the electrical box.



3



5

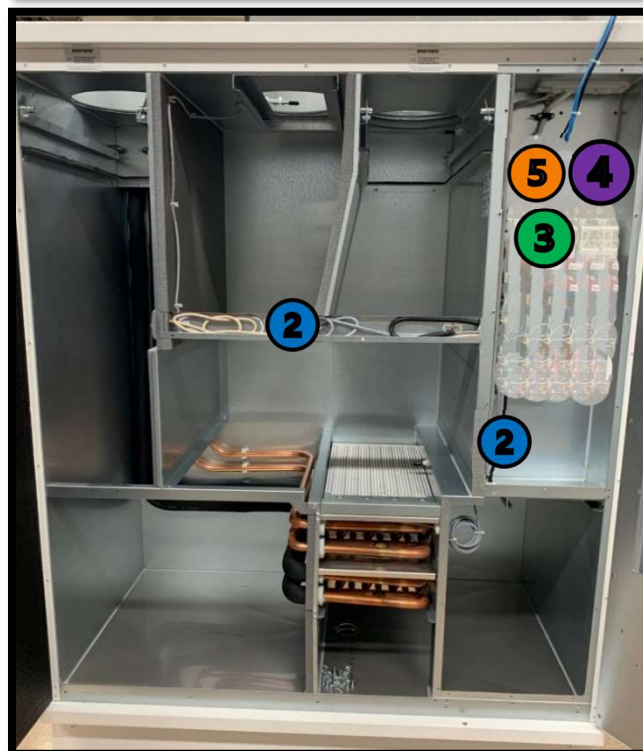
Install **the new fan cables (2)**
(40028782, 40028783, 40028784, 40028785).

Install **the new transformer (3)** in the electrical box
(40029195).

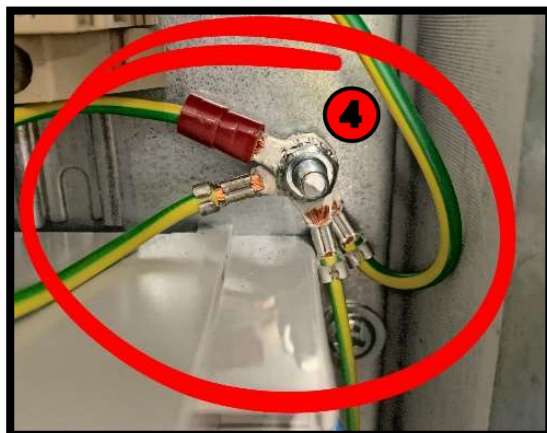
Install **the eAir mainboard (4)** in the electrical box
(40031093) (new holes for the PCB supports needs to be drilled).

Install **the terminal package (5)** in the electrical box
(40029344).

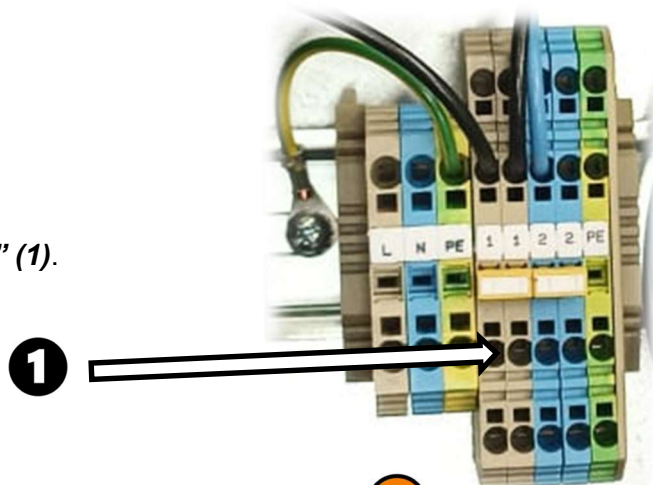
Connect the transformer, main board and terminal package according to the electrical diagrams (pages 20-22).



Connect **all ground wires to the ground point (4)**.
Tighten with **the nut**.

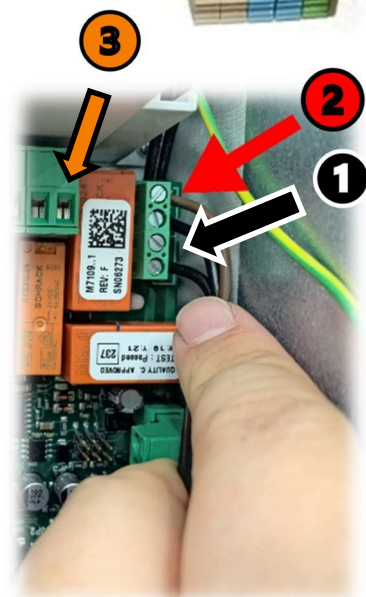


Connect **a wire (40028774)** from
the connection terminal (1) to eAir main board **"DO1" (1)**.

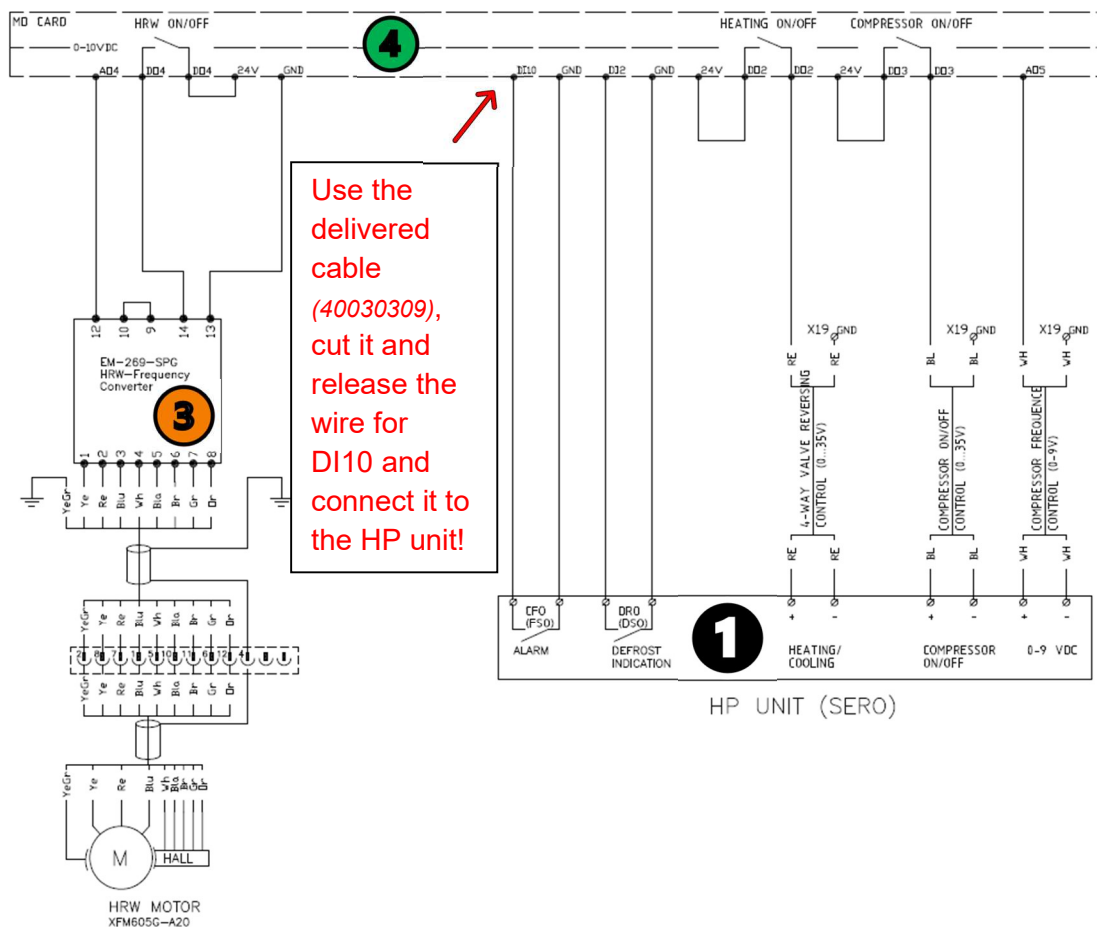


Connect **wires (40028773)** from **the 24VDC connector**
on the eAir main board to eAir main board **"DO2" (2)** and to **"DO3" (3)**
(page 10).

Connect **the wires marked "1"** in the fan power cables
(40028782, 40028783) to **"DO1" (1)**.

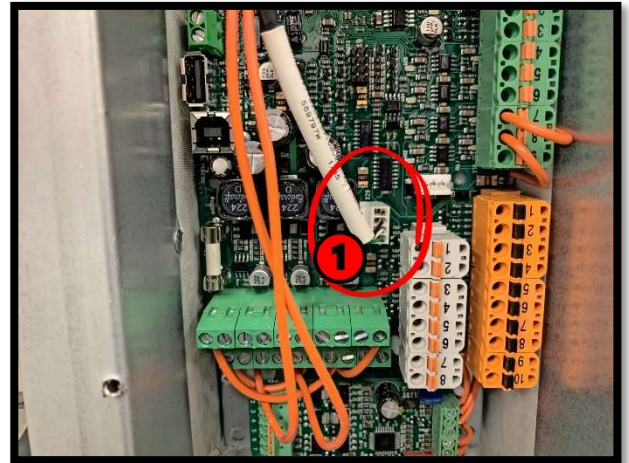


Connect **the wires marked "2"** in the fan power cables (40028782, 40028783) to **the blue connection terminal (2)**.



Connect **the HP controller (1)** to **the eAir main board (4)**.
Connect **the HRW circuit board (3)** to **the eAir main board (4)**.

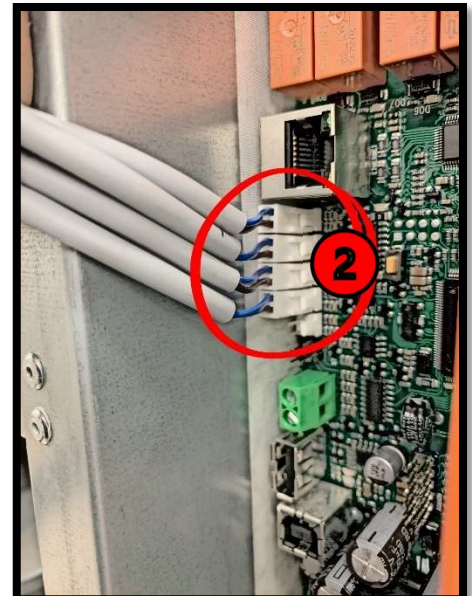
Connect **the extract air sensor (1)** (40029225) to the main board (X29).



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

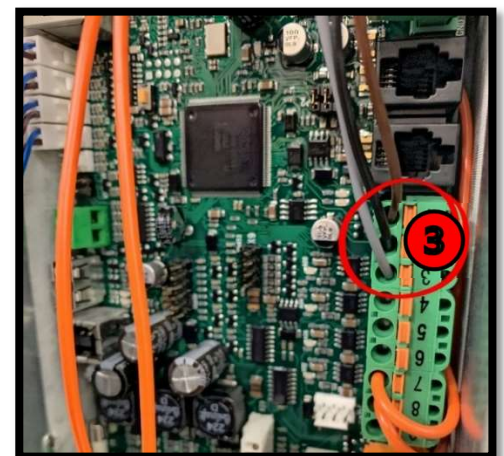
X1, TE01: Outside air
X2, TE05: HRW supply air
X3, TE10: Supply air
X4, TE32: Waste air

X5, TE31: HRW extract air
(replace the old one with the new one) (40029170)



Connect **the wires from the supply air fan control cable (3)** (40028784) to the main board.

1: Brown
2: Black
3: Gray

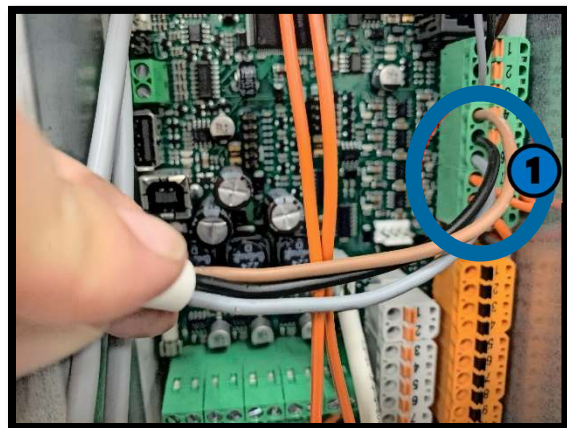


Connect **the wires from the extract air fan control cable (1)** (40028785) to the main board.

4: *Brown*

5: *Black*

6: *Gray*



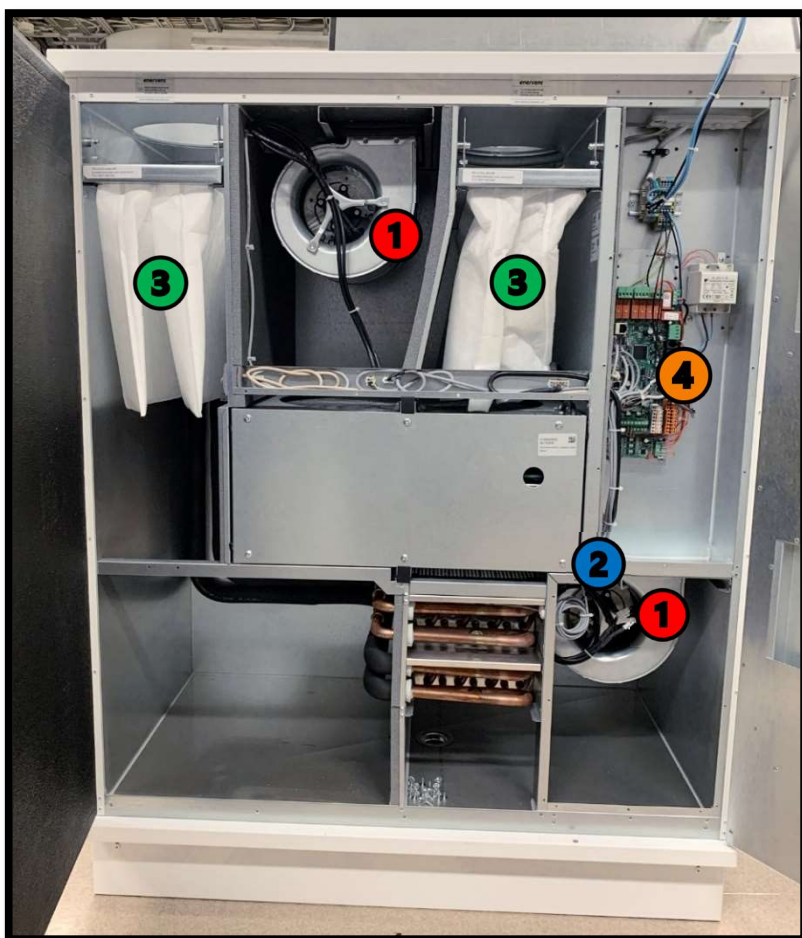
Connect possible other components to the eAir main board according to the electrical diagrams (pages 20-22).

Install **the new fans (1)**
(10023149)

Connect **the fan cables (2)** and attach
them together with cable ties (40030997).

Install **the filters (3)**.

Connect **the display cable (4)**
to the main board.



Disconnect and remove the old display.
Install **the new display (40031114)**.

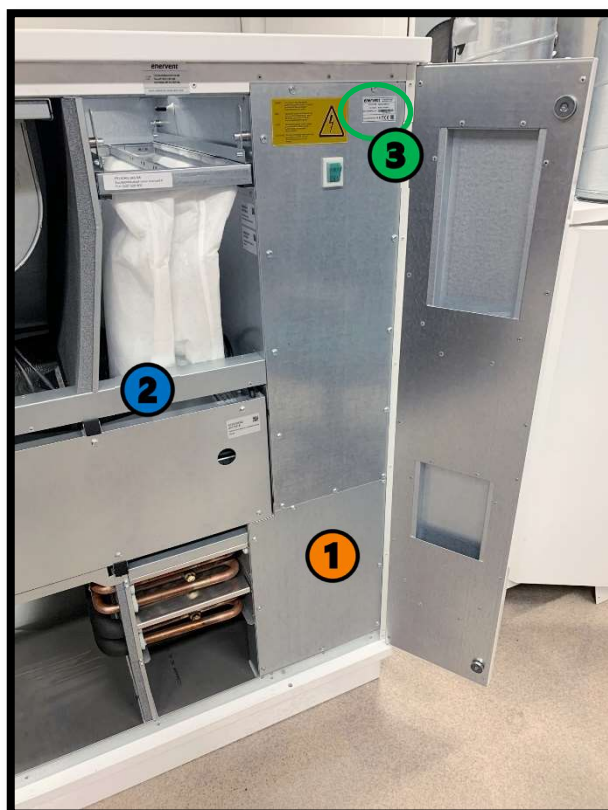


Attach the cover to **the electrical box (1)**
and **the supply air fan chamber (1)**.

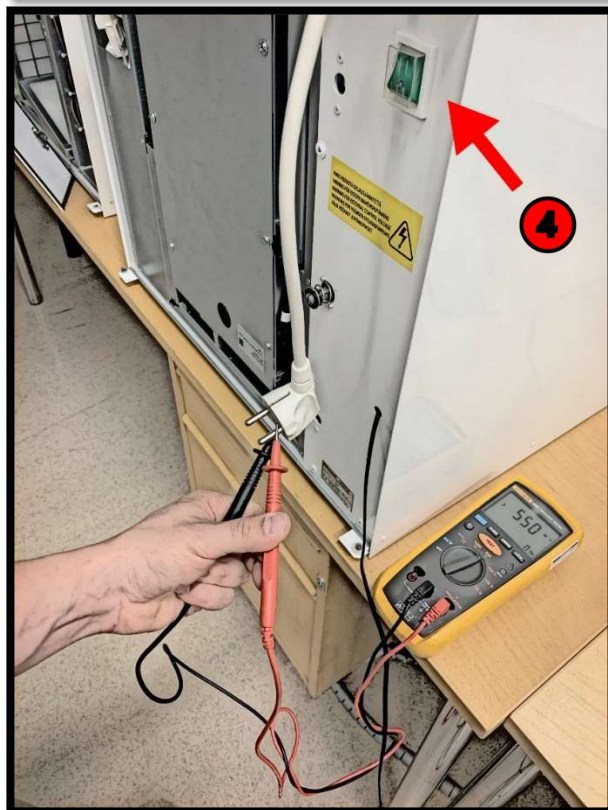
Attach **the cover to the cable rail (2)**
with **the new POP rivets (40031559)**.

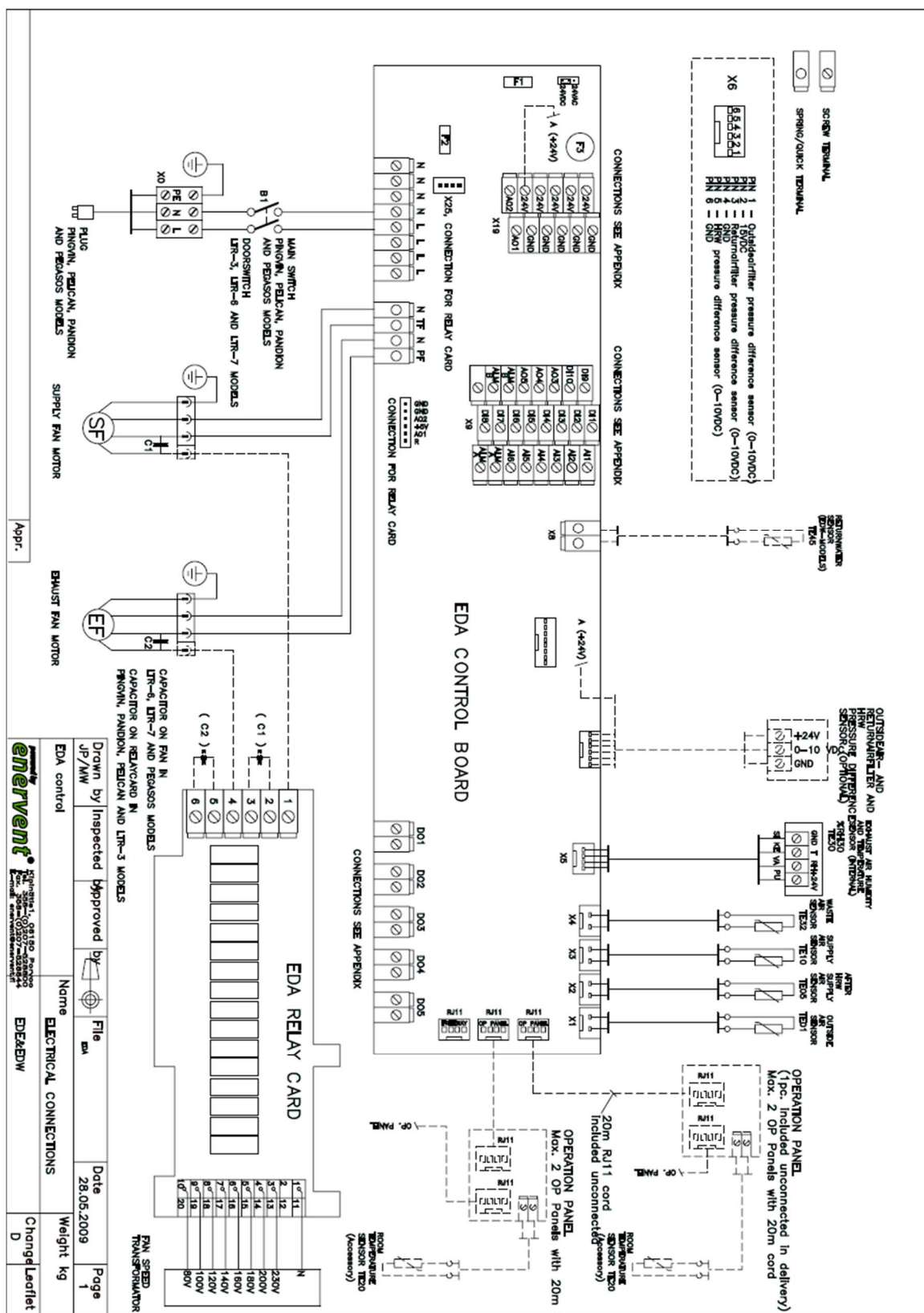
Install **the new type plate sticker (3)**.

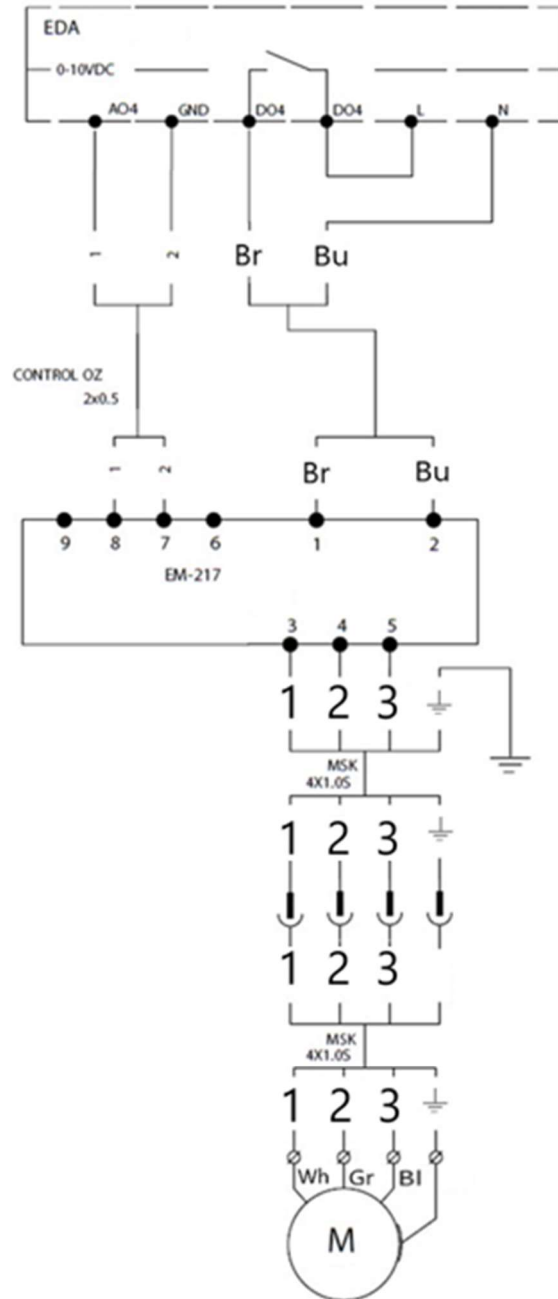
Close the service door.



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

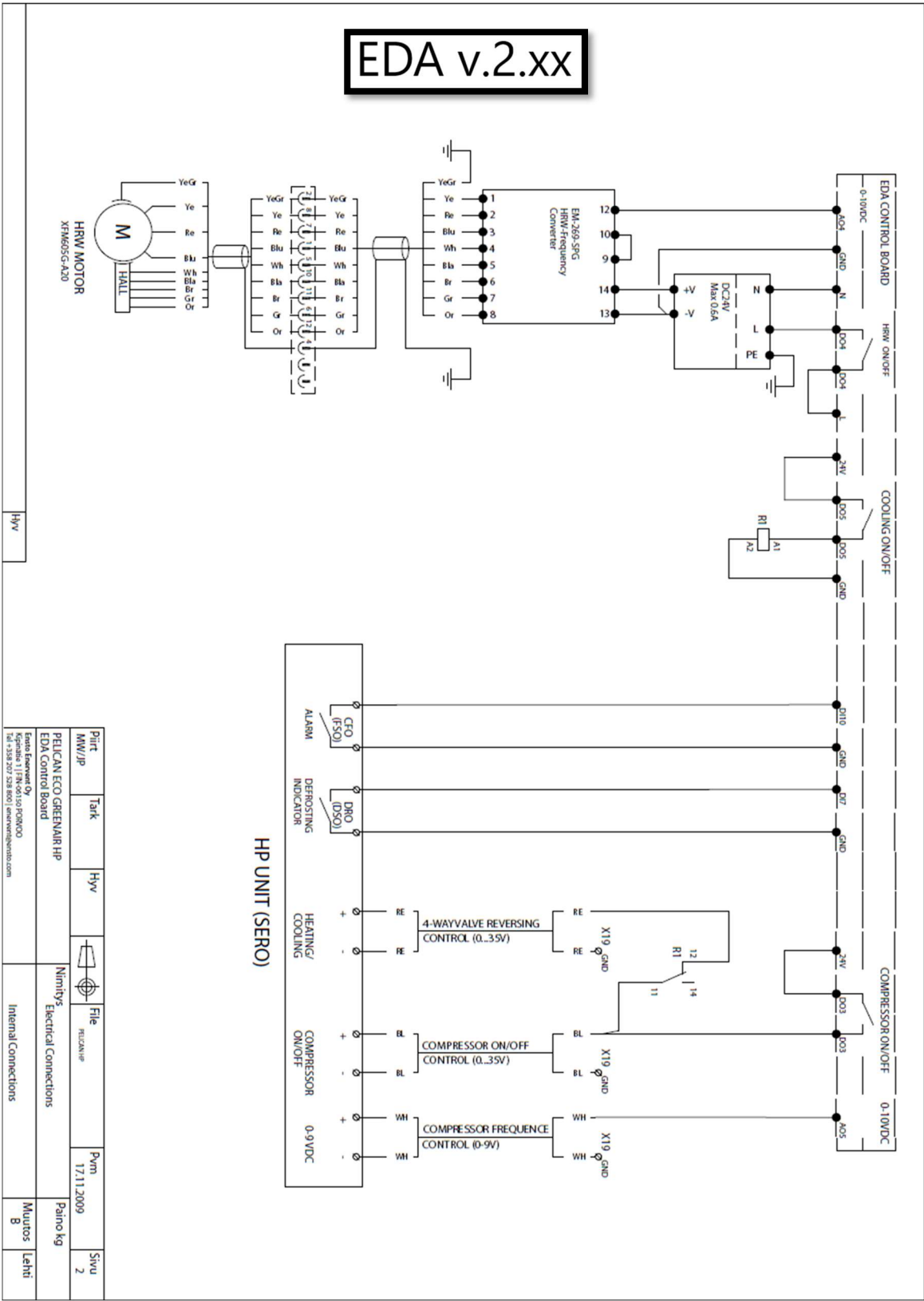


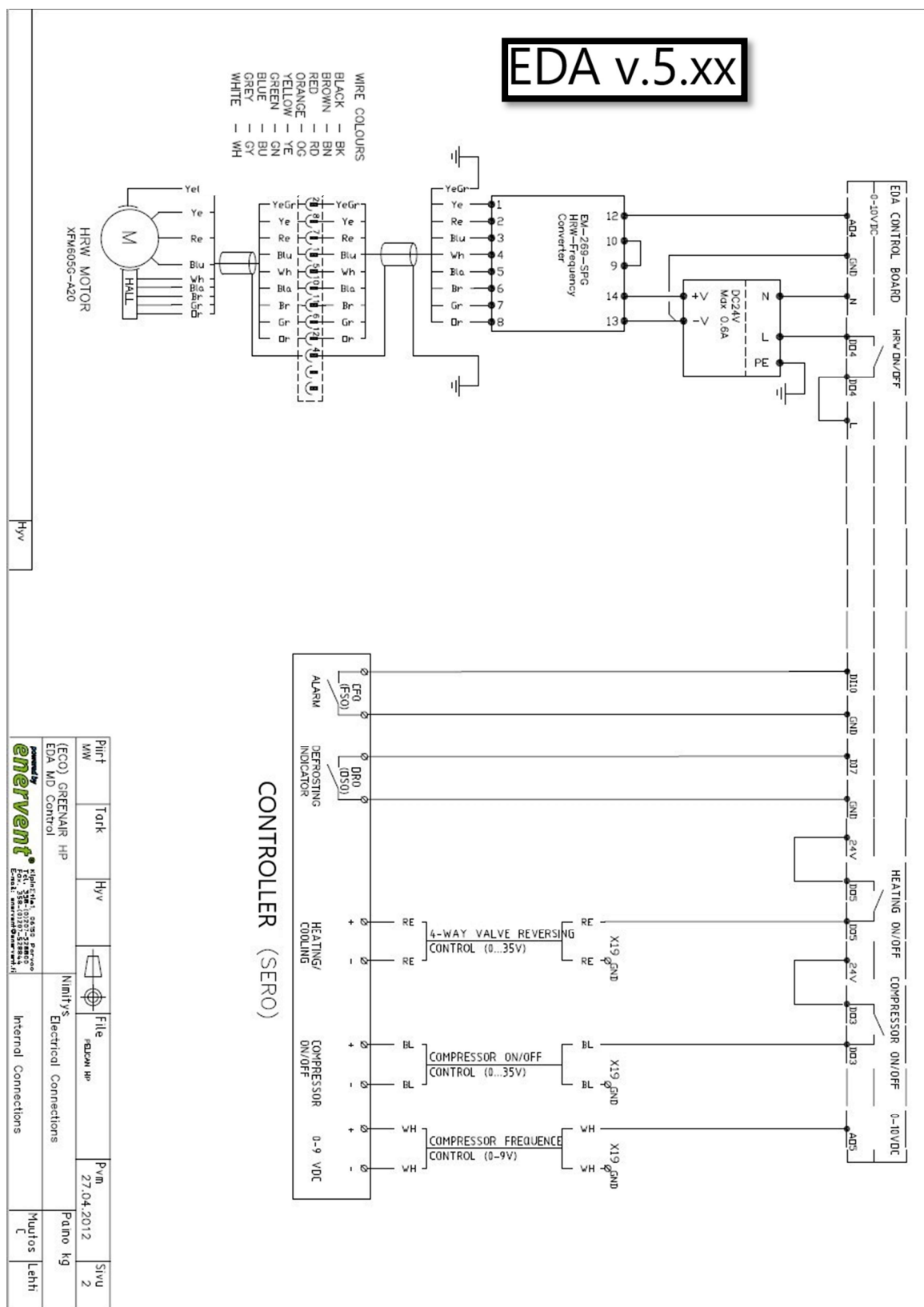


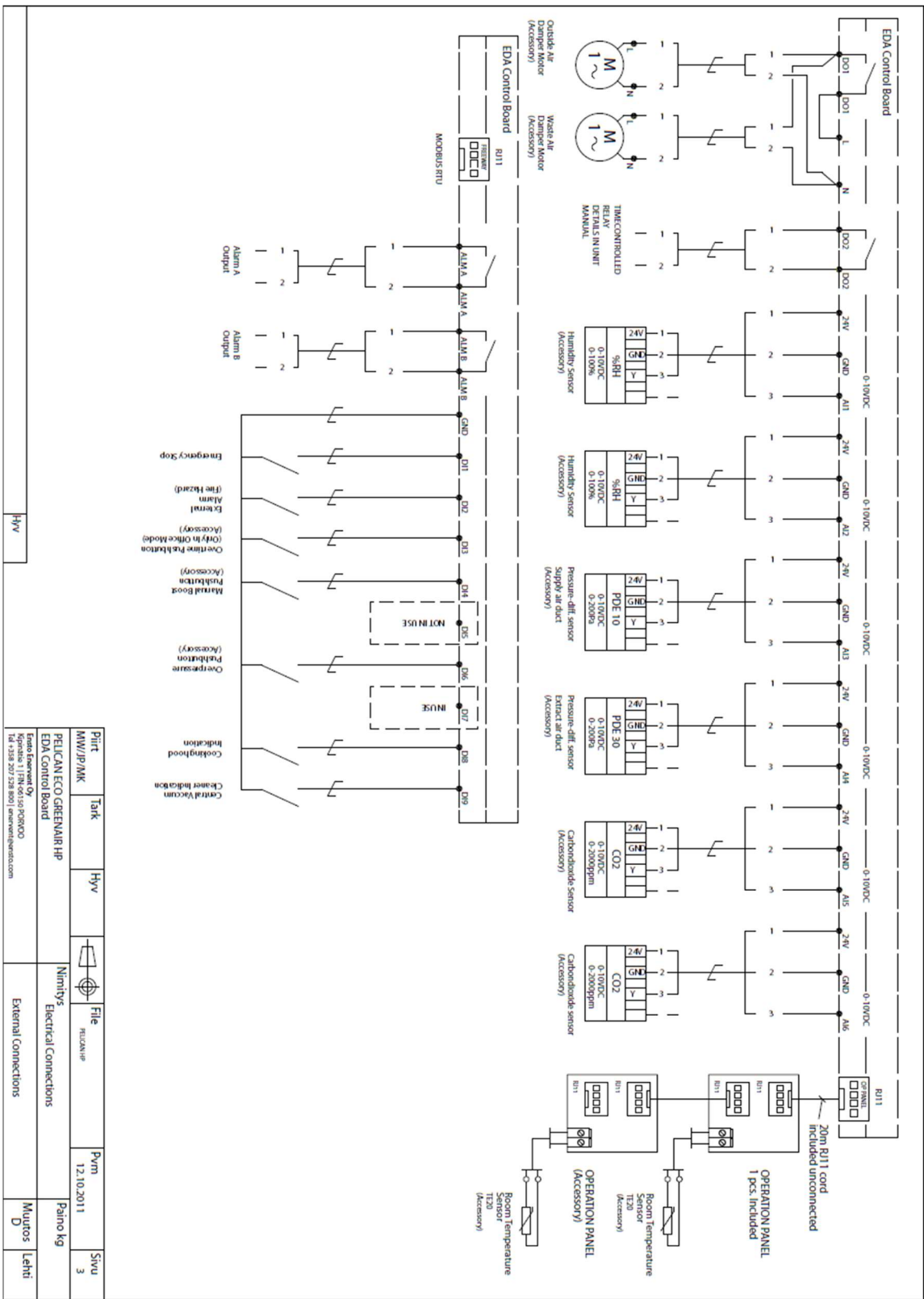


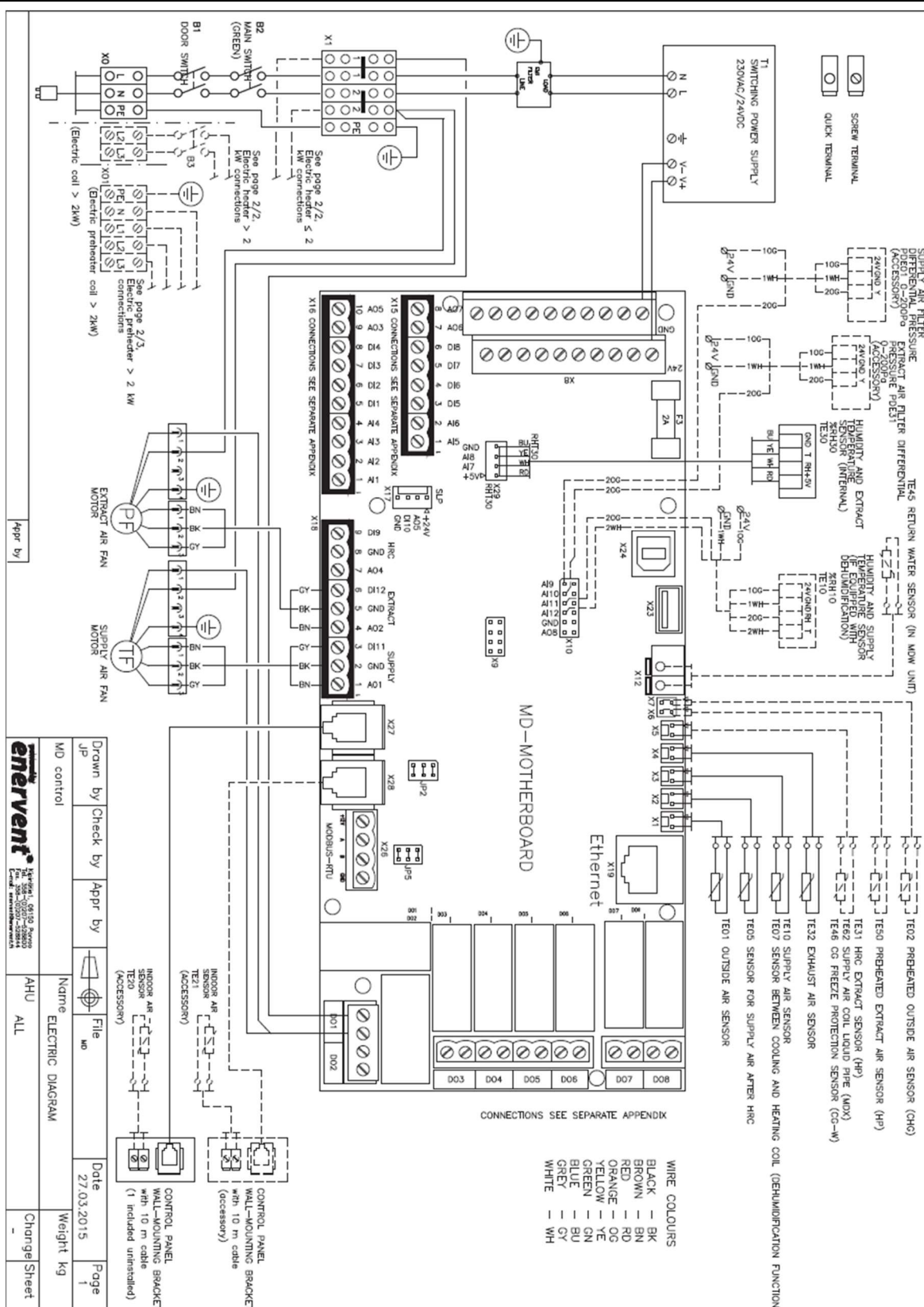
Bl: Black
Bu: Blue
Br: Brown
Wh: White
Gr: Gray

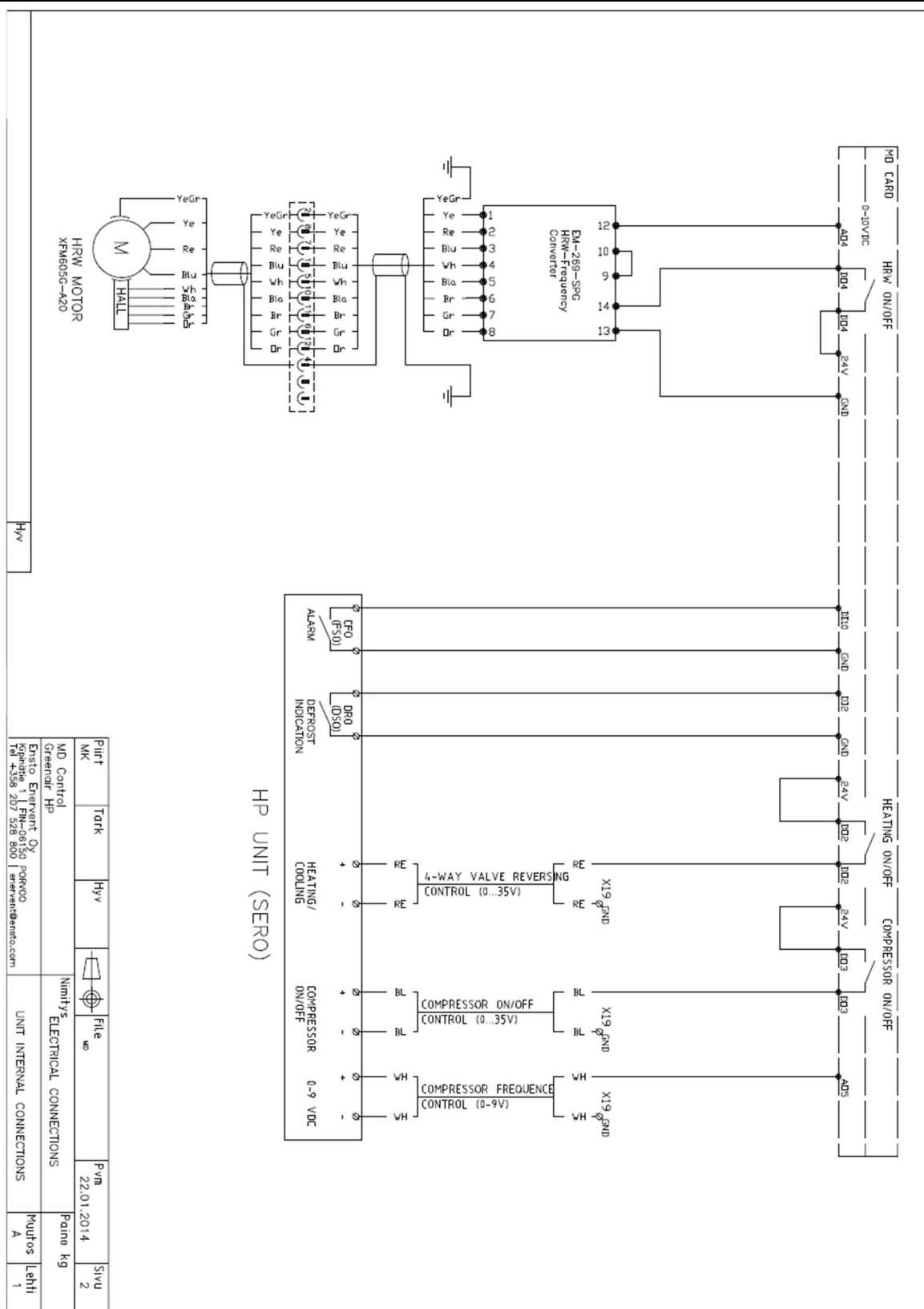
HRW MOTOR

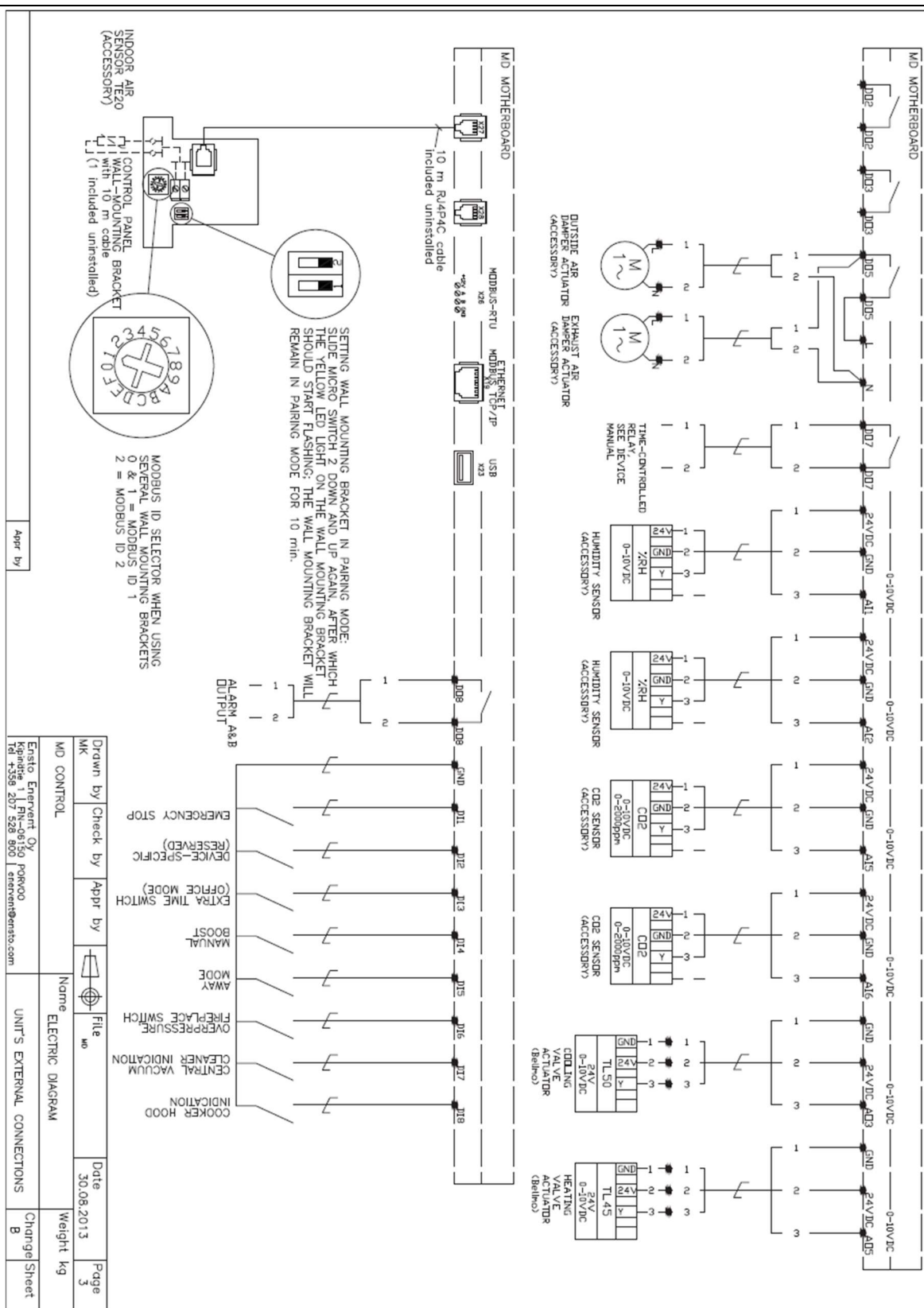












MANDATORY PARTS

10024005	CONTROL UPDATE KIT PELICAN EDA HP → EAIR HP	1
10023149	FAN PACKAGE 170W	2

<u>Code</u>	<u>Description</u>	<u>Pcs.</u>
10024005	CONTROL UPDATE KIT PELICAN EDA HP → EAIR HP	

Automation

40030936	PCB support KGLS-6S	5
40028773	Wire 340mm orange 0,75mm ²	6
40028774	Wire 255mm 1mm ² black	3
40028779	Wire 255mm 1mm ² blue	3
40031093	eAir main board	1
40029985	eAir main board connectors	1
40029195	Power supply Tufvassons PSLR24	1
40029344	Terminal package	1
40030100	Cable sealing VET 5-7	6
40030101	Cable sealing VET 7-10	6
40028782	Fan power cable supply air	1
40028783	Fan power cable extract air	1
40028784	Fan control cable supply air	1
40028785	Fan control cable extract air	1
40029170	EDA temperature sensor 2400mm	1
40029225	Humidity/temperature sensor Amphenol 1800mm	1
40030309	MD RHT cable	1
40030997	Cable tie 2,5x200mm	10
40031559	POP-rivet Multigrip 3,2x9	12
40031114	eAir panel package	1
40034288	WiFi module package	1

Manuals etc. (depends on model)

eAir installation manual	1
eAir user manual	1
eAir electrical diagrams	1

Notes: