

Error codes mechanical ventilation DucoBox Energy

ENGLISH en

Service instructions



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Translation from Dutch of the original instructions

Changes based on technical improvements reserved.

For information regarding warranty, installation, technical data, etc., see www.duco.eu.

Installation, connection, maintenance and repairs are to be carried out by an accredited installer. The electronic components of this product may be live. Avoid contact with water.



Always check that the product is correctly installed according to the installation manual before consulting the service manual.

01 Overview of error codes

If the troubleshooting shows that the problem can be solved by replacing a component, please refer to the spare parts list.

Various error codes may appear on the display of a ventilation system. Below you will find an overview of these codes, each with the error description and problem statement next to it and a hyperlink to the solution (to extra info on what exactly to do and how).

| ERROR CODE | TYPE OF ERROR | ERROR DESCRIPTION AND PROBLEM STATEMENT | SOLUTION |
|---------------|---------------|---|--|
| No error code | / | The DucoBox Energy is live but does not respond. | Check and/or replace the circuit board, see page 20 |
| 1.4.1 | error | No response from the extractor fan; check and/or replace the extractor fan. | Check and/or replace the fan, see page 9 |
| 3.1.1 | error | ODA (outdoor air to the unit) temperature sensor value is too low; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 3.1.2 | error | ODA (outdoor air to the unit) temperature sensor value is too high; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 3.1.3 | error | ODA (outdoor air to the unit) temperature sensor cannot be read; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 3.1.4 | error | ODA (outdoor air to the unit) temperature sensor has been measuring the same temperature for a long time; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 3.1.5 | error | ODA (outdoor air to the unit) temperature sensor is short-circuited; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 3.1.6 | error | ODA (outdoor air to the unit) temperature sensor has a bad connection; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 4.1.1 | error | ETA (extract air from the house to the unit) temperature sensor value is too low; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 4.1.2 | error | ETA (extract air from the house to the unit) temperature sensor value is too high; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 4.1.3 | error | ETA (extract air from the house to the unit) temperature sensor cannot be read; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 4.1.4 | error | ETA (extract air from the house to the unit) temperature sensor has been measuring the same temperature for a long time; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 4.1.5 | error | ETA (extract air from the house to the unit) temperature sensor is short-circuited; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 4.1.6 | error | ETA (extract air from the house to the unit) temperature sensor has a bad connection; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 6.1.1 | error | EHA (exhaust air from the unit to the outside) temperature sensor value is too low; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 6.1.2 | error | EHA (exhaust air from the unit to the outside) temperature sensor value is too high; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 6.1.3 | error | EHA (exhaust air from the unit to the outside) temperature sensor cannot be read; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |

| ERROR CODE | TYPE OF ERROR | ERROR DESCRIPTION AND PROBLEM STATEMENT | SOLUTION |
|------------|---------------|---|--|
| 6.1.4 | error | EHA (exhaust air from the unit to the outside) temperature sensor has been measuring the same temperature for a long time; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 6.1.5 | error | EHA (exhaust air from the unit to the outside) temperature sensor is short-circuited; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 6.1.6 | error | EHA (exhaust air from the unit to the outside) temperature sensor has a bad connection; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 16.1.1 | error | Extract air pressure sensor value is too low; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 16.1.2 | error | Extract air pressure sensor value is too high; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 16.1.3 | error | Extract air pressure sensor cannot be read; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 16.1.4 | error | The extract air pressure sensor has been measuring the same value for a long time; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 16.1.5 | error | The extract air pressure sensor is short-circuited; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 16.1.6 | error | The extract air pressure sensor has a bad connection; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 28.4.1 | error | No response from the supply fan; check and/or replace the supply fan. | Check and/or replace the fan, see page 9 |
| 29.1.1 | error | The supply air pressure sensor is too low; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 29.1.2 | error | The supply air pressure sensor is too high; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 29.1.3 | error | The supply air pressure sensor cannot be read; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 29.1.4 | error | The supply air pressure sensor has been measuring the same value for a long time; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 29.1.5 | error | The supply air pressure sensor is short-circuited; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 29.1.6 | error | The supply air pressure sensor has a bad connection; check and/or replace the sensor. | Check and/or replace the pressure sensor, see page <?> |
| 30.1.1 | error | SUP (supply air from the unit to the house) temperature sensor value is too low; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 30.1.2 | error | SUP (supply air from the unit to the house) temperature sensor value is too high; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 30.1.3 | error | SUP (supply air from the unit to the house) temperature sensor cannot be read; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |

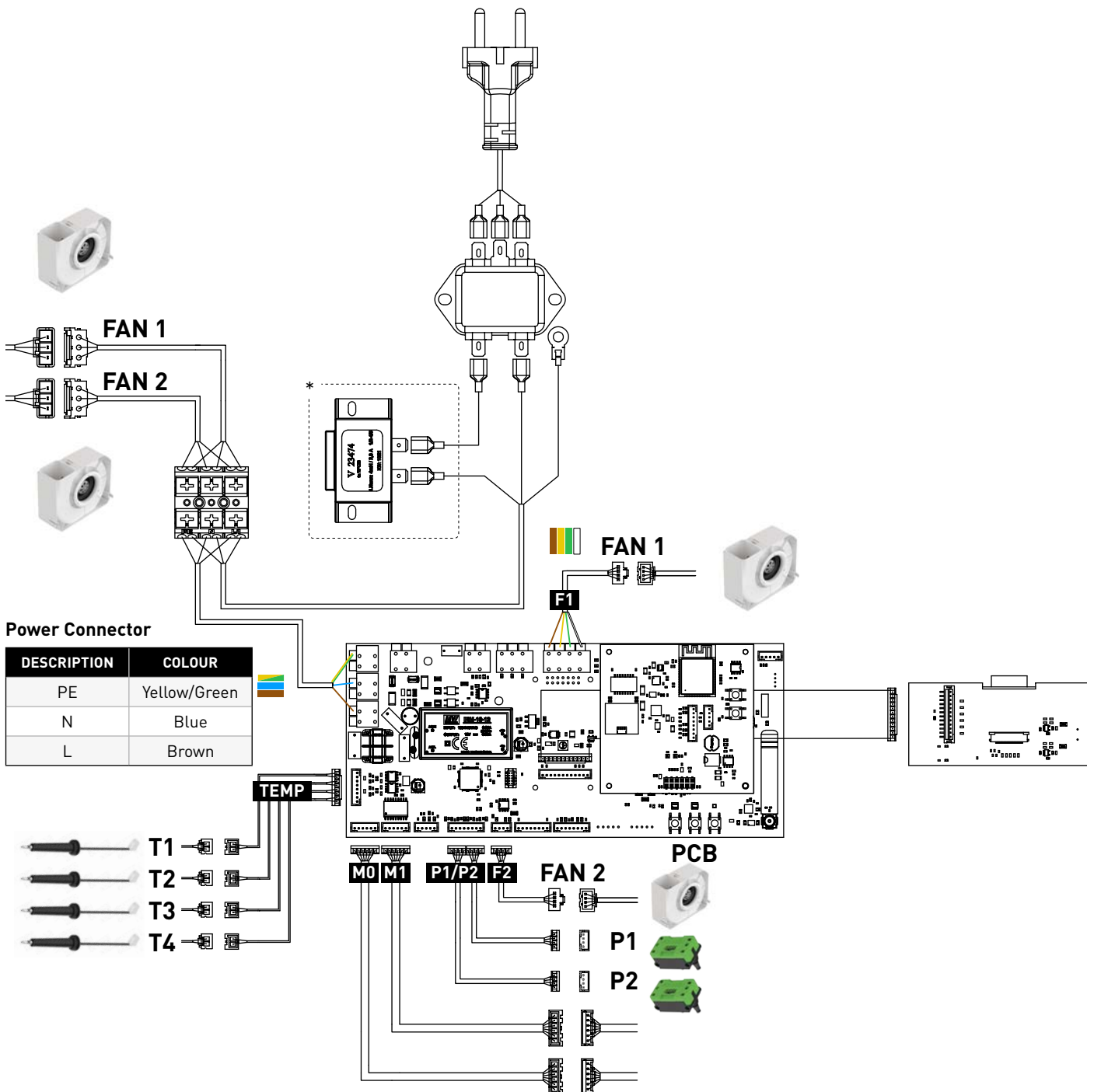
| ERROR CODE | TYPE OF ERROR | ERROR DESCRIPTION AND PROBLEM STATEMENT | SOLUTION |
|------------|---------------|--|---|
| 30.1.4 | error | SUP (supply air from the unit to the house) temperature sensor has been measuring the same temperature for a long time; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 30.1.5 | error | SUP (supply air from the unit to the house) temperature sensor is short-circuited; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 30.1.6 | error | SUP (supply air from the unit to the house) temperature sensor has a bad connection; check and/or replace the sensor. | Check and/or replace the temperature sensor, see page 12 |
| 31.19.1 | warning | Replace the filters. | See maintenance instructions |
| 32.10.1 | warning | Outdoor temperature too low - ventilation is switched off for 8h. | / |
| 33.10.1 | error | Outdoor temperature too low - ventilation is permanently switched off. Restart the DucoBox later. | / |
| 35.17.1 | error | Temperature sensor value is too low; check and/or replace the sensor. | / |
| 35.17.2 | error | Temperature sensor value is too high; check and/or replace the sensor. | / |
| 35.17.3 | error | The value of the temperature sensor cannot be read; check and/or replace the sensor. | / |
| 36.24.1 | error | The connection to the weather station has been lost. Check the connection. | / |
| 36.24.2 | error | The connection with the outdoor temperature sensor has been lost. Check the connection. | / |
| 37.17.1 | error | The value of the CO ₂ sensor is too low; check and/or replace the sensor. | Check and/or replace the user controller/ room sensor, see page 18 |
| 37.17.2 | error | The value of the CO ₂ sensor is too high; check and/or replace the sensor. | Check and/or replace the user controller/ room sensor, see page 18 |
| 37.17.3 | error | The value of the CO ₂ sensor cannot be read; check and/or replace the sensor. | Check and/or replace the user controller/ room sensor, see page 18 |
| 40.17.1 | error | The value of the Humidity sensor is too low; check and/or replace the sensor. | Check and/or replace the user controller/ room sensor, see page 18 |
| 40.17.2 | error | The value of the Humidity sensor is too high; check and/or replace the sensor. | Check and/or replace the user controller/ room sensor, see page 18 |
| 40.17.3 | error | The value of the Humidity sensor cannot be read; check and/or replace the sensor. | Check and/or replace the user controller/ room sensor, see page 18 |
| 42.22.1 | error | The number of connected valves is too high. The maximum number is given in the manual. | See installation manual DB Energy Comfort (Plus) or installation manual DB Energy Premium |
| 42.22.2 | error | The number of connected valves is too low. The minimum is 2. | See installation manual DB Energy Comfort (Plus) or installation manual DB Energy Premium |

| ERROR CODE | TYPE OF ERROR | ERROR DESCRIPTION AND PROBLEM STATEMENT | SOLUTION |
|------------|---------------|---|---|
| 43.23.1 | warning | The adjustment has not yet happened or has failed. Do the adjustment (again). | See installation manual DB Energy Comfort (Plus) or installation manual DB Energy Premium |
| 43.23.2 | warning | The desired flow rate cannot be achieved. Check the entire installation. | See installation manual DB Energy Comfort (Plus) or installation manual DB Energy Premium |
| 44.6.1 | error | There is no connection to the Duco Pre-Heater . Check the connection. | See installation manual DB Energy Comfort (Plus) or installation manual DB Energy Premium |
| 44.6.2 | error | A Duco Pre-Heater is connected to the DucoBox . Go to settings to configure it. | See installation manual DB Energy Comfort (Plus) or installation manual DB Energy Premium |

02 Overview of solutions

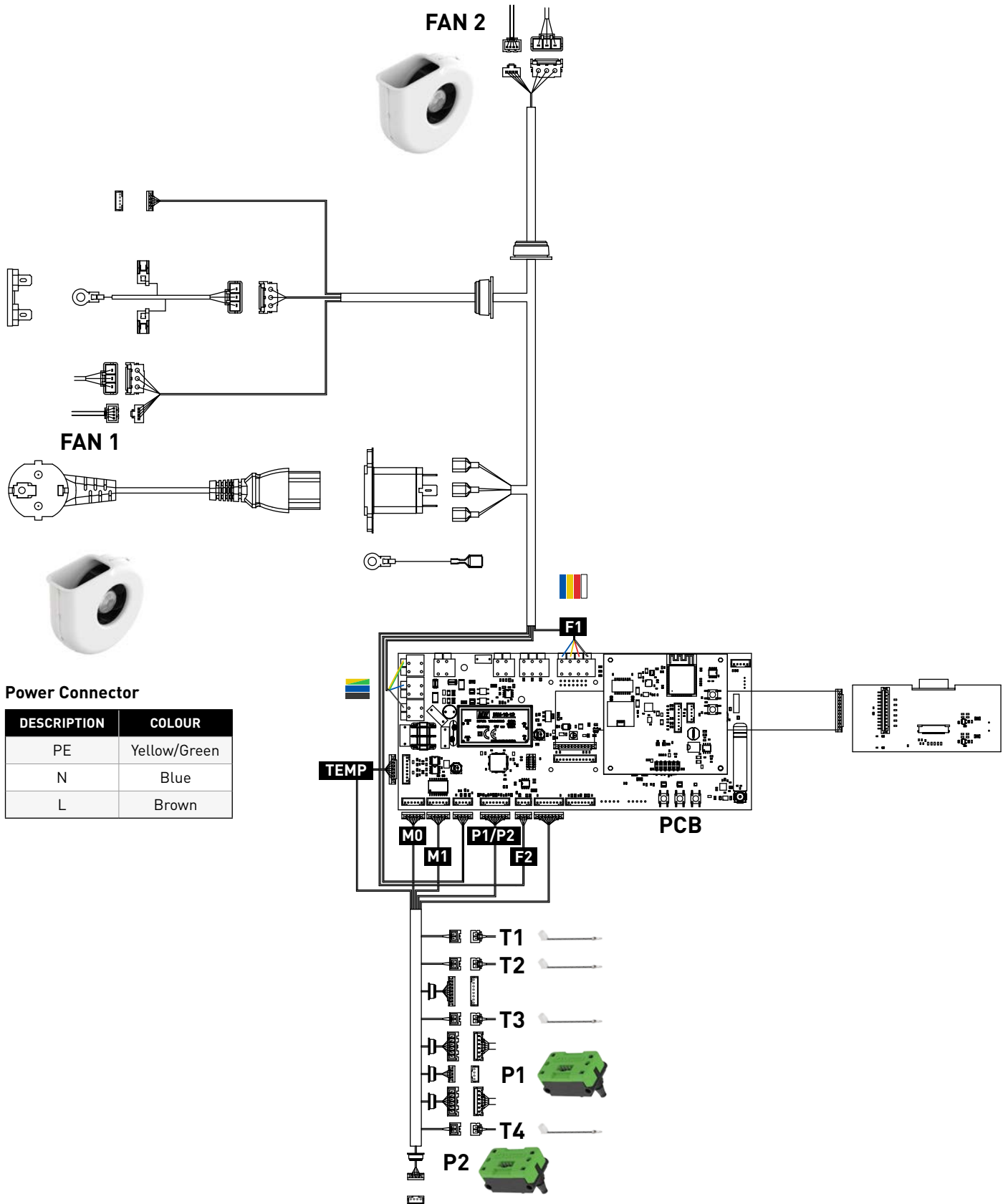
02.A Schematic representation (printed circuit board and wiring) of the DucoBox Energy

Of the DucoBox Energy Comfort (Plus)



* Not present with the D325.

Of the DucoBox Energy Premium



Power Connector

| DESCRIPTION | COLOUR |
|-------------|--------------|
| PE | Yellow/Green |
| N | Blue |
| L | Brown |

02.B Check and/or replace the fan

Error codes 1.4.1 and 28.4.1

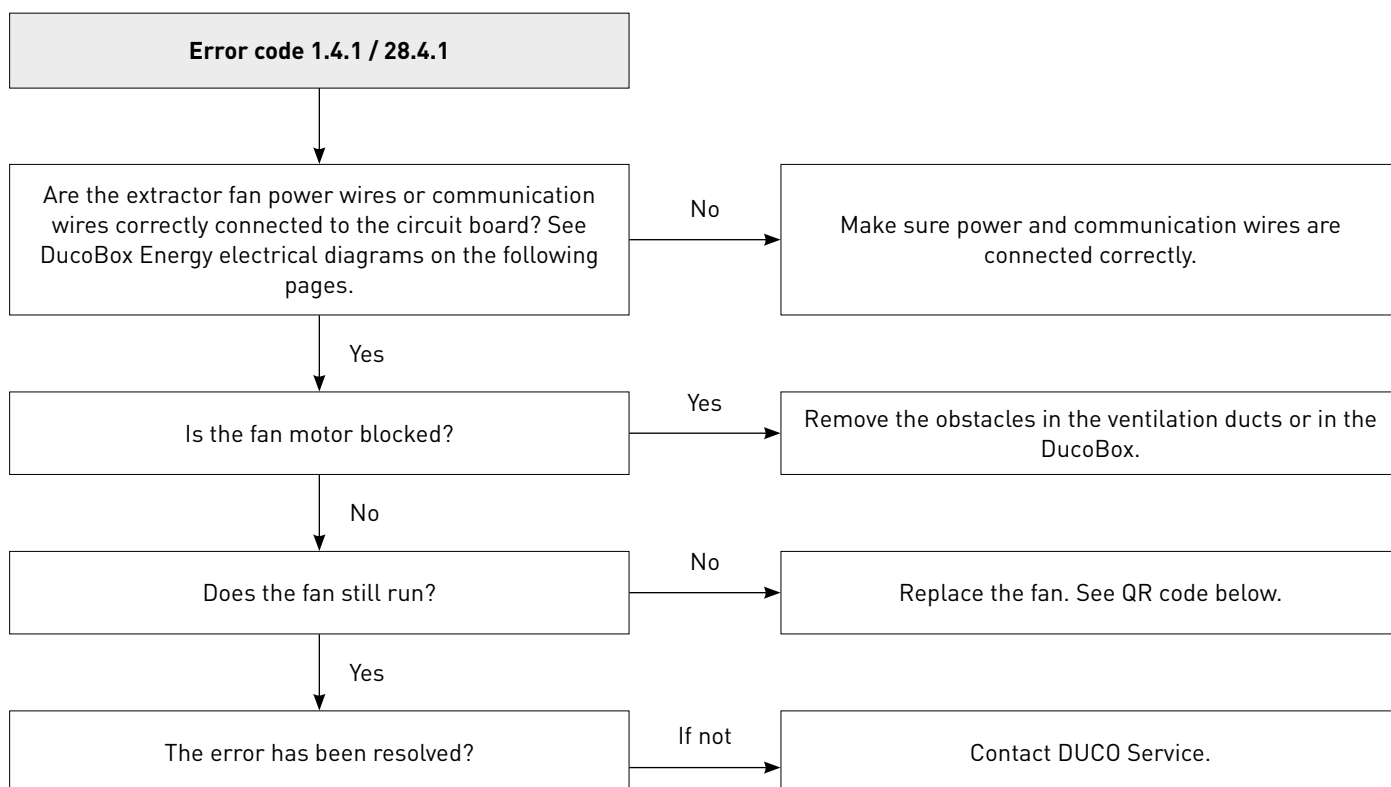
Additional explanations

The confirmation signal that the fan is rotating is missing, or the fan cannot reach the required speed. In the latter case, the speed (rpm) can optionally be read via the Duco Network Tool.

Possible causes

- The power cable or communication wires are not properly connected to the fan
- The fan motor is blocked or has failed
- The pressure sensor is damaged.
- The mains voltage of the DucoBox is abnormal.
- The DucoBox circuit board is damaged.
- The ventilation ducts to and from the DucoBox are blocked.
- The fan or fan cable is physically damaged.

Service instruction



Service & Maintenance
DucoBox Energy Comfort D325 fans



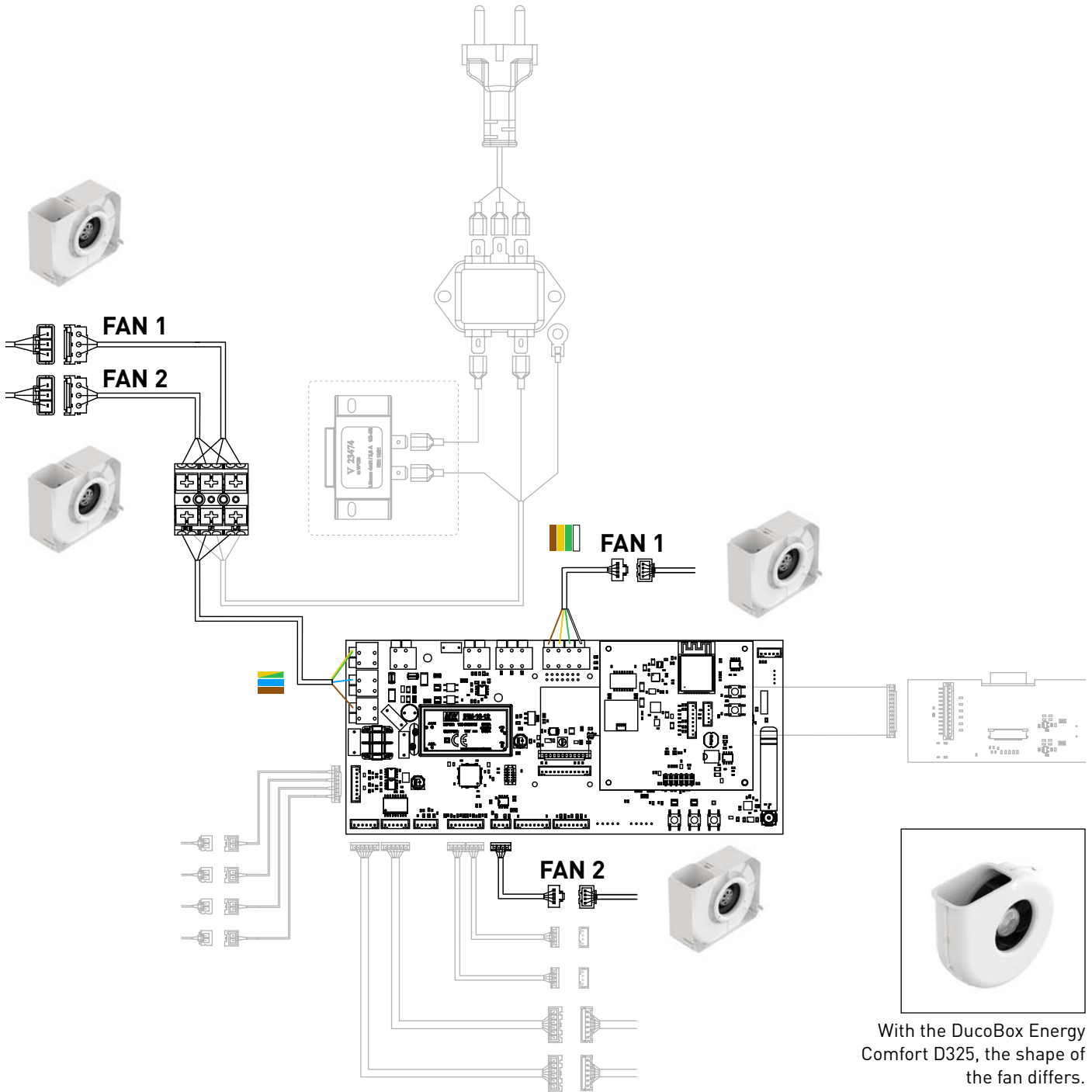
Service & Maintenance
DucoBox Energy Premium fans



Service & Maintenance
DucoBox Energy Comfort D400 and Comfort Plus fans

Specifically for a DucoBox Energy Comfort D325, you may wish to order the "Scroll puller DucoBox Energy Comfort".

Electrical diagram of DucoBox Energy Comfort (Plus)



With the DucoBox Energy Comfort D325, the shape of the fan differs.

Power Connector

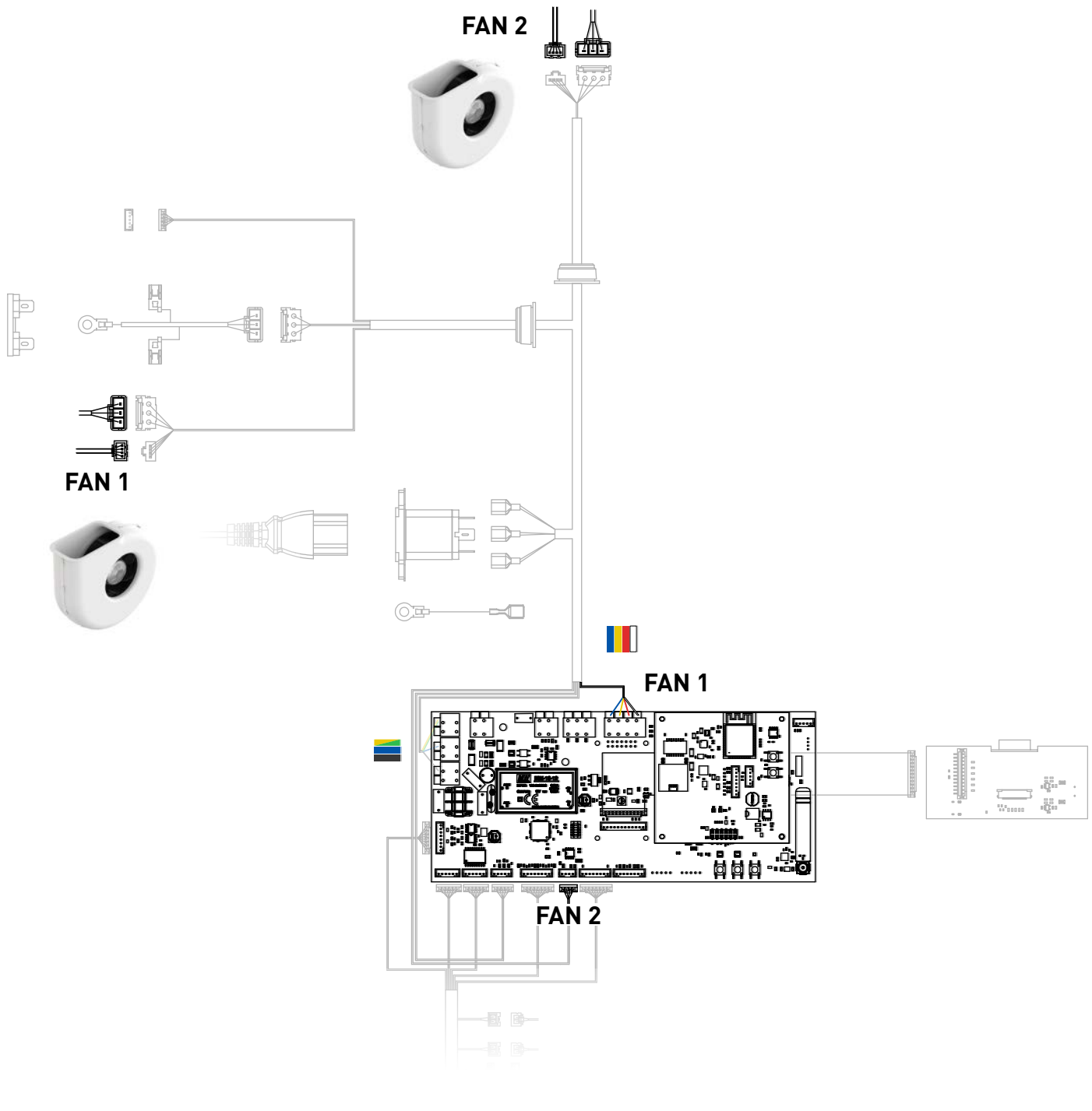
| DESCRIPTION | COLOUR | FUNCTION |
|-------------|--------------|---------------------------|
| PE | Yellow/Green | Grounding |
| N | Blue | Neutral conductor/ 230VAC |
| L | Brown | Phase wire / 230VAC |

Control connector

| DESCRIPTION | COLOUR | FUNCTION |
|-------------|---------------|------------------|
| GND | Blue or brown | Ground |
| 0-10V PWM | Yellow | Input: 0-10V-PWM |
| 10V | Red or green | Output: 10VDC |
| Tacho | White | Tacho output |



Electrical diagram of DucoBox Energy Premium

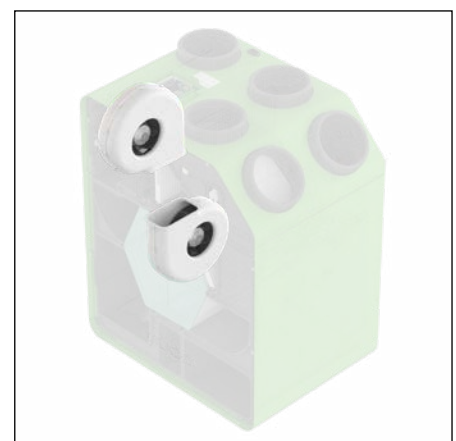


Power Connector

| DESCRIPTION | COLOUR | FUNCTION |
|-------------|--------------|---------------------------|
| PE | Yellow/Green | Grounding |
| N | Blue | Neutral conductor/ 230VAC |
| L | Black | Phase wire / 230VAC |

Control connector

| DESCRIPTION | COLOUR | FUNCTION |
|-------------|---------------|------------------|
| GND | Blue or brown | Ground |
| 0-10V PWM | Yellow | Input: 0-10V-PWM |
| 10V | Red or green | Output: 10VDC |
| Tacho | White | Tacho output |



02.C Check and/or replace the temperature sensor

Error codes 3.1.1 to 3.1.6; error codes 4.1.1 to 4.1.6; error codes 6.1.1 to 6.1.6; error codes 30.1.1 to 30.1.6

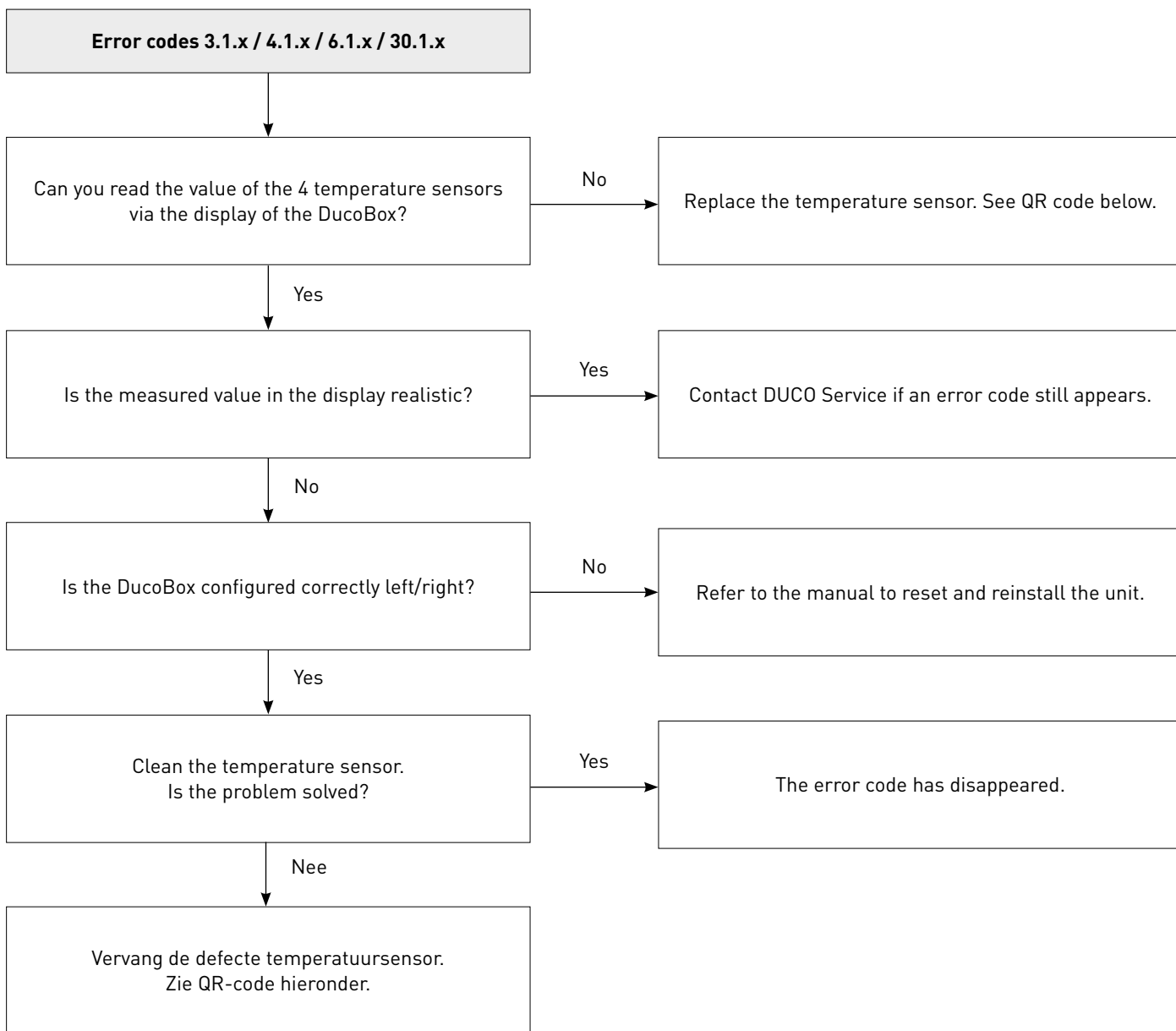
Additional explanations


The temperature sensor is not read correctly by the DucoBox or the connection between the DucoBox and the temperature sensor is interrupted.

Possible causes


- The temperature sensor is damaged.
- The connection to the temperature sensor is interrupted.
- The DucoBox Energy printed circuit board is damaged.

Service instruction



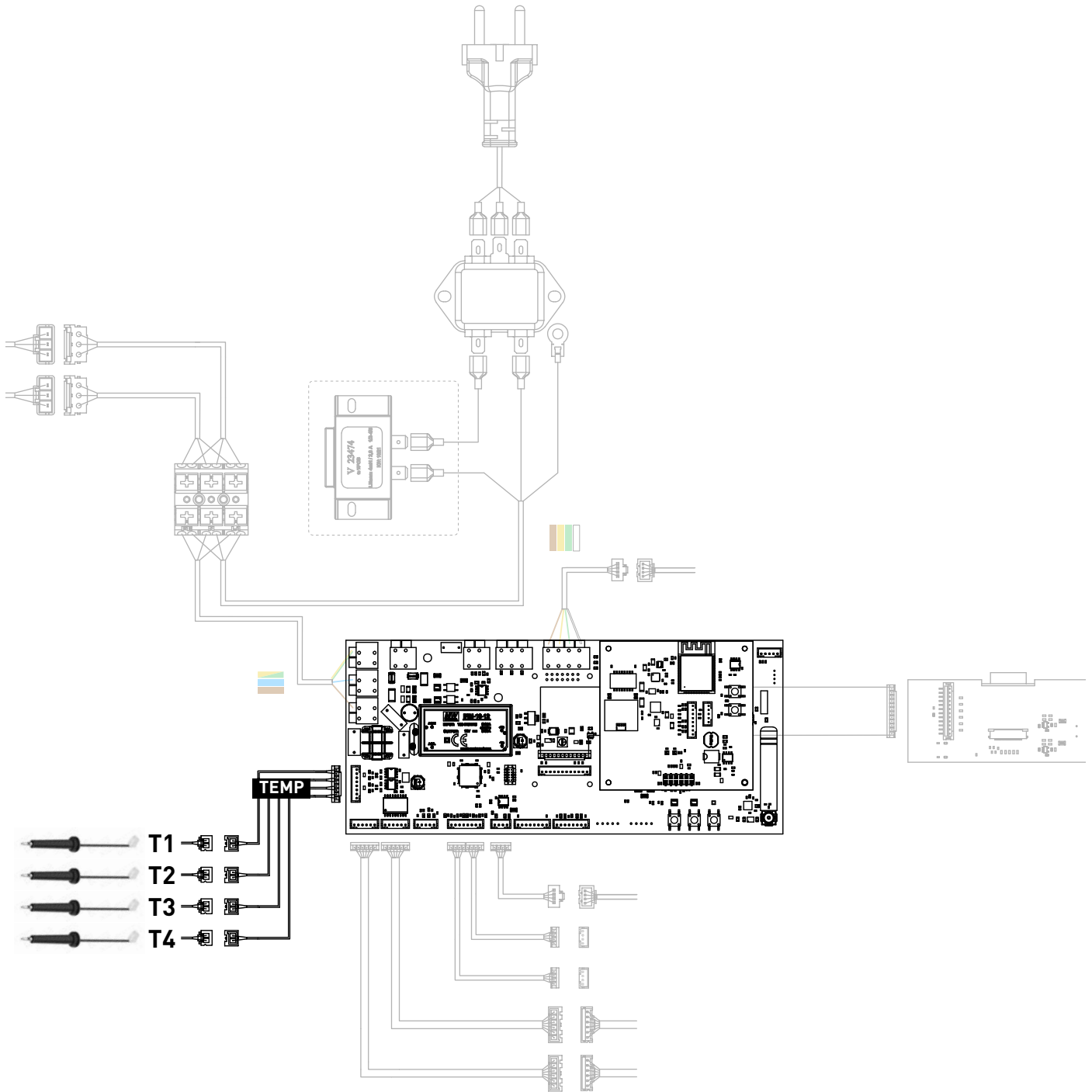


Service & Maintenance
DucoBox Energy Comfort (Plus)
temperature sensors



Service & Maintenance
DucoBox Energy Premium
temperature sensors

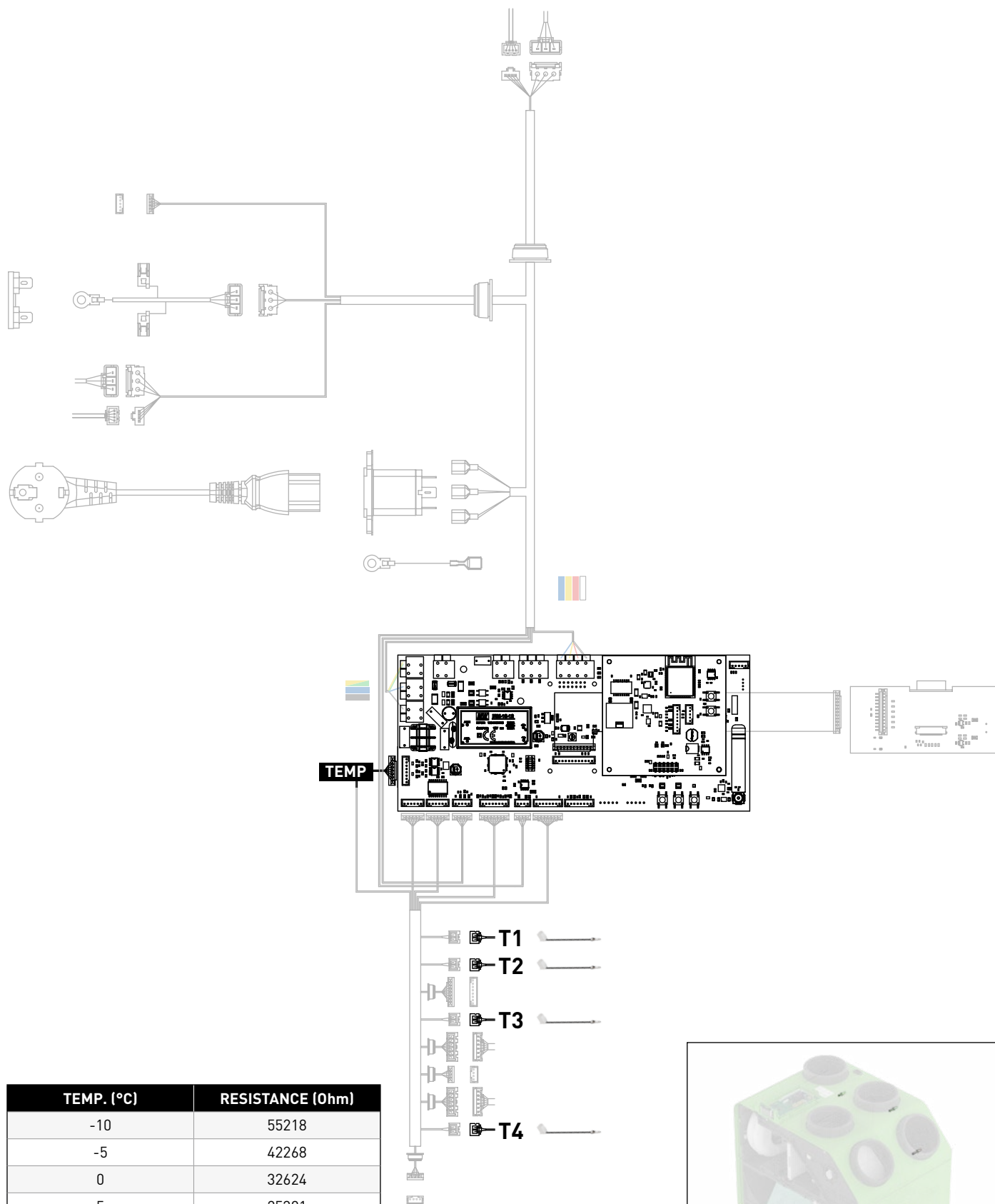
Electrical diagram of DucoBox Energy Comfort (Plus)



| TEMP. (°C) | RESISTANCE (Ohm) |
|------------|------------------|
| -10 | 55218 |
| -5 | 42268 |
| 0 | 32624 |
| 5 | 25381 |
| 10 | 19897 |
| 15 | 15711 |
| 20 | 12493 |
| 25 | 10000 |
| 30 | 8056 |



Electrical diagram of DucoBox Energy Premium



| TEMP. (°C) | RESISTANCE (Ohm) |
|------------|------------------|
| -10 | 55218 |
| -5 | 42268 |
| 0 | 32624 |
| 5 | 25381 |
| 10 | 19897 |
| 15 | 15711 |
| 20 | 12493 |
| 25 | 10000 |
| 30 | 8056 |



02.D Check and/or replace the pressure sensor

Error codes 16.1.1 to 16.1.6; error codes 29.1.1 to 29.1.6

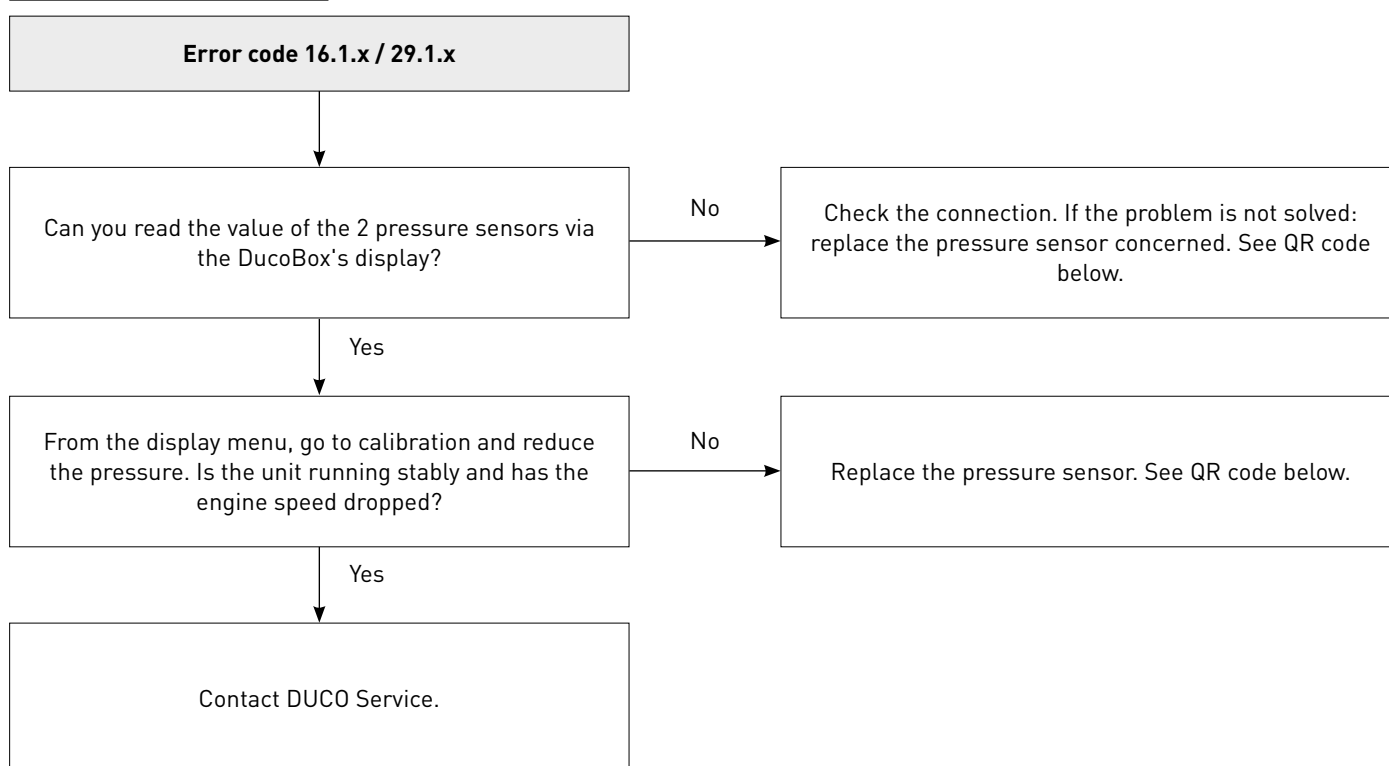
Additional explanations

The pressure sensor ETA or SUP is not being read correctly by the DucoBox or the connection between the DucoBox and the pressure sensor is interrupted.

Possible causes

- There are air leaks in and around the DucoBox (e.g. careless installation of the front panel)
- The pressure sensor was not correctly mounted in the casing.
- The connection to the pressure sensor is broken.
- An air duct to or from the DucoBox is blocked.
- The pressure sensor is damaged or dirty.
- The DucoBox Energy printed circuit board is damaged.

Service instruction

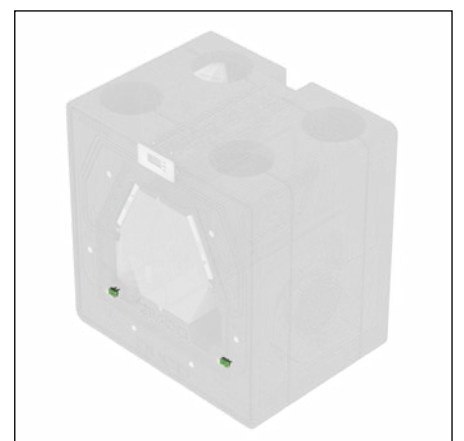
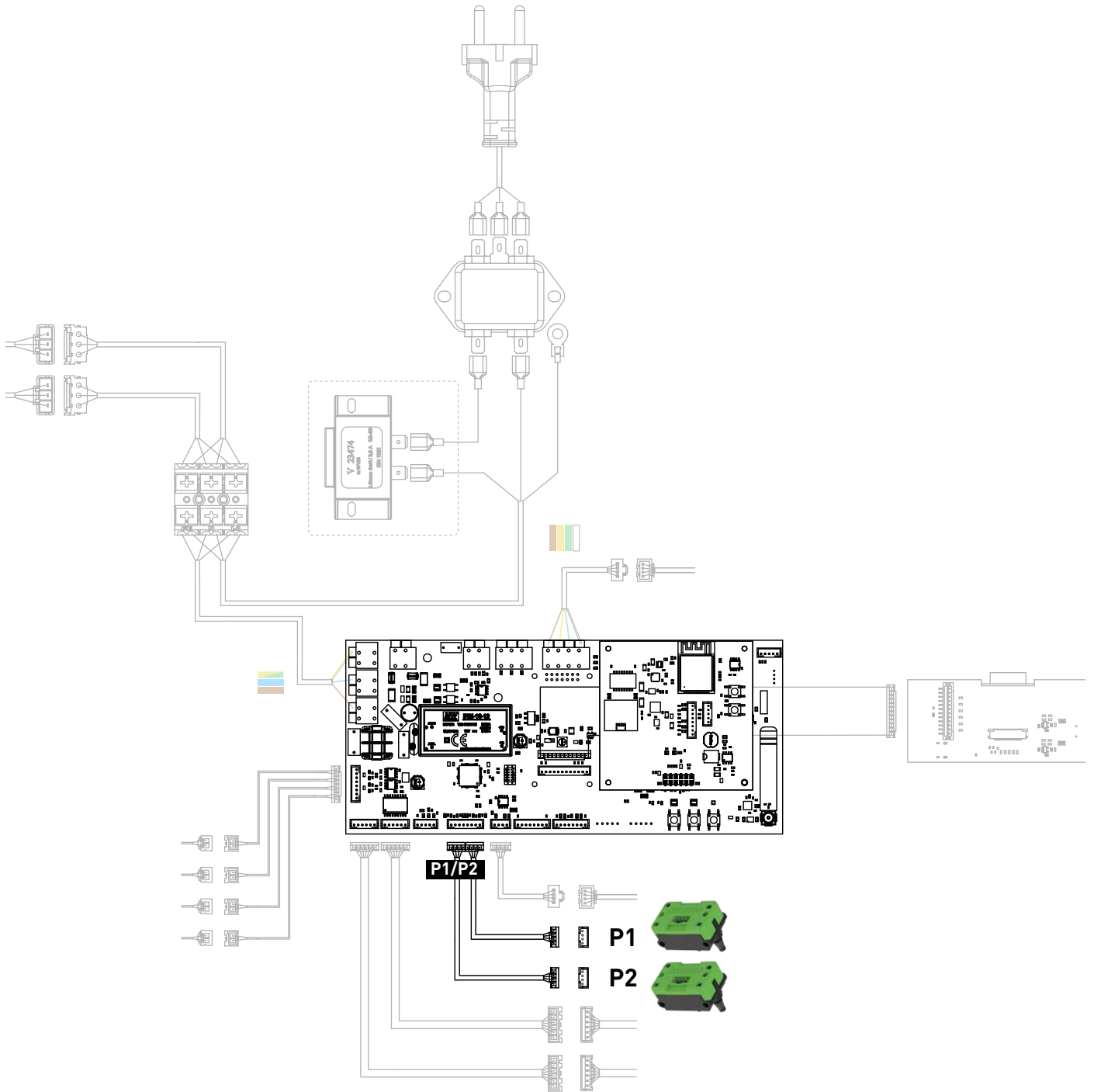


Service & Maintenance
DucoBox Energy Comfort (Plus)
pressure sensors

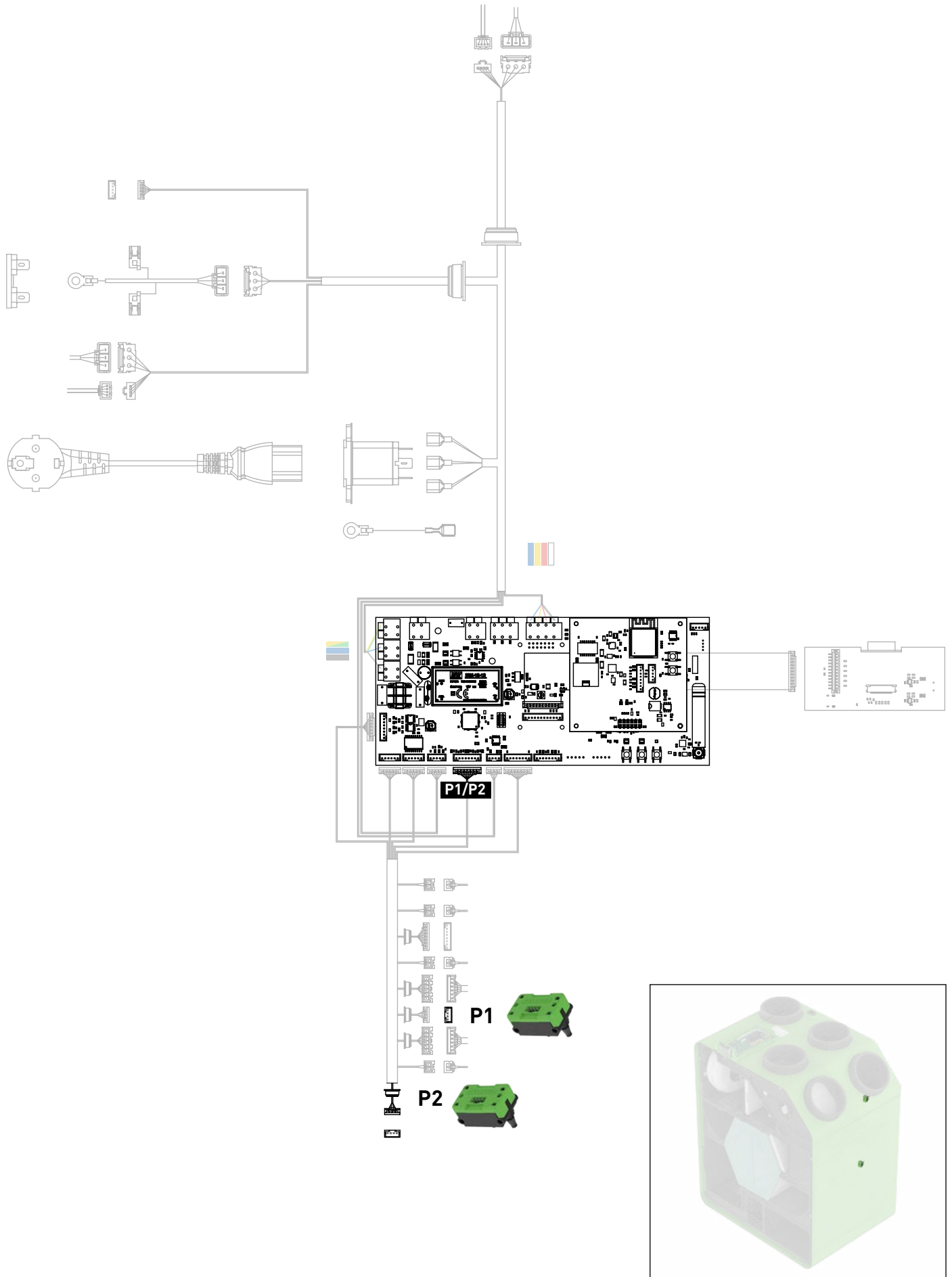


Service & Maintenance
DucoBox Energy Premium
pressure sensors

Electrical diagram of DucoBox Energy Comfort (Plus)



Electrical diagram of DucoBox Energy Premium



02.E Check and/or replace the user controller/room sensor

Error codes 37.17.1 to 37.17.3; error codes 40.17.1 to 40.17.3

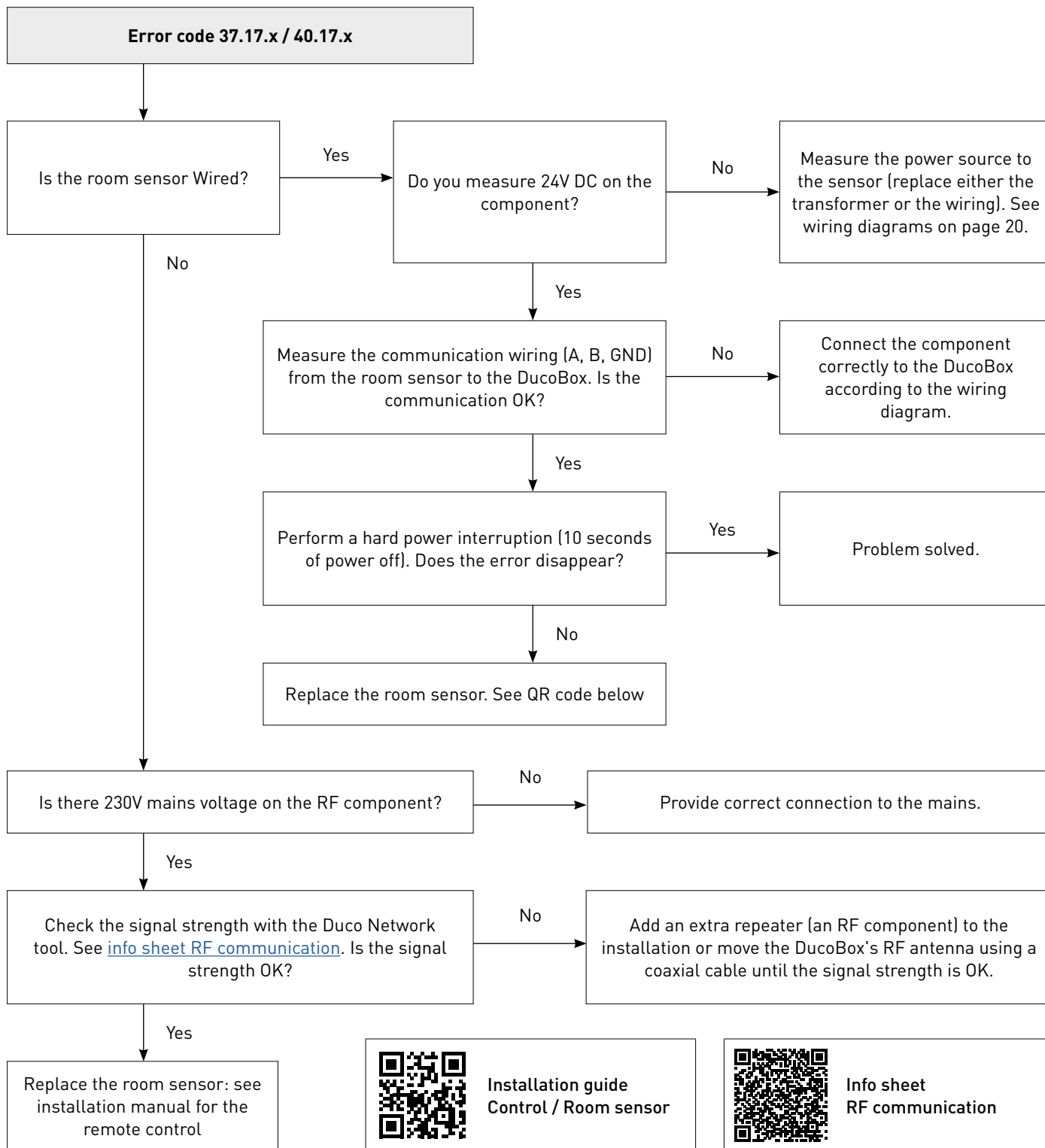
Additional explanations

The measured value of the room sensor is too high, too low or cannot be read correctly by the DucoBox, via the Duco Network Tool or via the Duco Installation App.

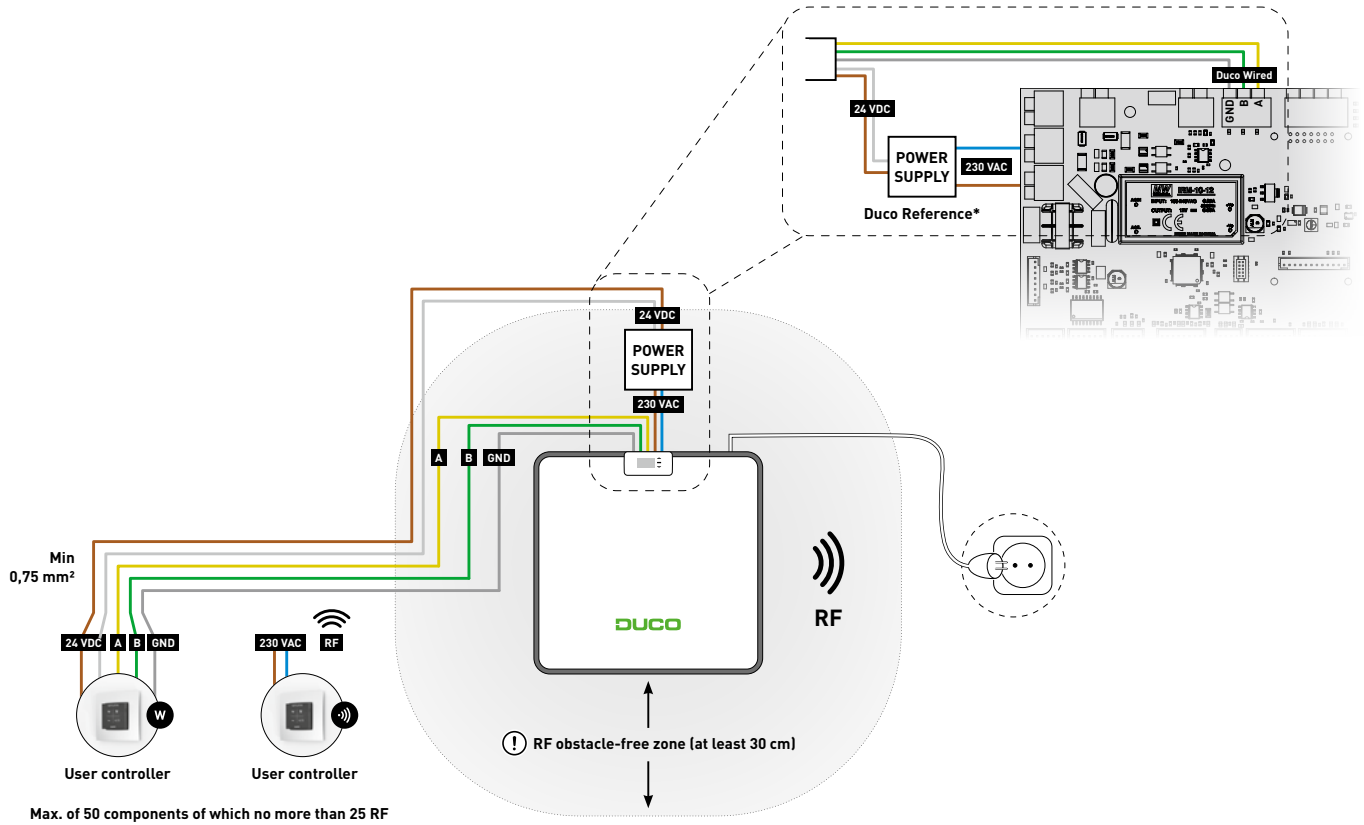
Possible causes

- The room sensor is damaged.
- The room sensor is outside the RF range of the DucoBox.
- The cabling (Wired) from the DucoBox to the room sensor is interrupted.
- The room sensor is exposed to direct sunlight.

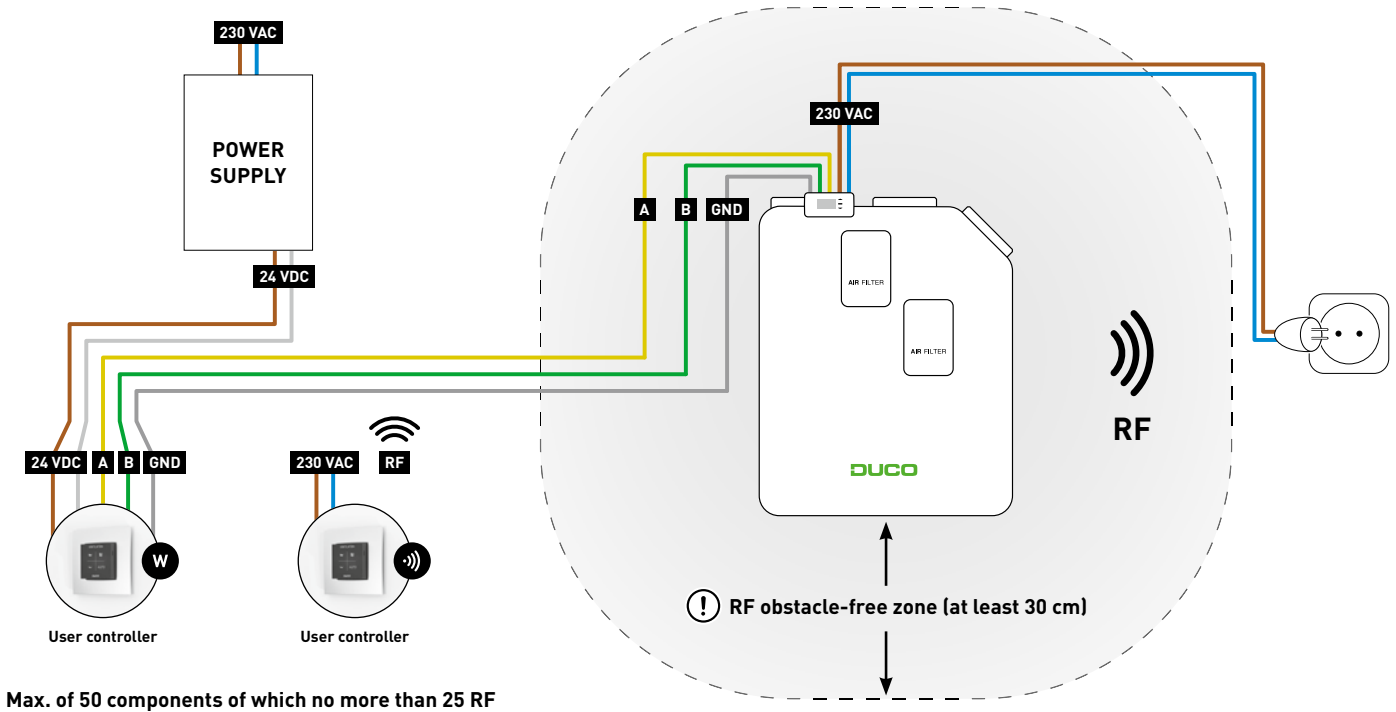
Service instruction



Wiring diagram DucoBox Energy Comfort (Plus)



Wiring diagram DucoBox Energy Premium



02.F Check and/or replace the circuit board

No error code.

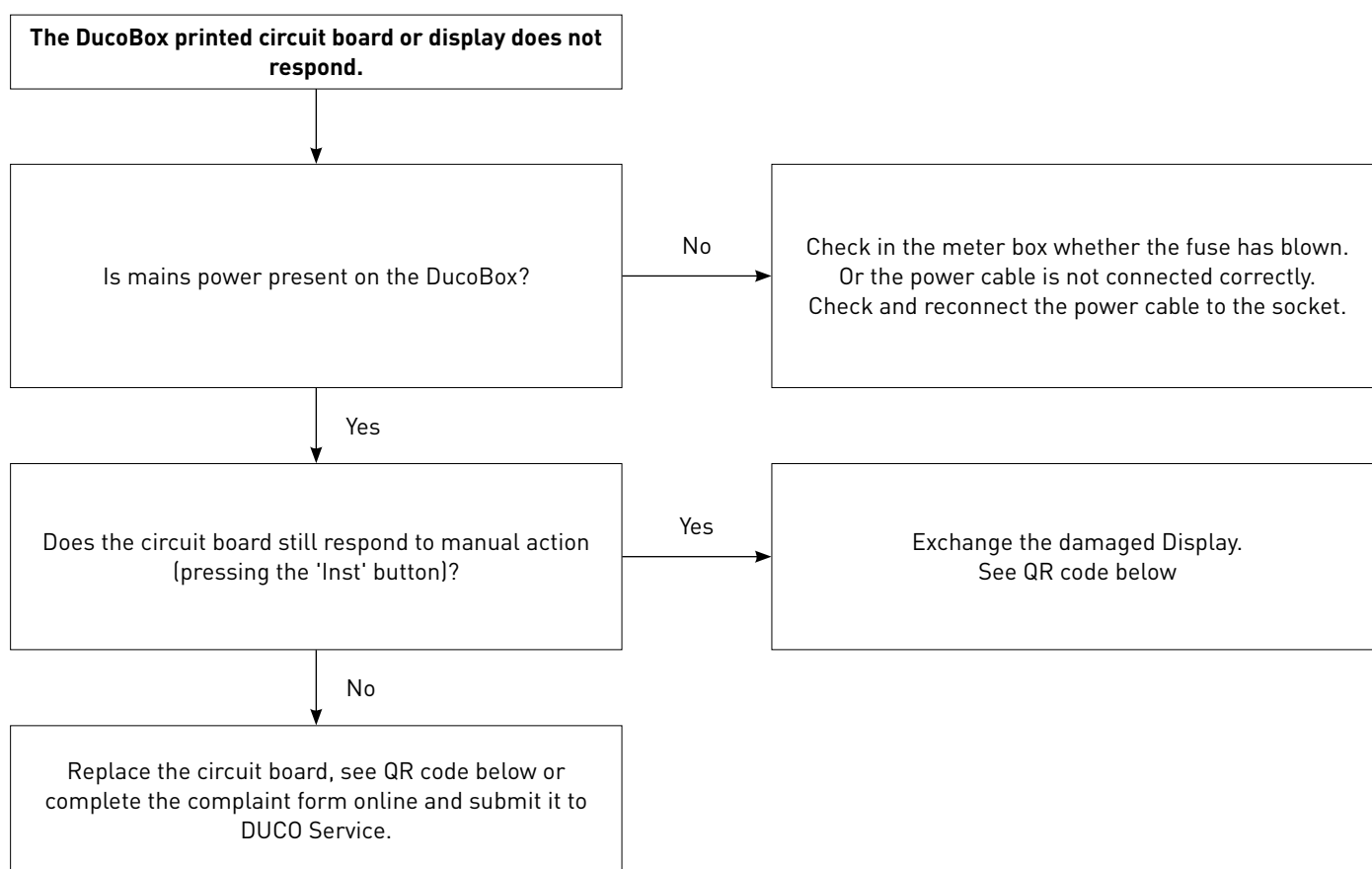
Additional explanations

The display does not start up and/or no LED indicator is lit on the DucoBox's circuit board.

Possible causes

- Poor connection of the power cables on the DucoBox board.
- The display is damaged.
- There is no mains voltage on the DucoBox Energy
- The DucoBox Energy printed circuit board is damaged.

Service instruction

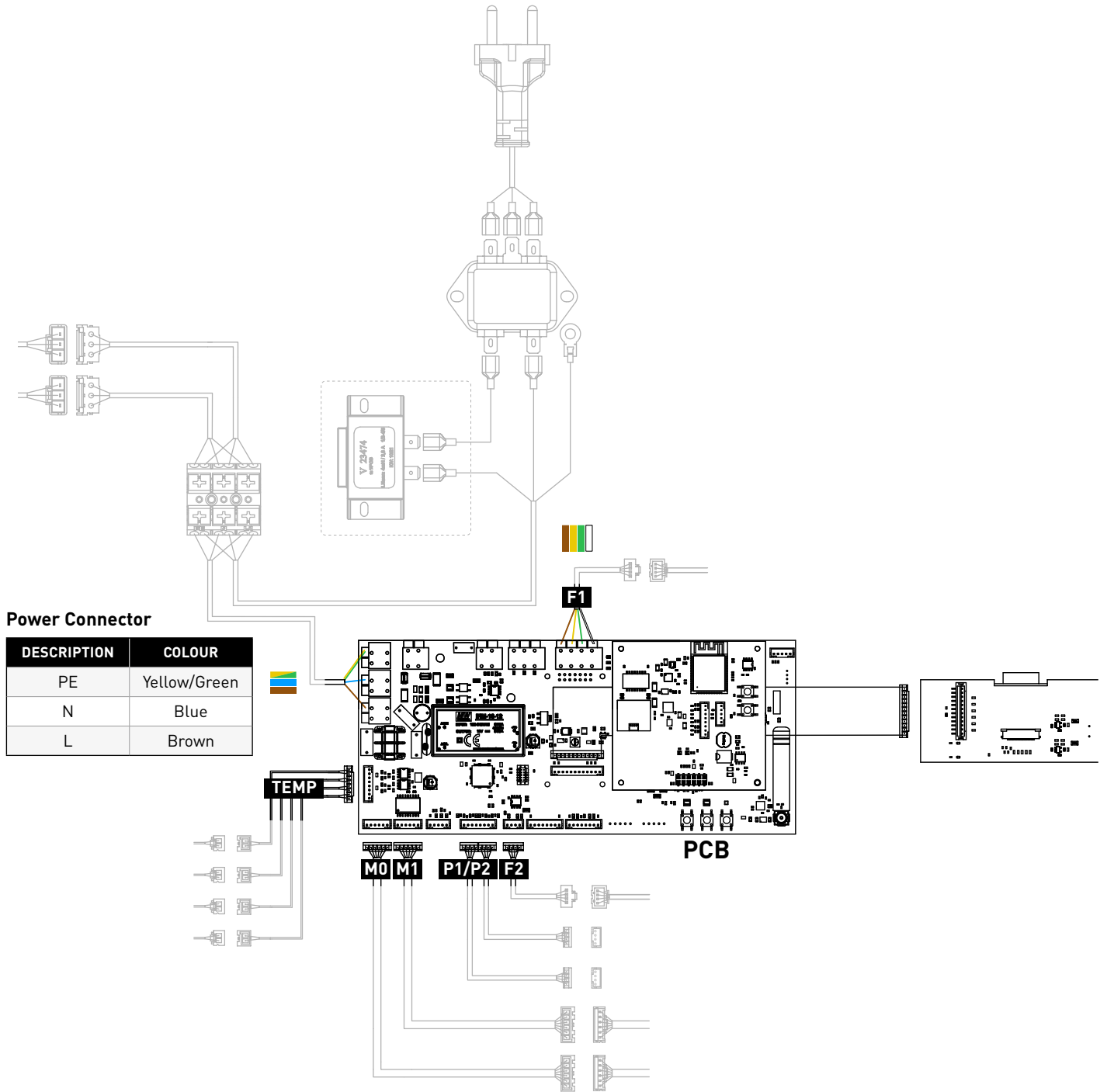


Service & Maintenance
DucoBox Energy Comfort (Plus)
PCB

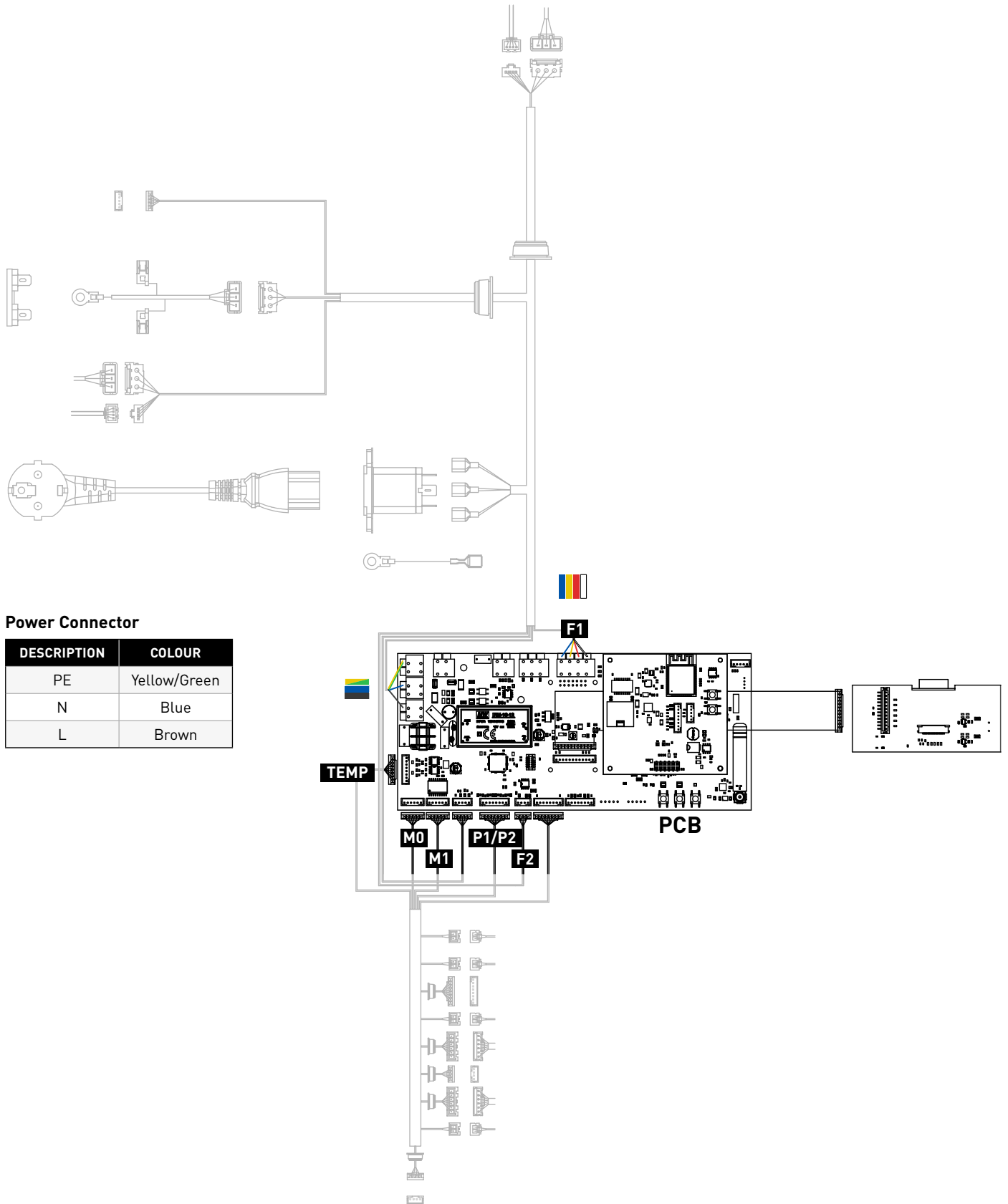


Service & Maintenance
DucoBox Energy Premium
PCB

Electrical diagram of DucoBox Energy Comfort (Plus)



Electrical diagram of DucoBox Energy Premium



DUCO