



Fan PCB connection and replacement process for Fan motor and Fan PCB

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This document explain the positioning of the connections of the PCB fan motor and the upper /lower fan motor replacement process for the SANDEN VENDO CDU-S / CDU-M & CDU-L

References:

Type	Model
CDU-L	R06A2A R06A2B R06A2C
CDU-M	R04A1A R04A1B R04A1C R04A1D
CDU-S	R02A1A R02A1B R02A1D

100% CO2 Condensing units

ECO-FRIENDLY REVOLUTION

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1.Summary

1. Fan motor specifications
2. Fan motor and Fan PCB position
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5. Fan motor replacement process

1.Fan motor specifications

REFERENCE : 93501-54220

DESIGNATION :MOTOR -SIC-65VF-F515-2

Pole number	Rated voltage [DC V]	Rated Current [mA]	Rated torque [N.m]	Rated speed [tr/min]	Maximum speed [tr/min]	Weight [kg]
8	350	45	0,167	600	800	1,5



2. Fan motor and fan PCB position



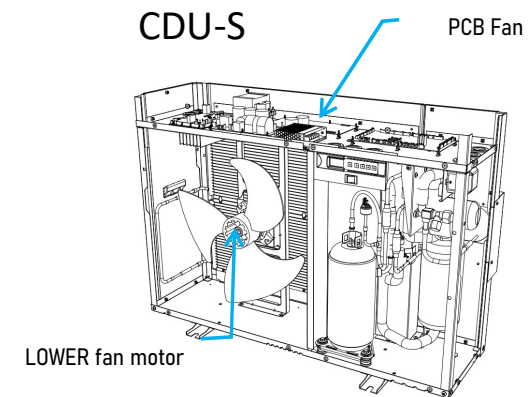
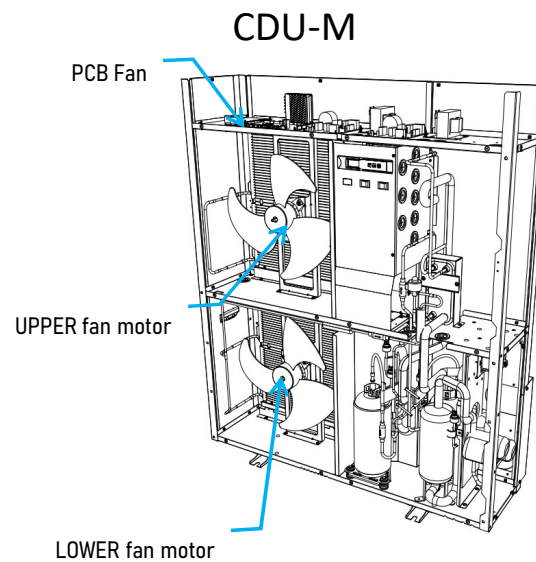
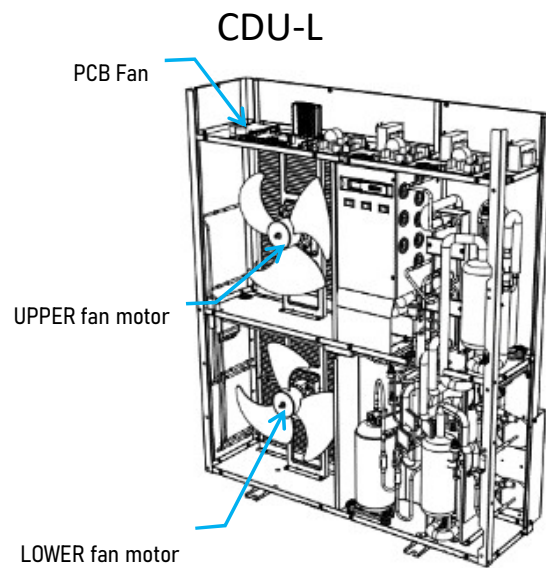
Before any fan motor replacement , it's important to check that :

- The compressor(s) switch(s) on the display panel are in OFF position.
- The CDU power supply is shut OFF.
- The fan motor shaft rotation is not hard or lock .
- The connection between fan motor and PCB fan motor are well wired (cf § 4 & 5)



E17: upper fan motor error
E16: lower fan motor error

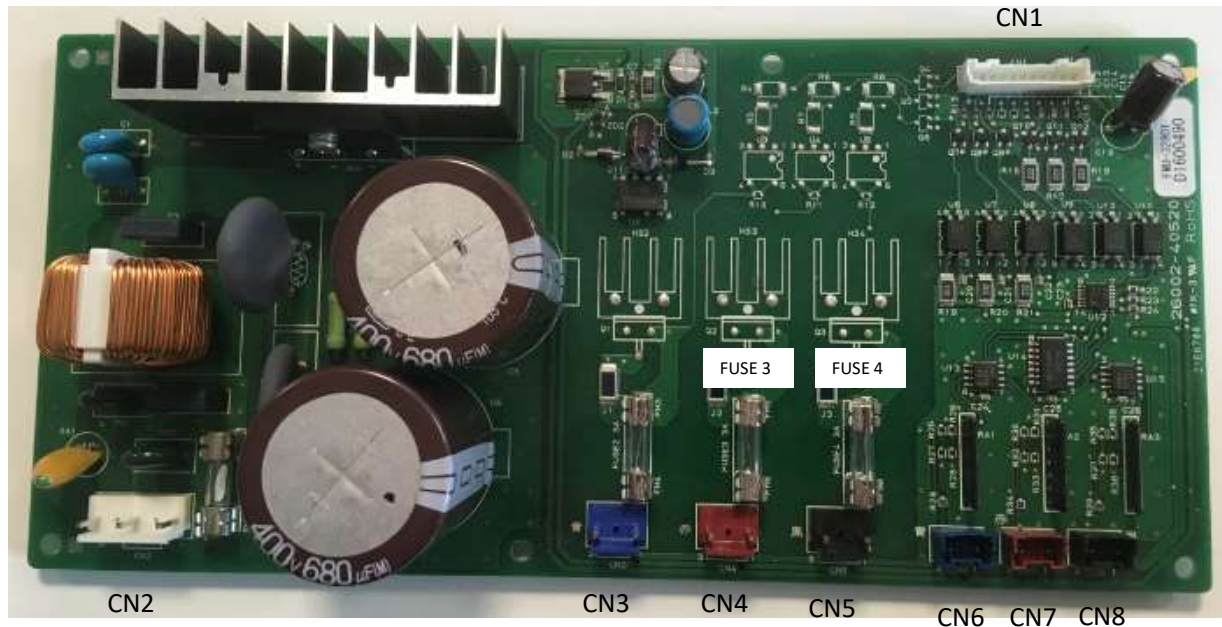
FAN MOTOR POSITION and PCB FAN POSITION inside CDU



3.Fan PCB connection

REFERENCE : FMU-32801

DESIGNATION : FAN MOTOR PCB



FUSE 3:
 - Upper fan fuse
 - E16 error after three start attempts if fuse damaged

FUSE 4:
 - Lower fan fuse
 - E17 error after three start attempts if fuse damaged



In case of difficult rotation of the shaft, check the condition of fuses FUSE 3 and FUSE 4
 In case of broken fuse, it is possible to use the unnecessary fuse placed in CN3

CN1:
 - Link with Control PCB
 - E17 error after three start attempts when disconnected connector

CN2 :
 - Power supply 230 V AC
 - E17 error after three start attempts when disconnected connector

CN3:
 - NOTHING

CN4:
 - Upper Fan motor power supply 350V DC (CDU-M & CDU-L)
 - E16 error after three start attempts when disconnected connector

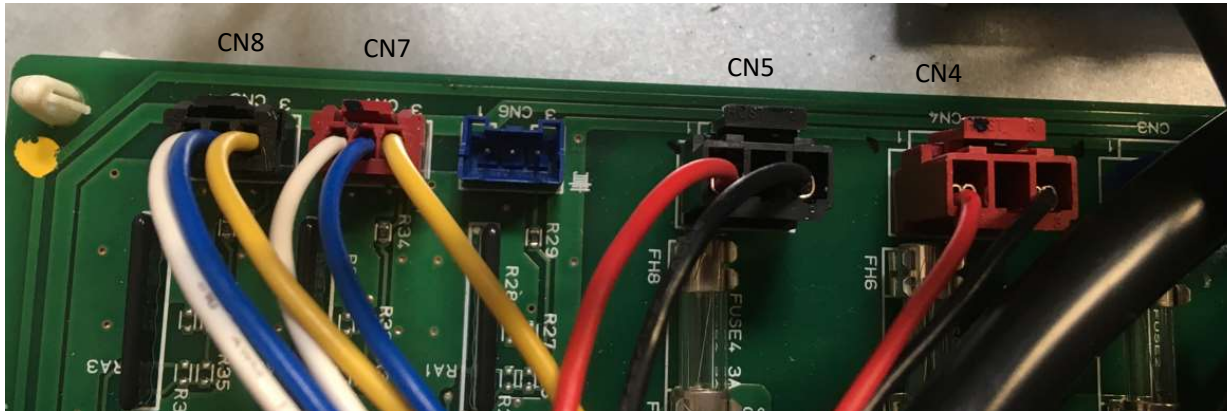
CN5 :
 - Lower Fan motor power supply 350V DC (All models)
 - E17 error after three start attempts when disconnected connector

CN6:
 - NOTHING

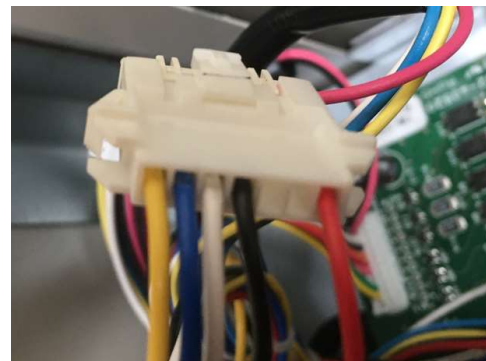
CN7:
 -Upper Fan motor Control and speed information (CDU-M/CDU-L)
 - E16 error after three start attempts when disconnected connector

CN8 :
 - Lower Fan motor Control and speed information (All models)
 - E17 error after three start attempts when disconnected connector

4.Fan PCB supply voltage check



Black : Ground
Red : DC power supply
White : DC electronic power supply
Yellow: Control DC
Blue : feedback Pulse



Relay harness

Yellow /Black	0-6 V DC
Black /Red	306 V DC
Black / White	15V DV

Make the measurement in the relay harness by using dedicated voltage tester with thin pins



4. Fan PCB replacement process

1. Switch OFF all compressors with front switches.
2. Shut OFF power supply main circuit breaker.
3. Eventually take a photo of the PCB Fan connected.
Then, unplug the connectors from the PCB to be replaced.
4. Pinch the plastic plots with fingers or helped with dedicated tool or pliers.
5. Remove the failed PCB Fan.
6. Install the new Fan PCB and check absence of screws or foreign matter when installing the new part.
7. Plug all the connector .
8. Switch ON Power supply main circuit breaker.
9. Place all compressor switch in ON position.
10. Confirm that no error code remain and control the correct operation of the CDU

5. Fan motor replacement process

1. Put the compressor switch of the panel display in OFF position
2. Switch OFF the power supply
3. Check for No Voltage
4. Remove the top panel
5. Remove the front left panel
6. Disconnect the wires between PCB FMU-32801 and FAN MOTOR
7. Unscrew the fan motor nut(s), **be careful unscrewing is clock wise**
8. Remove the propeller fan from the fan motor shaft
9. Remove the 4 screws securing the fan motor
10. Remove the fan motor
11. Place the new fan motor
12. Tighten the 4 fan motor screws
13. Assemble the propeller fan on the fan motor shaft
14. Screw the fan motor nut(s), **be careful screwing is counter clock wise**
15. Connect the fan motor wire(s) to the Fan motor PCB FMU-32801
16. Switch ON the power supply
17. Control that there is no error code on the display.
18. Put the compressor switch of the panel display in ON position

— Disassembly
— Reassembly

