2019-04-03
NIBE After Sales Service

TDI

CHECKPOINTS WHEN NO LED LIT ON PWB1
AMS10-8/12/16, F2040-8/12/16

Many PWB-cards are replaced unneccessary due to the fact that is is difficult to trouble-shoot the electronic unit. This is causing unneccessary high repair cost for the endcustomer. By issuing this document we are trying to help you determine the correct action to get the AMS10/F2040 working again.

- CNW2 is the connection for communicationscable between indoor and outdoor unit so there should be an oscillating signal 0-22 VDC, but it is not a steady voltage on it. The connector should be attached when you measure this.
- Voltage on CNA1 och CNA2 is approx. 310-320 VDC at 230 VAC powersupply.
- CNA1 and CNA2 is the supply for Control PCB then Control PCB create its own internal controlvoltage, where power to green and red LED are included.
- If LED are not lit up it could be this supply that is missing. Measure on positions 1-7 in order to determine where supply disappears.

If all LED on PWB1 is off, check the following points:

1. Incoming power supply (230 V)
2. Is the fuse OK?
   12/16 kW; 30A, 10x37mm. 8kW; 20A, 6x30 mm
3. Voltage out from Filtercard PWB3 (230 V), check fuse on the card.
   12/16 kW; 8A, 5x20mm. 8kW; 5A, 5x20mm
4. Check voltage between DM and Invertercard PWB2 (310-320 VDC). If no voltage, re-place the DM.
5. Check voltage at P2-N2 (12/16 kw), T26-T27 (8 kW) on Invertercard PWB2 (310-320 VDC).
   a) If no voltage, disconnect the compressor and check again.
   b) If needed replace the Invertercard.
   c) Check resistance in compressor coils and isolation to ground.
6. Check voltage at P-N2 from AF module to capacitor (310-320 VDC).
   a) Measure voltage on the capacitor and switch off the power, voltage should decrease slow and steady (2-3 volt per second) down to approximately 60 volt where it drops down to 30 volt. If the voltage disappears directly something is wrong.
   b) Disconnect wires from CNA1 and CNA2 on PWB1 and try again.
   c) If the same problem remains then probably the capacitor is broken or it could be the PWB1 that is causing it.

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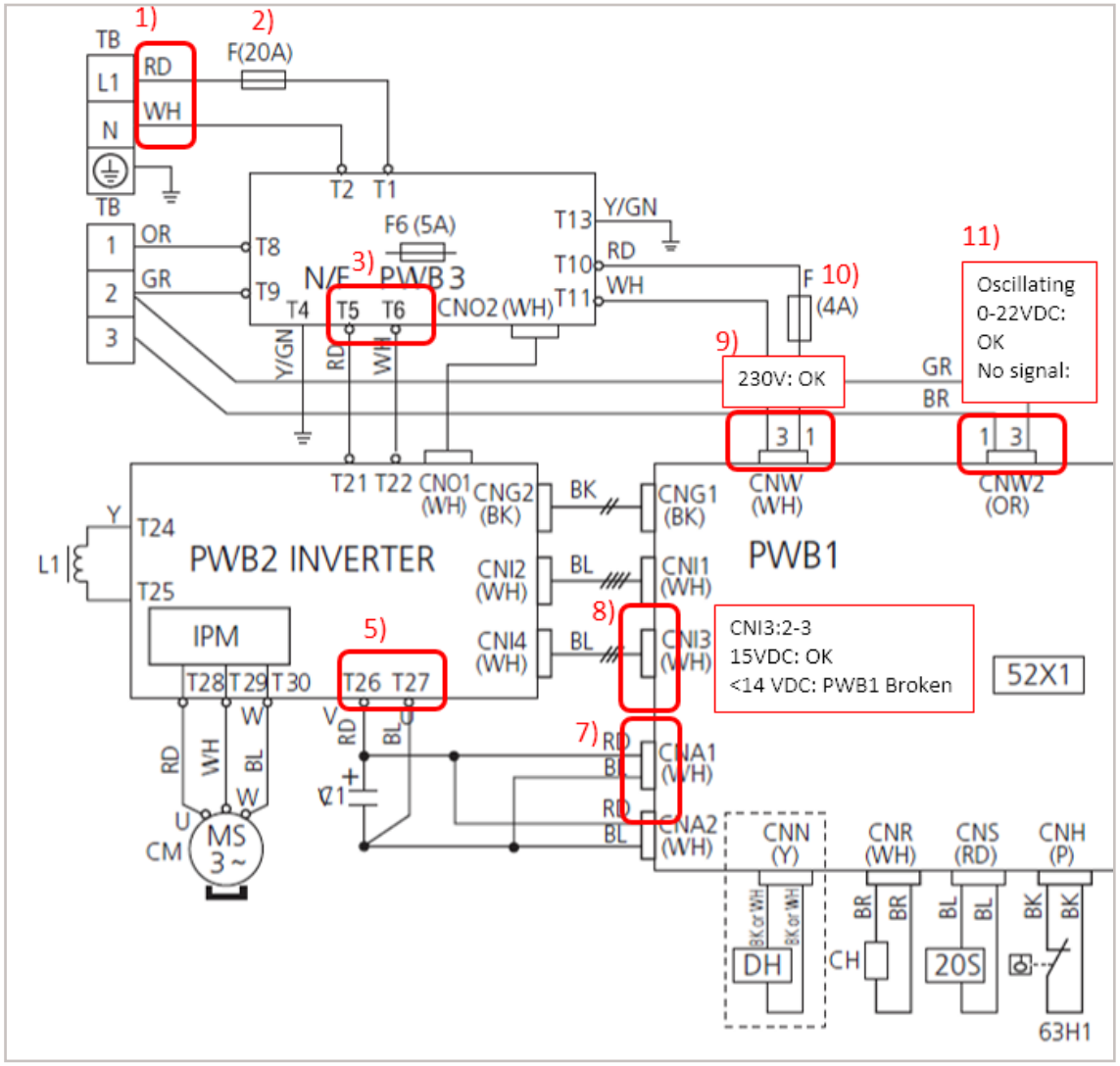
7. Check voltage at CNA1 (310-320 VDC)
   a) If no voltage, disconnect the wiring CNA1 and CNA2 that goes into the card and check again.
   b) Is voltage still missing? Change Invertercard.
   c) Do you get the correct voltage when wiring is disconnected? Then it could be a component connected to PWB1 that is creating an overload of the card. Disconnect all wiring except supply and internal communication from PWB1 (CNA1, CNA2, CNI1, CNI3, CNW and CNW2 shall remain connected on AMS10-12/16). Reconnect the other wiring one by one and observe if the voltage disappear. When the voltage disappear you have located the faulty component.

If green LED on card PWB1 is flashing but no function, check the following points:

8. Check voltage at points 8-11

AMS10-8, F2040-8



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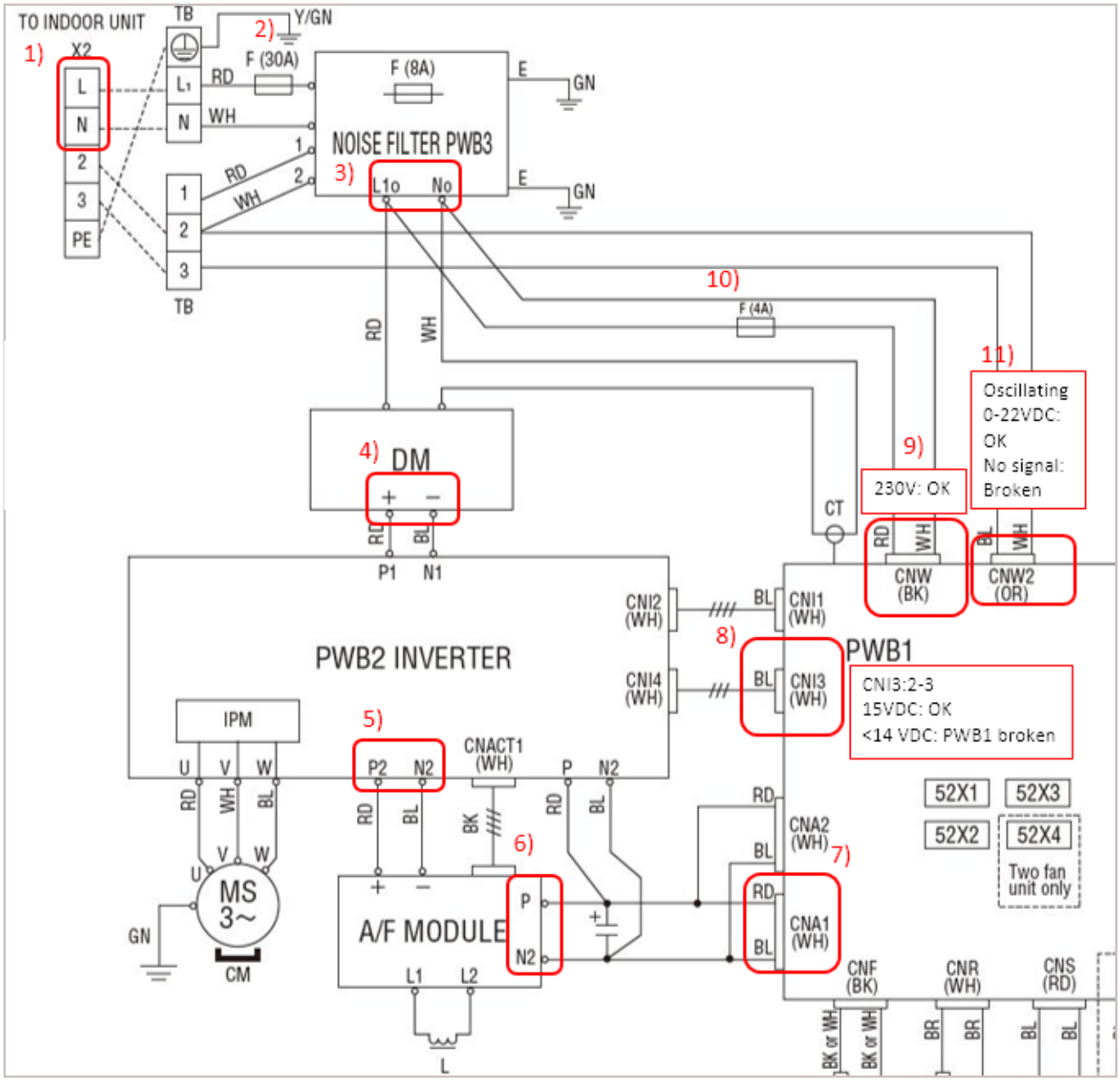

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