



# PCB inverter connection check and replacement process

SandenVendo February 2023

This document explain the positioning of the connections and replacement process of the PCB inverter for condensing unit SANDEN VENDO CDU-L / CDU-M & CDU-L

## References:

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

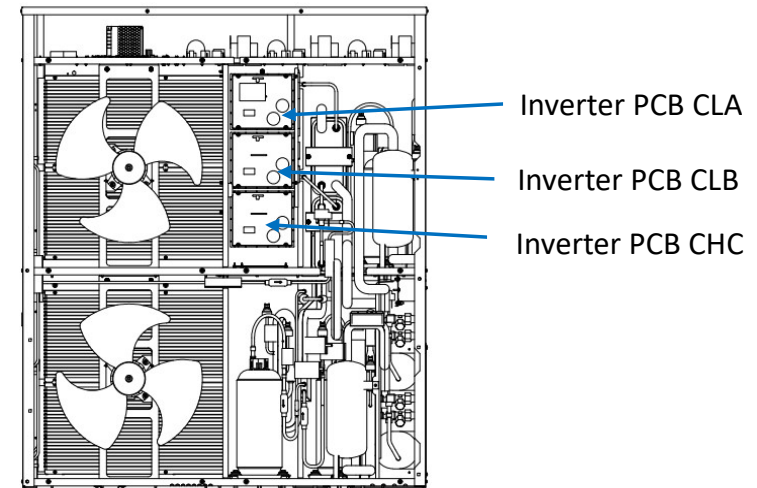
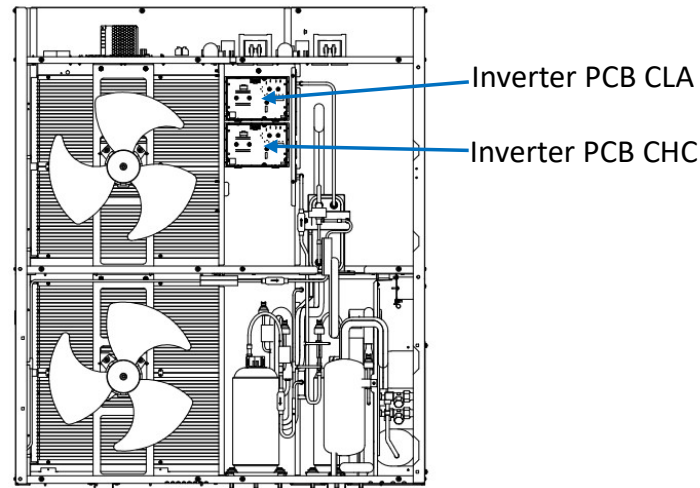
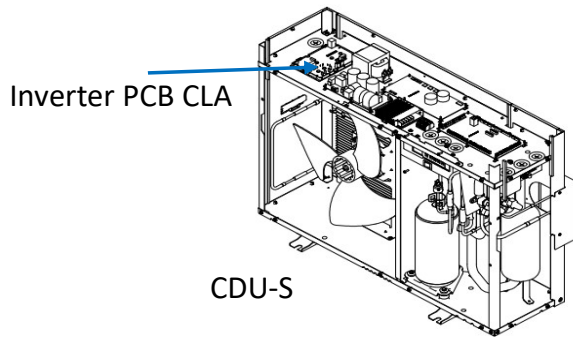
100% CO2 Condensing units

## ECO-FRIENDLY REVOLUTION

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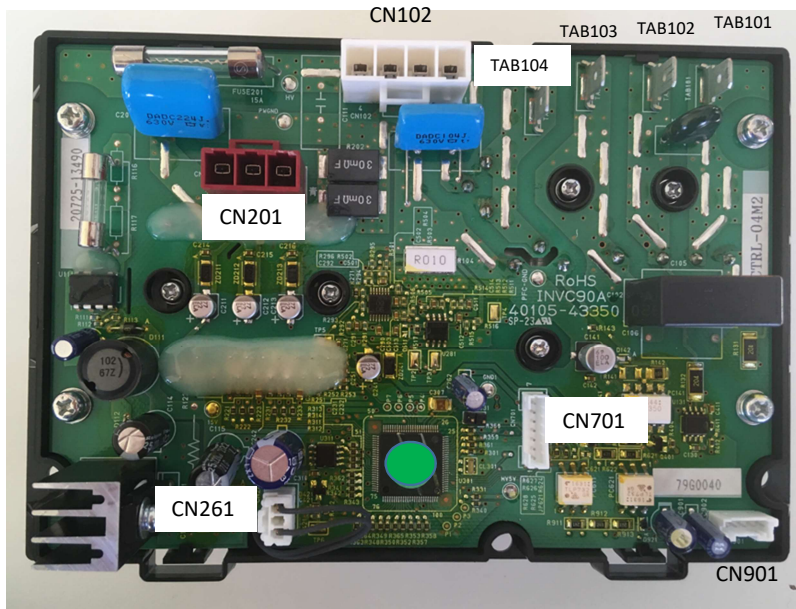
1. Inverter PCB single phase 230V SANDEN compressor
2. Inverter PCB single phase 230V PANASONIC compressor
3. Inverter PCB triple phase 400V SANDEN compressor
4. Inverter PCB triple phase 400V PANASONIC compressor
5. Inverter PCB replacement process





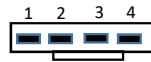
# 1. Inverter PCB single phase 230V SANDEN compressor

FOR CDU MODEL: R02A1B et R04A1B  
REFERENCE : 20725-13490

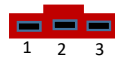


TAB101/TAB102 :Link PCB filter  
Measurement between TAB101 & TAB102 : 230V AC  
E42 error when disconnected connector

TAB103/TAB104: Link reactor  
E42 error when disconnected connector



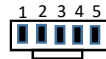
CN102: Link PCB filter  
E42 error when disconnected connector



CN201: Compressor power supply  
E42 error when disconnected connector  
As the output signal of the Inverter (CN500) being a square signal , it is not possible to carry out measurements using a simple voltage tester

CN261: PCB heat sink thermistor  
E10-H40 error when disconnected connector

CN701: software update connector ISP



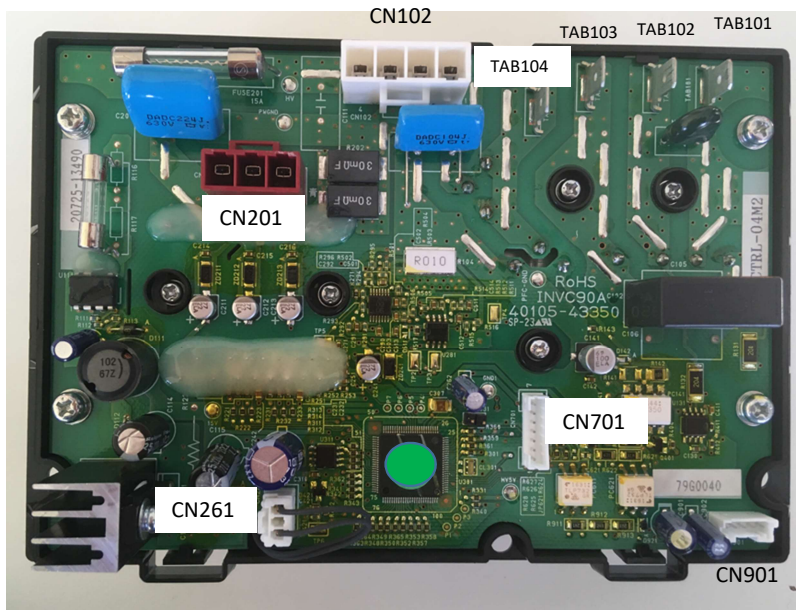
CN901: Link control PCB (control)  
E42 error when disconnected connector



## 2. Inverter PCB single phase 230V PANASONIC compressor

FOR CDU MODEL: R02A1D et R04A1D

REFERENCE : 78200001H10

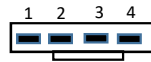


TAB101/TAB102 :Link PCB filter

Measurement between TAB101 & TAB102 : 230V AC  
E42 error when disconnected connector

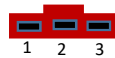
TAB103/TAB104: Link reactor

E42 error when disconnected connector



CN102: Link PCB filter

E42 error when disconnected connector



CN201: Compressor power supply

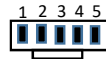
E42 error when disconnected connector

As the output signal of the Inverter (CN500) being a square signal , it is not possible to carry out measurements using a simple voltage tester

CN261: PCB heat sink thermistor

E10-H40 error when disconnected connector

CN701: software update connector ISP



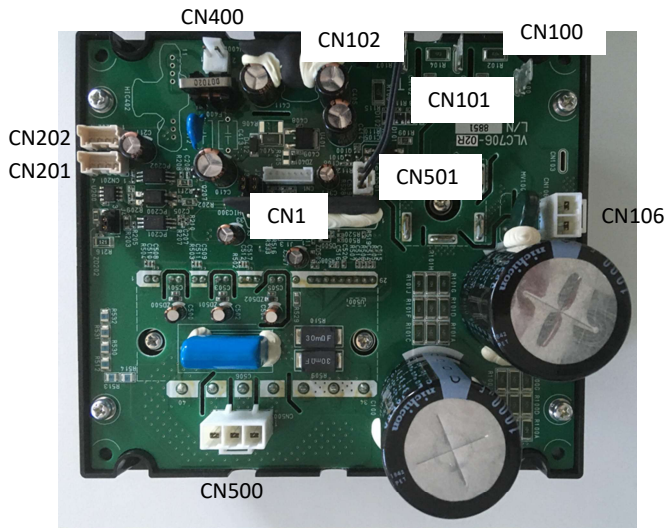
CN901: Link control PCB (control)

E42 error when disconnected connector



### 3. Inverter PCB triple phase 400V SANDEN compressor

**FOR CDU MODEL: R06A2B**  
**REFERENCE : INV-SCRM1A**



CN100/CN101 :400V AC  
 CN100/CN102: 400V AC  
 CN101/CN102: 400V AC  
 E10-H4C if one phase disconnected  
 E10-H14 if 2 or 3 phases disconnected



CN106: Link reactor  
 Between pin 1 & 2 and GND : 280V DC  
 E10-H14 error when disconnected connector



CN400 : Between pin 1 & 2 24V DC  
 E42 error when disconnected connector



CN201: Link IFU PCB  
 No measurement  
 E42 error when disconnected connector

CN202: Nothing

CN1: Software update connector ISP

CN501: PCB heat sink thermistor  
 E10-H68 when disconnected connector or sensor damaged

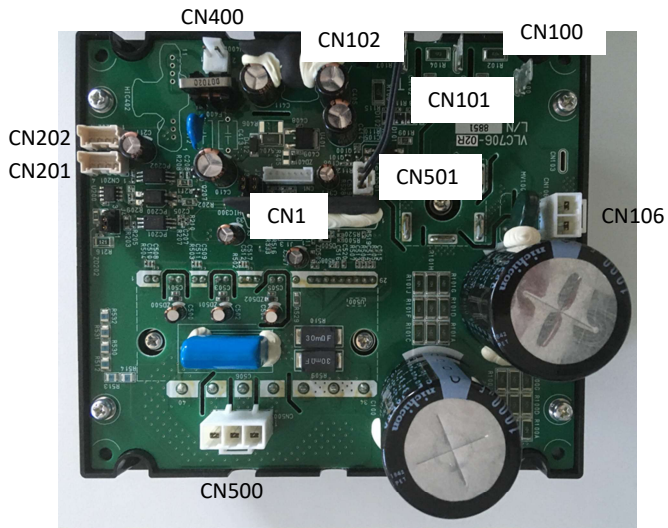


CN500: Compressor power supply 3 phases  
 E10-H20 error when disconnected connector  
 As the output signal of the Inverter (CN500) being a square signal , it is not possible to carry out measurements using a simple Voltage tester

# 4. Inverter PCB triple phase 400V PANASONIC compressor

**FOR CDU MODEL: R04A1C et R06A2C**  
**REFERENCE : INV-SCRM2A**

CN100/CN101 :400V AC  
 CN100/CN102: 400V AC  
 CN101/CN102: 400V AC  
 E10-H4C if one phase disconnected  
 E10-H14 if 2 or 3 phases disconnected



CN106: Link reactor  
 Between pin 1 & 2 and GND : 280V DC  
 E10-H14 error when disconnected connector



CN400 : Between pin 1 & 2 24V DC  
 E42 error when disconnected connector



CN201: Link IFU PCB  
 No measurement  
 E42 error when disconnected connector

CN202: Nothing

CN1: Software update connector ISP

CN501: PCB heat sink thermistor  
 E10-H68 when disconnected connector or sensor damaged



CN500: Compressor power supply 3 phases  
 E10-H20 error when disconnected connector  
 As the output signal of the Inverter (CN500) being a square signal , it is not possible to carry out measurements using a simple Voltage tester



## 5.PCB Inverter 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 controller connected.  
Then, unplug the connectors from the PCB to be replaced.
4. Untightened the PCB inverter fixing screw.
5. Remove the failed PCB inverter
6. Install the new Inverter PCB and check absence of screws or foreign matter when installing the new part.
7. Plug all the connectors .
8. Switch ON Power supply main circuit breaker.
9. Switch ON all compressors with front switches.
10. Confirm that no error code remain and control the correct operation of the CDU