Anti- Reverse Power Controller

Installation manual

HAVELLS

enviro
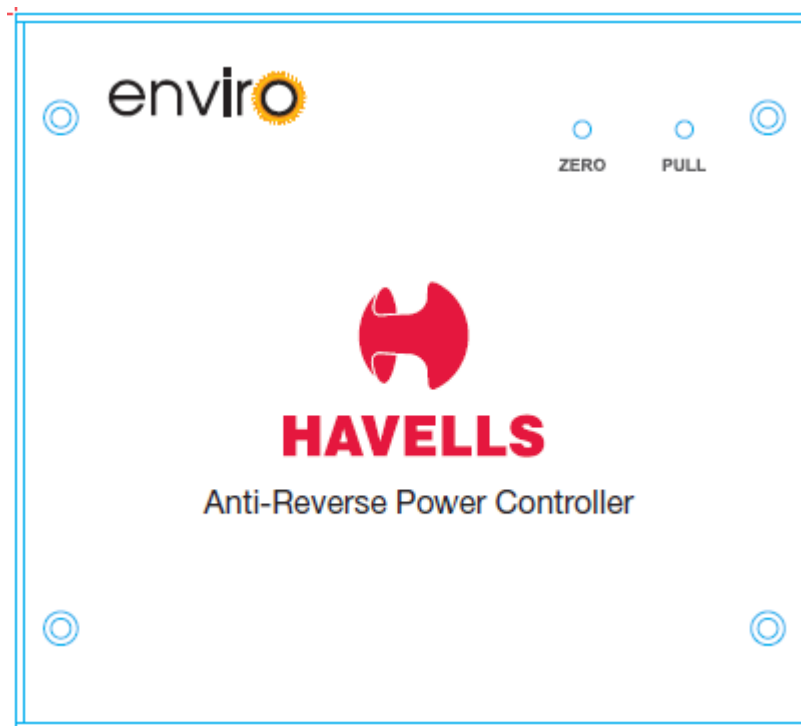
# Anti-Reverse Power Controller

Equipment Required

- Anti-Reverse Power Controller (ARPC)
- Current sensor (CT). Appropriate CT's with rated 1 % accuracy or less.
- Voltage cable, Cable section 2-4 Sq mm
- CT Cable, twisted shield Ethernet Cable
- Load limiting cable, twisted shield Ethernet Cable

Installation

1. Choose the Position for drilling holes and then mark the holes position by using a marker. Use the hammer drill to drill hole on the wall, then put the rear panel on the wall.

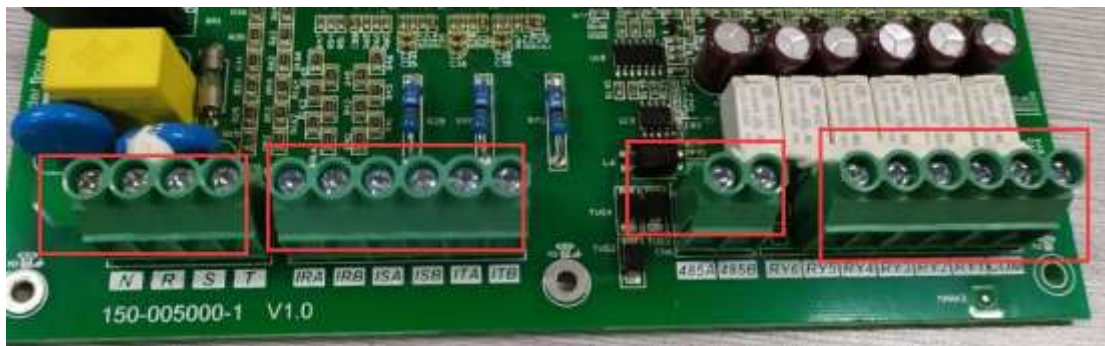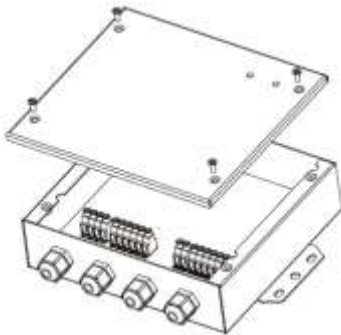2. Put the ARPC on the wall, and then use the screw to fix the ARPC.
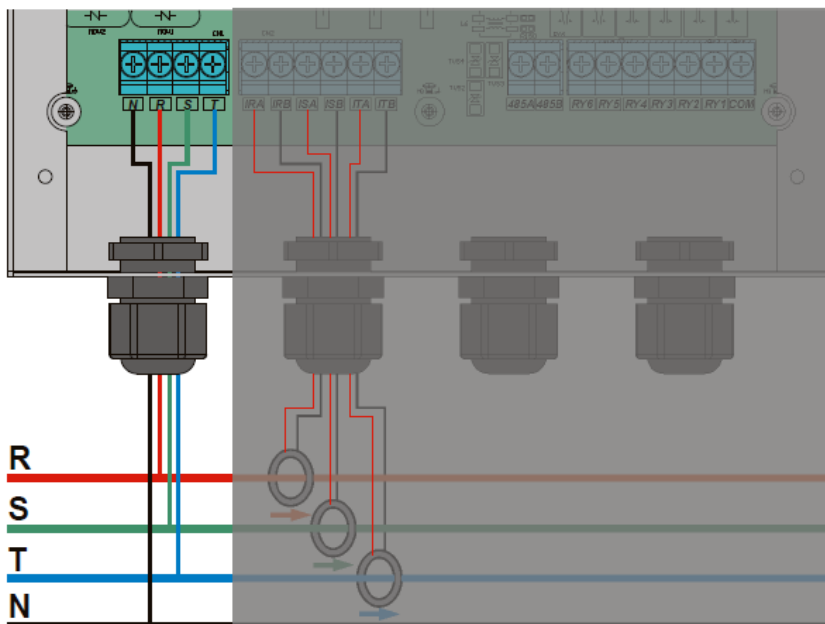
Step1
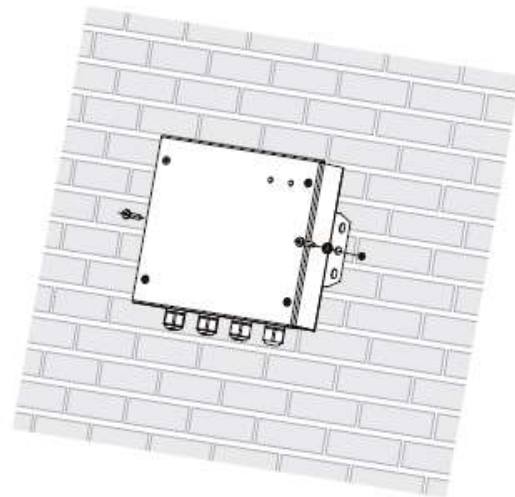
Step2

Wiring

1. Open the cover, connect the PE wire using the OT terminal

2. Connect voltage references

- Connect Neutral to Input Grid N
- Connect voltage reference to Input Grid R,S,T

3. Connect CT Sensors Grid (Input Grid PHA, PHB, PHC)

- Make sure the CT is installed in the right direction. The Arrow on the CT must be from grid to load.
- Wiring the signal wire off the CT as Table 1, there are 8 wires in the network cable, so please use the 4 wires to extend the RED wire of CT, use the other 4 wire to extend the Black wire of CT.
  Make sure that the CT which place the R Phase Line, the Signal wire of the CT must be connected to IRA/ IRB of the ARPC. Don't be in ISA/ ISB or ITA/ ITB.
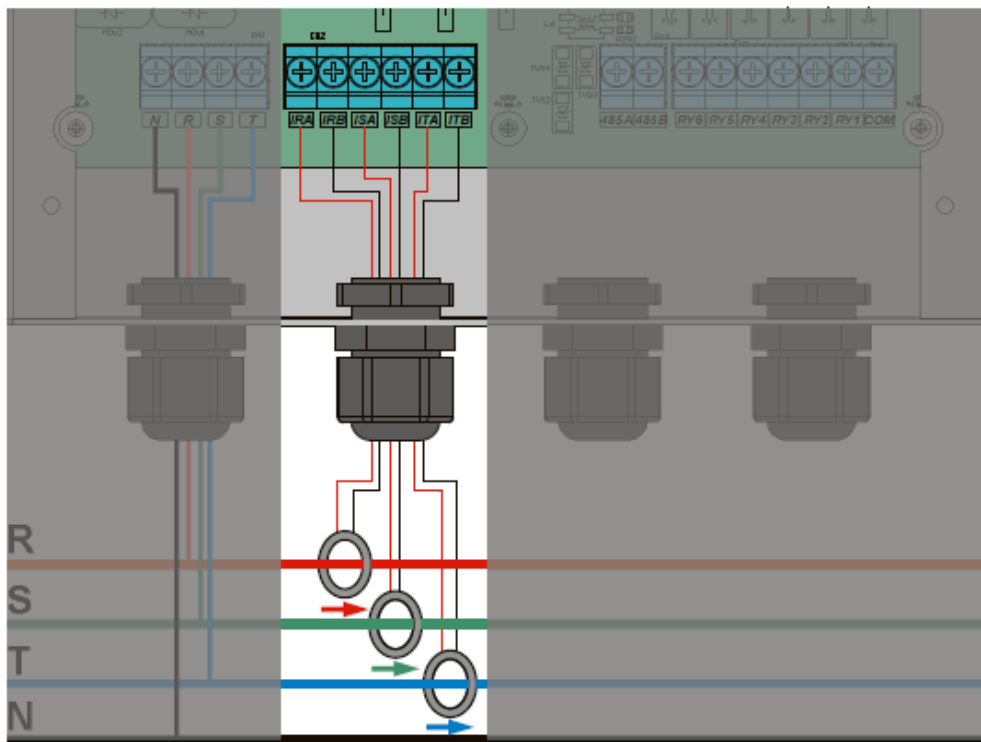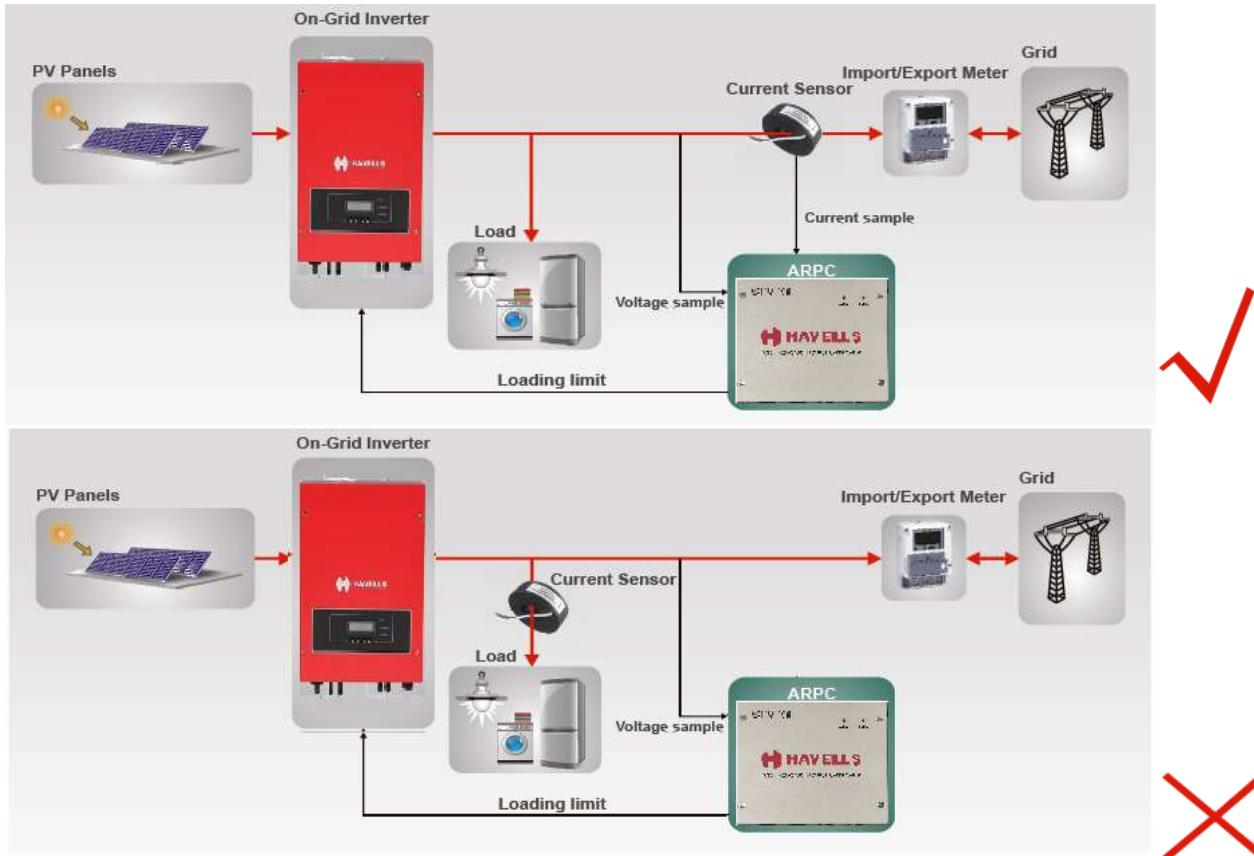

Grid   Load & inverter

Table 1

CT signal	extending wire (network cable)	ARPC
Red	orange/white-orange green/white-green	IRA/ISA/ITA
Black	blue/white-blue brown/white-brown	IRB/ISB/ITB

- CT signal wire extending method as shown in figure below

- The Correct CT Position is placed as the following

- Don't place the sensor on the N Wire or the earth wire.
- Don't place the sensor on the N and L wire simultaneously.
- Note: the length of CT's cable connect over 100 m.

4. Connect the loading limit signal wires

- Connect ARPC's COM to the GND pin of the Inverter Power Control Module.
- Connect ARPC's RY1 to the IN1 of the Inverter Power Control Module.
- Connect ARPC's RY2 to the IN2 of the Inverter Power Control Module.
- Connect ARPC's RY3 to the IN3 of the Inverter Power Control Module.
- Connect ARPC's RY4 to the IN4 of the Inverter Power Control Module.

Description of connection of load limit signal wire of inverter

Step1: open the bottom cover and insert the wires thought the water proof joint and locks the terminal.

Step2: insert the terminal and lock the screw.

Note : the order of the signal wire is different in different modes.

The following diagram shows the connection diagram of the limited load line of three type of machines signals. Please choose the correct connection mode according to the actual type and screen printing.
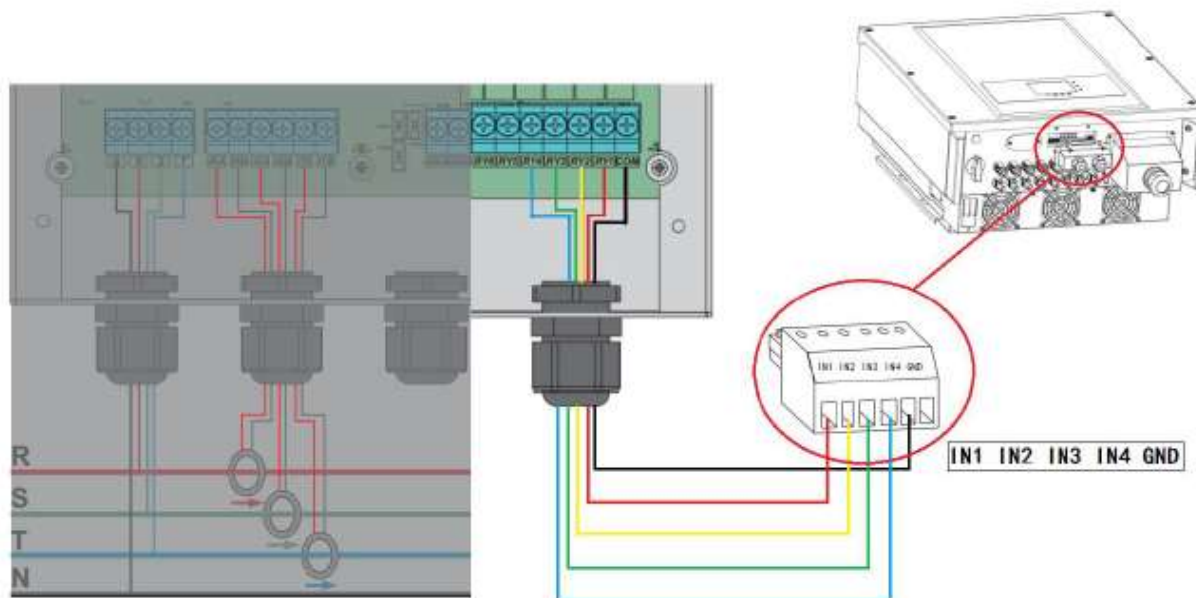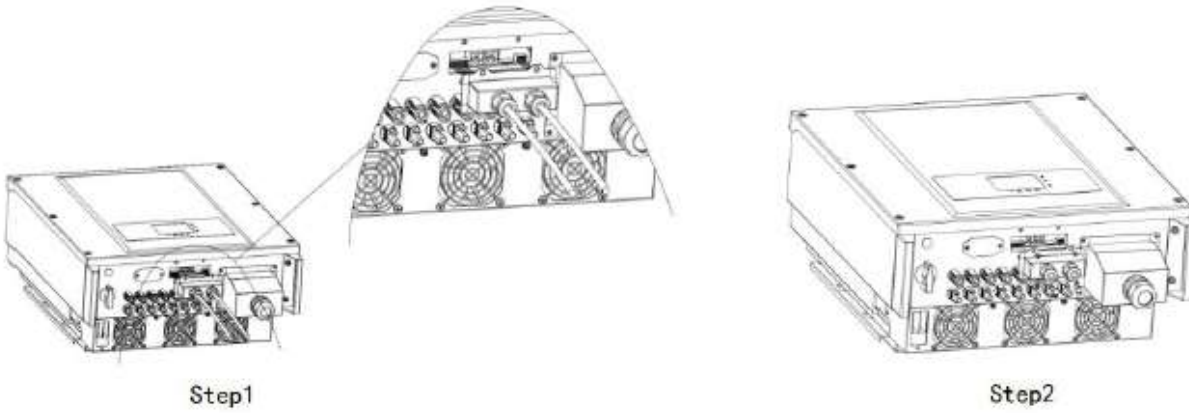
1a. Enviro GTi 5500TX-11000TX / Enviro GTi 15000T
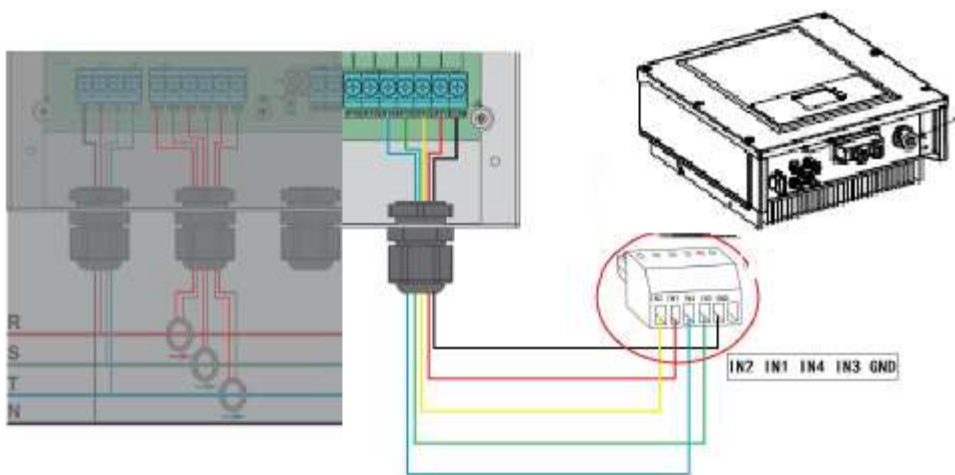
IN2 IN1 IN4 IN3 GND

1b. Enviro GTi 5500TX-11000TX / Enviro GTi 15000T

Step1

Step2
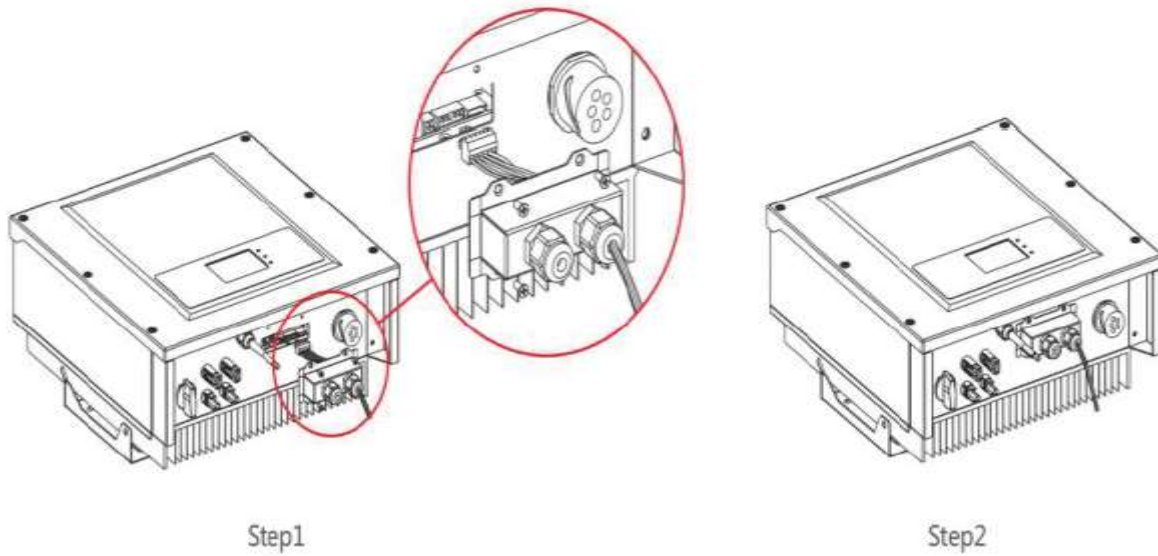
2a. Enviro GTi 20000TD – 33000TD

IN1 IN2 IN3 IN4 GND
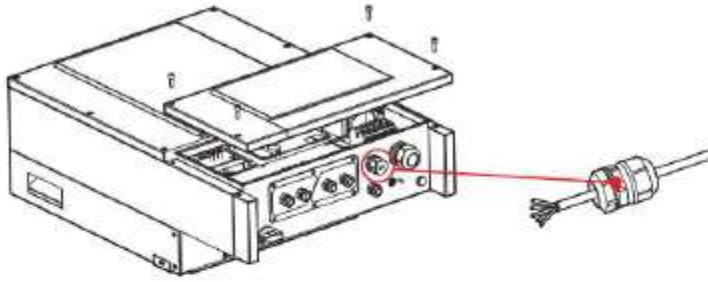
2b. Enviro GTi 20000TD – 33000TD

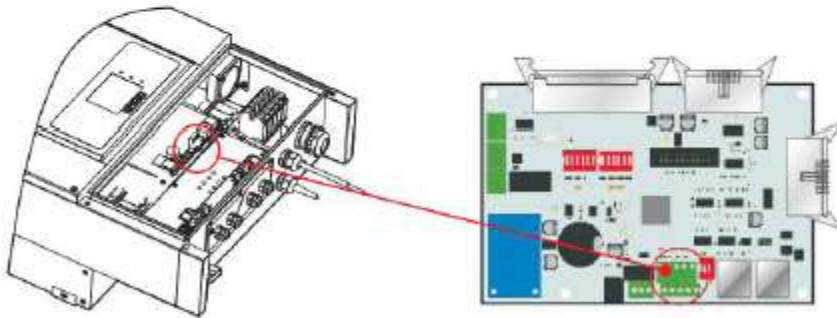Step1   Step2

3a. Enviro GTi 50 KT- 60 KT
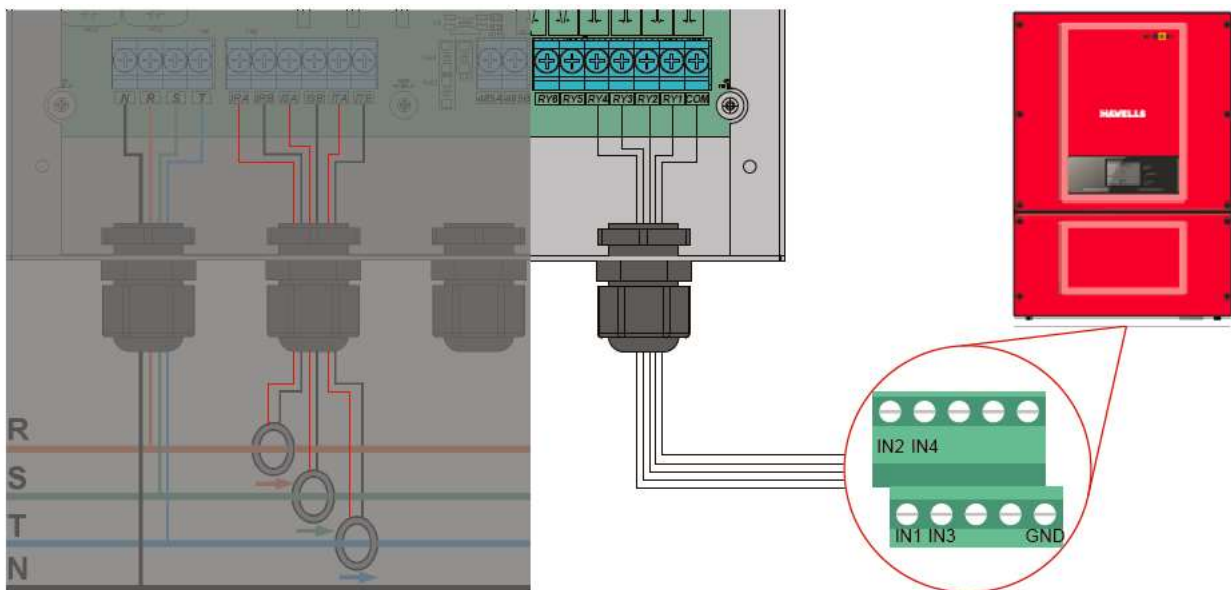
3b. Enviro GTi 50 KT- 60 KT

Step1

Step2

5. Multiple Inverter in parallel

- The connection of voltage sampling cable refers to the instruction 2 above in this manual.
- The connection of CT refers to the instruction 3 above in the manual
- The loading limit signal wires is connected according to the figure below

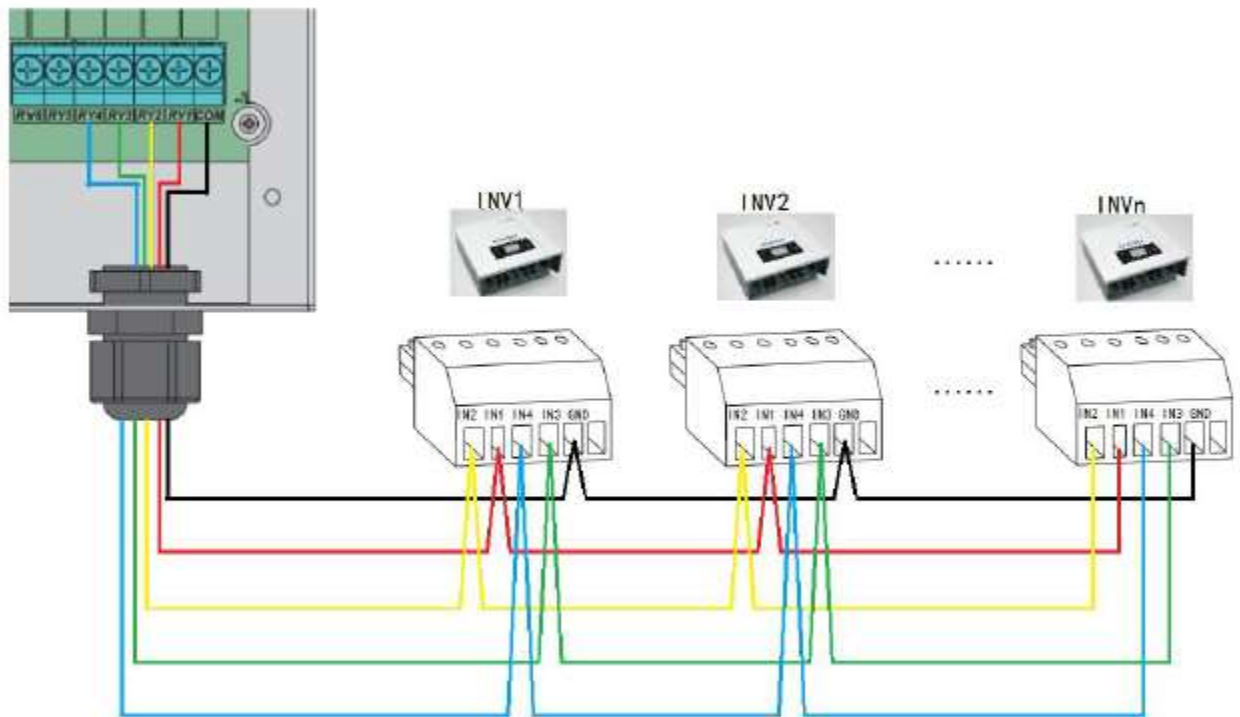**Fig 1C. Enviro GTi 5500TX-11000TX / Enviro GTi 15000T**
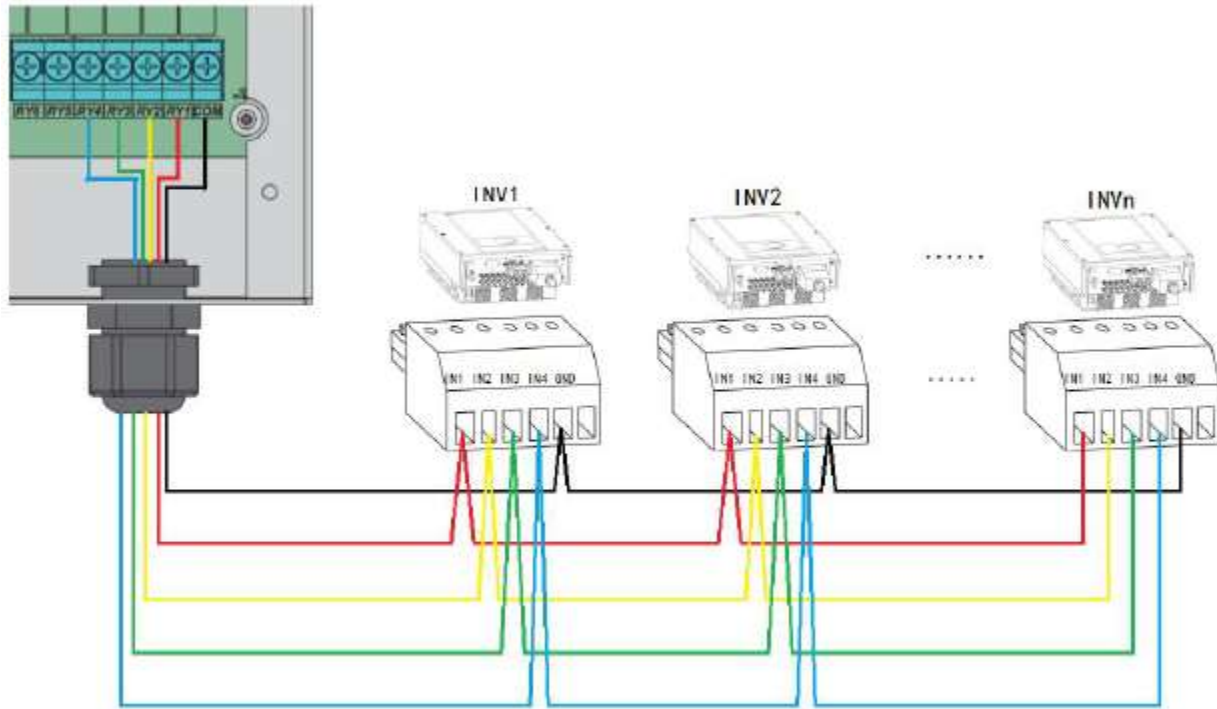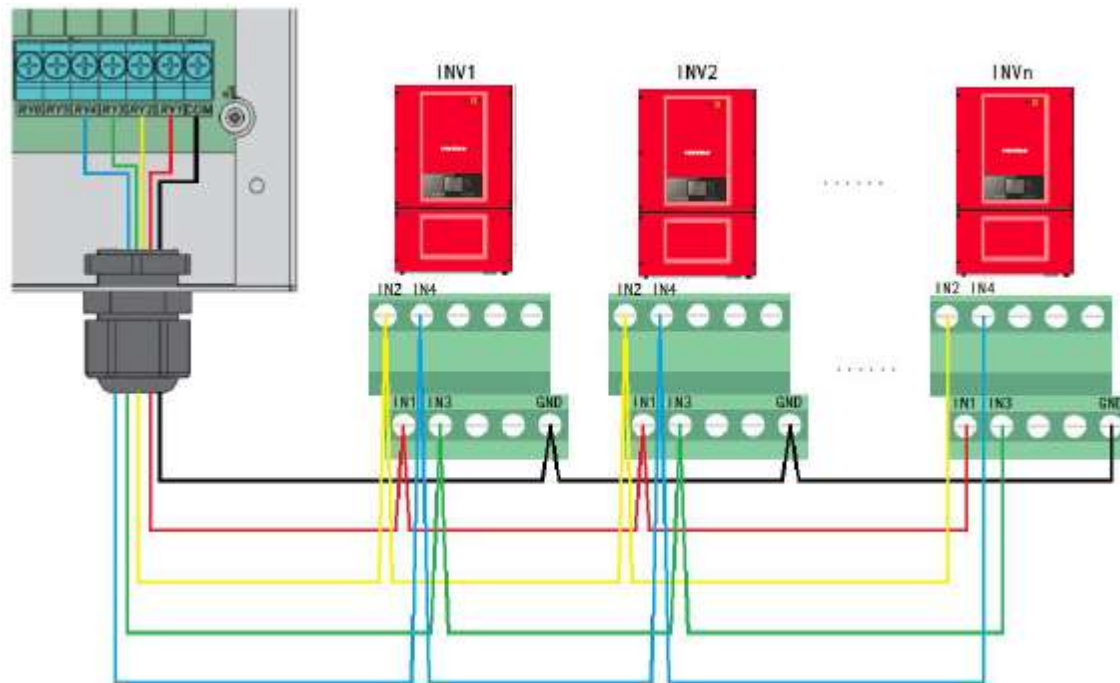
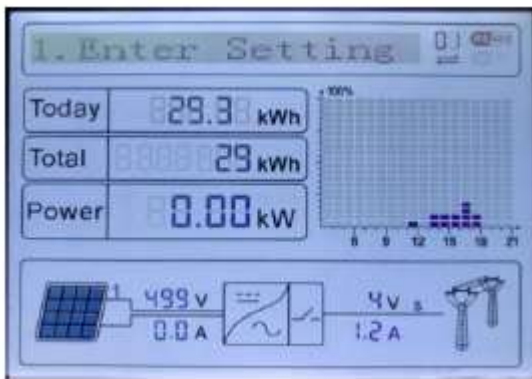**Fig 2C. 2b. Enviro GTi 20000TD – 33000TD**
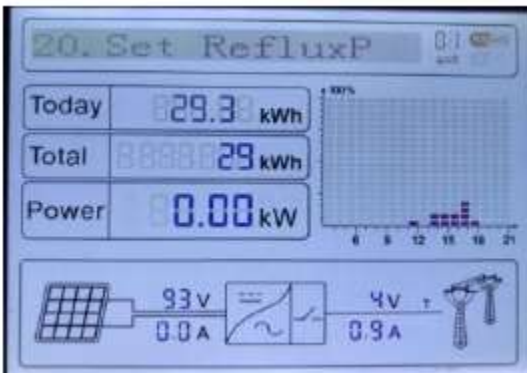

Fig 3b. Enviro GTi 50 KT- 60 KT

6. Operation Indicators

Green LED ON	Power to ARPC
RED LED Flicker	Generation Available
RED LED ON	The Phase of grid voltage sampling is not corresponding to the CT sampling

7. Enable Reflux function

- Select "1. Enter Setting"

- Select "20. Set RefluxP"

- Press button "Enter" to input password "0001"

- Press button "enter" to select "Reflux Enable".

- ## Success

8. Configuration

- Note: usually, the electrical parameter of the ARPC is configured ex-factory according to customer requirements. Users do not need to operate.
- Connect the PC to ARPC with RS485- USB
- Go to configuration to set up electrical parameters of the device.