DTSD422-D3-WiFi
Three Phase Meter

IEEA DTSD422-D3-WiFi Three Phase Meter User Manual

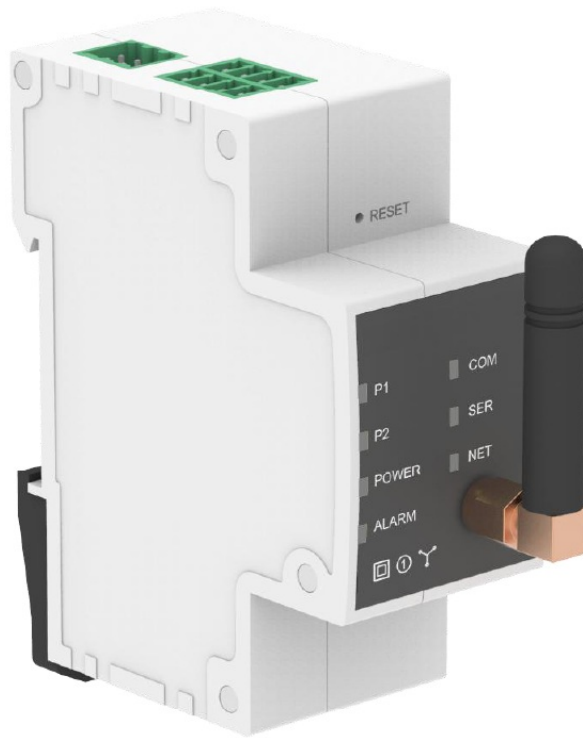**Contents**

IEEA DTSD422-D3-WiFi Three Phase Meter

Product Information

Specifications

- **Type:** DTSD422-D3-WiFi
- **Remote Communication:** WiFi 2.4GHz, RS485
- **Rated Voltage:** 3×230/400V
- **Rated Current:** 6x5100A
- **Lengths of CT:** 2m
- **Rated Frequency:** 50/60Hz
- **Accuracy:** Active – Class 1.0, Reactive – Class 2.0
- **Wire Connection:** 3 phase 4 wire
- **Start-up Current:** 0.004Ib
- **Power Consumption:** 3.5W
- **Working Temperature:** -25°C to +60°C
- **Working Humidity:** 95% (non-condensing)

Product Usage Instructions

- **Installation**

  The meter is designed for installation on a standard 35mm DIN rail. The CT design is an open type, eliminating the need to change wires.

- **Wiring**

  Refer to the wiring diagram provided in the user manual for correct wiring procedures for one path or two paths of three-phase applications.

- **LED Lights**

  The LED lights indicate various statuses such as power supply, alarms, pulse lights for energy consumption,

communication status with the wifi module and server, and working status.

- **Measuring Functions**

  The meter allows for bi-directional measuring and monitoring of generation and consumption on two paths of three phases.

- **Remote Communication**

  The built-in WiFi module enables remote communication for monitoring and data transmission.

Frequently Asked Questions (FAQ)

- **Q: How do I reset the meter?**

  A: Locate the reset button in the ports area and press it to restart or reset the meter.

- **Q: How can I monitor energy consumption?**

  A: The pulse lights (P1 and P2) indicate energy consumption on the respective paths of the three-phase application.

Introduction

The six-circuit multi-function ammeter is designed with an advanced single-chip microcomputer processing system. It has the advantages of simple installation, high reliability, and high precision. It can measure the power consumption of two circuits and three phases. The open-type transformer can measure the data of current, voltage, active power, reactive power, power factor, forward and backward total electric energy, time-sharing electric energy, and split phase electric energy in real-time without changing the original wiring; the built-in WiFi communication module does not need to be configured, plug and play, and the wiring is completed in 15 minutes, and the monitoring on power generation and consumption could be visualized via Solarman cloud WEB/APP after power on.
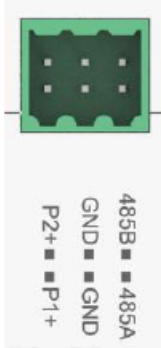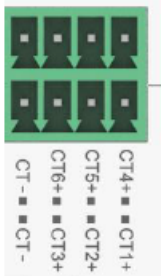
Characteristics

1. Bio-direction measuring and monitoring of generation and consumption
2. Two paths of three-phase application could be monitored
3. 36mm wide; 35mm standard din-rail for installation
4. Open-type CT design, no need to change the wire
5. Built-in wifi module for remote communication

Basic parameters

Type	Parameter	
Hardware-level	Remote communication	WiFi 2.4G HZ
	Serial communication	RS485
	Rated voltage	3×230/400V
	Rated current	6×5 100 A
	Lengths of CT	2m
	Rated frequency	50/60Hz
	Accuracy	Active: Class 1.0, Reactive: Claess-2.0
	Wire connection	3 phase 4 wire
	Start-up current	≤0.004Ib
	Power consumption	≤3.5W
	Working temperature	-25°C +60°C
	Working humidity	≤95%(non-condensing)

Definitions of ports

Area		Real picture	Description		Type	Notes
1	A		L-line: A		AC	
	B		L-line: B		AC	
	C		L-line: C		AC	
	N		N-line		AC	
2	485b		RS485 B	485B-	I/O	
	485a		RS485 A	485A+	I/O	
	GND		GND	GND	Power	Power supply: GND
	GND		GND	GND	Power	Power supply: GND
	P2+		Active pulse 2	Strong current interface		Baud rate: 2400 Check bit: even Stop bit: 1 Date bit: 8
	P1+		Active pulse 1	Strong current interface		
3	CT1+		CT 1+			1st path of 3 phase, refer to P1
	CT2+		CT 2+			
	CT3+		CT 3+			
	CT-		GND			
	CT4+		CT 4+			2nd path of 3 phase, refer to P2
	CT5+		CT 5+			
	CT6+		CT 6+			
	CT-		GND			
4	RESET	● RESET	Reset button			Restart/reset

Instructions for LED lights

No	Icon	Definition	Instruction
1	POWER	Power supply light Green	Flashing: Normal Off: with no power supply
2	ALARM	Alarm light Red	Flashing: abnormal Off: no alarm
3	P1	1st pulse light refer to CT1 CT2 CT3 Red	Flashing: energy consumption
4	P2	2nd pulse light refer to CT4 CT5 CT6 Red	Flashing: energy consumption
5	COM	Com status light between wifi module and meter Green	1. On the connection between wifi module and meter is normal 2. On 400ms / off 1600ms: module is initialized 3. On 400ms / off 400ms: data is sent between module and meter 4. Off: Communication between module and meter failed
6	SER	Comm. status light between wifi module and server Green	1. On succeed in connecting 2. On 400ms / off 400ms: connection with router is successful 3. Off: failed
7	NET	Working status s Green	1.On64ms/off 2000ms normal 2.On/off: abnormal

Structure
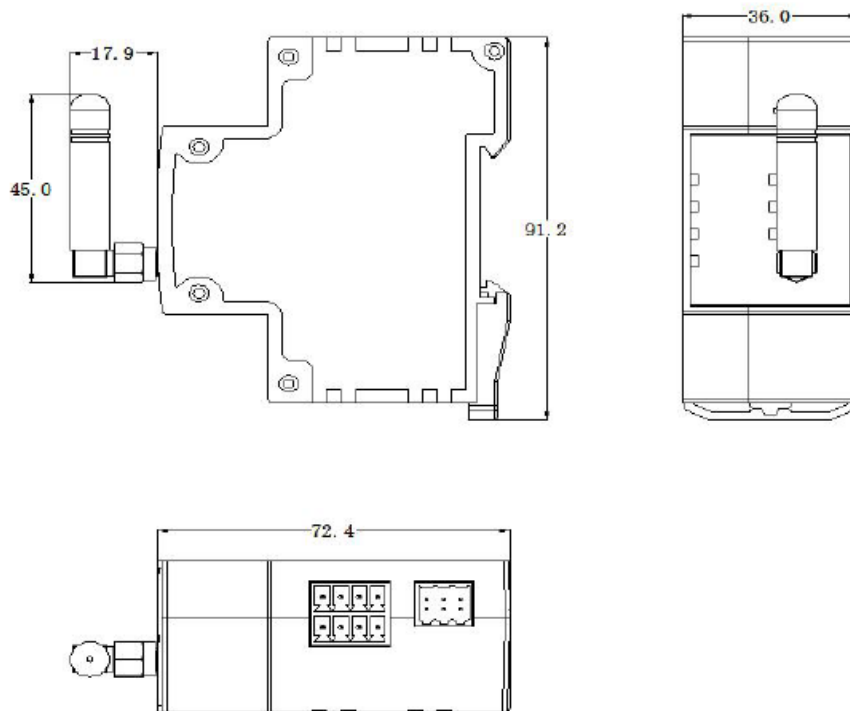
Measuring functions

Voltage, frequency, split phase current (ct1-ct6), power factor, the total power of phase separation forward and reverse (ct1-ct6), the total power of forwarding and reverse direction of phase separation (ct1-ct6), total positive and negative total power, totally positive and negative reactive power, totally positive and negative reactive power of the first three-phase (ct1-ct3), total forward and reverse total power, totally positive and negative reactive power of the second three-phase (ct4-ct6) Power, total electric energy of positive and negative reactive power.

Wiring Diagram

One path of 3 phase

Installation point: GRID side
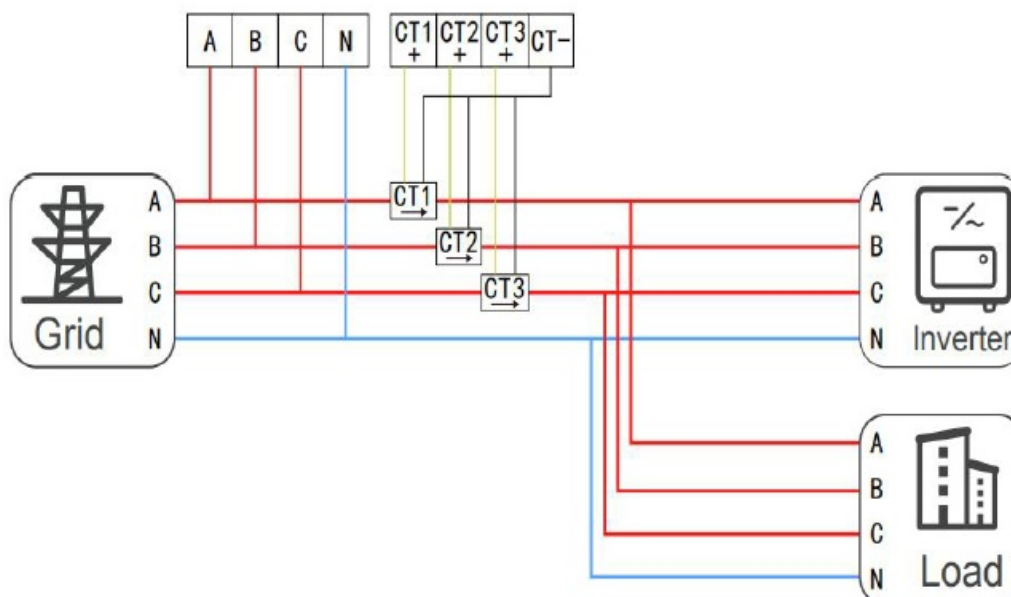
Installation point: Generation side
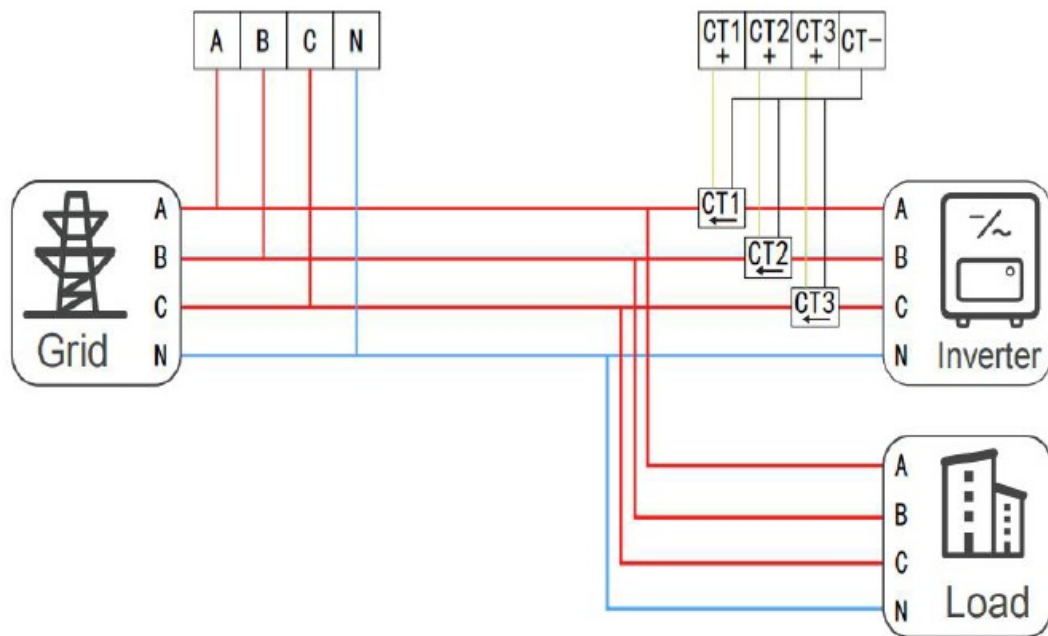
Installation point: Consumption side
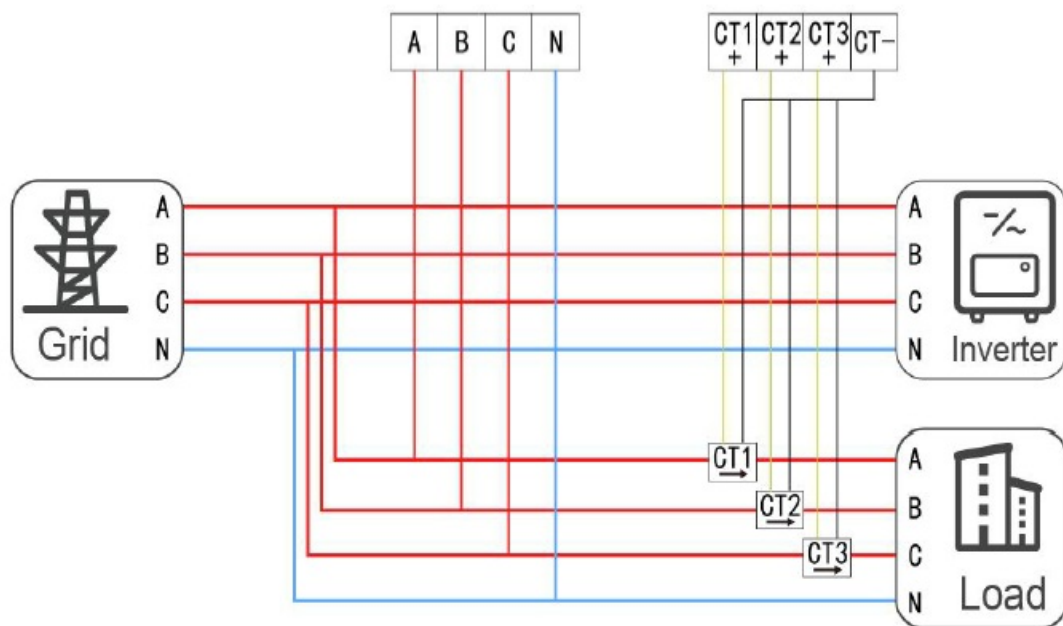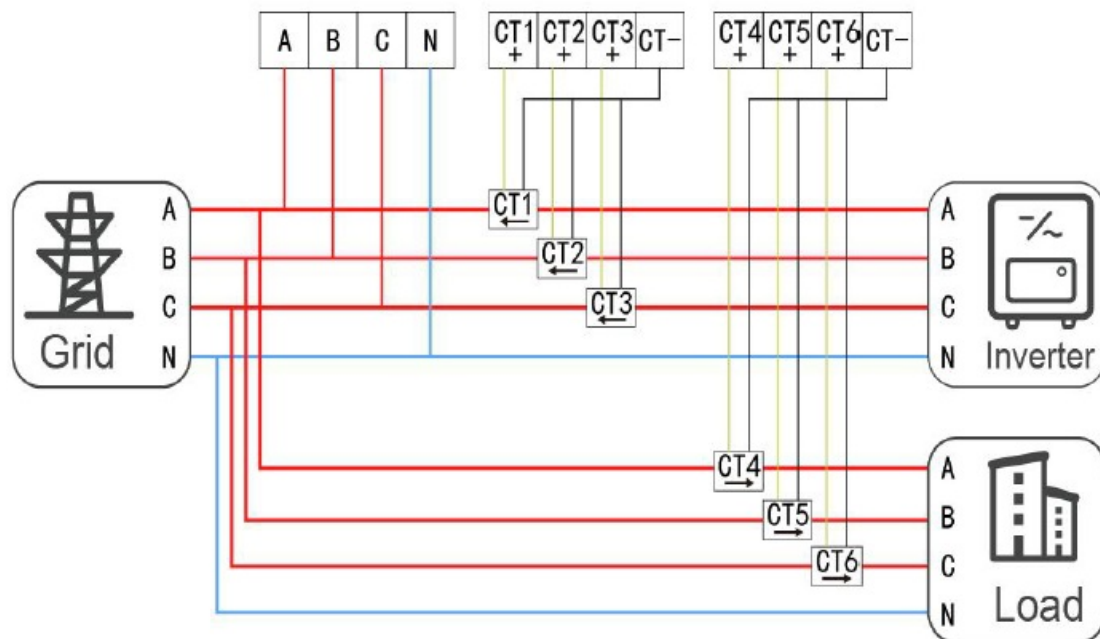

Two paths of 3 phase
Installation point: GRID side + Generation side
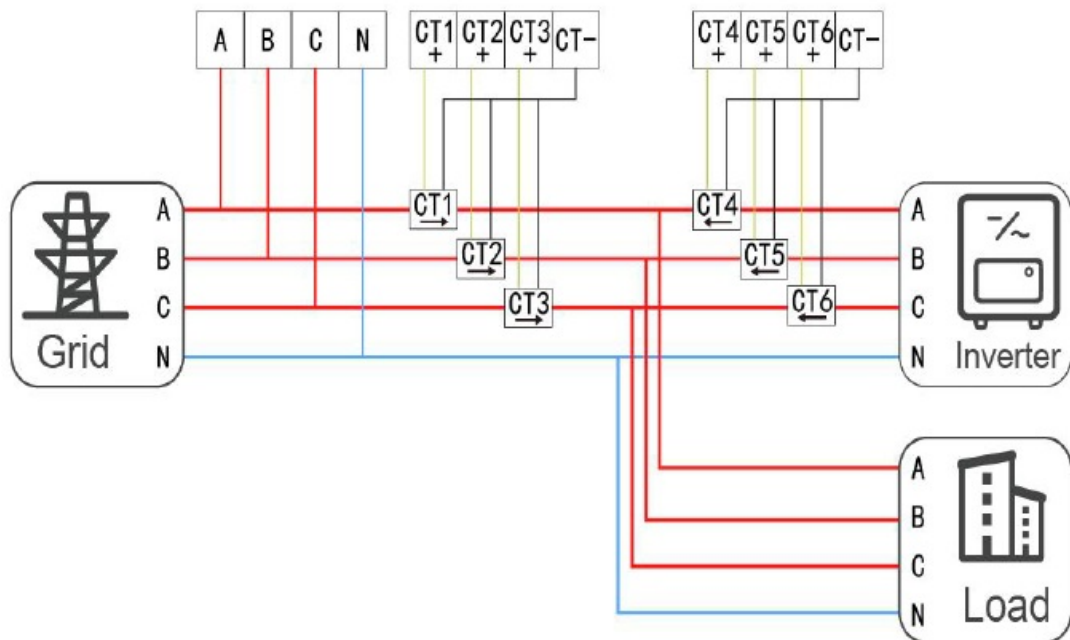
Installation point: GRID side + Consumption side
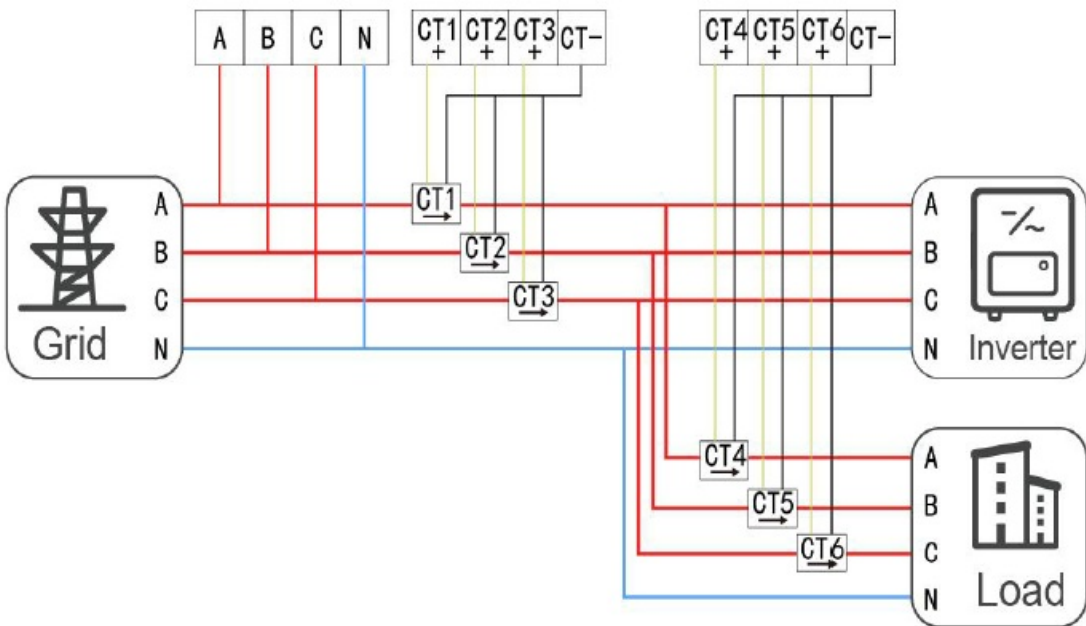
Installation point: Generation side + Consumption side

USER MANUAL for SOLARMAN APP

1. Download app

SOLARMAN Smart
for end user

SOLARMAN Business
for business

- **iPhone:** Search "SOLARMAN Smart"/ "SOLARMAN BUSINESS" in Apple Store.
- **Android:** Search "SOLARMAN Smart"/ "SOLARMAN BUSINESS" in Google Play.
- **You can also log in via WEB as below:**
    - **pro.solarmanpv.com**
    - **home.solarmanpv.com**
2. **Registration on SOLARMAN SMART**
   Go to SOLARMAN SMART and register. Click "Register" and create your account here.

3. **Create a Plant**

Click "Add Now" to create your plant. Please fill in plant basic info and other info here.

4. **Add a Device**

- **Method 1:** Enter logger SN manually.
- **Method 2:** Click the icon in the right and scan to enter logger SN You can find logger SN in the external packaging or on the logger body.
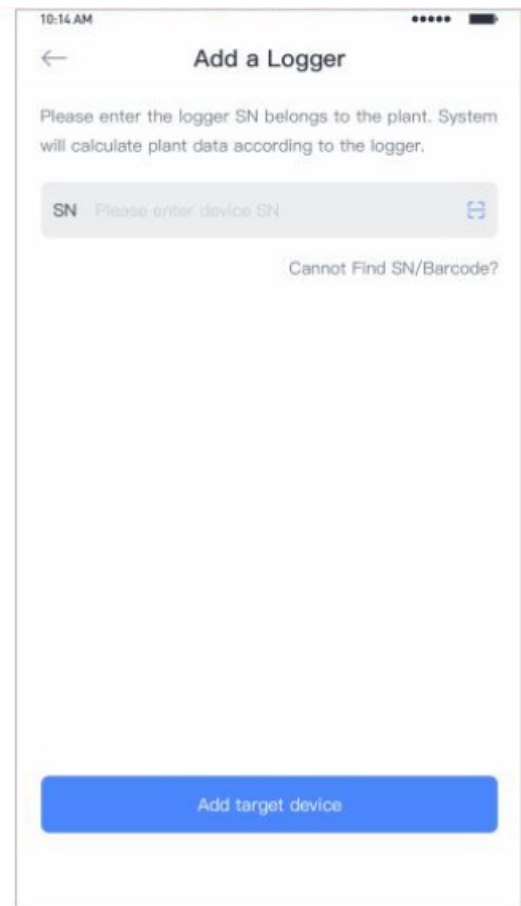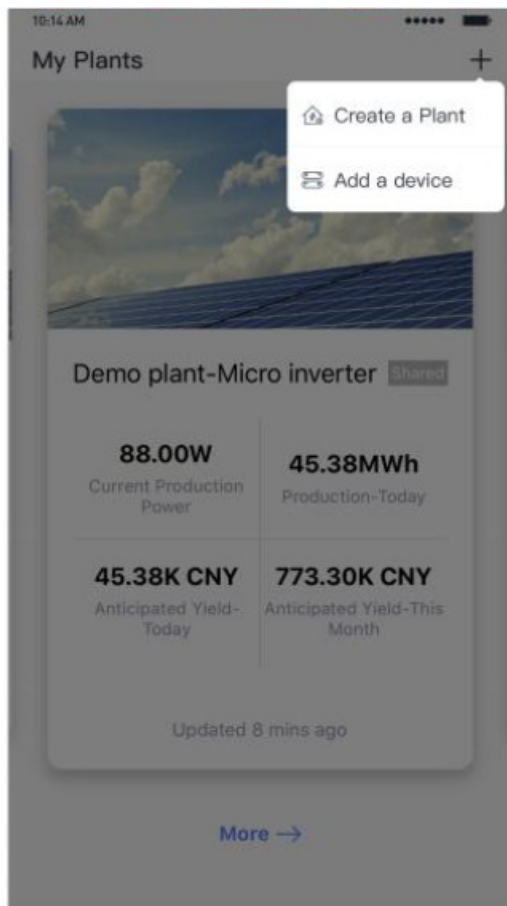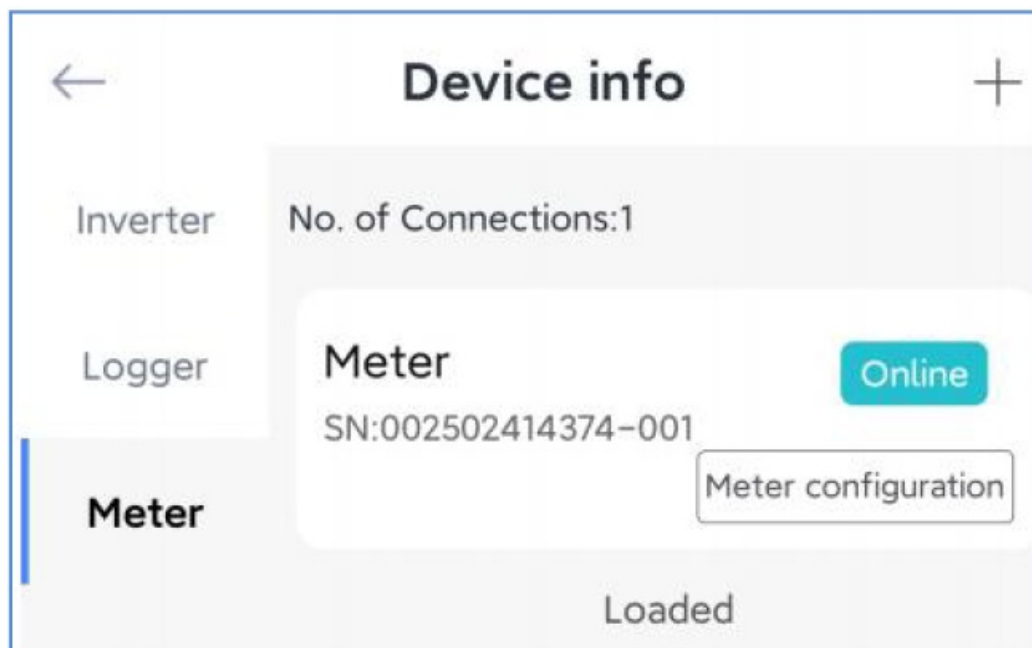
5. **Meter Configuration**

Meter configuration aims to send meter data to the platform and calculate meter data.

1. **Add a meter to the plant via logger**

   - The SOLARMAN platform does not support adding a meter directly. Users can add a logger first and the logger will send meter data to the platform.
   - Connect the devices first. After the logger is powered on and data is transmitted, the target meter will be listed on the device list.


6. **Network Configuration**

   - After the logger is added, please configure the network to ensure normal operation.
   - Go to "Plant Details"-"Device List", find the target SN, and click "Networking".
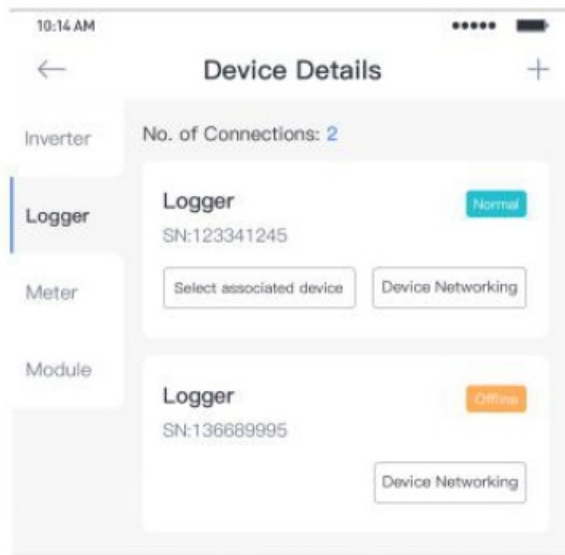
Step 1: Confirm Wi-Fi Info
Please make sure your phone is connected to the right WiFi network. Click "Start".

- Notice: 5G WiFi is not supported.
- Avoid the use of special characters in WiFi networks   = " " ')
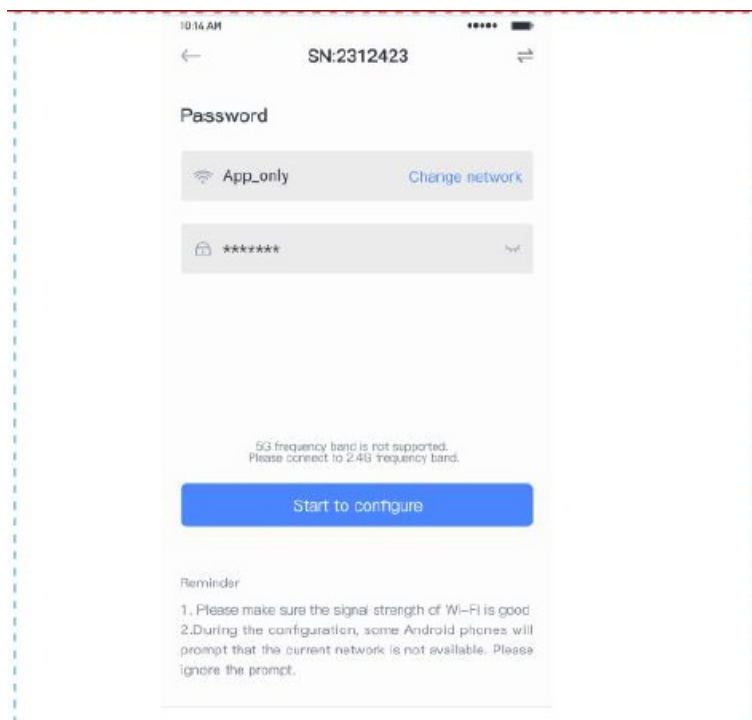
Step 2: Connect to the AP network

- Click "Go to connect" and find the right "AP_XXXXX" network (XXXXX refers to logger SN).
- If the password is required, you can find the password on the logger body.
- Go back to SOLARMAN Smart APP, after connecting to the AP network.
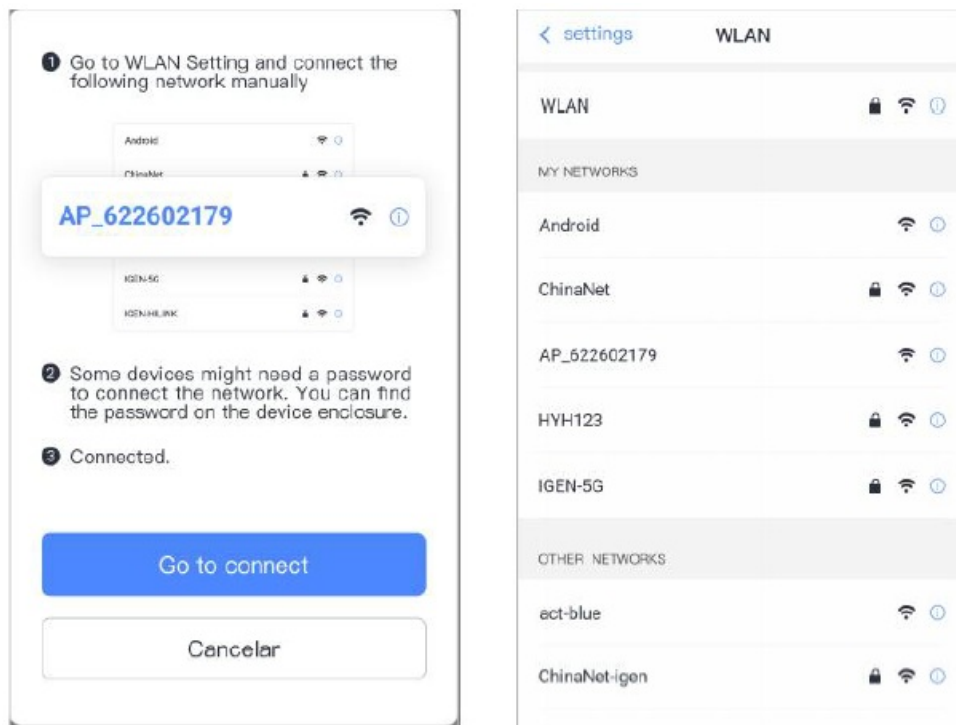
Step 3: Auto Configuration

- Please wait for a while to complete the configuration. Then system will switch to the following page.
- Click "Done" to check plant data. (Usually, the data will be updated in 10 mins)
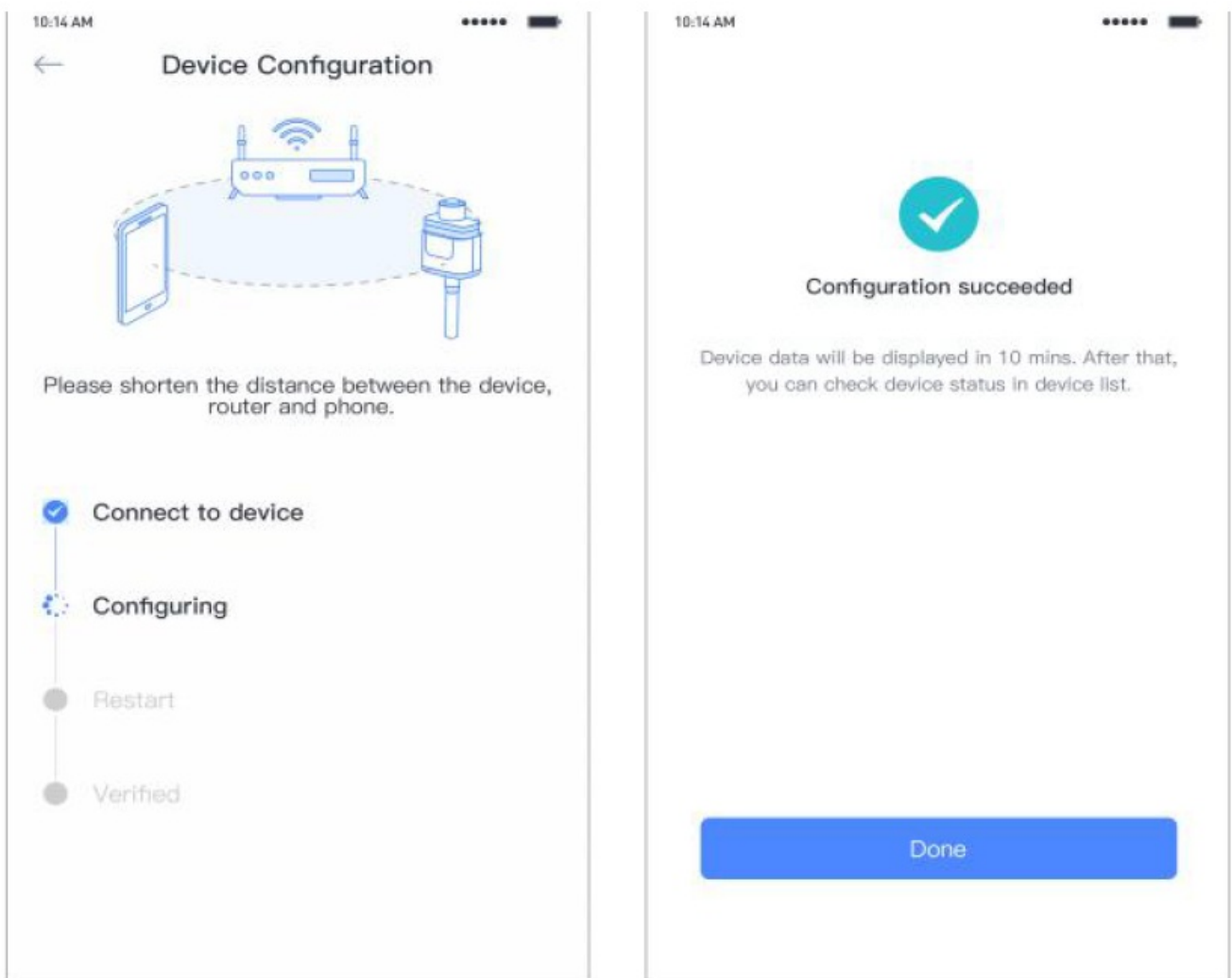
If configuration failure occurs, please check the following reason and try it again.

1. Make sure the WLAN is ON.
2. Make sure WiFi is normal.
3. Make sure the wireless router does not implement the white-black list.
4. Remove the special characters in the Wi-Fi network.
5. Shorten the distance between the phone and the device.
6. Try to connect to other Wi-Fi.

Documents / Resources

IEEA DTSD422-D3-WiFi Three Phase Meter [pdf] User Manual
DTSD422-D3-WiFi Three Phase Meter, DTSD422-D3-WiFi, Three Phase Meter, Phase Meter, Meter

References

- **home.solarmanpv.com**
- **pro.solarmanpv.com**
- **User Manual**