

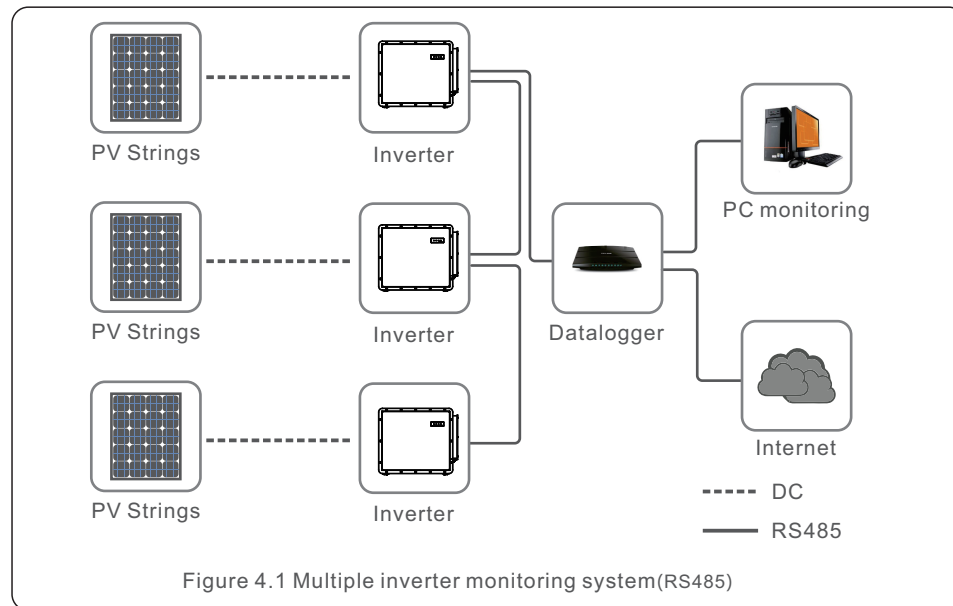
4. Comm. & Monitoring

There are 5 communication terminals on the inverters.
COM1 is a 4-pin connector reserved for WiFi/Cellular datalogger.
2*RS485 ports are for RS485 communication between inverters.
DRM port is for DRM connection.
Meter/CT port is reserved for further development.
Detailed connection please refer to 4.2 section.

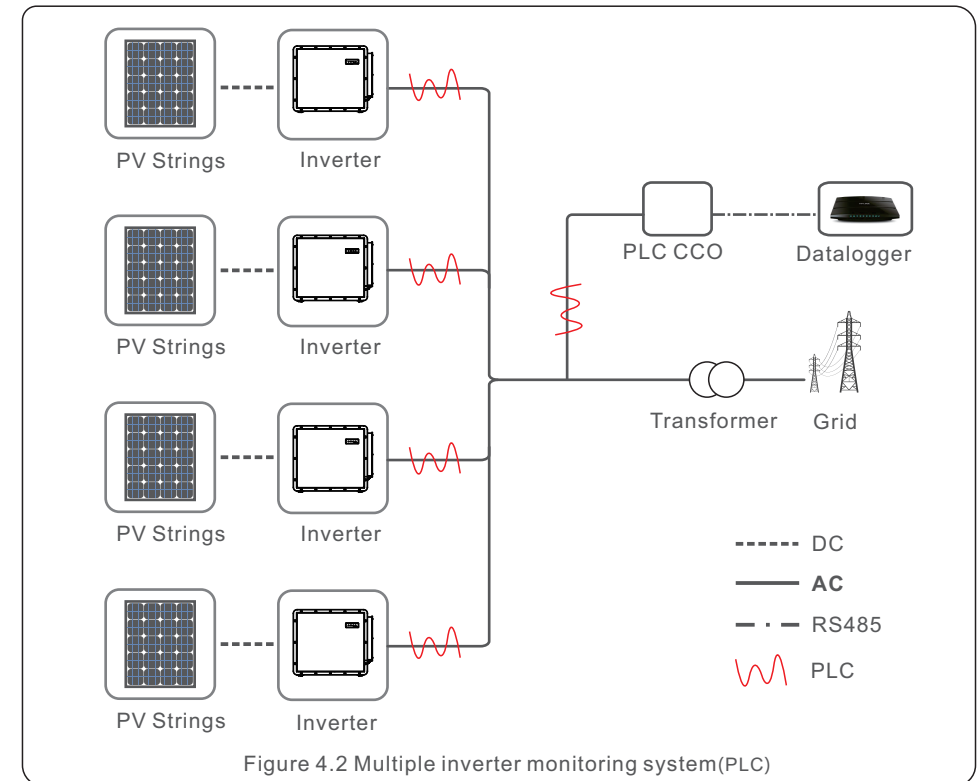
4.1 RS485 and PLC communication connection

Monitoring system for multiple inverters

Multiple inverters can be monitored through RS-485 daisy chain configuration.



PLC is available for multiple inverter monitoring.



NOTE

One of the RS485 and PLC communication methods is available.

4. Comm. & Monitoring

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4.2 Logic interface connection

Logic interface is required by some local regulations that can be operated by a simple switch or contactor (Not available in South Africa).

When the switch is closed the inverter can operate normally. When the switch is opened, the inverter will reduce its output power to zero within 5s.

Pin5 and Pin6 of RJ45 terminal is used for the logic interface connection.

Please follow below steps to assemble RJ45 connector.

1. Insert the network cable into the communication connection terminal of RJ45.

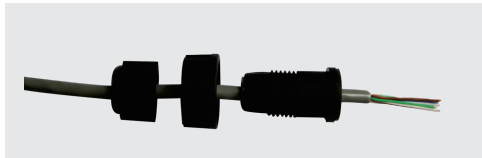


Figure 4.3 RJ45 communication connection terminals

2. Use the network wire stripper to strip the insulation layer of the communication cable.

According to the standard line sequence of figure 4.4 connect the wire to the plug of RJ45, and then use a network cable crimping tool to make it tight.

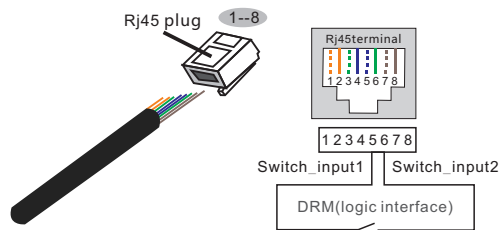


Figure 4.4 Strip the insulation layer and connect to RJ45 plug

3. Connect RJ45 to DRM (logic interface).

After wire connection, please refer chapter 7.5.8.1 to enable the logic interface function.

5. Start and Shutdown

5.1 Start-up procedure

To start-up the inverter, it is mandatory that the steps below are followed in the exact order outlined.

- 1). Ensure the commissioning checks in Section 5 have been performed.
- 2). Switch the AC switch ON.
- 3). Switch the DC switch ON. If the PV array (DC) voltage is higher than the inverter's start-up voltage, the inverter will turn on. The red DC POWER LED and LCD will be continuously lit.
- 4). Solis inverters are powered from the DC side. When the inverter detects DC power that is within start-up and operating ranges, the inverter will turn on. After turn-on, the inverter will check internal parameters, sense and monitor AC voltage, hertz rate and the stability of the supply grid. During this period, the green OPERATION LED will flash and the LCD screen will show INITIALIZING. This tells the operator that the inverter is preparing to generate AC power.
- 5). After the locally mandated delay (300 seconds for IEEE-1547 compliant inverters), the inverter will start generating AC power. The green OPERATION LED will light continuously and the LCD screen will show GENERATING.



CAUTION

The inverter's surface temperature can reach up to 70°C (162°F). To avoid risk of burns, do not touch the surface when the inverter is in the operational mode. Additionally, the inverter must be installed out of the reach of children.

5.2 Shutdown procedure

To stop the inverter, it is mandatory that the steps below are followed in the exact order outlined.

- 1). Select "Grid Off" in the Advanced Setting of Inverter LCD.
- 2). Turn off the AC Switch between Solis inverter and Grid.
- 3). Wait approximately 30 seconds (during this time, the AC side capacitors are dissipating energy). If the inverter has DC voltage above the start-up threshold, the red POWER LED will be lit. Switch the DC switch OFF.
- 4). Confirm all LED's switch OFF (~one (1) minute).



CAUTION

Although the inverter DC disconnect switch is in the OFF position and all the LED's are OFF, operators must wait five (5) minutes after the DC power source has been disconnected before opening the inverter cabinet. DC side capacitors can take up to five (5) minutes to dissipate all stored energy.

6. Normal operation

6.1 APP Download

Users need to download the APP before installing it for the first time.

There are three ways to download and install the latest APP:

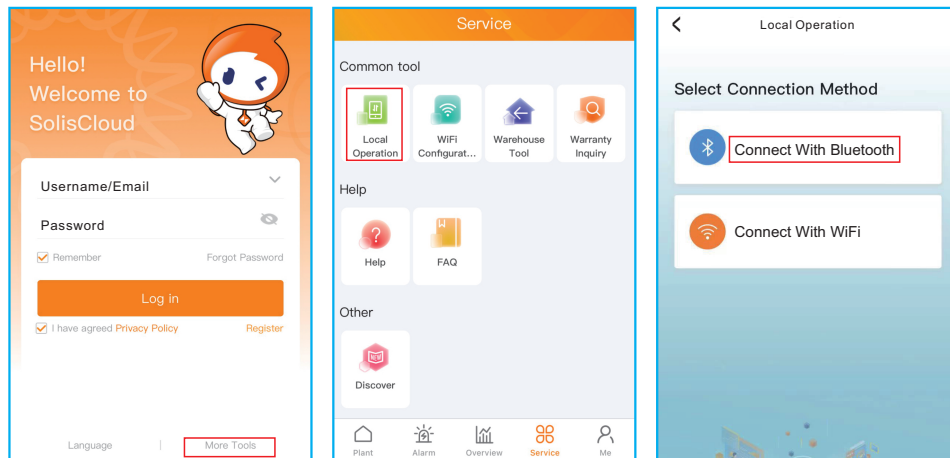
1. You can visit www.soliscloud.com to download the latest version APP.
2. You can search "Soliscloud" in Google Play or App Store.
3. You can scan this QR code below to download "Soliscloud".



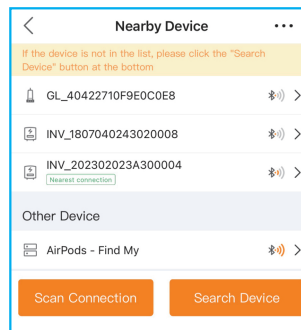
6.2 Log in the APP via bluetooth

Step 1: **Connect with Bluetooth.**

Turn on Bluetooth switch on your mobile phone and then open the Soliscloud APP.
Click "More Tools"->"Local Operation"->"Connect with Bluetooth"



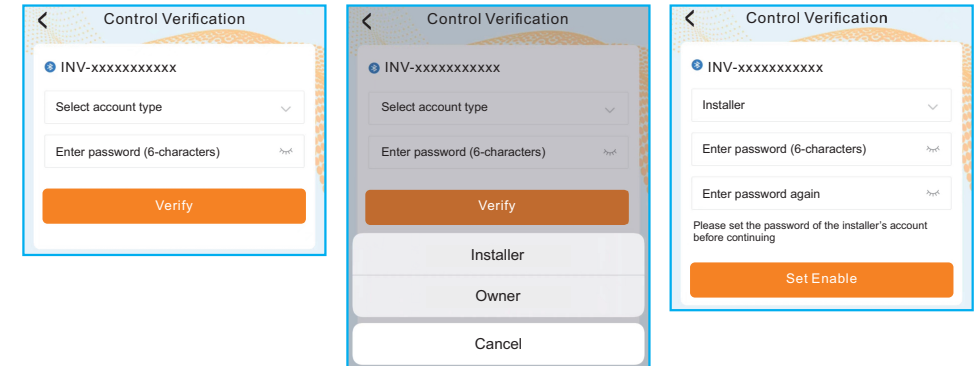
Step 2: Select the Bluetooth signal from the inverter. (Bluetooth Name: INV-Inverter SN)



6. Normal operation

Step 3: **Login account.**

If you are the installer, please select the account type as Installer. If you are the plant owner, please select the account type as owner. Then set your own initial password for control verification. (The first log-in must be finished by installer in order to do the initial set up)



Step 4: Perform the setting configuration for Grid CodeSetting, etc.

Step 5: Switch on the AC breaker, wait till the inverter start generating.