正面

背面

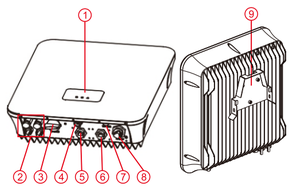
Grid-Connected PV Inverter 2 kW-6 kW
Quick Guide

NOTICE

- This guide can't replace the user manual. Before installing the device, read the user manual carefully to get familiar with product information and safety precautions.
- This device should only be installed, operated, serviced, and maintained by qualified personnel.

1 Overview

1.1 Panel Features



No.	Description	Explanation
①	LED display panel	To display the inverter running state / communication status
②	DC input terminals	To connect inverter to PV modules
③	DC switch	To directly control DC input On / Off
④	Communication terminals	To connect Wi-Fi or other communication module
⑤	Meter communication and digital input	Input interface for electric meter communication and external digital input
⑥	DRM communication	Interface of demand response modes for Australia grid dispatching
⑦	Ventilation valve	To prevent from condensing and fogging, and balance differential pressure between inside and outside the cabinet
⑧	AC output terminals	To feed the inverter output energy into the grid
⑨	Mounting bracket	To fix the inverter on the wall mounting bracket

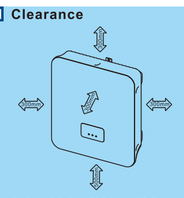
1.2 Scope of Delivery

Check that the delivery is complete and inspect the package contents upon receipt. Notify the carrier and dealer if any damage is found or any component is missing.

No.	Designation	Quantity
1	Grid-Connected PV inverter	1 pcs
2	User manual	1 pcs
3	Quick guide	1 pcs
4	PV input terminal	1 set
5	AC output terminal	1 set
6	Communication module (Wi-Fi)	1 set
7	Expansion screws	4 sets
8	Hexagon socket head cap screws	2 pcs
9	Outer hex-cross screw with spring and plain washer	1 pcs
10	Wall mounting bracket	1 pcs
11	Waterproof terminal	1 set

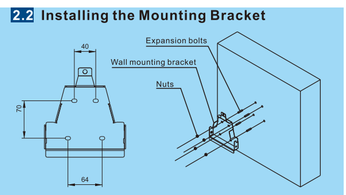
2 Installation

2.1 Clearance



In order to maintain sufficient ventilation, when installing the device a minimum clearance of 30 cm at the sides and top must be maintained. Operation and reading are made easier by installing the inverter with its display at eye level and by keeping a distance of 30 cm from the front. All cables are routed to the outside through the underside of the enclosure, therefore a minimum clearance of 50 cm must be observed here.

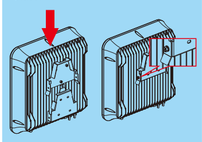
2.2 Installing the Mounting Bracket



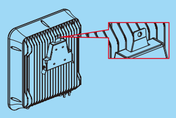
1.Place the wall mounting bracket against a suitable wall for mounting and align using a level. Mark the position of the drill holes using the wall mounting bracket.
2.Drill holes on the markings for them.
3.Secure the wall mounting bracket to the wall using expansion screws. Tighten the screws with a minimum torque of 30 Nm, and M6 x 50 expansion bolts are recommended for use.

2.3 Installing the Inverter

1.Attach the inverter to the wall mounting bracket. Screw the inverter to the wall mounting bracket on both sides using the M5 screws provided. Tighten the screws and make sure that they are securely in place.



2.The wall mounting bracket reserved a padlock hole to prevent the inverter from being stolen. The anti-theft lock needs to be prepared by the user himself.



3 Electrical Connection

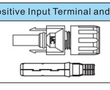
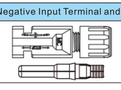
3.1 Cable Requirements

Only waterproof terminals are included in scope of delivery. The user should select appropriate cables according to the following recommended cable size.

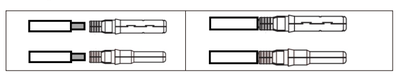
2 kW / 2.5 kW / 3 kW / 3 kW-D inverters	AC Output Terminals			PV Input Terminals	
	L	N	PE	Input +	Input -
Recommended Cross-sectional Area	4 mm²	4 mm²	4 mm²	4 mm²	4 mm²
3.68 kW / 4 kW / 4.6 kW / 5 kW / 6 kW inverters	AC Output Terminals			PV Input Terminals	
	L	N	PE	Input +	Input -
Recommended Cross-sectional Area	6 mm²	6 mm²	6 mm²	4 mm²	4 mm²

3.2 DC Connection

DC connection terminals are included in scope of delivery. Please connect the DC cables selected based on the above requirements to the connector by following the steps below. (Note: During connecting, use the same color for the positive cables with a mark and use another same color for negative cables with a mark. For example, generally red cables are used for the positive terminal and black cables are used for the negative terminal.)

Positive Input Terminal and Die	Negative Input Terminal and Die
	

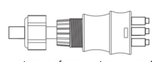
1.Strip the DC cable insulation about 8 mm to expose the copper wire. Insert the cable copper wire into the metal core of the connector and tighten it with a crimper (As shown in the figure below).



2.Loosen the terminal cover and pass the cable through the terminal cover. Insert the die into the wiring slot till you hear a sound indicating that the connection is in place. Tighten the terminal cover (As shown in the figure below).

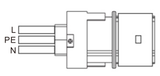
3.Check whether the PV array cable connection polarity is correct with a voltmeter whose DC voltage measurement range is over 1000 V, and verify that the open-circuit voltage does not exceed the specification. When the ambient temperature is above 10°C, the open-circuit voltage of PV arrays can't exceed 90% of the maximum DC voltage of the inverter. Otherwise, at the low temperatures, the voltage of PV arrays may exceed the maximum input voltage of the inverter and cause damage to the inverter.
4.Disconnect the circuit breaker on the DC side and connect the PV input cable to the inverter separately.

3.3 AC Connection



Procedures of connecting cable on AC side:

1.Pass the appropriate length of cable through the waterproof connector cap and shell. Strip the cable insulation about 10 mm (As shown in the figure below).
2.Fix L, N and PE wires to the corresponding AC terminals with a screwdriver and ensure that the PE wire is properly grounded (As shown in the figure below). (It is recommended to use soft copper core cables for customers)



3.Insert the shell into the AC terminal, hear a sound of "click", then tighten the waterproof connector cap.
4.Insert the AC connector into the AC output terminal, then turn the AC connector clockwise until hear a slight sound of "click", which indicates that the connection is in place.

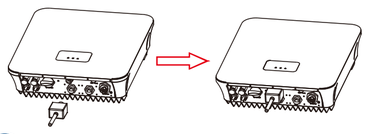
3.4 Second Protective Earth Connection

There is a protective grounding hole at the bottom of the inverter. The user must make the inverter grounded through the grounding hole and tighten it with M4 x 8 screws.

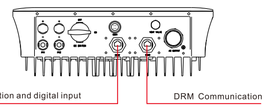
CAUTION
The PE point at the AC output port is used only as a PE equipotential point, and can not substitute for the PE point on the enclosure.
DANGER!
Do not connect the neutral wire to the enclosure as a PE cable. Otherwise, electric shocks could occur.

4 Installing the Communication Module

Insert the Wi-Fi module into the COM1 communication interface at the bottom of the inverter and tighten the fastening screw.



The RJ45 plug for electric meter communication and digital input is inserted into the COM2 connector, the RJ45 plug for DRM communication is inserted into the COM3 connector (only for Australian configuration).



5 Trial Operation

5.1 Switching On

1. Follow the above instructions to complete the connection of PV arrays and wiring on the AC/DC side of the inverter.
2. Before turning on the inverter, verify the following items:
- The inverter is installed correctly and securely. The installation environment is convenient for operation and maintenance.
- The communication module is connected correctly.
- Electrical specifications of the AC breaker meet the requirements and it is installed correctly.
- Cables are connected correctly, the electrified bodies are insulated and sealed to ensure safety.
- Safety and warning labels are prominent and clear.
- Voltage on the grid side and the DC side meet the requirements of the inverter.
3. Close the circuit breaker on the AC side.
4. Close the DC switch of the inverter. If the input voltage is within the range of requirement, the green LED indicator lights and flashes, and the inverter starts detecting.
5. When the illumination conditions meet the working requirements of the inverter, the inverter will automatically start running and deliver power to the grid. The green LED indicator is always lit.
6. There is no need to be manual controlled when the inverter is successfully connected to the power grid and runs automatically.
7. The inverter shuts down automatically if faults occur and the red LED indicator lights. Refer to Section 5.3 for LED indicators descriptions. After the fault is removed, the inverter will restart automatically.

5.2 Switching Off

1. When the illumination is insufficient to keep the inverter running, the inverter shuts down automatically.
2. When a fault occurs, the inverter displays the fault code automatically. Disconnect the AC circuit breaker and the DC switch of the inverter if emergency shutdown is required.

5.3 LED Indicator Lights

The current status of operating and communications of the inverter can be viewed via the three LED indicator lights on the panel (As shown in following table).

LED	Display Status	Explanation
	Illuminated	Communication is normal
	Extinguish	Communication module is disconnected
	Illuminated	Inverter is in grid-connected power generation status
	Flashes at 1 second interval	Inverter is waiting for on-grid or in the started state
	Illuminated	Inverter fault
	Flashes quickly at 0.2 seconds interval	Grid fault
	Flashes slowly at 1 second interval	PV input fault

Note: If both the green LED indicator and the red LED indicator are flashing at the same time, it indicates that a program upgrade is in progress. Do not perform any operation before the program upgrade is completed.

6 Downloading Monitoring App

This series of inverters doesn't have an LCD display screen, therefore the wireless communication module is required to view the running state. Please refer to section 4 for the installation of wireless communication module. After installing the Wi-Fi communication module, users can download a mobile App to monitor the running state of the whole PV system.

Download Professional Edition App

The user can view the running status of the inverter, configure the operational parameters and upgrade the software via the professional App. Professional App is recommended for professionals, operation and maintenance personnel. Search "solarmanPro" in Apple Store to download the App for iPhones, Search "solarmanPro" in Google Play to download the App for Android phones.

Download Home Edition APP

Home edition App is mainly used for residential PV system. It collects power generation information and operation information to enable users to obtain the running status information of the inverter in time. Search "solarman" in Apple Store to download the App for iPhones, Search "solarman" in Google Play to download the App for Android phones.

7 Troubleshooting for Fault Messages Displayed on App

Fault Messages	Description	Corrective Action
Grid overvoltage/ undervoltage	Voltage on AC side exceeds the allowable range	Check if the grid voltage is within the allowable range. Contact the local operation and maintenance personnel for any help.
Grid over-frequency /under-frequency	Frequency on AC side exceeds the allowable range	Check if the grid frequency is within the allowable range. Contact the local operation and maintenance personnel for any help.
No grid	Fail to detect the voltage on AC side	Check the connection of AC circuit breaker, AC fuse and AC terminals. Contact the local operation and maintenance personnel for any help.
PV reversely connected	Positive and negative polarity of DC input PV1 or PV2 are reversely connected	Contact the local operation and maintenance personnel for any help.
PV overvoltage	DC input voltage is excessive	Contact the local operation and maintenance personnel for any help.
Insulation impedance fault	Ground impedance of PV modules is less than the allowable value	Check the connection of PV arrays and earth wire, then restart the inverter. Contact the local operation and maintenance personnel for any help.
Leakage current abnormality	Leakage current exceeds the allowable value	Check the connection of PV arrays and earth wire, then restart the inverter. Contact the local operation and maintenance personnel for any help.

技术要求

1.说明书上下对折，对折整齐，裁剪方正无歪斜；
2.折后尺寸:148x210mm,整张展开尺寸:210x297mm(A4纸大小)；
3.最外围黑线为刀线，不需印刷；
4.材质：128克双铜，四色印刷；

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