V2.2 2026-01-06

Grid-Tied PV Inverter

SDT Series (4.0-50kW) G3

User Manual

GOODWE

Copyright Statement

NOTICE

Due to product version upgrades or other reasons, the content of the document will be updated periodically. Unless otherwise agreed, the content of the document cannot replace the Safety Precautions in the product label. All descriptions in the document are provided for guidance only.

About This Manual

This document primarily introduces the product information of Inverter, Installation wiring, configuration of Commissioning, fault troubleshooting, and maintenance. Before Installation and using this product, please carefully read this manual to understand the product safety information and familiarize yourself with the product's functions and features. The document may be updated periodically, so please obtain the latest version and more product information from the official website.

Applicable Model

This document applies to the Inverter of the following model:

model	Nominal output power	Nominal output voltage
GW4000-SDT-30	4kW	220/380, 230/400, 240/415, 3L/N/PE or 3L/PE
GW5000-SDT-30	5kW	
GW6000-SDT-30	6kW	
GW8000-SDT-30	8kW	
GW10K-SDT-30	10kW	
GW10K-SDT-EU30	10kW	
GW12K-SDT-30	12kW	
GW15K-SDT-30	15kW	
GW17K-SDT-30	17kW	
GW20K-SDT-30	20kW	
GW25K-SDT-C30	25kW	
GW25K-SDT-30	25kW	

GW30K-SDT-30	30kW	
GW30K-SDT-C30	30kW	
GW33K-SDT-C30	33kW	
GW36K-SDT-C30	36kW	
GW37K5-SDT-BR30	37.5kW	
GW40K-SDT-C30	40kW	
GW40K-SDT-P30	40kW	
GW20K-SDT-31	20kW	
GW25K-SDT-P31	25kW	
GW50K-SDT-C30	50kW	
GW12KLV-SDT-C30	12kW	127/220,3L/N/PE or 3L/PE
GW17KLV-SDT-C30	17kW	
GW23KLV-SDT-BR30	23kW	
GW12KLV-SDT-C31	12kW	
GW30KLV-SDT-C30	30kW	
GW5000-SDT-AU30	5kW	230/400,3L/N/PE or 3L/PE
GW6000-SDT-AU30	6kW	
GW8000-SDT-AU30	8kW	
GW9990-SDT-AU30	9.99kW	
GW15K-SDT-AU30	15kW	
GW20K-SDT-AU30	20kW	
GW25K-SDT-AU30	25kW	
GW29K9-SDT-AU30	29.9kW	

Applicable personnel

Only for use by professionals who are familiar with local regulatory standards and electrical systems, have received specialized training, and possess comprehensive knowledge of this product.

Symbol Definition

To better utilize this manual, the following symbols are used to highlight important information. Please carefully read the symbols and their descriptions.

DANGER
Indicates a highly potential DANGER, which, if not avoided, will result in death or serious injury.
WARNING
Indicates a moderate potential for DANGER. Failure to avoid may result in death or serious injury.
CAUTION
Indicates a low potential for DANGER, which, if not avoided, could result in moderate or minor injury to personnel.
NOTICE
Emphasis and supplementation of content, which may also provide tips or tricks for optimizing product use, can help you solve a problem or save you time.

Table of Contents

1 Safety Precautions

⚠WARNING

Inverter has been strictly designed in compliance with safety regulations and passed all required tests. However, as electrical equipment, all operations must adhere to relevant safety instructions. Improper operation may result in serious injury or property damage.

1.1 General Safety

NOTICE

- Due to product version upgrades or other reasons, the content of the document will be updated periodically. Unless otherwise agreed, the content of the document cannot replace the Safety Precautions in the product label. All descriptions in the document are provided for guidance only.
- Please read this document carefully before Installation the equipment to understand the product and NOTICE precautions.
- All operations of the equipment must be performed by professional and qualified electrical technicians who are thoroughly familiar with the relevant local standards and safety regulations at the project site.
- When operating equipment, use insulated tools and wear personal protective equipment to ensure personal safety. When handling electronic components, wear anti-static gloves, wrist straps, and clothing to prevent Protection from electrostatic damage.
- Unauthorized disassembly or modification may cause equipment damage, which is not covered under warranty.
- Damage to equipment or personal injury caused by failure to install, use, or configure the device in accordance with this document or the relevant user manual is not covered by the warranty. For more product warranty information, please visit the official website:https://www.goodwe.com/warrantyrelated.html.

1.2 DC side

⚠DANGER

Please use the DC Connector provided with the package to connect Inverter DC cable. Using DC Connector from other model may lead to serious consequences, and any equipment damage caused by this will beyond the manufacturer's liability.

⚠WARNING

- Ensure the module frame and mounting system are properly grounded.
- After the connection is completed, ensure that the cables are securely fastened and free from looseness.
- Measuring PV strings with multimeter may cause damage due to reverse connection, over voltage, or over current, resulting in beyond the manufacturer's liability.
- PV modules connected to the same MPPT must use PV panels with identical model. The voltage difference between different MPPTs should be <160V.
- When the input voltage is between 1000V and 1100V, Inverter will enter the Standby state. When voltage returns to the MPPT Operating Voltage range range (140V to 1000V), Inverter will resume normal operation.
- It is recommended that the sum of the peak Powercurrent of the strings connected to each MPPT does not exceed the Max. Input Current per MPPT of Inverter.
- When connecting multiple PV strings to Inverter, it is recommended to connect at least one string per MPPT, ensuring no MPPT remains unconnected.
- The photovoltaic modules used in conjunction with Inverter must comply with IEC 61730 Class A standards.

1.3 AC side

⚠WARNING

- Ensure the voltage and Frequency of the on-grid access point comply with Inverteron-grid requirements.
- It is recommended to add breaker or fuses and other Protection devices on the AC side. The specifications of the Protection device must be greater than 1.25 times the Inverter Max. Output Current.
- The Inverter's PE cable must be securely connected.
- The AC output line is recommended to use copper cable. If aluminum wire is required, please use a copper-aluminum transition terminal for wiring.

1.4 Inverter

⚠DANGER

- During the Inverter Installation process, avoid subjecting the bottom wiring terminal to load-bearing, as this may result in damage to the terminal.
- After InverterInstallation, the labels and warning signs on the enclosure must remain clearly visible. Blocking, altering, or damaging them is prohibited.
- The warning labels on the Inverter enclosure are as follows:

No.	symbol	Meaning
1		Potential DANGER exists during equipment operation. Please take necessary protective measures when operating the device.
2		High voltage DANGER. High voltage is present during equipment operation. Ensure the equipment is POWER OFF before performing any operations.
3		Inverter surface is at high temperature. Do not touch during operation to avoid burns.
4		delayed discharge. After the equipment is power off, please wait for 5 minutes until it is completely Discharge.
5		Before operating the equipment, please read the product manual carefully.
6		The equipment must not be disposed of as household waste. Please handle the equipment in accordance with local laws and regulations or return it to the manufacturer.
7		grounding point
8		CE marking.

1.5 EU Declaration of Conformity

1.5.1 Equipment with Wireless Communication Modules

The Equipment with Wireless Communication Modules available for sale in the European market complies with the following directives:

- Radio Equipment Directive 2014/53/EU (RED)
- Restrictions of Hazardous Substances Directive 2011/65/EU and (EU) 2015/863 (RoHS)
- Waste Electrical and Electronic Equipment 2012/19/EU
- Registration, Evaluation, Authorization and Restriction of Chemicals (EC) No 1907/2006 (REACH)

1.5.2 No Equipment with Wireless Communication Modules

Can be sold in the European market without Equipment with Wireless Communication Modules meeting the following directive requirements:

- Electromagnetic compatibility Directive 2014/30/EU (EMC)
- Electrical Apparatus Low Voltage Directive 2014/35/EU (LVD)
- Restrictions of Hazardous Substances Directive 2011/65/EU and (EU) 2015/863 (RoHS)
- Waste Electrical and Electronic Equipment 2012/19/EU
- Registration, Evaluation, Authorization and Restriction of Chemicals (EC) No 1907/2006 (REACH)

1.6 personnel requirements

NOTICE

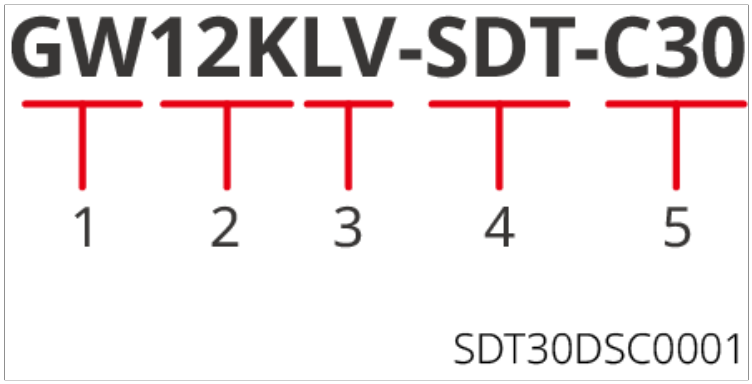
- Personnel responsible for the maintenance of Installation equipment must undergo rigorous training to understand various product Safety Precautions and master the correct operating procedures.
- Installation, operation, maintenance, and replacement of equipment or components shall only be performed by qualified professionals or trained personnel.

2 Product Introduction

2.1 Introduction

The SDT series Inverter is a three-phase string photovoltaic grid-tied PV inverter that converts the DC power generated by photovoltaic solar panels into AC power meeting Utility grid requirements and feeds it into the Utility grid. The main application scenarios of the Inverter are as follows:

model meaning



No.	meaning	Instructions
1	Brand code	GW: GoodWe
2	Nominal power	12K: Nominal power is 12kW
3	Grid type	LV: Low Voltage
4	Series code	SDT: SDT Series
5	Version code	Third-generation product

2.2 Circuit Block Diagram

GW4000-SDT-30、GW5000-SDT-30、GW6000-SDT-30、GW8000-SDT-30、GW10K-SDT-30、GW10K-SDT-EU30、GW12K-SDT-30、GW15K-SDT-30:

GW12KLV-SDT-C30、GW17K-SDT-30、GW20K-SDT-30、GW25K-SDT-C30:

GW17KLV-SDT-C30、GW30K-SDT-C30、GW20K-SDT-31、GW12KLV-SDT-C31、GW25K-SDT-P31：

GW5000-SDT-AU30、GW6000-SDT-AU30:

GW8000-SDT-AU30、GW9990-SDT-AU30:

GW15K-SDT-AU30、GW20K-SDT-AU30：

GW25K-SDT-AU30、GW29K9-SDT-AU30、GW25K-SDT-30、GW30K-SDT-30、GW23KLV-SDT-BR30、GW37K5-SDT-BR30、GW33K-SDT-C30、GW36K-SDT-C30、GW40K-SDT-C30：

GW40K-SDT-P30、GW30KLV-SDT-C30、GW50K-SDT-C30：

2.3 Supported Grid Types

2.4 Features

AFCI
The AFCI function is used to detect Inverter DC-side arc fault. When an arc fault occurs, Inverter will automatically perform Protection.
Causes of arc generation:

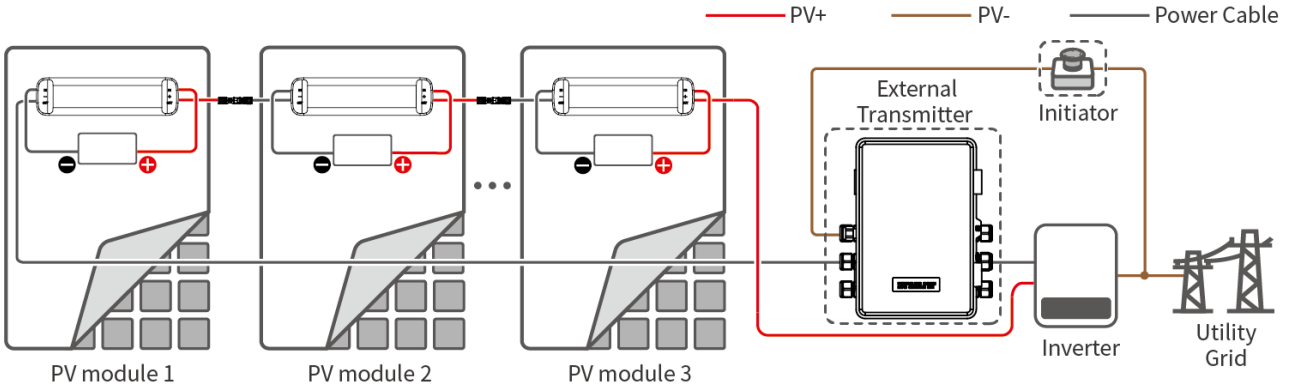
- The DC Connector in the photovoltaic system is damaged or improperly connected.
- Incorrect or damaged cable connection.
- Connector and cable aging.

Arc detection method:
When an arc is detected, the type of fault can be viewed via the App.
When a arc is detected, the Inverter will issue an alarm and shut down Protection. After a 60-second wait, the machine will automatically resume on-grid. If multiple shutdowns Protection occur, verify the Inverter wiring to eliminate arcing. For detailed operations, refer to the "SolarGo App User Manual."

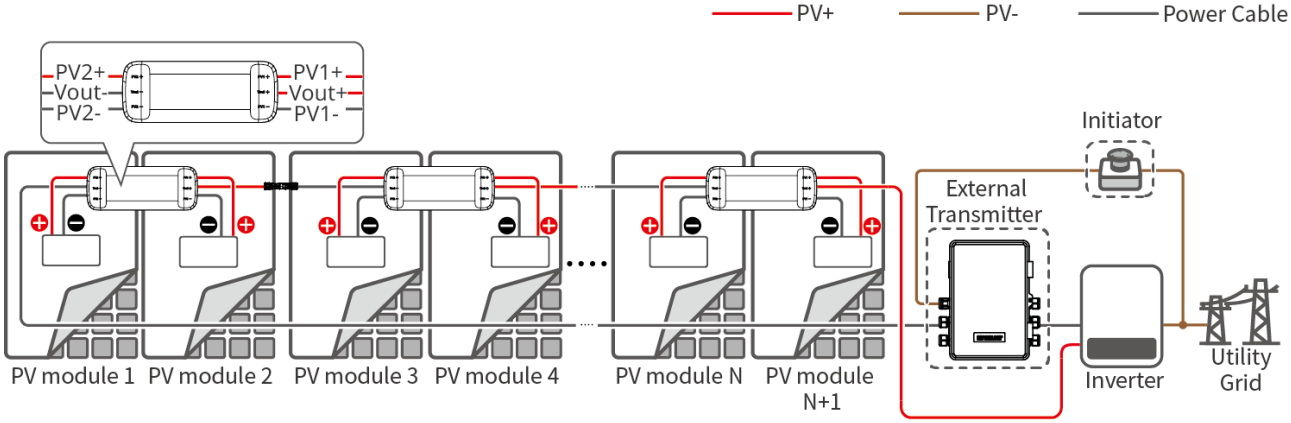
RSD

In a Rapid Shutdown system, the Rapid Shutdown transmitter and receiver work together to achieve system Rapid Shutdown. The receiver maintains module output by receiving signals from the transmitter. The transmitter can be externally mounted or integrated into the Inverter. In emergency situations, the transmitter can be deactivated by enabling an external trigger device, thereby shutting down the module.

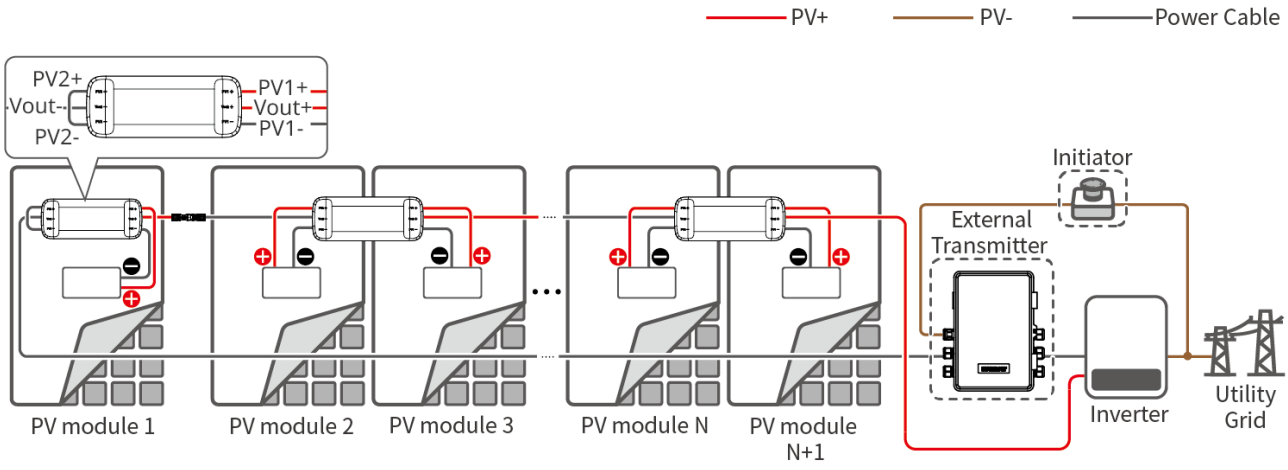
External transmitter:
Transmitter model: GTP-F2L-20, GTP-F2M-20
https://www.goodwe.com/Ftp/Installation-instructions/RSD2.0-transmitter.pdf
Receiver model: GR-B1F-20, GR-B2F-220
https://www.goodwe.com/Ftp/Installation-instructions/RSD2.0.pdf



RSD20NET0003



RSD20NET0004



Built-in transmitter:
External trigger device: AC side breaker;
Receiver model: GR-B1F-20, GR-B2F-+20
https://www.goodwe.com/Ftp/Installation-instructions/RSD2.0.pdf

Communication
Inverter supports parameter configuration via Bluetooth proximity; it also enables connection to the monitoring platform through 4G to monitor the operational status of Inverter and the performance of power station, among other functions.

- Bluetooth: Compliant with Bluetooth 5.1 standard.
- 4G: Supports connection to third-party monitoring platforms via the MQTT communication protocol.

2.5 Inverter operation mode

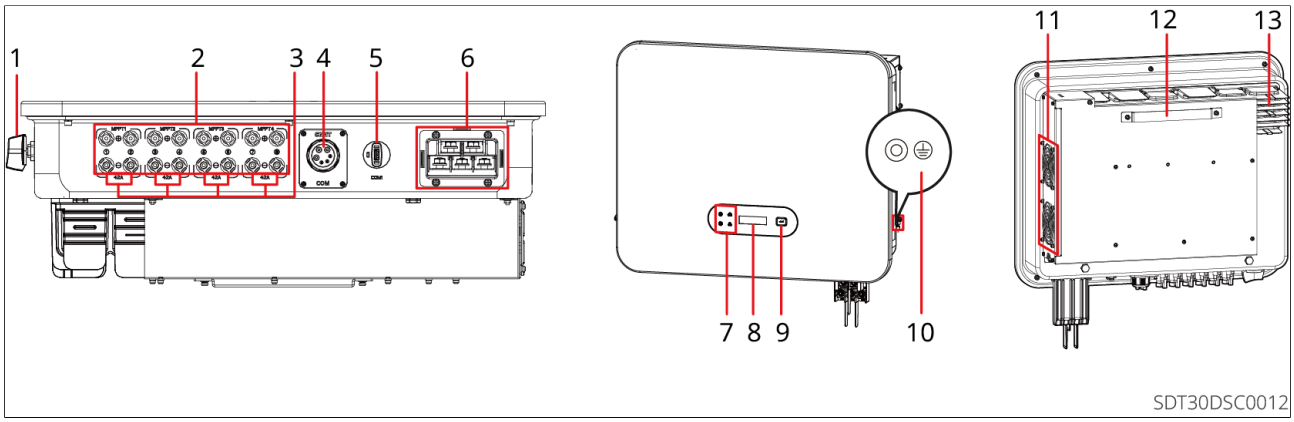
No.	Component	Instructions
1	Standby mode	Machine power on post-waiting phase. • When the conditions are met, enter the self-test mode. • If fault exists, Inverter enters fault mode. • If an upgrade request is received, enter upgrade mode.

2	Self-test mode	Inverter Before startup, continuous self-check and initialization are performed. • If the conditions are met, proceed to On-grid mode, and Inverter initiates on-grid operation. • If an upgrade request is received, enter upgrade mode. • If the self-test fails, it will enter fault mode.
3	On-grid mode	Inverter operates normally under on-grid. • If a fault is detected, enter fault mode. • If an upgrade request is received, enter upgrade mode.
4	fault mode	If fault is detected, Inverter enters fault mode. After fault is cleared, it enters standby mode. Once the standby mode ends, Inverter checks the operating status and then proceeds to the next operating mode.
5	Upgrade mode	Inverter transitions to this state during program updates. Once the program update is completed, it enters the waiting mode. After the waiting mode ends, Inverter checks the operating status and then proceeds to the next operating mode.

2.6 Appearance Description

There are differences in the color and appearance of different model Inverter, subject to the actual product.

2.6.1 Component Introduction



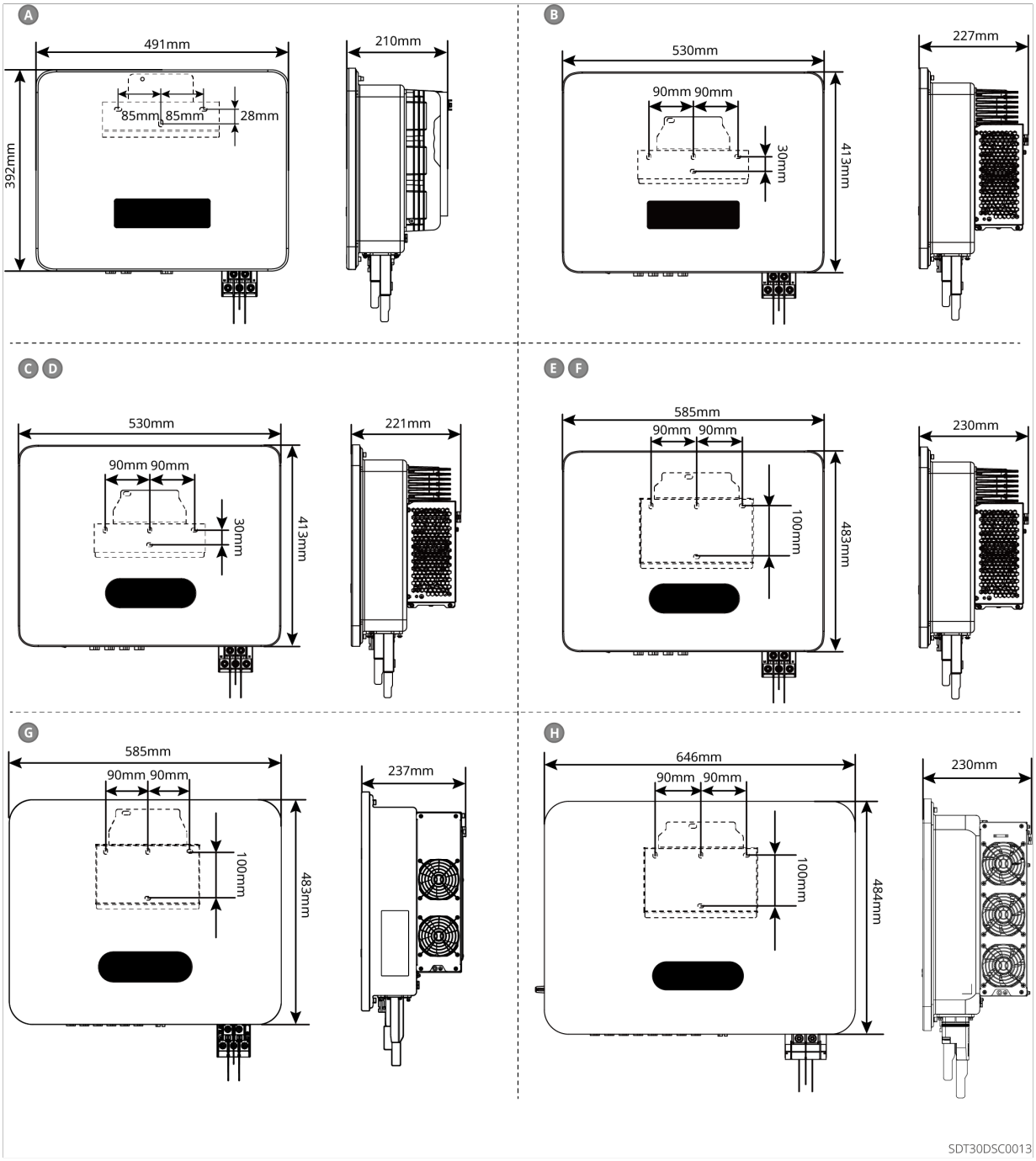
No.	Component/Silkscreen	Instructions
1	DC switch	Control the connection or disconnection of DC input.
2	PV Input terminal	Can connect PV module DC input wires.
3	Each MPPT Max. AC Current From Utility Grid silk screen value	The maximum current value that each MPPT can connect to. Different model Inverter have different values. For specific values, please refer to Inverter Parameters.
4	Communication Port	Can be connected to RS485 and electricity meters.
5	smart dongle port	Can be connected to smart dongle, please select the module type according to actual requirements.
6	AC Output	Connect the AC output cable, connecting Inverter to Utility grid.
7	indicator	Indicates the working status of Inverter.
8	Display (optional)	View data related to Inverter.
9	Button (optional)	Operate the Inverter in conjunction with the display screen.
10	Grounding terminal	Connecting the PE cable

11	fan	Inverter is equipped with an external fan, which can cool down the Inverter when the temperature is too high. • GW8000-SDT-30, GW10K-SDT-30, GW10K-SDT-EU30, GW12K-SDT-30, GW15K-SDT-30, GW4000-SDT-30, GW5000-SDT-30, GW6000-SDT-30: No external fan. • GW12KLV-SDT-C30, GW17K-SDT-30, GW20K-SDT-30, GW12KLV-SDT-C31, GW20K-SDT-31, GW5000-SDT-AU30, GW6000-SDT-AU30, GW8000-SDT-AU30, GW9990-SDT-AU30: External fan x 1. • GW17KLV-SDT-C30, GW25K-SDT-C30, GW30K-SDT-C30, GW25K-SDT-P31, GW40K-SDT-P30, GW15K-SDT-AU30, GW20K-SDT-AU30, GW25K-SDT-AU30, GW29K9-SDT-AU30, GW25K-SDT-30, GW30K-SDT-30, GW23KLV-SDT-BR30, GW37K5-SDT-BR30, GW33K-SDT-C30, GW36K-SDT-C30, GW40K-SDT-C30, GW30KLV-SDT-C30, GW50K-SDT-C30: External fan x 2.
11	Mounting bracket	Can be mounted with Inverter.
13	heat sink	Provide heat dissipation for Inverter.

2.6.2 Product Dimensions

A	B	C	D	E	F	G
GW4000-SDT-30 GW5000-SDT-30 GW6000-SDT-30 GW8000-SDT-30 GW10K-SDT-30 GW10K-SDT-EU30 GW12K-SDT-30 GW12KLV-SDT-C30 GW15K-SDT-30	GW17K-SDT-30 GW17KLV-SDT-C30 GW20K-SDT-30 GW25K-SDT-C30 GW30K-SDT-C30	GW20K-SDT-31 GW12KLV-SDT-C31 GW25K-SDT-P31	GW5000-SDT-AU30 GW6000-SDT-AU30 GW8000-SDT-AU30 GW9990-SDT-AU30 GW15K-SDT-AU30 GW20K-SDT-AU30	GW25K-SDT-AU30 GW29K9-SDT-AU30 GW25K-SDT-30 GW30K-SDT-30	GW23KLV-SDT-BR30 GW37K5-SDT-BR30 GW33K-SDT-C30 GW36K-SDT-C30 GW40K-SDT-C30	GW40K-SDT-P30 H GW30KLV-SDT-C30 GW50K-SDT-C30

SDT30INT0004



2.6.3 indicator Description

Three lights

indicator	Status	Description
		Changliang: Wireless monitoring normal

power supply		Single flicker: wireless module reset or restart
		Double flashing: No Router connected/No base station connected
		Four flashes: Monitoring Server not connected
		Flicker: RS485 communication normal
		Extinguish: Wireless module is restoring factory settings
operation		Long bright: Utility grid normal, on-grid successful
		Extinguish: Not on-grid
Communication		Long Bright: System fault
		Extinguish: None fault

Four lights

indicator	Status	Instructions
power supply		Long Bright: Equipment power on
		Extinguished: Equipment not power on
Operation		Long bright: Utility grid normal, on-grid successful
		Extinguish: Not on-grid
		Single slow blinking: Pre-on-grid self-check
		Single fast blinking: About to on-grid

Communication		Long Bright: Wireless monitoring normal
		Single flash: Wireless module reset or reboot
		Double flash: Base station not connected or Router
		Four flashes: Monitoring Server not connected
		Flicker: RS485 communication normal
		Extinguishing: The wireless module is being restored to factory settings.
fault		Long light: System fault
		Extinguish: None

2.6.4 Nameplate description

The nameplate is for reference only. Please refer to the actual product.

2.7 Check Before Receiving

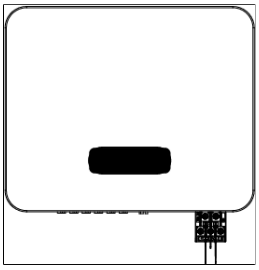
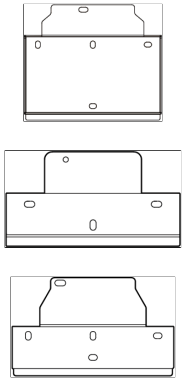
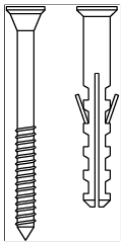
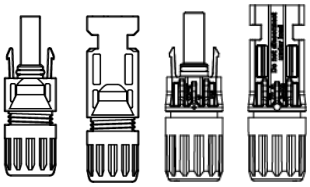
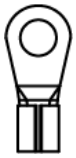
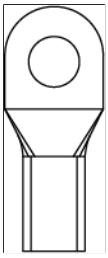
Before signing for the product, please carefully inspect the following:

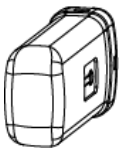
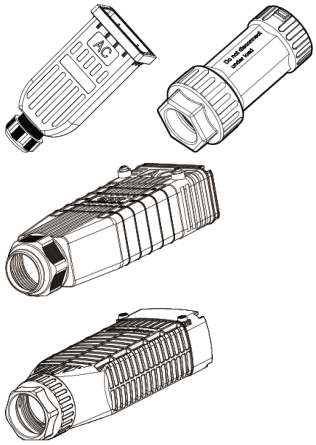
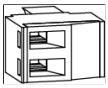
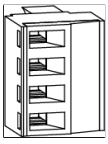
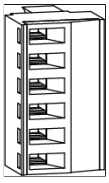
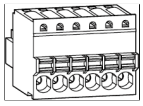
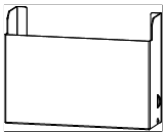
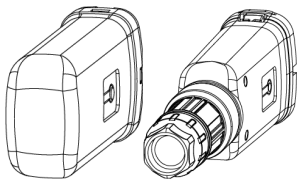
1. Check the outer packaging for any damage, such as deformation, punctures, cracks, or other signs that may indicate potential harm to the equipment inside the box. If damage is found, do not open the packaging and contact your distributor.
2. Check if the Invertermodel is correct. If there is any discrepancy, do not open the package and contact your dealer.
3. Check whether the deliverables type and quantity are correct and whether there is any damage to the appearance. If damaged, please contact your distributor.

2.8 deliverables

NOTICE

[1] The type of mounting plate is determined by the model of the Inverter.
[2] The quantity of DC Connector is consistent with the quantity of Inverter DC input terminal. Please verify based on the quantity of Inverter DC input terminal.
[3] The number of expansion bolt matches the hole positions of mounting plate.
[4] The quantity of communication terminal and PIN terminal should match the selected communication method. Please verify based on the communication configuration. The number of included 2PIN communication terminal, 3PIN communication terminal, 4PIN communication terminal, or DRED/RCR communication terminal varies depending on the Inverter configuration. Please refer to the actual shipment.
[5] The types of smart dongle include: 4G, WiFi/LAN smart dongle. The actual shipping type depends on the selected Inverter communication method.
[6] Protective coverP is only applicable to the following model: GW5000-SDT-AU30, GW6000-SDT-AU30, GW8000-SDT-AU30、GW9990-SDT-AU30、GW15K-SDTAU30、GW20K-SDT-AU30、GW25KSDT-AU30、GW29K9-SDT-AU30、GW25K-SDT-30、GW50K-SDT-30
[7] GW5000-SDT-AU30, GW6000-SDT-AU30, GW8000-SDT-AU30, GW9990-SDT-AU30, GW15K-SDTAU30, GW20K-SDT-AU30 model AC OT terminal Quantity: 0; GW25K-SDT-AU30, GW29K9-SDT-AU30, GW25K-SDT-30, GW30K-SDT-30 model AC OT terminal Quantity: 5
[8] The harness is fixed to the Protective coverP support plate cable tie, which is only applicable to models equipped with Protective coverP. GW5000-SDT-AU30, GW6000-SDT-AU30、GW8000-SDT-AU30、GW9990-SDT-AU30、GW15K-SDTAU30、GW20K-SDT-AU30, GW25K-SDT-AU30, GW29K9-SDT-AU30, GW25K-SDT-30 model count
Quantity: 3; GW50K-SDT-30 model Quantity: 5

Component	Instructions	Component	Instructions
	Inverter x1		mounting plate x1[1]
	Expansion screw x N[3]		DC Connector x N[2]
	Grounding OT terminal x 1		Product Information x 1
	AC OT terminal x N[7]		PIN terminalx N[4]

Component	Instructions	Component	Instructions
	smart dongle x 1		AC terminal Protective coverP x 1
	2PINcommunication terminalx N[4]		3PIN communication terminal x N[4]
	4PIN communication terminal x N[4]		6PIN communication terminal x 1
	DRED/RCRcommunication terminalx N[4]		Harness is fixed and tied to the Protective coverP support plate x N[8]
 	Protective coverP x 1[6]		smart dongle x 1[5]

2.9 Storage

If the equipment is not to be put into use immediately, please store it according to the following requirements:

1. Ensure the outer packaging box is not dismantle, and the desiccant inside the box is not missing.
2. Ensure the storage environment is clean, with an appropriate temperature range and free from condensation.
3. Ensure the Inverter stack height and orientation are positioned according to the label instructions on the packaging box.
4. Ensure there is no risk of tipping after Inverter stack.
5. If the storage time of Inverter exceeds two years or the non-operation period after Installation exceeds six months, it is recommended to undergo inspection and testing by professionals before being put back into service.
6. To ensure the electrical performance of the internal electronic components of the Inverter remains optimal, it is recommended to power it on every 6 months during storage. If it has not been powered on for more than 6 months, a professional inspection and testing are advised before putting it into operation.

3 Installation

3.1 Installation Requirements

Installation Environment Requirements

1. The equipment must not be operated in flammable, explosive, or corrosive environments.
2. The carrier is robust and reliable, capable of supporting the Weight of Inverter.
3. The space must meet the ventilation and heat dissipation requirements of the equipment as well as the operational space requirements.
4. The equipment Ingress Protection Rating must meet indoor and outdoor Installation and Installation environmental temperature Humidity requirements within the appropriate range.
5. Inverter should be protected from sunlight, rain, snow accumulation, and other Installation conditions. It is recommended to Installation in a shaded Installation Location, and a sunshade can be installed if necessary.
6. Installation Location should be kept out of reach of children and avoid being placed in easily accessible locations. The equipment surface may become hot during operation to prevent burns.
7. The height of the equipment Installation should facilitate operation and maintenance, ensuring that the equipment indicator and all labels are easily visible, and the wiring terminal is easily accessible.
8. GW5000-SDT-AU30, GW6000-SDT-AU30, GW8000-SDT-AU30, GW9990-SDT-AU30, GW15K-SDT-AU30, GW20K-SDT-AU30 Installation Altitude Below 3000m, when above 2000m, Inverter will derate. GW4000-SDT-30, GW5000-SDT-30, GW6000-SDT-30, GW30KLV-SDT-C30, GW50K-SDT-C30, GW20K-SDT-31, GW12KLV-SDT-C31, GW25K-SDT-P31, GW25K-SDT-AU30, GW29K9-SDT-AU30, GW25K-SDT-30, GW30K-SDT-30, GW23KLV-SDT-BR30, GW37K5-SDT-BR30, GW33K-SDT-C30, GW36K-SDT-C30, GW40K-SDT-C30, GW40K-SDT-P30, GW8000-SDT-30, GW10K-SDT-30, GW10K-SDT-EU30, GW12K-SDT-30, GW12KLV-SDT-C30, GW15K-SDT-30, GW17K-SDT-30, GW17KLV-SDT-C30, GW20K-SDT-30, GW25K-SDT-C30, GW30K-SDT-C30 Installation Altitude Below 4000m.
9. Inverter will corrode in salt affected area Installation. salt affected area refers to areas within 1000m of the coast or affected by sea breeze. The extent of sea breeze influence varies depending on meteorological conditions (e.g., typhoons, seasonal winds) or terrain features (such as embankments or hills).

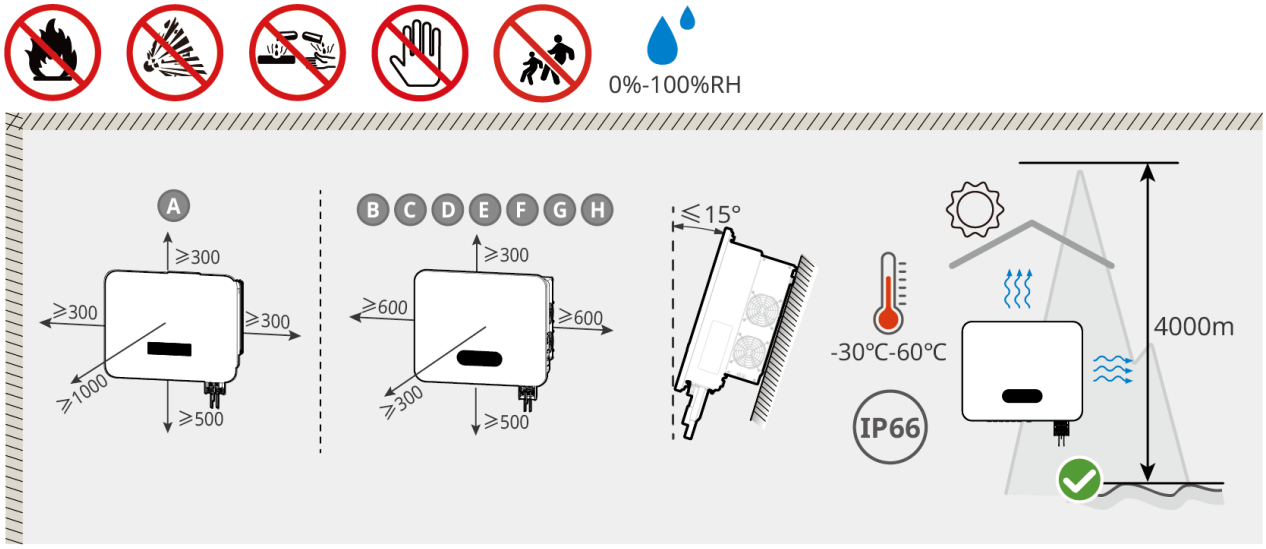
10. Keep away from strong magnetic fields to avoid electromagnetic interference. If there are radio stations or wireless communication devices below 30MHz near the Installation Location, please Installation the equipment according to the following requirements:
    - Add ferrite cores with multiple turns on the Inverter DC input or AC output lines, or incorporate a low-pass EMI Filter.
    - The distance between Inverter and the wireless electromagnetic interference equipment exceeds 30m.

Installation carrier requirements

- The carrier must not be made of flammable materials and must possess fire-resistant properties.
- Ensure the Installation surface is sturdy and verify that the carrier meets the load-bearing requirements of the equipment.
- During operation, the equipment may generate vibrations. Do not Installation it on a carrier with poor sound insulation to avoid causing disturbances to residents in living areas due to the Noise Emission produced by the equipment.

Installation angle requirement

- Recommended InverterInstallation angle: vertical or tilted backward ≤ 15°.
- Do not invert, tilt forward, tilt backward beyond the angle, or horizontally Installation the Inverter.



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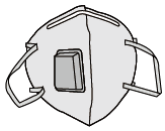
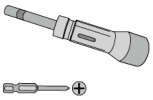
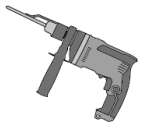
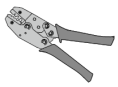
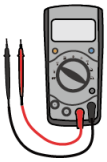
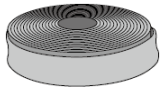
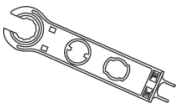
InstallationTool Requirements

When Installation, it is recommended to use the following Installation tools. If

necessary, other auxiliary tools can be used on-site.

Tool type	Description	Tool type	Description
	Safety gloves		Dust mask
	goggle		Safety shoes
	torque wrench M4、M5、M6		hammer drill
	diagonal plier		Hot air gun
	wire stripper		terminalcrimping tool
	rubber hammer		Marker pen
	multimeter		Heat shrink tubing
	Vacuum cleaner		Level bar
	MC4 DC unlocking tool		Jinko DC Unlocking Tool

3.2 Installing the Inverter

3.2.1 Handling Inverter

⚠CAUTION

Before Installation, the Inverter must be transported to the Installation location. To prevent personal injury or equipment damage during transportation, please NOTICE the following matters:

1. Please equip the corresponding personnel for the device Weight to prevent it from exceeding the Weight range that can be manually handled, thereby avoiding injury to personnel.
2. Please wear safety gloves to avoid injury.
3. Please ensure the equipment remains balanced during transportation to avoid falling.

3.2.2 Installing the Inverter

NOTICE

- When drilling, ensure the hole position avoids water pipes, cables, etc. inside the wall to prevent DANGER.
- When drilling, wear goggle and a dust mask to prevent dust from inhalation the respiratory tract or entering the eyes.
- The anti-theft lock is to be provided by the user. Please select an appropriately sized anti-theft lock to avoid potential Installation.
- The appearance of the graphics in this document is for reference only. The appearance may vary depending on different model or different versions of the same model. Please refer to the actual product.
- Step 4 applies only to GW5000-SDT-AU30, GW6000-SDT-AU30, GW8000-SDT-AU30, GW9990-SDT-AU30, GW15K-SDTAU30, GW20K-SDT-AU30, GW25K-SDT-AU30, GW29K9-SDT-AU30, GW25K-SDT-30, and GW30K-SDT-30.

Step 1: Place the backsheet horizontally against the wall surface and mark the drilling positions using a marker pen.
Step 2: Use hammer drill for punching.
Step 3: Use expansion bolt to secure the backsheet to the wall.
Step 4: Mount the Inverter onto the backplate, securing both the backplate and the Inverter.
Step 5 (Optional): Installation Anti-theft lock.

A	B	C	D	E	F	G
GW4000-SDT-30 GW5000-SDT-30 GW6000-SDT-30 GW8000-SDT-30 GW10K-SDT-30 GW10K-SDT-EU30 GW12K-SDT-30 GW12KLV-SDT-C30 GW15K-SDT-30	GW17K-SDT-30 GW17KLV-SDT-C30 GW20K-SDT-30 GW25K-SDT-C30 GW30K-SDT-C30	GW20K-SDT-31 GW12KLV-SDT-C31 GW25K-SDT-P31	GW5000-SDT-AU30 GW6000-SDT-AU30 GW8000-SDT-AU30 GW9990-SDT-AU30 GW15K-SDT-AU30 GW20K-SDT-AU30	GW25K-SDT-AU30 GW29K9-SDT-AU30 GW25K-SDT-30 GW30K-SDT-30	GW23KLV-SDT-BR30 GW37K5-SDT-BR30 GW33K-SDT-C30 GW36K-SDT-C30 GW40K-SDT-C30	GW40K-SDT-P30 **H** GW30KLV-SDT-C30 GW50K-SDT-C30

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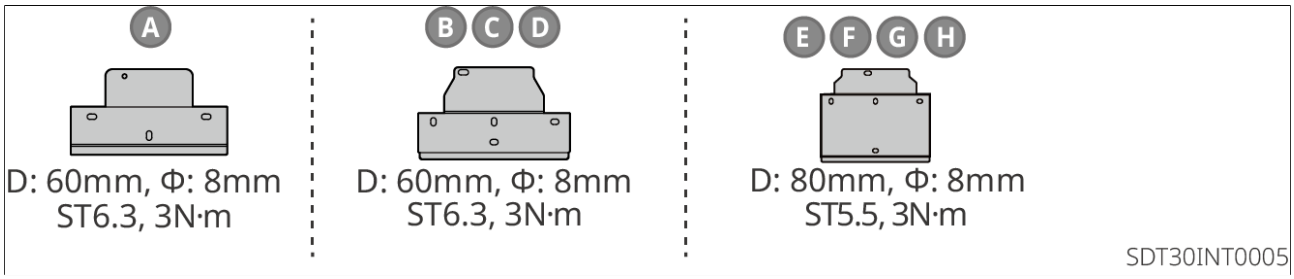

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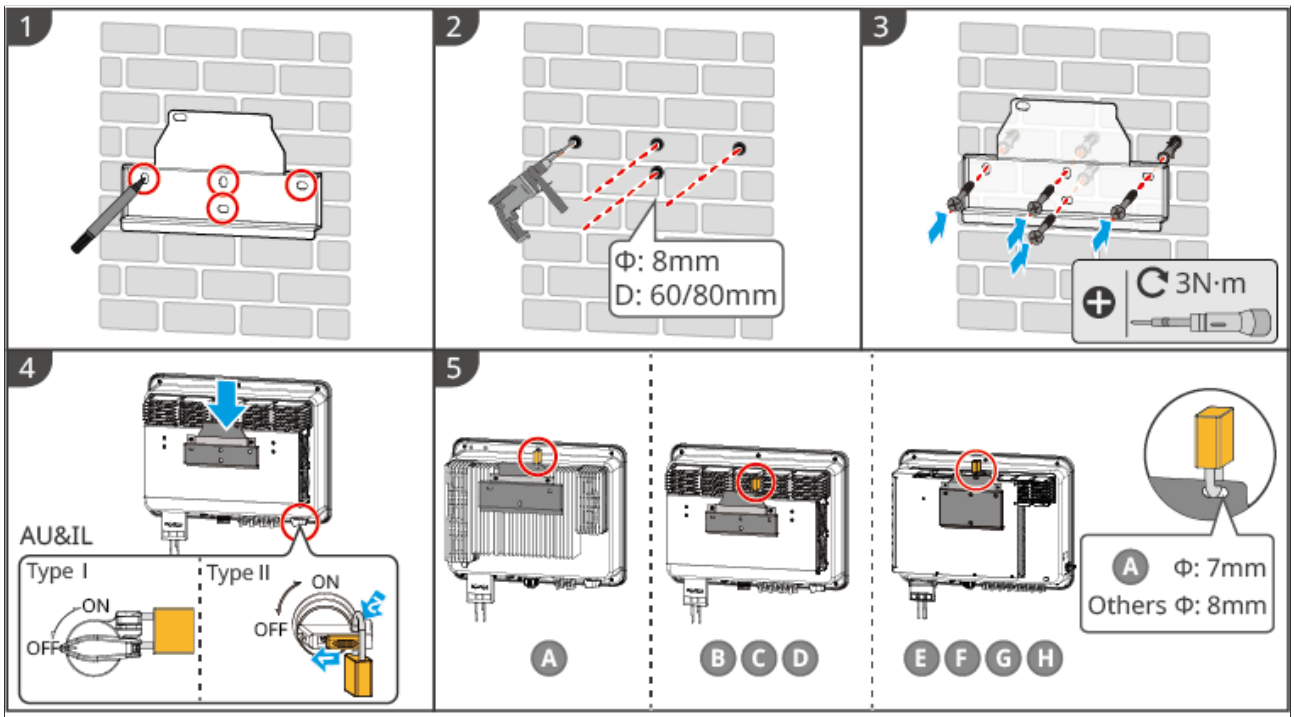

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4 Electrical connection

4.1 Safety Precautions

⚠DANGER

- Before performing electrical connections, disconnect the Inverter's DC switch and AC output switch to ensure the equipment is POWER OFF. Live operation is strictly prohibited, as it may lead to electric shock or other DANGER.
- All operations during the electrical connection process, as well as the specifications of the cables and components used, must comply with local laws and regulations.
- If the cable is subjected to excessive tension, it may result in poor connections. When wiring, leave a certain length of slack in the cable before connecting it to the Inverter terminal port.

NOTICE

- When performing electrical connections, wear safety shoes, protective gloves, insulated gloves, etc. as required.
- Only qualified personnel are permitted to perform electrical connection operations.
- The cable colors in the diagrams of this document are for reference only. The actual cable specifications must comply with local regulatory requirements.
- The appearance of the graphics in this document is for reference only. The appearance may vary depending on different model or different versions of the same model. Please refer to the actual product.

Cable specification requirements

cable	Type	Cable specification	
		Cable outer diameter(mm)	conductorcross-sectional area(mm^2)
DC cable		4.8~6.3	Recommended: 4~6

cable	Type	Cable specification		
		Cable outer diameter(mm)	**conductorcross-sectional area(mm^2)**	
	Photovoltaic cables compliant with the 1100V standard	5.9-8.8	Recommended: 4~6	
AC cable	Outdoor single-core four-strand/five-strand copper/aluminum wire[1]	**GW30KLV-SDT-C30**，GW50K-SDT-C30：22~38 **GW5000-SDT-AU30**、GW6000-SDT-AU30、GW8000-SDT-AU30、GW9990-SDT-AU30、GW15K-SDTAU30、GW20K-SDT-AU30：13~18 **Others: 18 ~ 30**	Copper core (supports single or multi-strand wire) **GW4000-SDT-30**，GW5000-SDT-30，GW6000-SDT-30，GW8000-SDT-30，GW10K-SDT-30，GW10K-SDT-EU30，GW12K-SDT-30，GW12KLV-SDT-C30，GW15K-SDT-30，GW5000-SDT-AU30、GW6000-SDT-AU30、GW8000-SDT-AU30、GW9990-SDT-AU30、GW15K-SDTAU30、GW20K-SDT-AU30: 6-10。 **GW17K-SDT-30**，GW17KLV-SDT-C30，GW20K-SDT-30，GW25K-SDT-C30，GW30K-SDT-C30，GW20K-SDT-	Aluminum core (supports single or multi-strand wire): **GW4000-SDT-30**，GW5000-SDT-30，GW6000-SDT-30，GW8000-SDT-30，GW10K-SDT-30，GW10K-SDT-EU30，GW12K-SDT-30，GW12KLV-SDT-C30，GW15K-SDT-30: 10~16。 **GW17K-SDT-30**，GW17KLV-SDT-C30，GW20K-SDT-30，GW25K-SDT-C30，GW30K-SDT-C30，GW20K-SDT-31，GW12KLV-SDT-C31，GW25K-SDT-P31: 16~25。 **GW12KLV-SDT-C30**，GW17KLV-SDT-C30，GW30K-

cable	Type	Cable specification		
		Cable outer diameter(mm)	conductorcross-sectional area(mm^2)	
			31，GW12KLV-SDT-C31，GW25K-SDT-P31：16~25。 GW12KLV-SDT-C30，GW17KLV-SDT-C30：25。 Copper core (only supports stranded wire) GW25K-SDT-AU30，GW29K9-SDT-AU30，GW25K-SDT-30，GW30K-SDT-30，GW23KLV-SDT-BR30，GW37K5-SDT-BR30，GW33K-SDT-C30，GW36K-SDT-C30，GW40K-SDT-C30，GW40K-SDT-P30:16-25。 GW30KLV-SDT-C30，GW50K-SDT-C30：25~70。	SDT-C30: 25。 Aluminum core (only supports multi-strand wire) GW25K-SDT-AU30，GW29K9-SDT-AU30，GW25K-SDT-30，GW30K-SDT-30，GW23KLV-SDT-BR30，GW37K5-SDT-BR30，GW33K-SDT-C30，GW36K-SDT-C30，GW40K-SDT-C30，GW40K-SDT-P30:25-35 GW30KLV-SDT-C30，GW50K-SDT-C30：35~70

cable	Type	Cable specification		
		Cable outer diameter(mm)	conductorcross-sectional area(mm^2)	
PE cable	Outdoor cable	-	Copper core **GW4000-SDT-30**，GW5000-SDT-30，GW6000-SDT-30，GW8000-SDT-30，GW10K-SDT-30，GW10K-SDT-EU30，GW12K-SDT-30，GW12KLV-SDT-C30，GW15K-SDT-30: 4。 **GW17K-SDT-30**，GW17KLV-SDT-C30，GW20K-SDT-30，GW25K-SDT-C30，GW30K-SDT-C30，GW20K-SDT-31，GW12KLV-SDT-C31，GW25K-SDT-P31，GW5000-SDT-AU30、GW6000-SDT-AU30、GW8000-SDT-AU30、GW9990-SDT-AU30、GW15K-SDTAU30、GW20K-SDT-AU30: 10。 **GW25K-SDT-AU30**，GW29K9-SDT-AU30，GW25K-SDT-30，GW30K-SDT-	Aluminum core **GW25K-SDT-AU30**，GW29K9-SDT-AU30，GW25K-SDT-30，GW30K-SDT-30，GW23KLV-SDT-BR30，GW37K5-SDT-BR30，GW33K-SDT-C30，GW36K-SDT-C30，GW40K-SDT-C30，GW40K-SDT-P30，GW30KLV-SDT-C30，GW50K-SDT-C30: 16 ~ 25。 Other models are not supported.

cable	Type	Cable specification		
		Cable outer diameter(mm)	conductorcross-sectional area(mm²)	
			30，GW23KLV-SDT-BR30，GW37K5-SDT-BR30，GW33K-SDT-C30，GW36K-SDT-C30，GW40K-SDT-C30，GW40K-SDT-P30，GW30KLV-SDT-C30，GW50K-SDT-C30:10-16。	
Communication cable cable	Outdoor shielded twisted pair cable compliant with local standards [2]	3~7	0.2~0.5	

Note: [1] When using aluminum wire, please connect the copper-aluminum adapter terminal.
[2] The total length of Communication cable shall not exceed 1000m. The values in this table are valid only when the external Protection grounding conductor uses the same metal as the phase conductor. Otherwise, the external Protection grounding conductor cross-sectional area shall be designed to achieve equivalent conductivity as specified in this table.

4.2 Connecting the PE cable

⚠WARNING

- The Protection grounding of the chassis enclosure cannot replace the PE cable of the AC output port. When wiring, ensure that the PE cable at both locations is reliably connected.
- If there are multiple Inverter, ensure that all Inverter chassis enclosures are equipotentially bonded via Protection Grounding point.
- To improve the corrosion resistance of terminal, it is recommended to apply silica gel or paint on the exterior of Grounding terminal after completing the connection of Installation to PE cable.
- Please prepare your own PE cable. It is recommended to use copper cable for grounding. If aluminum wire is required, please use a copper-aluminum transition terminal for connection.
  Copper-aluminum transition terminal (self-provided).

A	B	C	D	E	F	G
GW4000-SDT-30 GW5000-SDT-30 GW6000-SDT-30 GW8000-SDT-30 GW10K-SDT-30 GW10K-SDT-EU30 GW12K-SDT-30 GW12KLV-SDT-C30 GW15K-SDT-30	GW17K-SDT-30 GW17KLV-SDT-C30 GW20K-SDT-30 GW25K-SDT-C30 GW30K-SDT-C30	GW20K-SDT-31 GW12KLV-SDT-C31 GW25K-SDT-P31	GW5000-SDT-AU30 GW6000-SDT-AU30 GW8000-SDT-AU30 GW9990-SDT-AU30 GW15K-SDT-AU30 GW20K-SDT-AU30	GW25K-SDT-AU30 GW29K9-SDT-AU30 GW25K-SDT-30 GW30K-SDT-30	GW23KLV-SDT-BR30 GW37K5-SDT-BR30 GW33K-SDT-C30 GW36K-SDT-C30 GW40K-SDT-C30	GW40K-SDT-P30 H GW30KLV-SDT-C30 GW50K-SDT-C30

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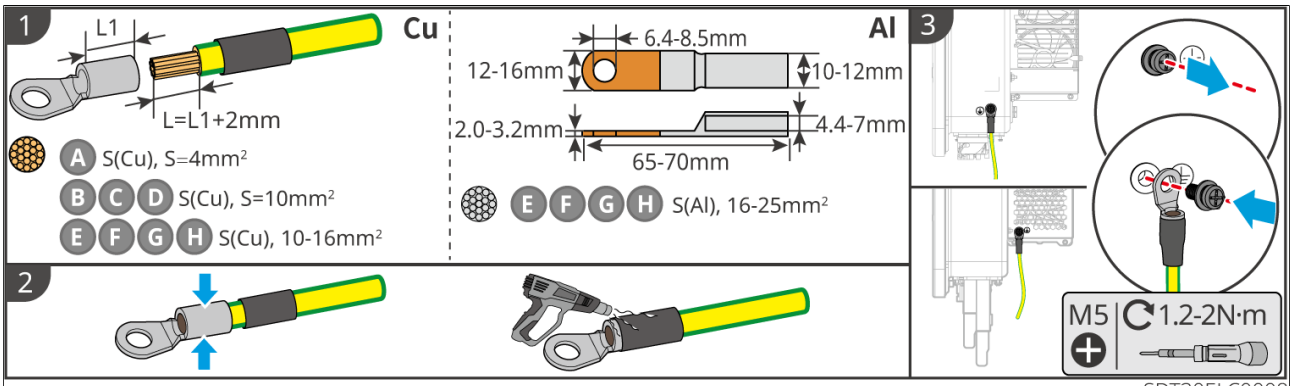

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4.3 Connect AC output cables

WARNING

- It is prohibited to connect any load between the Inverter and the AC Switch directly connected to the Inverter.
- The internally integrated residual current monitoring unit (RCMU) in Inverter will quickly disconnect from Utility grid when it detects a leakage current exceeding the permissible value.

Determine whether to install an RCD (Residual Current Device) based on local laws and regulations. An external Type A RCD can be connected to perform tripping when the DC component of the leakage current exceeds the limit. The following RCD specifications are for reference: 300mA.

NOTICE
Each Inverter must be equipped with an AC output switch, and multiple Inverter cannot be connected to the same AC Switch simultaneously.

To ensure safe disconnection between the Inverter and Utility grid in case of abnormal conditions, please connect a AC Switch on the AC side of the Inverter. Select an appropriate AC Switch according to local regulations. The following switch specifications are for reference:

Invertermodel	AC Switch specification
GW4000-SDT-30/GW5000-SDT-30/GW6000-SDT-30/GW5000-SDT-AU30/GW6000-SDT-AU30/GW8000-SDT-AU30/GW9990-SDT-AU30/GW8000-SDT-30/GW10K-SDT-30/GW10K-SDT-EU30	20A
GW12K-SDT-30/GW15K-SDT-30/GW15K-SDT-AU30/GW17K-SDT-30	32A
GW12KLV-SDT-C30/GW20K-SDT-30/GW20K-SDT-AU30/GW20K-SDT-31/GW12KLV-SDT-C31	40A
GW25K-SDT-C30/GW25K-SDT-AU30/GW25K-SDT-30/GW25K-SDT-P31	50A
GW17KLV-SDT-C30/GW30K-SDT-C30/GW29K9-SDT-AU30/GW30K-SDT-30/GW33K-SDT-C30	63A

GW36K-SDT-C30/GW40K-SDT-C30/GW40K-SDT-P30	80A
GW30KLV-SDT-C30/GW50K-SDT-C30	100A

⚠WARNING

- During wiring, ensure the AC output cables fully match the "L1", "L2", "L3", "N", and "PE" terminals of the AC terminal. Incorrect cable connections may damage the Inverter.
- Please ensure the conductor is fully inserted into the AC terminal terminal hole without any exposure.
- Ensure the cable connections are tight; otherwise, overheating of the terminal terminals during equipment operation may cause damage to the Inverter.
- The AC output can be configured as three-phase four-wire or three-phase five-wire systems, depending on the actual wiring scenario. This article uses the three-phase five-wire system as an example for illustration.
- The length of PE cable should reserve an allowance to ensure that PE cable bears the stress last when the AC output line is subjected to tension due to force majeure.
- When using aluminum wires, please connect with copper-aluminum adapters terminal, and prepare your own AC wiring OT terminal. The selection of terminal should refer to T/CEEIA 281-2017 or equivalent standards.

Type I:

Step 1: Prepare the AC output cable.

Step 2: Disassemble the AC terminal Protective coverP.

Step 3: crimp AC output cable, and thread it through the AC terminal Protective coverP.

Step 4: Disassemble the AC terminal terminal block wiring cover and cable fixing screw.

Step 5: Tighten the AC wiring.

Step 6: Tighten the AC terminal Protective coverP.

A	B	C	D	E	F	G
GW4000-SDT-30 GW5000-SDT-30 GW6000-SDT-30 GW8000-SDT-30 GW10K-SDT-30 GW10K-SDT-EU30 GW12K-SDT-30 GW12KLV-SDT-C30 GW15K-SDT-30	GW17K-SDT-30 GW17KLV-SDT-C30 GW20K-SDT-30 GW25K-SDT-C30 GW30K-SDT-C30	GW20K-SDT-31 GW12KLV-SDT-C31 GW25K-SDT-P31	GW5000-SDT-AU30 GW6000-SDT-AU30 GW8000-SDT-AU30 GW9990-SDT-AU30 GW15K-SDT-AU30 GW20K-SDT-AU30	GW25K-SDT-AU30 GW29K9-SDT-AU30 GW25K-SDT-30 GW30K-SDT-30	GW23KLV-SDT-BR30 GW37K5-SDT-BR30 GW33K-SDT-C30 GW36K-SDT-C30 GW40K-SDT-C30	GW40K-SDT-P30 H GW30KLV-SDT-C30 GW50K-SDT-C30

SDT30INT0004

Type II

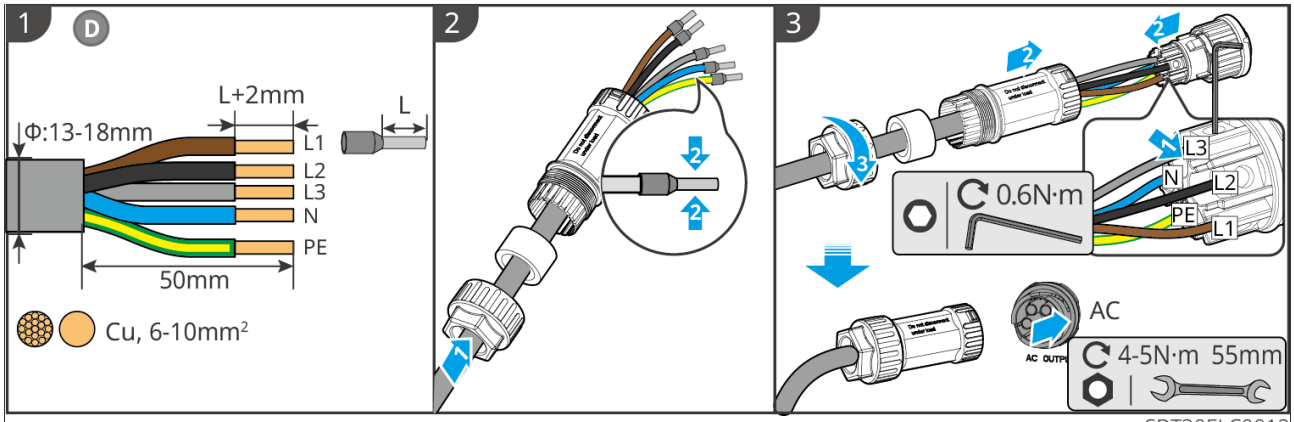
Step 1: Prepare the AC output cable.

Step 2: Disassemble the AC terminal Protective coverP.

Step 3: Connect the AC output cable and thread it through the AC terminal Protective coverP.

Step 4: Tighten the AC wiring.

Step 5: Tighten the AC terminal Protective coverP.



SDT30ELC0012

4.4 Connecting DC Input Cables

DANGER

Before connecting the PV string to the inverter, please confirm the following information. Otherwise, it may cause permanent damage to the inverter, and in severe cases, may lead to fire causing personal injury and property loss.

1. Ensure the maximum input voltage is within the allowable range of the inverter.
2. Ensure the positive pole of the PV string is connected to the PV+ terminal of the inverter, and the negative pole of the PV string is connected to the PV- terminal of the inverter.

⚠WARNING

- Mixing PV modules of different brands or models in the same MPPT string, or connecting PV modules with different orientation angles or tilt angles in the same PV string, may not necessarily damage the inverter, but it will lead to a decrease in system performance.
- It is recommended that the voltage difference between different MPPT strings does not exceed 160V.
- It is recommended that the sum of the peak power currents of the strings connected to each MPPT does not exceed the maximum input current of the inverter per MPPT.
- When the maximum DC input voltage of the inverter is 1100V, please ensure that the open-circuit voltage of the PV strings connected to each MPPT does not exceed 1100V. When the input voltage is between 1000V and 1100V, the inverter will enter standby mode. When the voltage returns to the MPPT operating voltage range (140V to 1000V), the inverter will resume normal operation.
- When the maximum DC input voltage of the inverter is 850V, please ensure that the open-circuit voltage of the PV strings connected to each MPPT does not exceed 850V. When the input voltage is between 700V and 850V, the inverter will enter standby mode. When the voltage returns to the MPPT operating voltage range (140V to 700V), the inverter will resume normal operation.
- When the inverter is connected to multiple PV strings, it is recommended to maximize the number of MPPT connections.
- Please use the DC connectors shipped with the box. Damage to the equipment caused by using incompatible connectors is not covered by the warranty.
- PV string output does not support grounding. Before connecting the PV string to the inverter, please ensure that the minimum insulation resistance to ground of the PV string meets the minimum insulation impedance requirements.
- Please prepare your own DC input cables.
- Type of DC input cable: outdoor photovoltaic cable that meets the maximum input voltage of the inverter.

PV String Connection Method

NOTICE

To achieve optimal power generation efficiency, it is recommended to connect the PV strings in the following manner.

Select the connection based on the actual number of MPPT channels and strings available on the inverter.

•: Connect one PV string ••: Connect two PV strings

Number of PV Strings	MPPT1	MPPT2	MPPT3	MPPT4
4	•	•	•	•
5	••	•	•	•
6	••	••	•	•
7	••	••	••	•
8	••	••	••	••

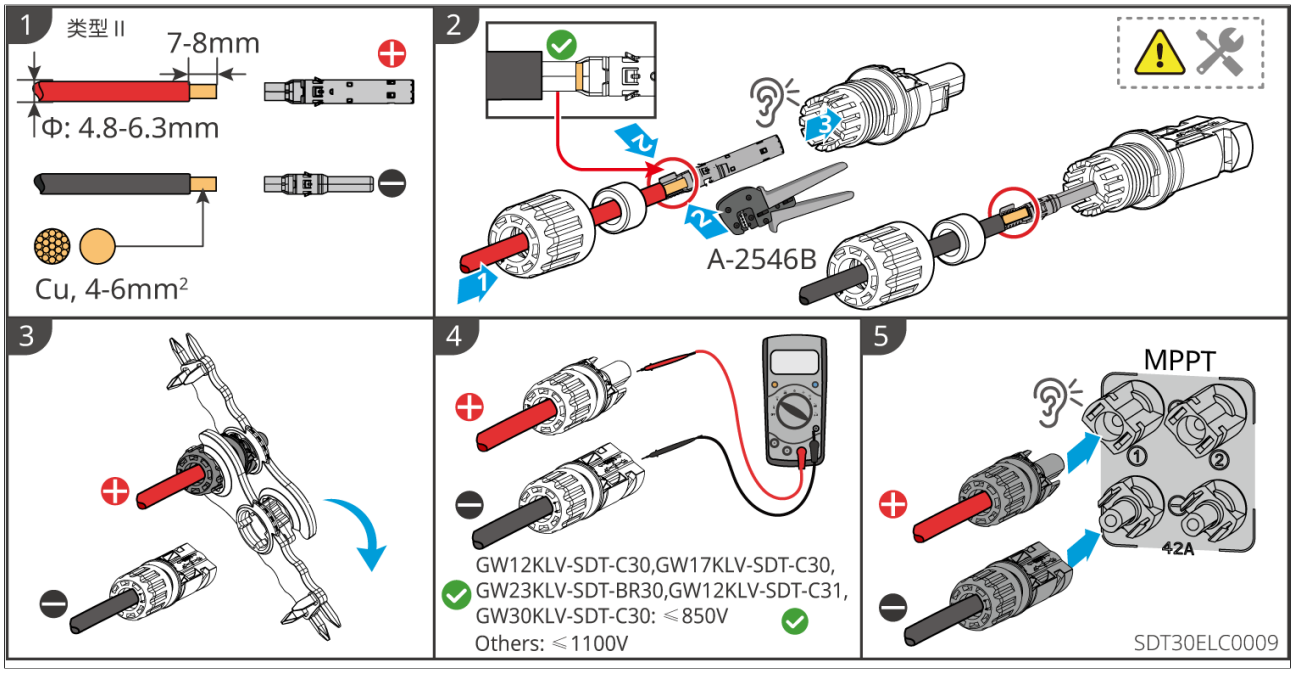
PV Connection Mode

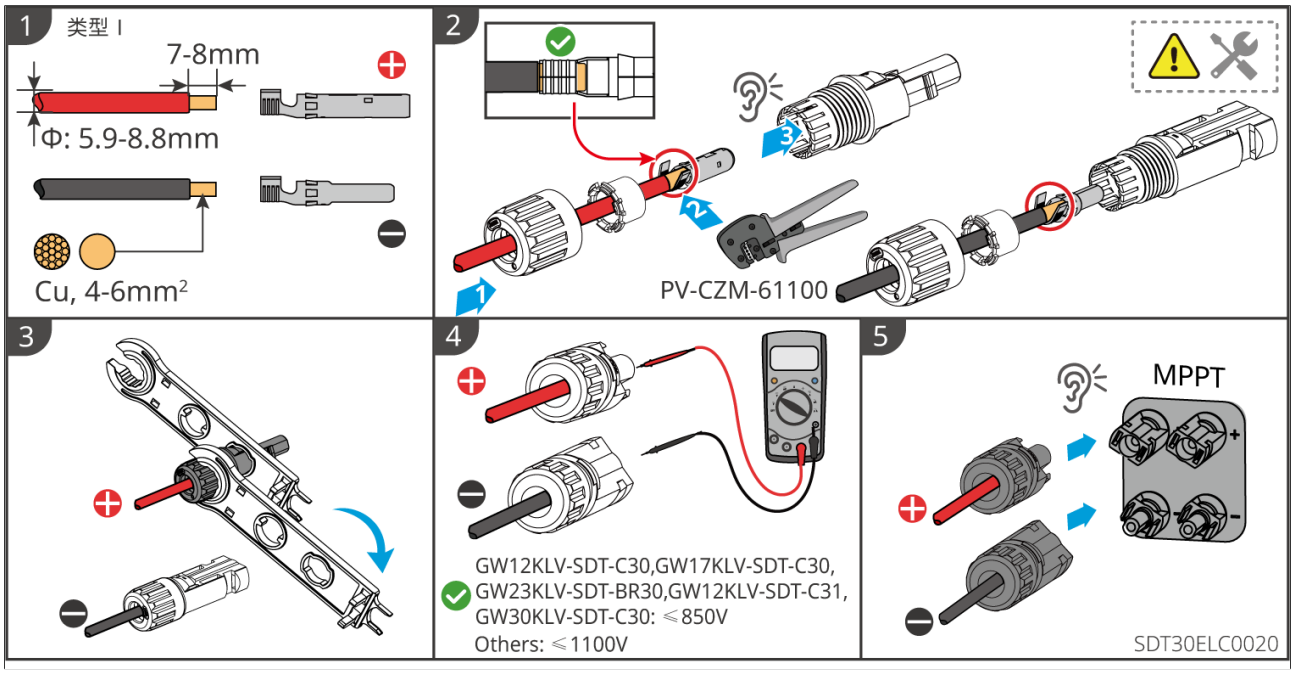
During initial installation, the corresponding MPPT connection mode must be configured via the Solar Go App (contact after-sales service for specific setup) according to the actual wiring method. After configuration, disconnect both PV and AC power to restart the inverter. Successful configuration is indicated if the inverter does not report a PV connection mode fault.

PV connection modes are divided into the following three types:
1. Independent connection (default mode): MPPT1, 2, 3, and 4 are connected independently.
2. Partial parallel connection: MPPT1 and MPPT2 are connected in parallel, while MPPT3 and MPPT4 are connected independently.
3. Parallel connection: MPPT1 - MPPT4 are connected in parallel to the same PV module.
For details on selecting the connection mode, refer to Chapter 8 of this manual or the SolarGo User Manual.

Connecting DC Input Cables

Step 1: Prepare the DC cables.
Step 2: Disassemble the DC connector. Crimp the DC terminals and reassemble the DC connector.
Step 3: Tighten the DC connector.
Step 4: Measure the DC input voltage.
Step 5: Connect the DC connector to the inverter's DC terminals.





Connecting Y-Type PV Connectors (Optional)

NOTICE

1. If using a Y-connector, ensure its DC connector model matches the inverter's PV input terminal model and specifications. Damage caused by using incompatible Y-connectors is not covered by the manufacturer's warranty.
2. Ensure all PV strings connected to one MPPT via a Y-connector have identical configurations, including model, quantity, tilt angle, and azimuth.
3. The total current of PV strings connected via a Y-connector must be less than the maximum current per PV input.
4. For PV strings connected via Y-connectors, if the total number of strings per MPPT is ≥3, each string must be equipped with a corresponding fuse.

4.5 Communication connection

NOTICE

- For specific functional configurations of the product, please refer to the actual Inverter and model in your region.
- Due to product version upgrades or other reasons, the content of the documentation will be updated periodically. The matching relationship between Inverter and IoT products can be referenced as follows:https://en.goodwe.com/Ftp/EN/Downloads/User%20Manual/GW_Compatibility-list-of-GoodWe-inverters-and-IoT-products-EN.pdf

4.5.1 RS485 communication networking solution

NOTICE

- When using a data logger to network multiple Inverter via RS485, each COMport port of the data logger can connect to multiple Inverter. When using EzLogger Pro or SEC1000, each COMport port can support up to 20 Inverter; when using EzLogger 3000C, SEC3000, or SEC3000C, each COMport port can support up to 25 Inverter. The total length of the RS485 cable for each COMport port must not exceed 1000m.
- When using EzLogger 3000C, SEC3000, or SEC3000C for parallel operation of multiple Inverter units, to ensure normal communication, confirm that only the last unit's Inverter Terminal resistor DIP switch is set to ON (factory default), while the remaining Inverter units are set to OFF.
- OnlyGW50K-SDT-C30 supports SEC3000C.

4.5.2 Power Limitation and Load Monitoring

Power limitation

When the photovoltaic power station power generation self use exceeds the consumption capacity of the electrical equipment, and the excess power needs to be fed into Utility grid, the power station power generation can be monitored and the power fed into Utility grid can be controlled via Smart Meter, a data acquisition unit, or the Smart Energy Controller SEC1000.

⚠WARNING

1. The CT Installation Location should be installed close to the on-grid point, with the Installation direction correctly aligned. The "→" symbol on the CT indicates the direction of Inverter current pointing toward Utility grid. If installed in reverse, Inverter will trigger an alarm, and the power limit function cannot be achieved.
2. The aperture of the CT must be larger than the outer diameter of the AC power line to ensure the AC power line can pass through the CT.
3. For the specific wiring method of the CT, please refer to the corresponding manufacturer's documentation to ensure correct wiring direction and proper functionality.
4. The CT must be clamped onto the L1, L2, and L3 cables, and should not be clamped onto the N cable.
5. CT specifications:
   - Please select the CT's current ratio specification as nA/5A. (nA: CT primary side input current, where n ranges from 200 to 5000, to be chosen by the user based on actual requirements. 5A: CT secondary side output current.)
   - It is recommended to select accuracy values of 0.5, 0.5s, 0.2, or 0.2s for the CT to ensure that the current sampling error is ≤1%.
6. To ensure the current monitoring accuracy of the CT, it is recommended that the CT cable length does not exceed 30m.
7. Inverter supports parameter configuration via WiFi or Bluetooth signals for local setup. It can connect to mobile phones or WEB interfaces to set device-related parameters, view operational information and error messages, enabling timely monitoring of system status.
   - When there is only one Inverter in the system, you can use the 4G Kit-CN-G20, 4G Kit-CN-G21, Wi-Fi Kit, Wi-Fi/LAN Kit, WiFi Kit-20, or WiFi/LAN Kit-20 smart dongle.
   - When multiple Inverter units are connected in parallel within the system, the Master inverter must utilize the Ezlink3000 smart dongle for networking.

NOTICE

- Please ensure the meter wiring and phase are correct. The recommended value for the meter input voltage cable cross-sectional area is 1mm² (18AWG).
- The external CT ratio value can be set via the Solargo App. For example: If a 200A/5A CT is selected, the CT ratio value should be set to 40.
- For detailed configuration information, please refer to:

SolarGo App
User Manual

Single-unit Power restriction networking solution (GMK330/GM330)

Multi-machine Power constrained networking solution (EzLogger Pro + GM330/GMK330)

Multi-machine Power constrained networking solution (EzLogger3000C+GM330)

Multi-machine Power constrained networking solution (SEC1000)

⚠WARNING

1. When connecting the SEC1000 AC line Utility grid, it is necessary to connect 3L/N/PE, and the Utility gridvoltage must be within the allowable voltage sampling range of the SEC1000.
2. The CTInstallation Location should be installed close to the on-grid point. When wiring the CTInstallation, ensure the CT direction is correct. If reversed, the power limit function cannot be achieved.
3. When using the SEC1000, an external CT must be prepared by the user.
4. The aperture of the CT must be larger than the outer diameter of the AC power line to ensure the AC power line can pass through the CT.
5. For the specific wiring method of CT, please refer to the corresponding manufacturer's documentation to ensure correct wiring direction and proper functionality.
6. The CT must be clamped onto the L1, L2, and L3 cables, and should not be clamped onto the N cable.

Recommended specifications for external CT:

No.	current scope	Specification Description	Remarks
1	Imax < 250A	CT 200A Acrel/AKH-0.66(200A/5A)	power limit CT, closed-core (window size 31mm*11mm, Φ22mm)
		CT 250A/5A Acrel/AKH-0.66-K-30x20-250/5	power limitCT, split-core type (aperture size 32mm*22mm), accuracy 0.5%
		CT 250A/5A Acrel/AKH-0.66-K-60x40-250/5	Split-core CT (aperture size 62mm*42mm), accuracy 1.0%
2	250A ≤ Imax < 1000A	CT 1000A/5A Acrel/AKH-0.66-K-60x40-1000/5	power limit CT, split-core type (aperture size 62mm*42mm), accuracy 0.5%
		CT 1000A/5A Acrel/AKH-0.66-K-80x40-1000/5	Split-core CT (aperture size 82mm*42mm), accuracy 0.5%
3	1000A ≤ Imax < 5000A	CT 5000A/5A Acrel/AKH-0.66-K-140x60-5000/5	Split-core CT (aperture size 142mm*62mm), accuracy 0.2%
		CT 5000A/5A Acrel/AKH-0.66-K-160x80-5000/5	Split-core CT (aperture size 162mm*82mm), accuracy 0.2%

Multi-machine Power Constrained Networking Solution (Ezlink3000+GM330)

Only applicable to the following model: GW5000-SDT-AU30, GW6000-SDT-AU30, GW8000-SDT-AU30, GW9990-SDT-AU30, GW15K-SDTAU30, GW20K-SDT-AU30, GW25K-SDT-AU30, GW29K9-SDT-AU30, GW25K-SDT-30, GW30K-SDT-30

24-hour load monitoring

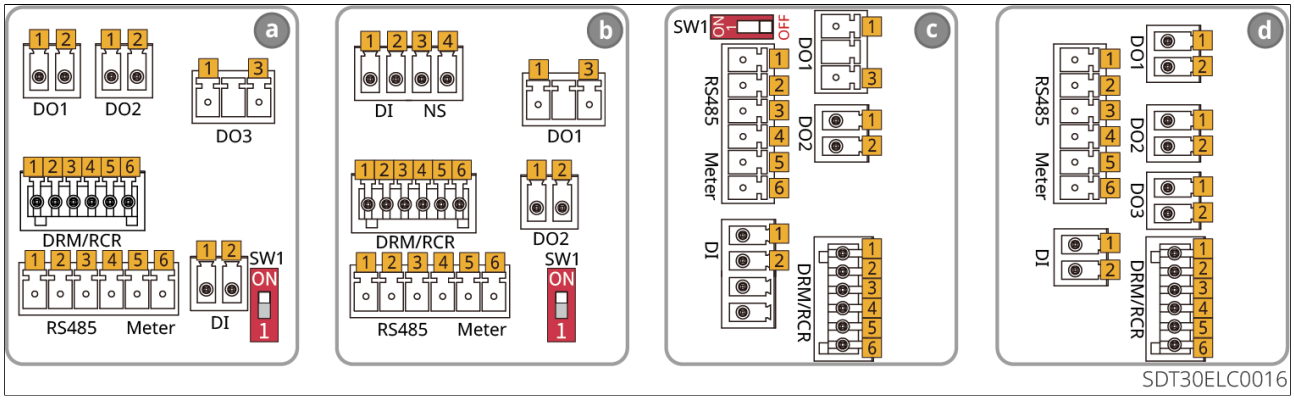
The optional Inverter with nighttime power supply features 24-hour load monitoring. The GMK330 and GM330 Smart Meter measure data from the on-grid terminal and transmit it to the Inverter. The Inverter sends power generation information and data from the on-grid terminal to the cloud monitoring platform via the smart dongle. The monitoring platform calculates Load consumption quantity data,

enabling real-time 24-hour monitoring of Load consumption quantity.

4.5.3 Connection Communication cable

NOTICE

- When connecting Communication cable, ensure that the wiring port definition exactly matches the equipment. The cable routing path should avoid interference sources such as power cable to prevent affecting signal reception.
- The remote shutdown and DRED/RCR functions are disabled by default. To use them, please enable via the SolarGo app. For details, refer to the "SolarGo User Manual".
- For detailed information, please refer to the accompanying documentation of the corresponding module. More comprehensive materials can be obtained from the official website.



Model A includes: GW23KLV-SDT-BR30、GW37K5-SDT-BR30、GW33K-SDT-C30、GW36K-SDT-C30、GW40K-SDT-C30

Model B includes: GW25K-SDT-AU30、GW29K9-SDT-AU30、GW25K-SDT-30、GW30K-SDT-30、GW40K-SDT-P30、GW30KLV-SDT-C30、GW50K-SDT-C30

Model C includes: GW5000-SDT-AU30、GW6000-SDT-AU30、GW8000-SDT-AU30、GW9990-SDT-AU30、GW15K-SDT-AU30、GW20K-SDT-AU30

Model d includes: GW8000-SDT-30、GW10K-SDT-30、GW10K-SDT-EU30、GW12K-SDT-30、GW12KLV-SDT-C30、GW15K-SDT-30、GW17K-SDT-30、GW17KLV-SDT-C30、GW20K-SDT-30、GW25K-SDT-C30、GW30K-SDT-C30、GW20K-SDT-31，GW12KLV-SDT-C31，GW25K-SDT-P31，GW4000-SDT-30, GW5000-SDT-30, GW6000-SDT-30

Function	port Definition (Model a)	port Definition (Model b)	port Definition (Model c)	port Definition (Model d)	Functional Description
Meter	5: RS485-B2 6: RS485-A2	5: RS485-B2 6: RS485-A2	5: RS485-B2 6: RS485-A2	5: RS485-B2 6: RS485-A2	The power limit function can be achieved with the help of an electricity meter and CT. If supporting equipment is needed, please contact the Inverter manufacturer for purchase.
RS485	1: RS485-B1 2: RS485-A1 3: RS485-B1 4: RS485-A1	1: RS485-B1 2: RS485-A1 3: RS485-B1 4: RS485-A1	1: RS485-B1 2: RS485-A1 3: RS485-B1 4: RS485-A1	1: RS485-B1 2: RS485-A1 3: RS485-B1 4: RS485-A1	Used to connect multiple Inverter or connect to the data collector's RS485 port.

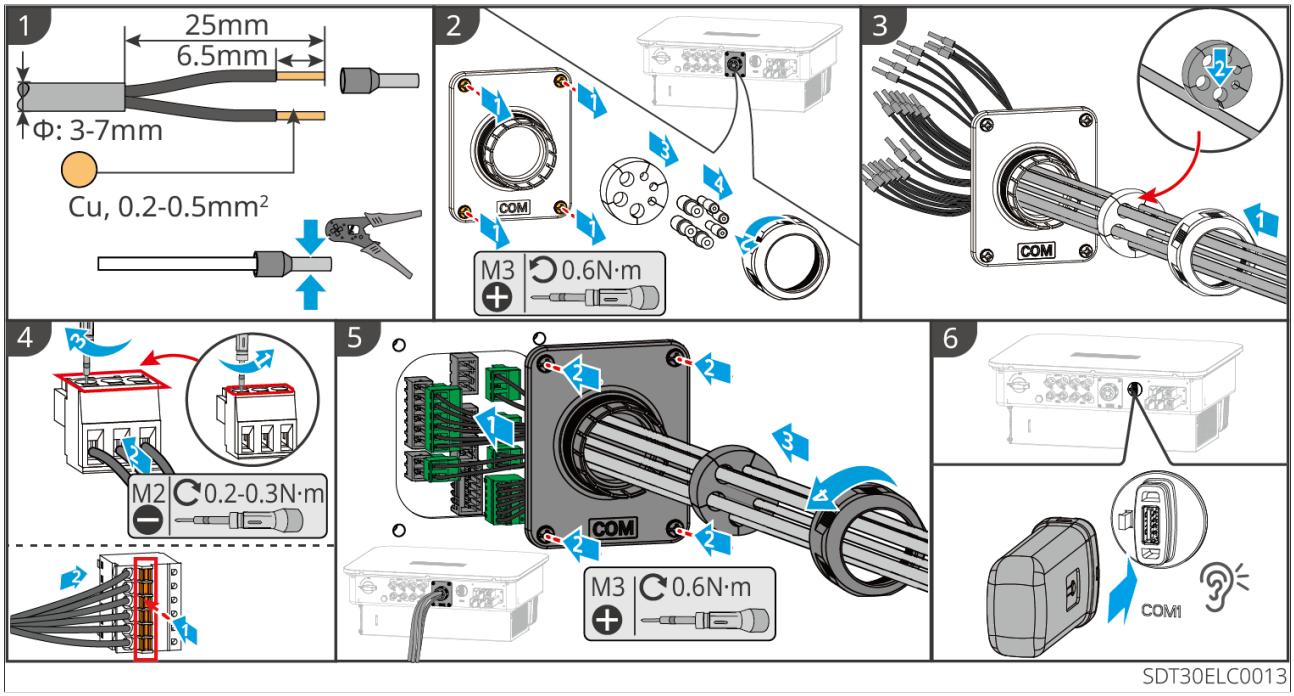
Function	port Definition (Model a)	port Definition (Model b)	port Definition (Model c)	port Definition (Model d)	Functional Description
DRM/ RCR	1: CL/0 2: RG/0 3: 4/8 4: 3/7 5: 2/6 6: 1/5	1: CL/0 2: RG/0 3: 4/8 4: 3/7 5: 2/6 6: 1/5	1: CL/0 2: RG/0 3: 4/8 4: 3/7 5: 2/6 6: 1/5	1: CL/0 2: RG/0 3: 4/8 4: 3/7 5: 2/6 6: 1/5	DRM （Demand Response Modes）: Meet the Australian DRM requirements and provide DRED signal control for port. RCR (Ripple Control Receiver): Provides RCR signal control for port, meeting the Utility grid dispatching requirements in regions such as Germany. Reserved wiring for Inverter, relevant equipment shall be provided by the user.

Function	port Definition (Model a)	port Definition (Model b)	port Definition (Model c)	port Definition (Model d)	Functional Description
DI	1: DI-2 2: DI-1	1: DI-2 2: DI-1	1: DI-2 2: DI-1	1: DI-2 2: DI-1	After the emergency switch sends a shutdown signal, the AC side of Inverter automatically disconnects, stopping on-grid. An external Emergency Poweroff switch is required and controlled via the DI port. • remote shutdown: If the DI port is closed, the unit starts; if the DI port is open, the unit stops. • Emergency Poweroff: If the DI port is closed, the unit will shut down; if the DI port is open, the unit will start up.
DO1	1: DO1-NO 2: DO1-COM	1: DO1-NO 3: DO1-COM	1: DO1-NO 3: DO1-COM	1: DO1-NO 2: DO1-COM	load control

Function	port Definition (Model a)	port Definition (Model b)	port Definition (Model c)	port Definition (Model d)	Functional Description
DO2	1: DO2-NO 2: DO2-COM	21: DO2-NO 2: DO2-COM	1: DO2-NO 2: DO2-COM	21: DO2-NO 2: DO2-COM	load control
DO3	1: DO3-NO 3: DO3-COM	Reserved	Reserved	1: DO3-NO 2: DO3-COM	load control
NS	Reserved	3: NS-2 4: NS-1	Reserved	Reserved	Connection NS Protection (Germany only)

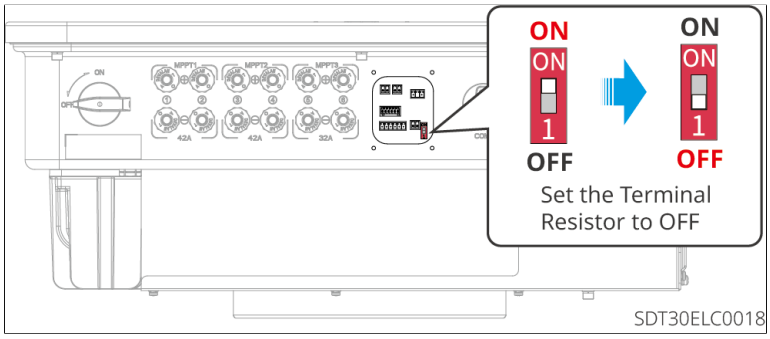
Taking model b as an example:

Step 1: Prepare the Communication cable.
Step 2: Disconnect the communication connector.
Step 3-4: Connect the communication cable to terminal and secure it.
Step 5: Connect the communication terminal to the device.
Step 6: InstallationSmart dongle.



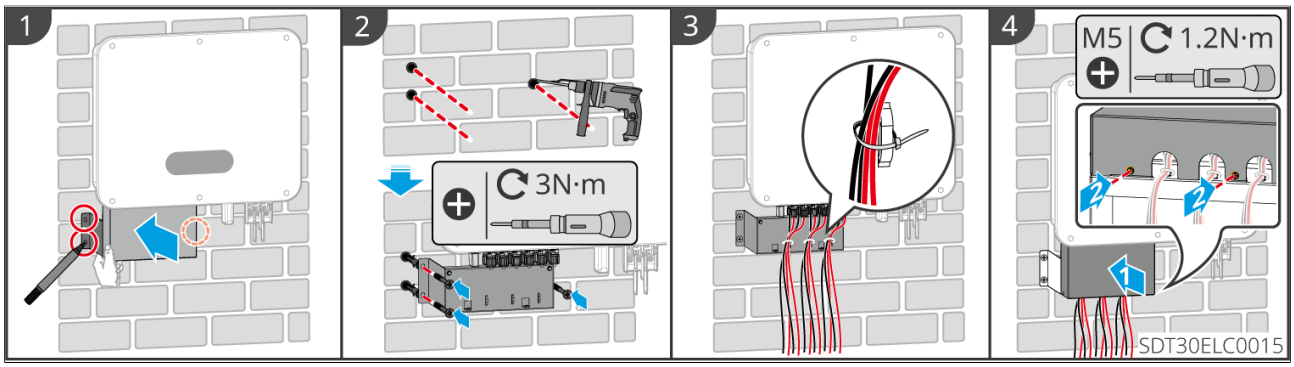
Turn off the Terminal resistor DIP switch

Some models of Inverter are equipped with an RS485 Terminal resistor. The default setting for this Terminal resistor DIP switch is "ON." "ON" indicates enabled, while "1" indicates disabled. Operation method: Open the outer cover of the Communication Port (refer to section 6.5.4), and use an insulated tool to set the Terminal resistor DIP switch to "1" (OFF).



4.6 InstallationProtective coverP

For Australia only: GW5000-SDT-AU30, GW6000-SDT-AU30, GW8000-SDT-AU30, GW9990-SDT-AU30, GW15K-SDTAU30, GW20K-SDT-AU30, GW25K-SDT-AU30, GW29K9-SDT-AU30,GW50K-SDT-C30.



5 Equipment trial operation

5.1 Pre-operation inspection

Serial number	Inspection Items
1	Inverter Installation is sturdy, Installation Location facilitates operation and maintenance, Installation space allows for ventilation and heat dissipation, Installation environment is clean and tidy.
2	PE cable, DC input line, AC output line, and Communication cable are correctly and securely connected.
3	The cable ties meet the wiring requirements, are reasonably distributed, and show no signs of damage.
4	Unused port has been sealed.
5	The Inverter and Frequency of the on-grid access point comply with the on-grid requirements.

5.2 Equipment power on

Step 1: Close the AC Switch between Inverter and Utility grid.
Step 2: (Optional) Close the DC switch between the Inverter and the PV module.
Step 3: Close the DC switch of Inverter.

6 System Commissioning

6.1 Set Inverter parameters via the display screen

NOTICE

- The interface images in this document correspond to the Inverter software version V1.00.00. The interface is for reference only and subject to actual conditions.
- The parameter names, ranges, and default values may be subject to change or adjustment in the future, and the actual display shall prevail.
- Inverter power parameters must be configured and monitored by professionals to avoid incorrect settings that may affect the Inverter power generation.

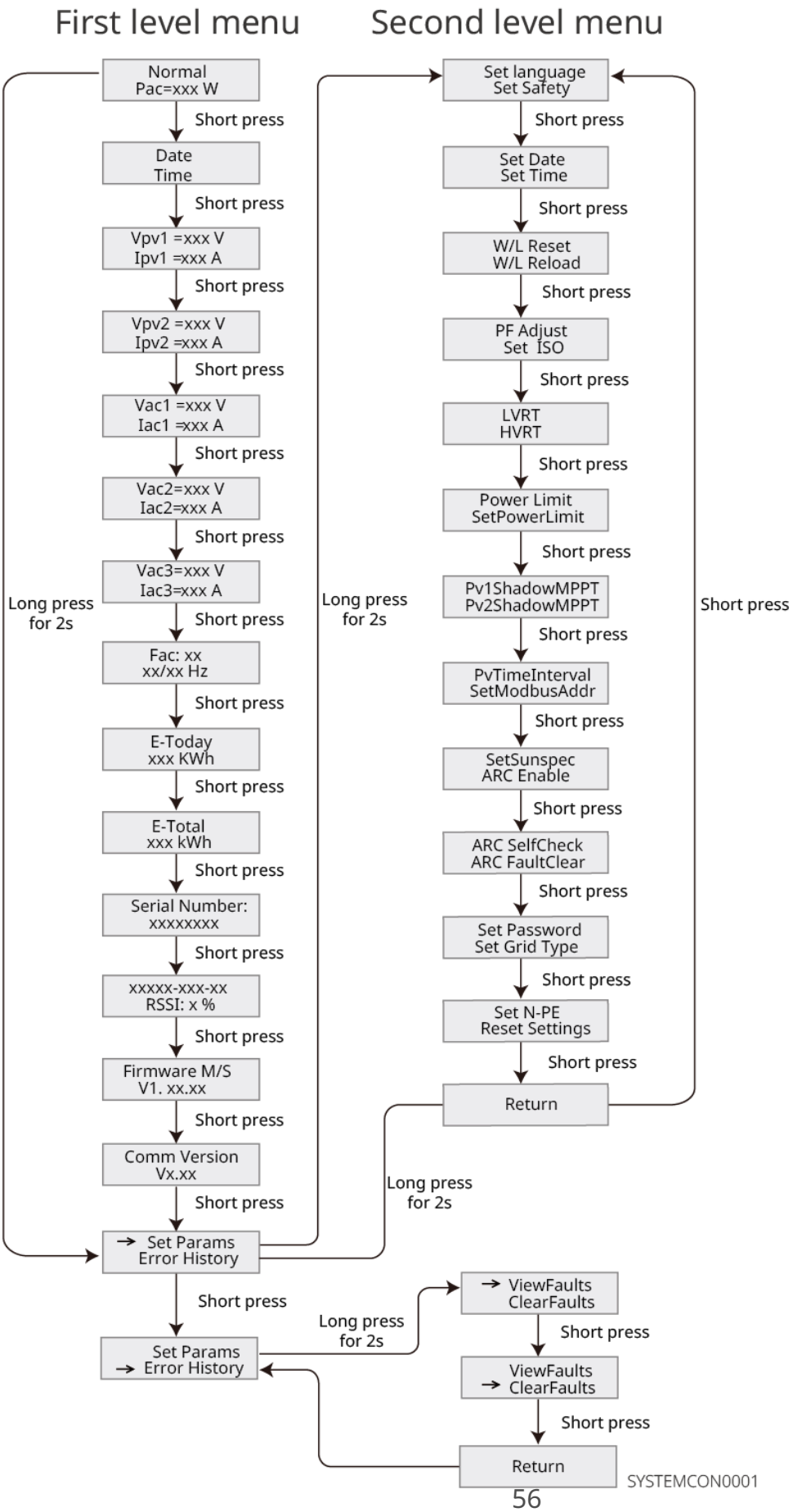
Display Button Instructions

- At any menu level, if no button is pressed for a certain period, the LCD display will dim and automatically return to the initial interface.
- Short press the display operation button: switch menu interface, adjust parameter values.
- Long press the display operation button: After adjusting the parameter value, long press to confirm the setting; proceed to the next submenu.

Example of button operation:

6.1.1 Introduction to Display Screen Menu

Introduce the display menu structure to facilitate your navigation through various levels of menus, allowing you to view Inverter information and configure relevant Inverter parameters.



6.1.2 Inverter Parameter Introduction

Parameter Name	Description
Date Time	Check the country where Inverter is located/Regional time.
voltage	Check Inverter DC input voltage.
current	Check the Inverter DC input current.
Utility Power	View Utility gridvoltage.
Output	Check the Inverter AC output current.
Utility Power	View Utility gridFrequency.
Daily power generation	View the power generation of Inverter on the day.
Total power generation	View the total power generation of Inverter.
serial number	View the serial number of Inverter.
XXXXX-XXX-XX Signal strength: xx%	Check the signal strength of the communication module.
Firmware Version	Check the firmware version of Inverter.
Communication version	View the communication version of Inverter.
Language Settings	Set according to actual needs.
Safety Regulation Settings	According to the country where Inverter is located/Set according to the regional Utility grid standards and the application scenarios of Inverter.
Date setting	According to the country where Inverter is located/Set according to the local actual time.
Time setting	
W/LRestart	smart donglePOWER OFF restart.

Parameter Name	Description
W/LHeavy load	smart dongle Restore factory settings. After restoration, the communication module network parameters need to be reconfigured.
Output Power Factor regulation	Set the Output Power Factor of Inverter according to actual needs.
SettingISO	Set toPV-PEThe insulation resistance threshold, when the detected actual value is less than the set value, an alarm will be triggered.ISOfault
Low Voltage Ride Through (LVRT)	When this function is enabled, if the Utility grid experiences a temporary low voltage anomaly, the Inverter will not immediately trigger a Grid disconnected and can sustain operation for a period of time.
High Voltage Ride Through (HVRT)	When this function is enabled, the Inverter will not immediately trigger a Grid disconnected when the Utility grid experiences a short-term high voltage anomaly, allowing it to sustain for a period of time.
Power limit enable	Set according to the actual Power that can be fed into the Utility grid.
Set the Power limit value	
PV1Shading mode	IfPVThere is severe shading on the panel, the shadow scan function can be enabled.
PV2Shading pattern	
shadow scan bay	Set the shadow scan time according to actual needs.
SetModbusAddress	According to the actual connection of InverterModbusSet the address.
SettingSunspec	Set according to actual communication requirements.SunspecAgreement.

Parameter Name	Description
arc enable	The arc function is optional and disabled by default. Please enable or disable it according to actual needs.
arc self-check	Check if the Inverter arc function is working properly.
arcfault Clear	Clear arc alarm records.
Password setting	The password for Inverter can be modified. After changing the password, please remember it. If you forget the password, please contact the after-sales service center for assistance.
Grid type	Set according to the actual Utility grid connected by Inverter, currently supporting star and delta configurations. Shape
N-PEdetection	NLine-to-ground detection switch.
Restore factory settings	Reset the Inverter section to factory defaults.
View fault	View Inverter history fault records.
Clear fault	Clear Inverter history fault records.

6.2 Set Inverter parameters via the App

The SolarGo App is a mobile application software that can communicate with Inverter via Bluetooth and WiFi. Below are the common features:

1. View the operating data, software version, alarm information, etc. of Inverter.
2. Set the Inverter parameters, communication parameters, etc. for Utility grid.
3. Maintenance equipment.

For detailed functions, please refer to the "SolarGo App User Manual". The user manual can be obtained from the official website or by scanning the QR code below.

SolarGo App

SolarGo App User Manual

6.3 Perform Power Plant Monitoring via Xiaogu Cloud Window.

Xiaogu Cloud Window is a monitoring platform that can communicate with devices via WiFi, LAN, or 4G. Below are the commonly used functions of Xiaogu Cloud Window:

1. Manage organizations or user information, etc.
2. Add, monitor power station information, etc.
3. Maintenance equipment.

Xiaogu Cloud Window App

7 Maintenance

7.1 Inverter power off

DANGER

- When performing operation and maintenance on Inverter, ensure the Inverter is power off. Operating live equipment may cause Inverter damage or result in electric shock DANGER.
- After InverterPOWER OFF, the internal components Discharge require a certain amount of time. Please wait until the equipment is fully Discharge according to the time specified on the label.

Step 1: (Optional) Issue a command to stop on-grid to Inverter.
Step 2: Disconnect the AC Switch between Inverter and Utility grid.
Step 3: Disconnect the DC switch of the Inverter.
Step 4: (Optional) Disconnect the switch between Inverter and the PV module.

7.2 dismantle Inverter

WARNING

- Ensure that the Inverter is POWER OFF.
- When operating Inverter, please wear personal protective equipment.

Step 1: Disconnect all electrical connections of the Inverter, including: DC cables, AC cables, Communication cable, smart dongle, and PE cable.
Step 2: Remove the Inverter from the mounting plate.
Step 3: dismantlemounting plate.
Step 4: Properly store the Inverter. If the Inverter will be reused in the future, ensure the storage conditions meet the requirements.

7.3 Scrap Inverter

When Inverter can no longer be used and needs to be scrapped, please dispose of

Inverter in accordance with the electrical waste disposal requirements of the regulations in the country/region where Inverter is located. Inverter must not be treated as household waste.

7.4 Troubleshooting

Please follow the troubleshooting method below for fault. If the troubleshooting method does not resolve the issue, please contact the after-sales service center. When contacting the after-sales service center, please collect the following information to facilitate a quick resolution.

1. Inverter information, such as: serial number, software version, device Installation time, fault occurrence time, fault occurrence Frequency, etc.
2. Equipment Installation environment, such as weather conditions, whether the modules are shaded, obstructed, etc. Installation environment. It is recommended to provide photos, videos, or other documents to assist in problem analysis.
3. Utility grid situation.

No.	fault name	fault cause	Solution measures
1	Grid disconnected	1. Power outage. 2. AC line or AC Switch disconnected.	1. The alarm automatically disappears after Grid connected recovery. 2. Check if the AC line or AC Switch is disconnected.

2	Utility grid overvoltage Protection	Utility gridvoltage exceeds the allowable range, or the duration of overvoltage surpasses the overvoltage ride-through setting.	1. If it occurs occasionally, it may be due to a temporary abnormality in Utility grid. Inverter will resume normal operation after detecting that Utility grid is functioning properly, without requiring manual intervention. 2. If frequent occurrences, check whether Utility grid voltage is within the allowable range. • If the Utility gridvoltage exceeds the permissible range, please contact the local power operator. • If the Utility grid voltage is within the allowable range, it is necessary to modify the Inverter Utility grid overvoltage Protection point and HVRT after obtaining consent from the local power operator. 1. If the issue persists for an extended period, please check whether the AC-side breaker and output cables are properly connected.

3	Overvoltage fast Protection	Utility gridvoltage anomaly or ultra-high voltage triggers fault.	1. If it occurs occasionally, it may be due to a temporary anomaly in Utility grid. Inverter will resume normal operation after detecting that Utility grid is functioning properly, without requiring manual intervention. 2. Check if Utility gridvoltage is operating at a high voltage for an extended period. If this occurs frequently, verify whether Utility gridvoltage is within the allowable range. • If the Utility gridvoltage exceeds the permissible range, please contact the local power operator. • If the Utility gridvoltage is within the allowable range, the modification of Utility gridvoltage requires prior consent from the local power operator. 1. If the issue persists for an extended period, please check whether the AC-side breaker and output cables are properly connected.

4	Undervoltage	Utility gridvoltage is below the permissible range, or the duration of low voltage exceeds the low voltage ride-through setting.	1. If it occurs occasionally, it may be due to a temporary anomaly in Utility grid. Inverter will resume normal operation after detecting that Utility grid is functioning properly, without requiring manual intervention. 2. If frequent occurrences, check whether Utility grid voltage is within the allowable range. • If Utility gridvoltage exceeds the permissible range, please contact the local power operator. • If the Utility gridvoltage is within the allowable range, it is necessary to modify the InverterUtility grid undervoltage Protection point and LVRT after obtaining approval from the local power operator. 1. If the issue persists for an extended period, please check whether the AC-side breaker and output cables are properly connected.

5	10-minute overvoltage Protection	The sliding average of Utility gridvoltage exceeds the safety regulation range within 10 minutes.	1. If it occurs occasionally, it may be due to a temporary abnormality in Utility grid. Inverter will resume normal operation after detecting that Utility grid is functioning properly, without requiring manual intervention. 2. Check if Utility gridvoltage is operating at a high voltage for an extended period. If this occurs frequently, verify whether Utility gridvoltage is within the allowable range. • If the Utility gridvoltage exceeds the permissible range, please contact the local power operator. • If the Utility gridvoltage is within the allowable range, it is necessary to obtain approval from the local power operator before modifying the Utility grid 10-minute overvoltage Protection point.
6	Utility grid overfrequency Protection	Utility grid anomaly, Utility grid actual Frequency exceeds local Utility grid standard requirements.	1. If it occurs occasionally, it may be due to a temporary abnormality in Utility grid. Inverter will resume normal operation after detecting that Utility grid is functioning properly, without requiring manual intervention. 2. If it occurs frequently, check whether Utility grid and Frequency are within the allowable range. • If not, please contact the local power operator. • If yes, the Utility grid over-frequency Protection point must also be modified after obtaining approval from the local power operator.

7	underfrequency	Utility grid anomaly, Utility grid actual Frequency is lower than the local Utility grid standard requirement.	1. If it occurs occasionally, it may be due to a temporary anomaly in Utility grid. Inverter will resume normal operation after detecting that Utility grid is functioning properly, without requiring manual intervention. 2. If it occurs frequently, check whether Utility grid and Frequency are within the permissible range. • If not, please contact the local power operator. • If so, the Utility grid underfrequency Protection point must also be modified after obtaining approval from the local power operator.
8	Islanding	Utility grid has been disconnected, maintaining Utility grid voltage due to the presence of load. According to safety regulation Protection, on-grid is stopped.	Wait for Utility grid to return to normal, then the machine will automatically on-grid.
9	undervoltage ride-through	Utility grid anomaly, Utility grid voltage anomaly duration exceeds the LVRT specified time.	

10	ride-through overvoltage	Utility grid anomaly, Utility grid voltage anomaly duration exceeds the time specified by HVRT.	1. If it occurs occasionally, it may be due to a temporary anomaly in Utility grid. Inverter will resume normal operation after detecting that Utility grid is functioning properly, without requiring manual intervention. 2. If it occurs frequently, please check whether Utility grid and voltage are within the allowable range. If not, contact the local power operator; if they are, contact your distributor or after-sales service center.
11	30mA GFCI (Ground Fault Circuit Interrupter)	During operation, the input-to-ground insulation resistance becomes low.	1. If it occurs occasionally, it may be caused by temporary external line abnormalities. It will return to normal operation after the fault is cleared, without requiring manual intervention. 2. If the issue occurs frequently or cannot be resolved for an extended period, please check whether the PV String-to-ground insulation resistance is too low.
12	60mA GFCI (Ground Fault Circuit Interrupter)		
13	150mA Gfci		
14	GFCI gradual change		
15	DCI Level 1 Protection	The DC component of the Inverter output exceeds the safety regulations or the default allowable range of the machine.	

16	DCI Level 2 Protection		1. If the anomaly is caused by external fault (such as Utility grid anomaly, Frequency anomaly, etc.), the Inverter will automatically resume normal operation after the fault disappears, without requiring manual intervention. 2. If the alarm occurs frequently and affects the normal power generation of the power station, please contact your dealer or after-sales service center.

17	insulation resistance low	1. PV String is short-circuited to ground with Protection. 2. PV StringInstallation has been exposed to a humid environment for an extended period, and the line-to-ground insulation is poor. 3. Batteryport line-to-ground insulation resistance is low.	1. Check the impedance between PV String/Battery port and ground Protection. A resistance value greater than 50kΩ is normal. If the measured resistance is less than 50kΩ, locate and rectify the short-circuit point. 2. Check if the PE cable of the Inverter is properly connected. 3. If it is confirmed that the impedance is indeed lower than the default value in rainy weather conditions, please reset the Inverter "insulation resistanceProtection point" via the SolarGo App. Australia and New Zealand markets Inverter, when insulation resistance fault occurs, can also issue alarms through the following methods: 1. Inverter is equipped with a buzzer, which will sound continuously for 1 minute when a fault occurs; if the fault is not resolved, the buzzer will sound again every 30 minutes. 2. If Inverter is added to the monitoring platform and the alarm notification method is configured, alarm information can be sent to customers via email.

18	System Grounding Anomaly	1. The PE cable of Inverter is not connected. 2. When the output of PV String is grounded, the L and N wires of the Inverter AC output cable are reversed.	1. Please confirm whether the Inverter of PE cable is not connected properly. 2. In the scenario where the output of PV String is grounded, please verify whether the L and N wires of the Inverter AC output cable are reversed.
19	Live wire to ground short circuit	Low impedance or short circuit between output phase line and PE	Measure the impedance between the output phase line and PE, identify locations with abnormally low impedance, and perform necessary repairs.
20	Hardware power limit Protection	Abnormal load fluctuation	1. If the abnormality is caused by an external fault, the Inverter will automatically resume normal operation after the fault disappears, without requiring manual intervention. 2. If this alarm occurs frequently and affects the normal power generation of the power station, please contact your dealer or after-sales service center.
21	Internal communication link failure	1. Chip not power on 2. Chip program version error	Disconnect the AC output side switch and the DC input side switch. After 5 minutes, close the AC output side switch and the DC input side switch. If fault persists, please contact your dealer or after-sales service center.

22	AC sensor self-check abnormality	AC sensor sampling anomaly	Disconnect the AC output side switch and the DC input side switch, then close the AC output side switch and the DC input side switch after 5 minutes. If fault persists, please contact your distributor or after-sales service center.
23	Leakage current sensor self-check abnormal	Leakage current sensor sampling anomaly detected.	Disconnect the AC output side switch and DC input side switch, then close the AC output side switch and DC input side switch after 5 minutes. If fault persists, please contact your distributor or after-sales service center.
24	Relay self-check abnormal	1. Relay abnormality (relay short circuit) 2. Control circuit abnormality 3. Abnormal AC measurement wiring (possible loose connection or short circuit)	Disconnect the AC output side switch and the DC input side switch, then close the AC output side switch and the DC input side switch after 5 minutes. If fault persists, please contact your distributor or after-sales service center.
25	Internal fan abnormality	1. Abnormal fan power supply 2. Mechanical fault(Locked Rotor) 3. Fan aging and damage	Disconnect the AC output side switch and DC input side switch, then close the AC output side switch and DC input side switch after 5 minutes. If fault persists, please contact your distributor or after-sales service center.
26	External fan anomaly		
27	Flash read/write error	Internal Flash memory exception	Disconnect the AC output side switch and DC input side switch, then close the AC output side switch and DC input side switch after 5 minutes. If fault persists, please contact your distributor or after-sales service center.

28	DC arc fault	1. DC string connection terminal is not securely connected. 2. DC wiring is damaged.	Please check whether the component connection cables are correctly connected according to the wiring requirements in the quick installation manual.
29	DC arc self-check fault	arc detection equipment abnormality	Disconnect the AC output side switch and the DC input side switch. After 5 minutes, close the AC output side switch and the DC input side switch. If fault persists, please contact your dealer or after-sales service center.
30	INV module overtemperature	1. Inverter Installation Location is not ventilated. 2. Ambient temperature is too high. 3. Internal fan operation abnormal.	1. Check if the ventilation of InverterInstallation Location is adequate and if the ambient temperature exceeds the maximum allowable range. 2. If ventilation is insufficient or the ambient temperature is too high, improve its ventilation and heat dissipation conditions. 3. If ventilation and ambient temperature are both normal, please contact the dealer/after-sales service center.
31	1.5V reference anomaly	Reference Circuit	Disconnect the AC output side switch and DC input side switch, then close the AC output side switch and DC input side switch after 5 minutes. If fault persists, please contact the dealer/after-sales service center.

32	0.3V reference anomaly	Reference circuit	Disconnect the AC output side switch and the DC input side switch. After 5 minutes, close the AC output side switch and the DC input side switch. If fault persists, please contact your dealer or after-sales service center.
33	Bus overvoltage	PV overvoltage InverterBUSvoltage sampling anomaly The poor isolation effect of the rear-end double splitting causes mutual interference between the two Inverter on-grid units, resulting in DC overvoltage alarms from one Inverter on-grid unit.	Disconnect the AC output side switch and the DC input side switch. After 5 minutes, close the AC output side switch and the DC input side switch. If fault persists, please contact your dealer or after-sales service center.
34	Upper busbar overvoltage		
35	Lower busbar overvoltage		
36	BUS Overvoltage (Sub-CPU1)		
37	PBUS overvoltage (sub-CPU1)		
38	NBUS overvoltage (sub-CPU1)		
39	PV input overvoltage	PV array configuration error, too many PV Battery panels connected in series within the string.	Check the series configuration of the corresponding PV array strings to ensure that the open-circuit voltage of the strings does not exceed the maximum working voltage of the Inverter.

40	PV continuous hardware overcurrent	1. Unreasonable module configuration 2. Hardware damage	Disconnect the AC output side switch and the DC input side switch, then reconnect them after 5 minutes. If fault persists, please contact your distributor or after-sales service center.
41	PV continuous software overcurrent	1. Unreasonable module configuration 2. Hardware damage	Disconnect the AC output side switch and the DC input side switch. After 5 minutes, close the AC output side switch and the DC input side switch. If fault persists, please contact your dealer or after-sales service center.
42	String reverse connection (String 1~String 16)	PV string reverse connection	Check whether the string is reverse connected.
43	PV low voltage	Weak or abnormal variation in light intensity	1. If it occurs occasionally, it may be due to abnormal lighting conditions. The Inverter will automatically resume normal operation without manual intervention. 2. If it occurs frequently, please contact the dealer/after-sales service center.
44	BUS undervoltage	Weak or abnormal variation in light intensity	1. If it occurs occasionally, it may be due to abnormal lighting conditions. The Inverter will automatically resume normal operation without manual intervention. 2. If it occurs frequently, please contact the dealer/after-sales service center.

45	BUS soft start failure	Boost drive circuit abnormality	Disconnect the AC output side switch and DC input side switch, then close the AC output side switch and DC input side switch after 5 minutes. If fault persists, please contact the dealer/after-sales service center.
46	BUSvoltage Unbalance	1. Sampling circuit abnormality. 2. Hardware anomaly.	Disconnect the AC output side switch and DC input side switch, then close the AC output side switch and DC input side switch after 5 minutes. If fault persists, please contact the dealer/after-sales service center.
47	Utility grid phase-locking failure	Utility gridFrequency instability	Disconnect the AC output side switch and DC input side switch, then close the AC output side switch and DC input side switch after 5 minutes. If fault persists, please contact the dealer/after-sales service center.
48	Inverter continuous overcurrent	Utility grid or load transient causes overcurrent control	Occasional occurrences do not require handling; if this alarm appears frequently, please contact the dealer/after-sales service center.
49	Inverter software overcurrent		
50	R-phase inverter hardware overcurrent		
51	S-phase inverter hardware overcurrent		

52	T-phase inverter hardware overcurrent		
53	PV single hardware overcurrent	Weak or abnormal variation in light intensity	Disconnect the AC output side switch and DC input side switch, then close the AC output side switch and DC input side switch after 5 minutes. If fault persists, please contact the dealer/after-sales service center.
54	PV single software overcurrent		
55	PV HCT	Boostcurrent sensor anomaly	Disconnect the AC output side switch and DC input side switch, then close the AC output side switch and DC input side switch after 5 minutes. If fault persists, please contact the distributor/our customer service center.
56	Cavity temperature too high	1. Inverter Installation Location is not ventilated. 2. Ambient temperature is too high. 3. Internal fan operation abnormal	1. Check if the ventilation of InverterInstallation Location is adequate and if the ambient temperature exceeds the maximum allowable range. 2. If ventilation is insufficient or the ambient temperature is too high, improve its ventilation and heat dissipation conditions. 3. If ventilation and ambient temperature are both normal, please contact the dealer/after-sales service center.

57	Incorrect PV connection mode setting	The actual connection mode of the PV panels does not match the configured PV connection mode in the equipment.	Check whether the PV connection mode is set correctly. If incorrect, please reconfigure the PV connection mode according to the correct method. 1. Verify that all PV strings are correctly connected. 2. If the PV strings are correctly connected, verify through the App or screen whether the currently set "PV Connection Mode" corresponds to the actual connection mode. 3. If the currently set "PV Connection Mode" does not match the actual connection mode, it is necessary to set the "PV Connection Mode" to the mode consistent with the actual situation via the App or screen. After completing the setting, disconnect the AC output side switch and the DC input side switch, then close the AC output side switch and the DC input side switch after 5 minutes. 4. After the setup is completed, if the current "PV Connection Mode" matches the actual connection mode but this fault still appears, please contact the dealer/our customer service center.

7.5 Routine Maintenance

DANGER

When performing operation and maintenance on Inverter, ensure the Inverter is power off. Operating live equipment may cause damage to Inverter or result in electric shock DANGER.

Maintenance content	Maintenance method	Maintenance cycle
System cleaning	Check for any foreign objects or dust in the heat sink and air inlet/outlet.	Once every six months - Once a year
fan	Check whether the fan is operating normally, if there are any abnormal noises, and if the appearance is normal.	Once per year
DC switch	Open and close the DC switch 10 times consecutively to ensure the DC switch function operates normally.	Once per year
Electrical connection	Check for loose electrical connections, damaged cable insulation, or exposed copper conductors.	1 time/half year - 1 time/year
Sealing	Check whether the cable entry hole Sealing of the equipment meets the requirements. If the gap is too large or unsealed, resealing is required.	Once per year

8 technical parameter

Technical Data	GW4000-SDT-30	GW5000-SDT-30	GW6000-SDT-30	GW8000-SDT-30
Input				
Max. Input Power (kW)	6	7.5	9	12
Max. Input Voltage (V)*1	1100	1100	1100	1100
MPPT Operating Voltage Range (V)*2*3	140 ~ 1000	140 ~ 1000	140 ~ 1000	140 ~ 1000
MPPT Voltage Range at Nominal Power (V)	250~850*4	250~850*4	250~850*4	250~850
Start-up Voltage (V)	160	160	160	160
Nominal Input Voltage (V)	600	600	600	600
Max. Input Current per MPPT (A)	22	22	22	22
Max. Short Circuit Current per MPPT (A)	27.5	27.5	27.5	27.5
Max. Backfeed Current to The Array (A)	0	0	0	0
Number of MPP Trackers	2	2	2	2

Technical Data	GW4000-SDT-30	GW5000-SDT-30	GW6000-SDT-30	GW8000-SDT-30
Number of Strings per MPPT	1	1	1	1
Output				
Nominal Output Power (kW)	4	5	6	8
Nominal Output Apparent Power (kVA)	4	5	6	8
Max. AC Active Power (kW)	4.4	5.5	6.6	8.8
Max. AC Apparent Power (kVA)	4.4	5.5	6.6	8.8
Nominal Power at 40℃ (kW)	4	5	6	8
Max. Power at 40℃ (Including AC Overload) (kW)	4	5	6	8
Nominal Output Voltage (V)	220/380,230/400,240/415, 3L/N/PE or 3L/PE	220/380,230/400,240/415, 3L/N/PE or 3L/PE	220/380,230/400,240/415, 3L/N/PE or 3L/PE	220/380,230/400,240/415, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180~280 (according to local standard)	180~280 (according to local standard)	180~280 (according to local standard)	180~280 (according to local standard)
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60	50/60
AC Grid Frequency Range (Hz)	45~55 / 55~65	45~55 / 55~65	45~55 / 55~65	45~55 / 55~65

Technical Data	GW4000-SDT-30	GW5000-SDT-30	GW6000-SDT-30	GW8000-SDT-30
Max. Output Current (A)	6.7	8.4	10	13.4
Max. Output Fault Current (Peak and Duration) (A/μs)	42 ,6.5μs	42 ,6.5μs	42 ,6.5μs	42 ,6.5μs
Inrush Current (Peak and Duration) (A/μs)	23.7 ,50μs	23.7 ,50μs	23.7 ,50μs	23.7 ,50μs
Nominal Output Current (A)	6.1	7.6	9.2	11.6
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	42	42	42	42
Efficiency				
Max. Efficiency	98.4%	98.4%	98.4%	98.5%
European Efficiency	97.7%	97.7%	97.7%	98.0%
Protection				
PV String Current Monitoring	Integrated	Integrated	Integrated	Integrated

Technical Data	GW4000-SDT-30	GW5000-SDT-30	GW6000-SDT-30	GW8000-SDT-30
PV Insulation Resistance Detection	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated	Integrated
DC Surge Protection	Type III (Type II Optional)	Type III (Type II Optional)	Type III (Type II Optional)	Type III (Type II Optional)
AC Surge Protection	Type III (Type II Optional)	Type III (Type II Optional)	Type III (Type II Optional)	Type III (Type II Optional)
AFCI	Optional	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional	Optional
Power Supply at Night	Optional	Optional	Optional	Optional

Technical Data	GW4000-SDT-30	GW5000-SDT-30	GW6000-SDT-30	GW8000-SDT-30
General Data				
Operating Temperature Range (℃)	-30~+60	-30~+60	-30~+60	-30~+60
Derating temperature (℃)	45	45	45	45
Storage Temperature (℃)	-40~+70	-40~+70	-40~+70	-40~+70
Relative Humidity	0~100%	0~100%	0~100%	0~100%
Max. Operating Altitude (m)	4000	4000	4000	4000
Cooling Method	Natural Convection	Natural Convection	Natural Convection	Natural Convection
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP
Communication	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)
Communication Protocols	Modbus-RTU (SunSpec Compliant), Modbus-TCP	Modbus-RTU (SunSpec Compliant), Modbus-TCP	Modbus-RTU (SunSpec Compliant), Modbus-TCP	Modbus-RTU (SunSpec Compliant), Modbus-TCP
Weight (kg)	15.1	15.1	15.1	15.1
Dimension (W×H×D mm)	491*392*210	491*392*210	491*392*210	491*392*210

Technical Data	GW4000-SDT-30	GW5000-SDT-30	GW6000-SDT-30	GW8000-SDT-30
Noise Emission (dB)	< 30	< 30	< 30	< 30
Topology	Non-isolated	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	<1	<1	<1	<1
Ingress Protection Rating	IP66	IP66	IP66	IP66
Anti-corrosion Class	C4	C4	C4	C4
DC Connector	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)
AC Connector	OT/DT terminal (Max.10 mm^2)	OT/DT terminal (Max.10mm^2)	OT/DT terminal (Max.10mm^2)	OT/DT terminal (Max.10 mm^2)
Environmental Category	4K4H	4K4H	4K4H	4K4H
Pollution Degree	III	III	III	III
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF *5	AFDPF + AQDPF *5	AFDPF + AQDPF *5	AFDPF + AQDPF *5
Country of Manufacture	China	China	China	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: GW4000-SDT-30, GW5000-SDT-30, GW6000-SDT-30 MPPT Voltage Range at Nominal Power are 150V~850V, 180V~850V, 220V~850V in 182*182 panel; 250V~850V in all panel. (Only in the manual)
*5: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW10K-SDT-30	GW10K-SDT-EU30	GW12K-SDT-30
Input			
Max. Input Power (kW)	15	15	18
Max. Input Voltage (V)*1	1100	1100	1100
MPPT Operating Voltage Range (V)*2*3	140 ~ 1000	140 ~ 1000	140 ~ 1000
MPPT Voltage Range at Nominal Power (V)	310~850	310~850	380~850
Start-up Voltage (V)	160	160	160
Nominal Input Voltage (V)	600	600	600
Max. Input Current per MPPT (A)	22	22	22
Max. Short Circuit Current per MPPT (A)	27.5	27.5	27.5
Max. Backfeed Current to The Array (A)	0	0	0

Technical Data	GW10K-SDT-30	GW10K-SDT-EU30	GW12K-SDT-30
Number of MPP Trackers	2	2	2
Number of Strings per MPPT	1	1	1
Output			
Nominal Output Power (kW)	10	10	12
Nominal Output Apparent Power (kVA)	10	10	12
Max. AC Active Power (kW)	11	10	13.2
Max. AC Apparent Power (kVA)	11	10	13.2
Nominal Power at 40℃ (kW)	10	10	12
Max. Power at 40℃ (Including AC Overload) (kW)	10	10	12
Nominal Output Voltage (V)	220/380,230/400, 240/415, 3L/N/PE or 3L/PE	220/380,230/400, 240/415, 3L/N/PE or 3L/PE	220/380,230/400, 240/415, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180~280 (according to local standard)	180~280 (according to local standard)	180~280 (according to local standard)
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60
AC Grid Frequency Range (Hz)	45~55 / 55~65	45~55 / 55~65	45~55 / 55~65

Technical Data	GW10K-SDT-30	GW10K-SDT-EU30	GW12K-SDT-30
Max. Output Current (A)	16.7	15.2	20
Max. Output Fault Current (Peak and Duration) (A/μs)	42 ,6.5μs	42 ,6.5μs	67 ,6.5μs
Inrush Current (Peak and Duration) (A/μs)	23.7 ,50μs	23.7 ,50μs	23.7 ,50μs
Nominal Output Current (A)	14.5	14.5	17.4
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	42	42	67
Efficiency			
Max. Efficiency	98.5%	98.5%	98.5%
European Efficiency	98.0%	98.0%	98.2%
Protection			
PV String Current Monitoring	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated

Technical Data	GW10K-SDT-30	GW10K-SDT-EU30	GW12K-SDT-30
PV Reverse Polarity Protection	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated
DC Surge Protection	Type III (Type II Optional)	Type III (Type II Optional)	Type III (Type II Optional)
AC Surge Protection	Type III (Type II Optional)	Type III (Type II Optional)	Type III (Type II Optional)
AFCI	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional
Power Supply at Night	Optional	Optional	Optional
General Data			
Operating Temperature Range (℃)	-30~+60	-30~+60	-30~+60
Derating temperature (℃)	45	45	45

Technical Data	GW10K-SDT-30	GW10K-SDT-EU30	GW12K-SDT-30
Storage Temperature (℃)	-40~+70	-40~+70	-40~+70
Relative Humidity	0~100%	0~100%	0~100%
Max. Operating Altitude (m)	4000	4000	4000
Cooling Method	Natural Convection	Natural Convection	Natural Convection
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP
Communication	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)
Communication Protocols	Modbus-RTU (SunSpec Compliant), Modbus-TCP	Modbus-RTU (SunSpec Compliant), Modbus-TCP	Modbus-RTU (SunSpec Compliant), Modbus-TCP
Weight (kg)	15.1	15.1	16.6
Dimension (W×H×D mm)	491*392*210	491*392*210	491*392*210
Noise Emission (dB)	< 30	< 30	< 30
Topology	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	<1	<1	<1
Ingress Protection Rating	IP66	IP66	IP66

Technical Data	GW10K-SDT-30	GW10K-SDT-EU30	GW12K-SDT-30
Anti-corrosion Class	C4	C4	C4
DC Connector	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)
AC Connector	OT/DT terminal (Max.10mm^2)	OT/DT terminal (Max.10mm^2)	OT/DT terminal (Max. 16 mm^2)
Environmental Category	4K4H	4K4H	4K4H
Pollution Degree	III	III	III
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF *5	AFDPF + AQDPF *5	AFDPF + AQDPF *5
Country of Manufacture	China	China	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: GW4000-SDT-30, GW5000-SDT-30, GW6000-SDT-30 MPPT Voltage Range at Nominal Power are 150V~850V, 180V~850V, 220V~850V in 182*182 panel; 250V~850V in all panel. (Only in the manual)
*5: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW15K-SDT-30	GW17K-SDT-30	GW20K-SDT-30
Input			
Max. Input Power (kW)	22.5	25.5	30
Max. Input Voltage (V)*1	1100	1100	1100
MPPT Operating Voltage Range (V)*2*3	140 ~ 1000	140 ~ 1000	140 ~ 1000
MPPT Voltage Range at Nominal Power (V)	480~850	520~850	520~850
Start-up Voltage (V)	160	160	160
Nominal Input Voltage (V)	600	600	600
Max. Input Current per MPPT (A)	22	32/22	32/22
Max. Short Circuit Current per MPPT (A)	27.5	40/27.5	40/27.5
Max. Backfeed Current to The Array (A)	0	0	0
Number of MPP Trackers	2	2	2
Number of Strings per MPPT	1	2/1	2/1
Output			
Nominal Output Power (kW)	15	17	20

Technical Data	GW15K-SDT-30	GW17K-SDT-30	GW20K-SDT-30
Nominal Output Apparent Power (kVA)	15	17	20
Max. AC Active Power (kW)	16.5	18.7	22
Max. AC Apparent Power (kVA)	16.5	18.7	22
Nominal Power at 40℃ (kW)	15	17	20
Max. Power at 40℃ (Including AC Overload) (kW)	15	17	20
Nominal Output Voltage (V)	220/380,230/400, 240/415, 3L/N/PE or 3L/PE	220/380,230/400, 240/415, 3L/N/PE or 3L/PE	220/380,230/400, 240/415, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180~280 (according to local standard)	180~280 (according to local standard)	180~280 (according to local standard)
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60
AC Grid Frequency Range (Hz)	45~55 / 55~65	45~55 / 55~65	45~55 / 55~65
Max. Output Current (A)	25	28.3	33.3
Max. Output Fault Current (Peak and Duration) (A/μs)	67 ,6.5μs	73 ,6.5μs	73 ,6.5μs
Inrush Current (Peak and Duration) (A/μs)	23.7,50μs	30.2 ,50μs	30.2 ,50μs

Technical Data	GW15K-SDT-30	GW17K-SDT-30	GW20K-SDT-30
Nominal Output Current (A)	21.8	24.7	29
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	67	73	73
Efficiency			
Max. Efficiency	98.5%	98.5%	98.5%
European Efficiency	98.2%	98.2%	98.2%
Protection			
PV String Current Monitoring	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated

Technical Data	GW15K-SDT-30	GW17K-SDT-30	GW20K-SDT-30
AC Overvoltage Protection	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated
DC Surge Protection	Type III (Type II Optional)	Type III (Type II Optional)	Type III (Type II Optional)
AC Surge Protection	Type III (Type II Optional)	Type III (Type II Optional)	Type III (Type II Optional)
AFCI	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional
Power Supply at Night	Optional	Optional	Optional
General Data			
Operating Temperature Range (℃)	-30~+60	-30~+60	-30~+60
Derating temperature (℃)	45	45	45
Storage Temperature (℃)	-40~+70	-40~+70	-40~+70
Relative Humidity	0~100%	0~100%	0~100%
Max. Operating Altitude (m)	4000	4000	4000
Cooling Method	Natural Convection	Smart Fan Cooling	Smart Fan Cooling

Technical Data	GW15K-SDT-30	GW17K-SDT-30	GW20K-SDT-30
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP
Communication	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)
Communication Protocols	Modbus-RTU (SunSpec Compliant), Modbus-TCP	Modbus-RTU (SunSpec Compliant), Modbus-TCP	Modbus-RTU (SunSpec Compliant), Modbus-TCP
Weight (kg)	16.6	18.8	18.8
Dimension (W×H×D mm)	491*392*210	530*413*227	530*413*227
Noise Emission (dB)	< 30	< 45	< 45
Topology	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	<1	<1	<1
Ingress Protection Rating	IP66	IP66	IP66
Anti-corrosion Class	C4	C4	C4
DC Connector	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)
AC Connector	OT/DT terminal (Max. 16 mm^2)	OT/DT terminal (Max. 25 mm^2)	OT/DT terminal (Max. 16mm^2)
Environmental Category	4K4H	4K4H	4K4H
Pollution Degree	III	III	III

Technical Data	GW15K-SDT-30	GW17K-SDT-30	GW20K-SDT-30
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF *4	AFDPF + AQDPF *4	AFDPF + AQDPF *4
Country of Manufacture	China	China	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW20K-SDT-31	GW25K-SDT-C30	GW25K-SDT-30	GW25K-SDT-P31
Input				
Max. Input Power (kW)	30	37.5	37.5	37.5
Max. Input Voltage (V)*1	1100	1100	1100	1100
MPPT Operating Voltage Range (V)*2*3	140 ~ 1000	140 ~ 1000	140~950	140 ~ 1000

Technical Data	GW20K-SDT-31	GW25K-SDT-C30	GW25K-SDT-30	GW25K-SDT-P31
MPPT Voltage Range at Nominal Power (V)	400~850	550~850	400~850	450~850
Start-up Voltage (V)	160	160	160	160
Nominal Input Voltage (V)	600	600	600	600
Max. Input Current per MPPT (A)	40/40	42/22	40/40/40	40/40
Max. Short Circuit Current per MPPT (A)	52.5/52.5	52.5/27.5	50/50/50	52.5/52.5
Max. Backfeed Current to The Array (A)	0	0	0	0
Number of MPP Trackers	2	2	3	2
Number of Strings per MPPT	2/2	2/1	2	2/2
Output				
Nominal Output Power (kW)	20	25	25	25
Nominal Output Apparent Power (kVA)	20	25	25	25
Max. AC Active Power (kW)	20	27.5	25	27.5

Technical Data	GW20K-SDT-31	GW25K-SDT-C30	GW25K-SDT-30	GW25K-SDT-P31
Max. AC Apparent Power (kVA)	20	27.5	25	27.5
Nominal Power at 40℃ (kW)	22	25	25	25
Max. Power at 40℃ (Including AC Overload) (kW)	22	25	25	25
Nominal Output Voltage (V)	220/380,230/400,240/415, 3L/N/PE or 3L/PE	220/380,230/400,240/415, 3L/N/PE or 3L/PE	220/380, 230/400, 240/415, 3L/N/PE or 3L/PE	220/380,230/400,240/415, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180~280 (according to local standard)	180~280 (according to local standard)	180 ~ 260 (According to local standard)	180~280 (according to local standard)
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60	50/60
AC Grid Frequency Range (Hz)	45~55 / 55~65	45~55 / 55~65	45~55 / 55~65	45~55 / 55~65
Max. Output Current (A)	30.3	41.7	37.9	37.9
Max. Output Fault Current (Peak and Duration) (A/μs)	73 ,6.5μs	95 ,6.5μs	126 ,6.5μs	95 ,6.5μs
Inrush Current (Peak and Duration) (A/μs)	30.2 ,50μs	29.4 ,50μs	48.12 ,50μs	29.4 ,50μs
Nominal Output Current (A)	30.3	36.3	37.9	37.9

Technical Data	GW20K-SDT-31	GW25K-SDT-C30	GW25K-SDT-30	GW25K-SDT-P31
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	73	95	126	95
Efficiency				
Max. Efficiency	98.5%	98.6%	98.7%	98.5%
European Efficiency	97.9%	98.2%	98.3%	97.9%
Protection				
PV String Current Monitoring	Integrated	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated	Integrated

Technical Data	GW20K-SDT-31	GW25K-SDT-C30	GW25K-SDT-30	GW25K-SDT-P31
AC Short Circuit Protection	Integrated	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated	Integrated
DC Surge Protection	Type III (Type II Optional)	Type III (Type II Optional)	Type II	Type III (Type II Optional)
AC Surge Protection	Type III (Type II Optional)	Type III (Type II Optional)	Type II	Type III (Type II Optional)
AFCI	Optional	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional	Optional
Power Supply at Night	Optional	Optional	Optional	Optional
General Data				
Operating Temperature Range (℃)	-30~+60	-30~+60	-30~+60	-30~+60
Derating temperature (℃)	45	45	45	45
Storage Temperature (℃)	-40~+70	-40~+70	-40~+70	-40~+70
Relative Humidity	0~100%	0~100%	0~100%	0~100%
Max. Operating Altitude (m)	4000	4000	4000	4000

Technical Data	GW20K-SDT-31	GW25K-SDT-C30	GW25K-SDT-30	GW25K-SDT-P31
Cooling Method	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP
Communication	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)
Communication Protocols	Modbus RTU, Modbus TCP	Modbus-RTU (SunSpec Compliant), Modbus-TCP	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP
Weight (kg)	16.6	20.8	30.0	17.7
Dimension (W×H×D mm)	530*413*221	530*413*227	585×483×230	530*413*221
Noise Emission (dB)	< 45	< 45	< 45	< 45
Topology	Non-isolated	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	<1	<1	<1	<1
Ingress Protection Rating	IP66	IP66	IP66	IP66
Anti-corrosion Class	C4	C4	C4	C4
DC Connector	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)

Technical Data	GW20K-SDT-31	GW25K-SDT-C30	GW25K-SDT-30	GW25K-SDT-P31
AC Connector	OT/DT terminal (Max. 16mm²)	OT/DT terminal (Max. 16 mm²)	OT terminal (Max. 25mm²)	OT/DT terminal (Max. 16mm²)
Environmental Category	4K4H	4K4H	4K4H	4K4H
Pollution Degree	III	III	III	III
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF *4	AFDPF + AQDPF *4	AFDPF + AQDPF *4	AFDPF + AQDPF *4
Country of Manufacture	China	China	China	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW30K-SDT-C30	GW30K-SDT-30	GW33K-SDT-C30	GW36K-SDT-C30
Input				
Max. Input Power (kW)	45	45	49.5	54
Max. Input Voltage (V)*1	1100	1100	1100	1100
MPPT Operating Voltage Range (V)*2*3	140 ~ 1000	140~950	140~1000	140~1000
MPPT Voltage Range at Nominal Power (V)	550~850	400~850	480~850	480~850
Start-up Voltage (V)	160	160	160	160
Nominal Input Voltage (V)	600	600	600	600
Max. Input Current per MPPT (A)	42/32	40/40/40	42/42/32	42/42/32
Max. Short Circuit Current per MPPT (A)	52.5/40	50/50/50	52.5/52.5/40	52.5/52.5/40
Max. Backfeed Current to The Array (A)	0	0	0	0
Number of MPP Trackers	2	3	3	3
Number of Strings per MPPT	2	2	2	2

Technical Data	GW30K-SDT-C30	GW30K-SDT-30	GW33K-SDT-C30	GW36K-SDT-C30
Output				
Nominal Output Power (kW)	30	30	33	36
Nominal Output Apparent Power (kVA)	30	30	33	36
Max. AC Active Power (kW)	33	30	33	36
Max. AC Apparent Power (kVA)	33	30	33	36
Nominal Power at 40℃ (kW)	30	30	33	36
Max. Power at 40℃ (Including AC Overload) (kW)	30	30	33	36
Nominal Output Voltage (V)	220/380,230/400,240/415, 3L/N/PE or 3L/PE	220/380, 230/400, 240/415, 3L/N/PE or 3L/PE	220/380, 230/400, 240/415, 3L/N/PE or 3L/PE	220/380, 230/400, 240/415, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180~280 (according to local standard)	180 ~ 260 (According to local standard)	180~280 (according to local standard)	180~280 (according to local standard)
Nominal AC Grid Frequency (Hz)	50/60	50/60	50	50
AC Grid Frequency Range (Hz)	45~55 / 55~65	45~55 / 55~65	45~55	45~55

Technical Data	GW30K-SDT-C30	GW30K-SDT-30	GW33K-SDT-C30	GW36K-SDT-C30
Max. Output Current (A)	50	45.5	50.1	54.6
Max. Output Fault Current (Peak and Duration) (A/μs)	115 ,6.5μs	126 ,6.5us	126 ,6.5μs	157 ,6.5μs
Inrush Current (Peak and Duration) (A/μs)	29.4 ,50μs	48.12 ,50us	60 ,500μs	60 ,500μs
Nominal Output Current (A)	45.5 @380V 43.5 @400V 41.7 @415V	45.5 @380V 43.5 @400V 41.7 @415V	50.1 @380V 47.9 @400V 45.9 @415V	54.6 @380V 52.3 @400V 50.1 @415V
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	115	126	126	157
Efficiency				
Max. Efficiency	98.6%	98.7%	98.6%	98.6%
European Efficiency	98.3%	98.3%	97.8%	97.8%
Protection				
PV String Current Monitoring	Integrated	Integrated	Integrated	Integrated

Technical Data	GW30K-SDT-C30	GW30K-SDT-30	GW33K-SDT-C30	GW36K-SDT-C30
PV Insulation Resistance Detection	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated	Integrated
DC Surge Protection	Type III (Type II Optional)	Type II	Type III（Type II Optional）	Type III（Type II Optional）
AC Surge Protection	Type III (Type II Optional)	Type II	Type III（Type II Optional）	Type III（Type II Optional）
AFCI	Optional	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional	Optional
Power Supply at Night	Optional	Optional	Optional	Optional

Technical Data	GW30K-SDT-C30	GW30K-SDT-30	GW33K-SDT-C30	GW36K-SDT-C30
General Data				
Operating Temperature Range (℃)	-30~+60	-30~+60	-30~+60	-30~+60
Derating temperature (℃)	45	45	45	45
Storage Temperature (℃)	-40~+70	-40~+70	-40~+70	-40~+70
Relative Humidity	0~100%	0~100%	0~100%	0~100%
Max. Operating Altitude (m)	4000	4000	4000	4000
Cooling Method	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP
Communication	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)
Communication Protocols	Modbus-RTU (SunSpec Compliant), Modbus-TCP	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP
Weight (kg)	21.1	30.0	28.0	28.0
Dimension (W×H×D mm)	530*413*227	585*483*230	585*483*230	585*483*230

Technical Data	GW30K-SDT-C30	GW30K-SDT-30	GW33K-SDT-C30	GW36K-SDT-C30
Noise Emission (dB)	45	45	45	45
Topology	Non-isolated	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	< 1	< 1	< 1	< 1
Ingress Protection Rating	IP66	IP66	IP66	IP66
Anti-corrosion Class	C4	C4	C4	C4
DC Connector	MC4 (4~6 mm^2)	MC4 (Max. 4 ~ 6 mm^2)	MC4 (Max. 4 ~ 6 mm^2)	MC4 (Max. 4 ~ 6 mm^2)
AC Connector	OT/DT terminal (Max. 25 mm^2)	OT/DT terminal (Max. 25mm^2)	OT/DT terminal (Max. 35mm^2)	OT/DT terminal (Max. 35mm^2)
Environmental Category	4K4H	4K4H	4K4H	4K4H
Pollution Degree	III	III	III	III
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF*4	AFDPF + AQDPF*4	AFDPF + AQDPF*4	AFDPF + AQDPF*4

Technical Data	GW30K-SDT-C30	GW30K-SDT-30	GW33K-SDT-C30	GW36K-SDT-C30
Country of Manufacture	China	China	China	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW40K-SDT-C30	GW40K-SDT-P30	GW50K-SDT-C30
Input			
Max. Input Power (kW)	60	60	75
Max. Input Voltage (V)*1	1100	1100	1100
MPPT Operating Voltage Range (V)*2*3	140~1000	140~1000	140 ~ 1000
MPPT Voltage Range at Nominal Power (V)	480~850	480~850	450~850
Start-up Voltage (V)	160	160	160
Nominal Input Voltage (V)	600	600	600
Max. Input Current per MPPT (A)	42/42/32	40	40
Max. Short Circuit Current per MPPT (A)	52.5/52.5/40	56	52

Technical Data	GW40K-SDT-C30	GW40K-SDT-P30	GW50K-SDT-C30
Max. Backfeed Current to The Array (A)	0	0	0
Number of MPP Trackers	3	4	4
Number of Strings per MPPT	2	2	2
Output			
Nominal Output Power (kW)	40	40	50
Nominal Output Apparent Power (kVA)	40	40	50
Max. AC Active Power (kW)	40	40	50
Max. AC Apparent Power (kVA)	40	40	50
Nominal Power at 40℃ (kW)	40	40	50
Max. Power at 40℃ (Including AC Overload) (kW)	40	40	50
Nominal Output Voltage (V)	220/380, 230/400, 240/415, 3L/N/PE or 3L/PE	220/380,230/400, 240/415, 3L/N/PE or 3L/PE	220/380,230/400, 240/415, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180~280 (according to local standard)	180~280 (according to local standard)	180~280 (according to local standard)

Technical Data	GW40K-SDT-C30	GW40K-SDT-P30	GW50K-SDT-C30
Nominal AC Grid Frequency (Hz)	50	50/60	50/60
AC Grid Frequency Range (Hz)	45~55	45~55 / 55~65	45~55 / 55~65
Max. Output Current (A)	60.7	60.6	75.7
Max. Output Fault Current (Peak and Duration) (A/μs)	157 ,6.5μs	157 ,6.5μs	230 ,4.36μs
Inrush Current (Peak and Duration) (A/μs)	60 ,500μs	60 ,500μs	26.4 ,8.5ms)
Nominal Output Current (A)	60.7 @380V 58.0 @400V 55.6 @415V	60.7 @380V 58.0 @400V 55.6 @415V	75.7 @380V 72.4 @400V 69.4 @415V
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	157	157	196.6
Efficiency			
Max. Efficiency	98.6%	98.6%	98.7%
European Efficiency	97.8%	97.7%	98.0%
Protection			

Technical Data	GW40K-SDT-C30	GW40K-SDT-P30	GW50K-SDT-C30
PV String Current Monitoring	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated
DC Surge Protection	Type III（Type II Optional）	Type II	Type II
AC Surge Protection	Type III（Type II Optional）	Type II	Type II
AFCI	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional
Power Supply at Night	Optional	Optional	Optional

Technical Data	GW40K-SDT-C30	GW40K-SDT-P30	GW50K-SDT-C30
General Data			
Operating Temperature Range (℃)	-30~+60	-30~+60	-30~+60
Derating temperature (℃)	45	45	45
Storage Temperature (℃)	-40~+70	-40~+70	-40~+70
Relative Humidity	0~100%	0~100%	0~100%
Max. Operating Altitude (m)	4000	4000	4000
Cooling Method	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WiFi+APP
Communication	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth(Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth(Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth(Optional)
Communication Protocols	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP	Modbus-RTU (SunSpec Compliant), Modbus-TCP
Weight (kg)	28.0	31.0	33.0
Dimension (W×H×D mm)	585*483*230	585*483*237	646*484*230
Noise Emission (dB)	45	45	50

Technical Data	GW40K-SDT-C30	GW40K-SDT-P30	GW50K-SDT-C30
Topology	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	< 1	<1	<1
Ingress Protection Rating	IP66	IP66	IP66
Anti-corrosion Class	C4	C4	C4
DC Connector	MC4 (Max. 4 ~ 6 mm²)	MC4 (4~6 mm²)	MC4 (4 ~ 6mm²)
AC Connector	OT/DT terminal (Max. 35mm²)	OT/DT terminal (Max.35mm²)	OT/DT terminal (Max. 70 mm²)
Environmental Category	4K4H	4K4H	4K4H
Pollution Degree	III	III	III
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF*4	AFDPF + AQDPF*4	AFDPF + AQDPF*4
Country of Manufacture	China	China	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV

panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW12KLV-SDT-C31	GW12KLV-SDT-C30	GW17KLV-SDT-C30
Input			
Max. Input Power (kW)	18	18	25.5
Max. Input Voltage (V)*1	850	850	850
MPPT Operating Voltage Range (V)*2*3	140 ~ 700	140 ~ 700	140 ~ 700
MPPT Voltage Range at Nominal Power (V)	260~600	260~600	260~500
Start-up Voltage (V)	160	160	160
Nominal Input Voltage (V)	420	420	420
Max. Input Current per MPPT (A)	40/40	32/22	42/32
Max. Short Circuit Current per MPPT (A)	52.5/52.5	40/27.5	52.5/40
Number of MPP Trackers	2	2	2
Number of Strings per MPPT	45690	45689	2
Output			

Technical Data	GW12KLV-SDT-C31	GW12KLV-SDT-C30	GW17KLV-SDT-C30
Nominal Output Power (kW)	12	12	17
Max. AC Active Power (kW)	13.2	13.2	18.7
Max. AC Apparent Power (kVA)	13.2	13.2	18.7
Nominal Power at 40℃ (kW)	12	12	17
Max. Power at 40℃ (Including AC Overload) (kW)	12	12	17
Nominal Output Voltage (V)	127/220，3L/N/PE or 3L/PE	127/220，3L/N/PE or 3L/PE	127/220，3L/N/PE or 3L/PE
Output Voltage Range (V)	114~139(according to local standard)	114~139(according to local standard)	114~139(according to local standard)
Nominal AC Grid Frequency (Hz)	60	60	60
AC Grid Frequency Range (Hz)	59.5~60.2	59.5~60.2	59.5~60.2
Max. Output Current (A)	31.5	33.3	50
Nominal Output Current (A)	31.5	33.3	50

Technical Data	GW12KLV-SDT-C31	GW12KLV-SDT-C30	GW17KLV-SDT-C30
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%	<3%
Efficiency			
Max. Efficiency	98.2%	98.2%	97.5%
European Efficiency	97.2%	97.2%	96.9%
Protection			
PV String Current Monitoring	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated

Technical Data	GW12KLV-SDT-C31	GW12KLV-SDT-C30	GW17KLV-SDT-C30
DC Surge Protection	Type II	Type II	Type II
AC Surge Protection	Type III (Type II Optional)	Type III (Type II Optional)	Type III (Type II Optional)
AFCI	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional
Power Supply at Night	Optional	Optional	Optional
General Data			
Operating Temperature Range (℃)	-30~+60	-30~+60	-30~+60
Relative Humidity	0~100%	0~100%	0~100%
Cooling Method	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP
Communication	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth(Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth(Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth(Optional)
Communication Protocols	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP
Weight (kg)	16.6	18.8	21.1

Technical Data	GW12KLV-SDT-C31	GW12KLV-SDT-C30	GW17KLV-SDT-C30
Dimension (W×H×D mm)	530×413×221	530×413×227	530×413×227
Noise Emission (dB)	< 45	< 45	< 45
Topology	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	<1	<1	<1
Ingress Protection Rating	IP66	IP66	IP66
Anti-corrosion Class	C4	C4	C4
DC Connector	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)
AC Connector	OT/DT terminal (Max. 16 mm^2)	OT/DT terminal (Max. 16mm^2)	OT/DT terminal (Max. 16 mm^2)
Environmental Category	4K4H	4K4H	4K4H
Pollution Degree	III	III	III
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF*4	AFDPF + AQDPF*4	AFDPF + AQDPF*4
Country of Manufacture	China	China	China

*1: When the input voltage is 700V-850V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	**GW23KLV-SDT-BR30**	**GW30KLV-SDT-C30**
Input		
Max. Input Power (kW)	34.5	45
Max. Input Voltage (V)*1	850	850
MPPT Operating Voltage Range (V)*2*3	140~700	140 ~ 700
MPPT Voltage Range at Nominal Power (V)	350~600	350~600
Start-up Voltage (V)	160	160
Nominal Input Voltage (V)	420	420
Max. Input Current per MPPT (A)	42/42/32	40/40/40/40
Max. Short Circuit Current per MPPT (A)	52.5/52.5/40	52/52/52/52
Number of MPP Trackers	3	4

Technical Data	GW23KLV-SDT-BR30	GW30KLV-SDT-C30
Number of Strings per MPPT	2	2
Output		
Nominal Output Power (kW)	23	30
Max. AC Active Power (kW)	25.3	33
Max. AC Apparent Power (kVA)	25.3	33
Nominal Power at 40℃ (kW)	23	30
Max. Power at 40℃ (Including AC Overload) (kW)	23	30
Nominal Output Voltage (V)	127/220，3L/N/PE or 3L/PE	127/220，3L/N/PE or 3L/PE
Output Voltage Range (V)	114~139(according to local standard)	114~139 (according to local standard)
Nominal AC Grid Frequency (Hz)	60	60
AC Grid Frequency Range (Hz)	59.5~60.2	59.5~60.2
Max. Output Current (A)	60.4	78.8
Nominal Output Current (A)	60.4	78.8

Technical Data	GW23KLV-SDT-BR30	GW30KLV-SDT-C30
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%
Efficiency		
Max. Efficiency	97.8%	98.0%
European Efficiency	97.0%	97.1%
Protection		
PV String Current Monitoring	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated
DC Switch	Integrated	Integrated
DC Surge Protection	Type II	Type II

Technical Data	GW23KLV-SDT-BR30	GW30KLV-SDT-C30
AC Surge Protection	Type III（Type II Optional）	Type II
AFCI	Optional	Optional
Rapid Shutdown	Optional	Optional
Remote Shutdown	Integrated	Integrated
PID Recovery	Optional	Optional
Power Supply at Night	Optional	Optional
General Data		
Operating Temperature Range (℃)	-30 ~ 60	-30 ~ 60
Relative Humidity	0 ~ 100%	0 ~ 100%
Cooling Method	Smart Fan Cooling	Smart Fan Cooling
User Interface	LED, LCD (Optional)，WLAN+APP	LED, LCD (Optional)，WLAN+APP
Communication	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)	RS485, WiFi+LAN+Bluetooth, 4G+Bluetooth (Optional)
Communication Protocols	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP
Weight (kg)	28.0	33.0
Dimension (W×H×D mm)	585×483×230	646×484×230
Noise Emission (dB)	< 45	< 50

Technical Data	GW23KLV-SDT-BR30	GW30KLV-SDT-C30
Topology	Non-isolated	Non-isolated
Self-consumption at Night (W)	<1	<1
Ingress Protection Rating	IP66	IP66
Anti-corrosion Class	C4	C4
DC Connector	MC4 (4~6 mm^2)	MC4 (4~6 mm^2)
AC Connector	OT/DT terminal（Max 35mm^2)	OT/DT terminal (Max. 70 mm^2)
Environmental Category	4K4H	4K4H
Pollution Degree	III	III
Overvoltage Category	DC II / AC III	DC II / AC III
Protective Class	I	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF*4	AFDPF + AQDPF*4
Country of Manufacture	China	China

*1: When the input voltage is 700V-850V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.

*4: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW37K5-SDT-BR30
Input	
Max. Input Power (kW)	67.5
Max. Input Voltage (V)*1	1100
MPPT Operating Voltage Range (V)*2*3	140~1000
MPPT Voltage Range at Nominal Power (V)	480~850
Start-up Voltage (V)	160
Nominal Input Voltage (V)	600
Max. Input Current per MPPT (A)	42/42/32
Max. Short Circuit Current per MPPT (A)	52.5/52.5/40
Max. Backfeed Current to The Array (A)	0
Number of MPP Trackers	3
Number of Strings per MPPT	2
Output	
Nominal Output Power (kW)	37.5
Nominal Output Apparent Power (kVA)	37.5

Technical Data	GW37K5-SDT-BR30
Max. AC Active Power (kW)	37.5
Max. AC Apparent Power (kVA)	37.5
Nominal Power at 40℃ (kW)	37.5
Max. Power at 40℃ (Including AC Overload) (kW)	37.5
Nominal Output Voltage (V)	220/380, 230/400, 240/415, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180~280 (according to local standard)
Nominal AC Grid Frequency (Hz)	60
AC Grid Frequency Range (Hz)	59.5~60.2
Max. Output Current (A)	56.9
Max. Output Fault Current (Peak and Duration) (A/μs)	157 ,6.5μs
Inrush Current (Peak and Duration) (A/μs)	60 ,500μs
Nominal Output Current (A)	56.9 @380Vac 54.4 @400Vac 52.1 @415Vac
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)

Technical Data	GW37K5-SDT-BR30
Max. Total Harmonic Distortion	<3%
Maximum Output Overcurrent Protection (A)	157
Efficiency	
Max. Efficiency	98.6%
European Efficiency	97.8%
Protection	
PV String Current Monitoring	Integrated
PV Insulation Resistance Detection	Integrated
Residual Current Monitoring	Integrated
PV Reverse Polarity Protection	Integrated
Anti-islanding Protection	Integrated
AC Overcurrent Protection	Integrated
AC Short Circuit Protection	Integrated
AC Overvoltage Protection	Integrated
DC Switch	Integrated
DC Surge Protection	Type II
AC Surge Protection	Type III (Type II Optional)

Technical Data	GW37K5-SDT-BR30
AFCI	Integrated
Rapid Shutdown	Optional
Remote Shutdown	Integrated
PID Recovery	Optional
Power Supply at Night	Optional
General Data	
Operating Temperature Range (℃)	-30 ~ 60
Derating temperature (℃)	45
Storage Temperature (℃)	-40 ~ 70
Relative Humidity	0 ~ 100%
Max. Operating Altitude (m)	4000
Cooling Method	Smart Fan Cooling
User Interface	LED, LCD (Optional), WLAN+APP
Communication	RS485, WiFi+Bluetooth, WiFi+LAN+Bluetooth (Optional)
Communication Protocols	Modbus RTU, Modbus TCP
Weight (kg)	28.0

Technical Data	GW37K5-SDT-BR30
Dimension (W×H×D mm)	585*483*230
Noise Emission (dB)	< 45
Topology	Non-isolated
Self-consumption at Night (W)	< 1
Ingress Protection Rating	IP66
Anti-corrosion Class	C4
DC Connector	MC4 (4~6 mm^2)
AC Connector	OT terminal (Max. 35 mm^2)
Environmental Category	4K4H
Pollution Degree	III
Overvoltage Category	DC II / AC III
Protective Class	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF *4
Country of Manufacture	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.

*2: PV modules connected to the same MPPT need to be of the same type of PV

panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW5000-SDT-AU30	GW6000-SDT-AU30	GW8000-SDT-AU30
Input			
Max. Input Power (kW)	7.5	9	12
Max. Input Voltage (V)*1	1100	1100	1100
MPPT Operating Voltage Range (V)*2*3	140~950	140~950	140~950
MPPT Voltage Range at Nominal Power (V)*4	150~850	150~850	150~850
Start-up Voltage (V)	160	160	160
Nominal Input Voltage (V)	600	600	600
Max. Input Current per MPPT (A)	16/16/16	16/16/16	32/16/16
Max. Short Circuit Current per MPPT (A)	23/23/23	23/23/23	45/23/23
Max. Backfeed Current to The Array (A)	0	0	0
Number of MPP Trackers	3	3	3
Number of Strings per MPPT	1	1	37257
Output			

Technical Data	GW5000-SDT-AU30	GW6000-SDT-AU30	GW8000-SDT-AU30
Nominal Output Power (W)	5	6	8
Nominal Output Apparent Power (VA)	5	6	8
Max. AC Active Power (W)	5	6	8
Max. AC Apparent Power (VA)	5	6	8
Nominal Power at 40℃ (W)	5	6	8
Max. Power at 40℃ (Including AC Overload) (W)	5	6	8
Nominal Output Voltage (V)	230/400, 3L/N/PE or 3L/PE	230/400, 3L/N/PE or 3L/PE	230/400, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180 ~ 260 (According to local standard)	180 ~ 260 (According to local standard)	180 ~ 260 (According to local standard)
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60
AC Grid Frequency Range (Hz)	45~55 / 55~65	45~55 / 55~65	45~55 / 55~65
Max. Output Current (A)	7.3	8.7	11.6
Max. Output Fault Current (Peak and Duration) (A)	26 @6.5us	26 @6.5us	37 @6.5us

Technical Data	GW5000-SDT-AU30	GW6000-SDT-AU30	GW8000-SDT-AU30
Inrush Current (Peak and Duration) (A)	19.3 @50us	19.3 @50us	28.1 @50us
Nominal Output Current (A)	7.3 @400Vac	8.7 @400Vac	11.6 @400Vac
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	26	26	37
Efficiency			
Max. Efficiency	98.5%	98.5%	98.5%
European Efficiency	97.8%	97.8%	97.9%
Protection			
PV String Current Monitoring	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated

Technical Data	GW5000-SDT-AU30	GW6000-SDT-AU30	GW8000-SDT-AU30
Anti-islanding Protection	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated
DC Surge Protection	Type II	Type II	Type II
AC Surge Protection	Type II	Type II	Type II
AFCI	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional
Power Supply at Night	Integrated	Integrated	Integrated
Shadow scanning	Integrated	Integrated	Integrated
General Data			
Operating Temperature Range (℃)	-30 ~ 60	-30 ~ 60	-30 ~ 60
Derating temperature (℃)	45	45	45

Technical Data	GW5000-SDT-AU30	GW6000-SDT-AU30	GW8000-SDT-AU30
Storage Temperature (℃)	-30 ~ 70	-30 ~ 70	-30 ~ 70
Relative Humidity	0 ~ 100%	0 ~ 100%	0 ~ 100%
Max. Operating Altitude (m)	3000	3000	3000
Cooling Method	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP
Communication	WiFi+Lan+Bluetooth or 4G+Bluetooth（optional）	WiFi+Lan+Bluetooth or 4G+Bluetooth（optional）	WiFi+Lan+Bluetooth or 4G+Bluetooth（optional）
Communication Protocols	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP
Weight (kg)	＜20	＜20	＜20
Dimension (W×H×D mm)	530×413×221	530×413×221	530×413×221
Noise Emission (dB)	＜35	＜35	＜35
Topology	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	<1	<1	<1

Technical Data	GW5000-SDT-AU30	GW6000-SDT-AU30	GW8000-SDT-AU30
Ingress Protection Rating	IP66	IP66	IP66
Anti-corrosion Class	C4	C4	C4
DC Connector	MC4 (Max. 4 ~ 6 mm²)	MC4 (Max. 4 ~ 6 mm²)	MC4 (Max. 4 ~ 6 mm²)
AC Connector	OT terminal(Max.10 mm²)	OT terminal (Max. 10 mm²)	OT terminal (Max. 10 mm²)
Environmental Category	4K4H	4K4H	4K4H
Pollution Degree	III	III	III
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I
The Decisive Voltage Class (DVC)	PV：C AC：C Com：A	PV：C AC：C Com：A	PV：C AC：C Com：A
Active Anti-islanding Method	AFDPF + AQDPF *5	AFDPF + AQDPF *5	AFDPF + AQDPF *5
Country of Manufacture	China	China	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: The PV input voltage should be higher than the Max. MPPT Voltage at Nominal Power.

*5: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW9990-SDT-AU30	GW15K-SDT-AU30	GW20K-SDT-AU30
Input			
Max. Input Power (kW)	15	22.5	30
Max. Input Voltage (V)*1	1100	1100	1100
MPPT Operating Voltage Range (V)*2*3	140~950	140~950	140~950
MPPT Voltage Range at Nominal Power (V)*4	180~850	210~850	300~850
Start-up Voltage (V)	160	160	160
Nominal Input Voltage (V)	600	600	600
Max. Input Current per MPPT (A)	32/16/16	32/32/16	32/32/16
Max. Short Circuit Current per MPPT (A)	45/23/23	45/45/23	45/45/23
Max. Backfeed Current to The Array (A)	0	0	0
Number of MPP Trackers	3	3	3
Number of Strings per MPPT	37257	37288	37288
Output			
Nominal Output Power (W)	9.99	15	20

Technical Data	GW9990-SDT-AU30	GW15K-SDT-AU30	GW20K-SDT-AU30
Nominal Output Apparent Power (VA)	9.99	15	20
Max. AC Active Power (W)	9.99	15	20
Max. AC Apparent Power (VA)	9.99	15	20
Nominal Power at 40℃ (W)	9.99	15	20
Max. Power at 40℃ (Including AC Overload) (W)	9.99	15	20
Nominal Output Voltage (V)	230/400, 3L/N/PE or 3L/PE	230/400, 3L/N/PE or 3L/PE	230/400, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180 ~ 260 (According to local standard)	180 ~ 260 (According to local standard)	180 ~ 260 (According to local standard)
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60
AC Grid Frequency Range (Hz)	45~55 / 55~65	45~55 / 55~65	45~55 / 55~65
Max. Output Current (A)	14.5	21.8	29
Max. Output Fault Current (Peak and Duration) (A)	37 @6.5us	70 @6.5us	70 @6.5us
Inrush Current (Peak and Duration) (A)	28.1 @50us	42.3 @50us	42.3 @50us

Technical Data	GW9990-SDT-AU30	GW15K-SDT-AU30	GW20K-SDT-AU30
Nominal Output Current (A)	14.5 @400Vac	21.8 @400Vac	29 @400Vac
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	37	70	70
Efficiency			
Max. Efficiency	98.5%	98.6%	98.6%
European Efficiency	97.9%	98.1%	98.3%
Protection			
PV String Current Monitoring	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated

Technical Data	GW9990-SDT-AU30	GW15K-SDT-AU30	GW20K-SDT-AU30
AC Short Circuit Protection	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated
DC Surge Protection	Type II	Type II	Type II
AC Surge Protection	Type II	Type II	Type II
AFCI	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional
Power Supply at Night	Integrated	Integrated	Integrated
Shadow scanning	Integrated	Integrated	Integrated
General Data			
Operating Temperature Range (℃)	-30 ~ 60	-30 ~ 60	-30 ~ 60
Derating temperature (℃)	45	45	45
Storage Temperature (℃)	-30 ~ 70	-30 ~ 70	-30 ~ 70
Relative Humidity	0 ~ 100%	0 ~ 100%	0 ~ 100%
Max. Operating Altitude (m)	3000	3000	3000
Cooling Method	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling

Technical Data	GW9990-SDT-AU30	GW15K-SDT-AU30	GW20K-SDT-AU30
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP
Communication	WiFi+Lan+Blueto oth or 4G+Bluetooth（optional）	WiFi+Lan+Blueto oth or 4G+Bluetooth（optional）	WiFi+Lan+Blueto oth or 4G+Bluetooth（optional）
Communication Protocols	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP
Weight (kg)	＜20	＜20	＜22
Dimension (W×H×D mm)	530×413×221	530×413×221	530×413×221
Noise Emission (dB)	＜35	＜40	＜40
Topology	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	<1	<1	<1
Ingress Protection Rating	IP66	IP66	IP66
Anti-corrosion Class	C4	C4	C4
DC Connector	MC4 (Max. 4 ~ 6 mm²)	MC4 (Max. 4 ~ 6 mm²)	MC4 (Max. 4 ~ 6 mm²)
AC Connector	OT terminal (Max.10 mm²)	OT terminal (Max. 16 mm²)	OT terminal (Max. 16 mm²)
Environmental Category	4K4H	4K4H	4K4H
Pollution Degree	III	III	III

Technical Data	GW9990-SDT-AU30	GW15K-SDT-AU30	GW20K-SDT-AU30
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I
The Decisive Voltage Class (DVC)	PV：C	PV：C	PV：C
	AC：C	AC：C	AC：C
	Com：A	Com：A	Com：A
Active Anti-islanding Method	AFDPF + AQDPF *5	AFDPF + AQDPF *5	AFDPF + AQDPF *5
Country of Manufacture	China	China	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: The PV input voltage should be higher than the Max. MPPT Voltage at Nominal Power.
*5: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

Technical Data	GW25K-SDT-AU30	GW29K9-SDT-AU30	GW50K-SDT-C30
Input			
Max. Input Power (kW)	37.5	45	75
Max. Input Voltage (V)*1	1100	1100	1100

Technical Data	GW25K-SDT-AU30	GW29K9-SDT-AU30	GW50K-SDT-C30
MPPT Operating Voltage Range (V)*2*3	140~950	140~950	140 ~ 1000
MPPT Voltage Range at Nominal Power (V)*4	400~850	400~850	450~850
Start-up Voltage (V)	160	160	160
Nominal Input Voltage (V)	600	600	600
Max. Input Current per MPPT (A)	40/40/40	40/40/40	40
Max. Short Circuit Current per MPPT (A)	56/56/56	56/56/56	52
Max. Backfeed Current to The Array (A)	0	0	0
Number of MPP Trackers	3	3	4
Number of Strings per MPPT	2	2	2
Output			
Nominal Output Power (W)	25	29.99	50
Nominal Output Apparent Power (VA)	25	29.99	50
Max. AC Active Power (W)	25	29.99	50
Max. AC Apparent Power (VA)	25	29.99	50
Nominal Power at 40℃ (W)	25	29.99	50

Technical Data	GW25K-SDT-AU30	GW29K9-SDT-AU30	GW50K-SDT-C30
Max. Power at 40℃ (Including AC Overload) (W)	25	29.99	50
Nominal Output Voltage (V)	230/400, 3L/N/PE or 3L/PE	230/400, 3L/N/PE or 3L/PE	220/380, 230/400, 240/415, 3L/N/PE or 3L/PE
Output Voltage Range (V)	180 ~ 260 (According to local standard)	180 ~ 260 (According to local standard)	180~280 (according to local standard)
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60
AC Grid Frequency Range (Hz)	45~55 / 55~65	45~55 / 55~65	45~55/55~65
Max. Output Current (A)	37.9	45.5	75.7
Max. Output Fault Current (Peak and Duration) (A)	126 @6.5us	126 @6.5us	230 @ 4.36μs
Inrush Current (Peak and Duration) (A)	48.12 @50us	48.12 @50us	26.4A @8.5ms
Nominal Output Current (A)	36.3 @400Vac	43.5 @400Vac	75.7 @380Vac 72.4 @400Vac 69.4 @415Vac
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)	~1 (Adjustable from 0.8 leading to 0.8 lagging)

Technical Data	GW25K-SDT-AU30	GW29K9-SDT-AU30	GW50K-SDT-C30
Max. Total Harmonic Distortion	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	126	126	196.6
Efficiency			
Max. Efficiency	98.7%	98.7%	98.7%
European Efficiency	98.3%	98.3%	98.0%
Protection			
PV String Current Monitoring	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated
DC Surge Protection	Type II	Type II	Type II
AC Surge Protection	Type II	Type II	Type II

Technical Data	GW25K-SDT-AU30	GW29K9-SDT-AU30	GW50K-SDT-C30
AFCI	Optional	Optional	Optional
Rapid Shutdown	Optional	Optional	Optional
Remote Shutdown	Integrated	Integrated	Integrated
PID Recovery	Optional	Optional	Optional
Power Supply at Night	Integrated	Integrated	Optional
Shadow scanning	Integrated	Integrated	Integrated
General Data			
Operating Temperature Range (℃)	-30 ~ 60	-30 ~ 60	-30 ~ 60
Derating temperature (℃)	45	45	45
Storage Temperature (℃)	-30 ~ 70	-30 ~ 70	-30 ~ 70
Relative Humidity	0 ~ 100%	0 ~ 100%	0 ~ 100%
Max. Operating Altitude (m)	4000	4000	4000
Cooling Method	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling
User Interface	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP	LED, LCD (Optional), WLAN+APP
Communication	WiFi+Lan+Bluetooth or 4G+Bluetooth（optional）	WiFi+Lan+Bluetooth or 4G+Bluetooth（optional）	WiFi+Lan+Bluetooth or 4G+Bluetooth（optional）
Communication Protocols	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP	Modbus RTU, Modbus TCP

Technical Data	GW25K-SDT-AU30	GW29K9-SDT-AU30	GW50K-SDT-C30
Weight (kg)	< 30	< 30	33
Dimension (W×H×D mm)	585×483×230	585×483×230	646*484*230
Noise Emission (dB)	< 45	< 45	< 50
Topology	Non-isolated	Non-isolated	Non-isolated
Self-consumption at Night (W)	<1	<1	<1
Ingress Protection Rating	IP66	IP66	IP66
Anti-corrosion Class	C4	C4	C4
DC Connector	MC4 (Max. 4 ~ 6 mm²)	MC4 (Max. 4 ~ 6 mm²)	MC4 (4 ~ 6mm²)
AC Connector	OT terminal (Max. 25mm²)	OT terminal (Max. 25 mm²)	OT/DT terminal (Max. 70 mm²)
Environmental Category	4K4H	4K4H	4K4H
Pollution Degree	III	III	III
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I
The Decisive Voltage Class (DVC)	PV: C AC: C Com: A	PV: C AC: C Com: A	PV: C AC: C Com: A
Active Anti-islanding Method	AFDPF + AQDPF *5	AFDPF + AQDPF *5	AFDPF + AQDPF *5
Country of Manufacture	China	China	China

*1: When the input voltage is 1000V-1100V, the inverter will enter standby mode.

The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.
*2: PV modules connected to the same MPPT need to be of the same type of PV panel. The voltage difference between the different MPPTs must be <160 V.
*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*4: The PV input voltage should be higher than the Max. MPPT Voltage at Nominal Power.
*5: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

9 Explanation of Terms

Overvoltage category definition

- **Category I overvoltage**Equipment connected to circuits with measures to limit transient overvoltage to a relatively low level.
- **Overvoltage Category II**Energy-consuming equipment powered by fixed electrical distribution installations. Such equipment includes appliances, portable tools, and other household and similar loads. If special requirements for reliability and suitability apply to such equipment, voltage Category III shall be used.
- **Category III overvoltage**The equipment in fixed electrical installations must meet special requirements for reliability and suitability. This includes switching devices in fixed electrical installations and industrial equipment permanently connected to fixed electrical installations.
- **Overvoltage category IV**The upper equipment used in the power supply of distribution devices includes measuring instruments and prefixed overcurrent protection devices.
- **Definition of Wet Location Categories**

Environmental parameters	level		
	3K3	4K2	4K4H
Temperature range	0~+40℃	-33~+40℃	-33~+40℃
Humidity scope	5% to 85%	15% to 100%	4% to 100%

- **Explanation of Environmental Categories:**
  - **Outdoor Inverter**The ambient air temperature range is -25 to +60°C, suitable for Pollution Degree3 environments;
  - **Indoor Type II Inverter**The ambient air temperature range is -25 to +40°C, suitable for Pollution Degree3 environments;
  - **Indoor Type I Inverter**The ambient air temperature range is 0 to +40°C, suitable for Pollution Degree2 environments;
- **Pollution Degree category definition**
  - **Pollution Degree1**No pollution or only dry non-conductive pollution;
  - **Pollution Degree2**Generally, there is only non-conductive pollution, but occasional temporary conductive pollution due to condensation must be

considered.

- **Pollution Degree3**Conductive contamination, or non-conductive contamination becoming conductive due to condensation;
- **Pollution Degree4**Persistent conductive contamination, such as that caused by conductive dust or rain/snow.

10 Related product manuals acquisition

Document Name	Official website link
Quick Start Guide for Smart Meter (GM330, GMK330)	Quick Start Guide for Smart Meter Installation (GM330, GMK330)
EzLink3000 Quick Commissioning Guide	EzLink3000 Quick Commissioning Guide
Ezlogger3000C Quick Installation Guide	Ezlogger3000C Quick Commissioning Guide
EzLogger Pro Quick Installation Guide	EzLogger Pro Quick Installation Guide
4G Kit-CN-G20, 4G Kit-CN-G21 Quick Installation Guide	4G Kit-CN-G20, 4G Kit-CN-G21 Quick Installation Guide
WiFi, LAN Kit-20, WiFi Kit-20 Quick Installation Guide	WiFi, LAN Kit-20, WiFi Kit-20 Quick Installation Guide