V2.0 2025-09-25

Grid-Tied PV Inverter

SDT Series (4.0-50kW) G3

User Manual

GOODWE

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NOTICE

The information in this document is subject to change due to product updates or other reasons. This document cannot replace the product labels or the safety precautions unless otherwise specified. All descriptions in the manual are for guidance only.

1 About This Manual

This document describes the product information, installation, electrical connection, commissioning, troubleshooting, and maintenance of the inverter. Read through this manual before installing and operating the products to understand product safety information and familiarize yourself with functions and features of the product. This manual is subject to update without notice. For more product details and latest documents, visit https://en.goodwe.com/.

1.1 Applicable Model

This manual applies to the listed inverters below:

Model	Rated Output Power	Rated 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	

1.2 Target Audience

Only for use by professionals who are familiar with local regulations and standards, electrical systems, and who have received professional training and are knowledgeable about this product.

1.3 Symbol Definition

To make better use of this manual, the following symbols are used to highlight important information. Please read the symbols and explanations carefully.

⚠DANGER
Indicates a high-level hazard that, if not avoided, will result in death or serious injury.
⚠WARNING
Indicates a medium-level hazard that, if not avoided, could result in death or serious injury.
⚠CAUTION
Indicates a low-level hazard that, if not avoided, could result in minor or moderate injury.
NOTICE
Highlights key information and supplements the texts. Or some skills and methods to solve product-related problems to save time.

2 Safety Precautions

WARNING

The inverters are designed and tested strictly complying with related safety rules. Read and follow all the safety instructions and cautions before any operations. Improper operation might cause personal injury or property damage as the inverters are electrical equipment.

2.1 General Safety

NOTICE

- The information in this document is subject to change due to product updates or other reasons. This document cannot replace the product labels or the safety precautions unless otherwise specified. All descriptions in the manual are for guidance only.
- Before installations, read through the user manual to learn about the product and the precautions.
- All operations should be performed by trained and knowledgeable technicians who are familiar with local standards and safety regulations.
- Use insulating tools and wear personal protective equipment (PPE) when operating the equipment to ensure personal safety. Wear anti-static gloves, wrist strips, and cloths when touching electronic devices to protect the equipment from damage.
- Unauthorized dismantling or modification may damage the equipment, and the damage is not covered under the warranty.
- Strictly follow the installation, operation, and configuration instructions in this manual or the user manual. The manufacturer shall not be liable for equipment damage or personal injury if you do not follow the instructions. For more warranty details, please visit https://www.goodwe.com/warrantyrelated.html.

2.2 DC Side

DANGER

Connect the inverter DC cables using the delivered DC connectors. The manufacturer shall not be liable for the equipment damage if DC connectors of other models are used.

WARNING

- Ensure the PV module frames and the bracket system are securely grounded.
- Ensure the DC cables are connected tightly, securely and correctly.
- Damage caused by reverse connection, overvoltage, or overcurrent when measuring PV strings with a multimeter is not covered by the equipment manufacturer's warranty.
- Photovoltaic modules connected to the same MPPT must use photovoltaic panels of the same model. The voltage difference between different MPPT devices must be less than 160V.
- 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.
- It is recommended that the sum of the Imp of the PV strings connected to each MPPT shall not exceed the Max. Input Current per MPPT of the inverter.
- When connecting multiple PV strings to the inverter, it is recommended that each MPPT be connected to at least one string, and that there be no empty connections to the MPPT.
- PV modules used with inverters must comply with IEC 61730 Class A standard.

2.3 AC Side

⚠WARNING

- The voltage and frequency at the connecting point should meet the on-grid requirements.
- Additional protective devices like circuit breakers or fuses are recommended on the AC side. Specification of the protective device should be at least 1.25 times the maximum output current.
- Make sure that all the groundings are tightly connected.
- You are recommended to use copper cables as AC output cables. If you prefer aluminum cables, remember to use copper to aluminum adapter terminals.

2.4 Inverter

⚠DANGER

- Do not apply mechanical load to bottom terminals, otherwise the terminals may be damaged.
- All labels and warning marks should be visible after the installation. Do not cover, scrawl, or damage any label on the equipment.
- The warning labels on the inverter enclosure are as follows:

No.	Symbol	Descriptions
1		Potential risks exist. Wear proper PPE before any operations.
2		High voltage hazard. High voltage exists. Disconnect all incoming power and turn off the product before working on it.
3		High-temperature hazard. Do not touch the product under operation to avoid being burnt.
4		Delayed discharge. Wait 5 minutes after power off until the components are completely discharged.
5		Read through the user manual before any operations.
6		Do not dispose of the System as household waste. Deal with it in compliance with local laws and regulations, or send it back to the manufacturer.
7		Grounding point.
8		CE Mark.

2.5 EU Declaration of Conformity

2.5.1 Equipment with Wireless Communication Modules

The equipment with wireless communication modules sold in the European market meets the requirements of 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)

2.5.2 Equipment without Wireless Communication Modules

The equipment without wireless communication modules sold in the European market meets the requirements of the following directives:

- 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)

2.6 Personal Requirements

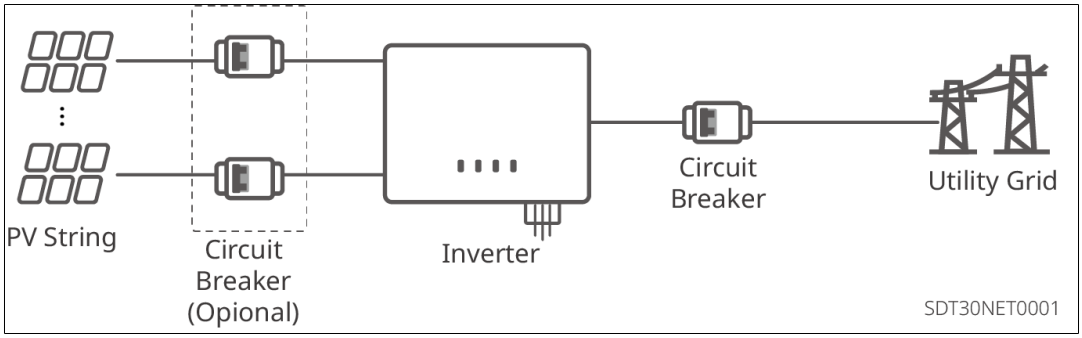
NOTICE

- Personnel who install or maintain the equipment must be strictly trained, learn about safety precautions and correct operations.
- Only qualified professionals or trained personnel are allowed to install, operate, maintain, and replace the equipment or parts.

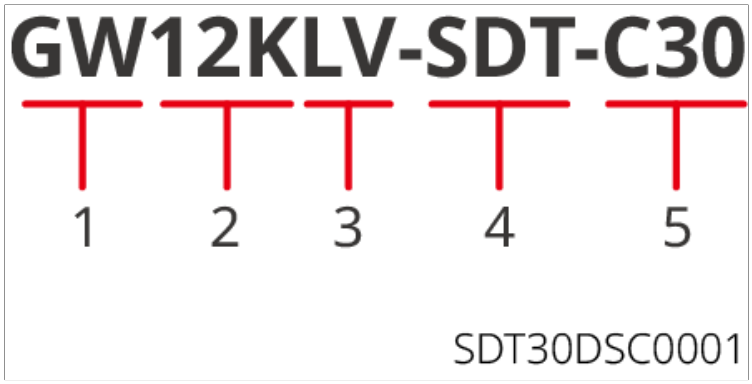
3 Product Introduction

3.1 Overview

The SDT inverter is a three-phase PV string on-grid inverter.The inverter converts the DC power generated by the PV module into AC power and feeds it into the utility grid.The intended use of the inverter is as follows:



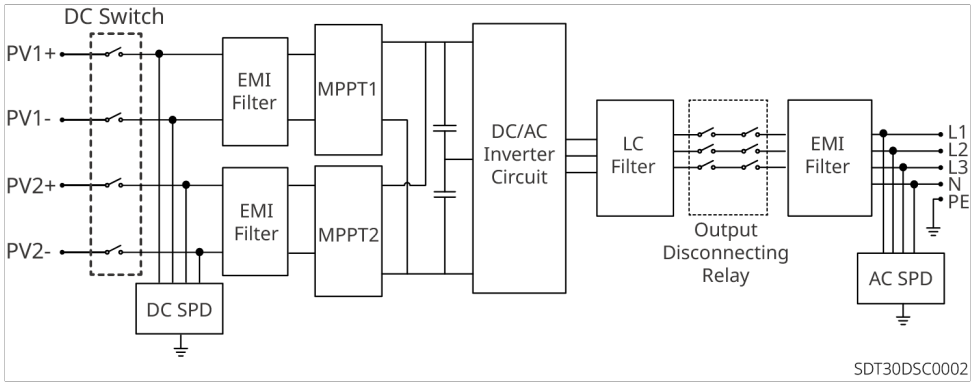
Model Description



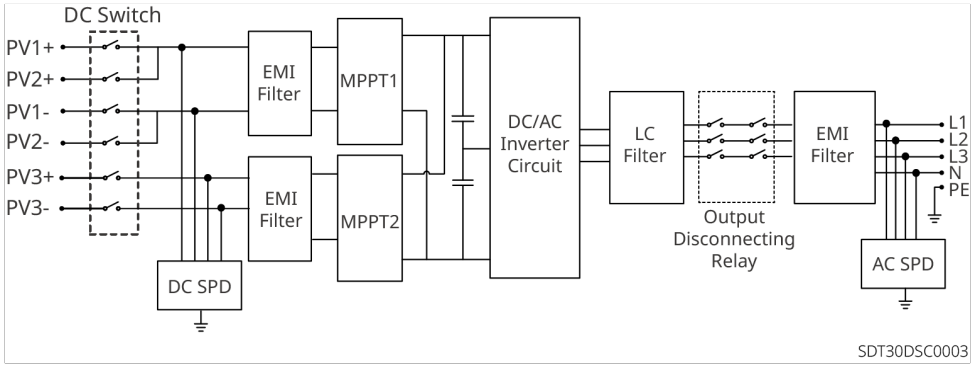
No.	Descriptions	Description
1	Brand Code	GW: GoodWe
2	Rated Power	12K: The nominal power is 12kW
3	Type of Electrical Supply System	LV: Low Voltage Grid
4	Series Code	SDT: SDT Series
5	Version Code	The inverter version is 3.0

3.2 Circuit Diagram

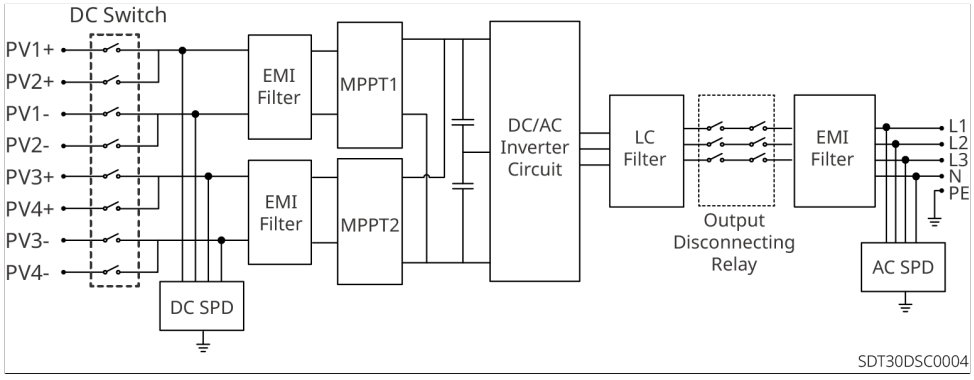
GW4000-SDT-30, GW5000-SDT-30, GW6000-SDT-30, GW8000-SDT-30, GW10K-SDT-30, GW10K-SDT-EU30, GW12K-SDT-30, GW15K-SDT-30:



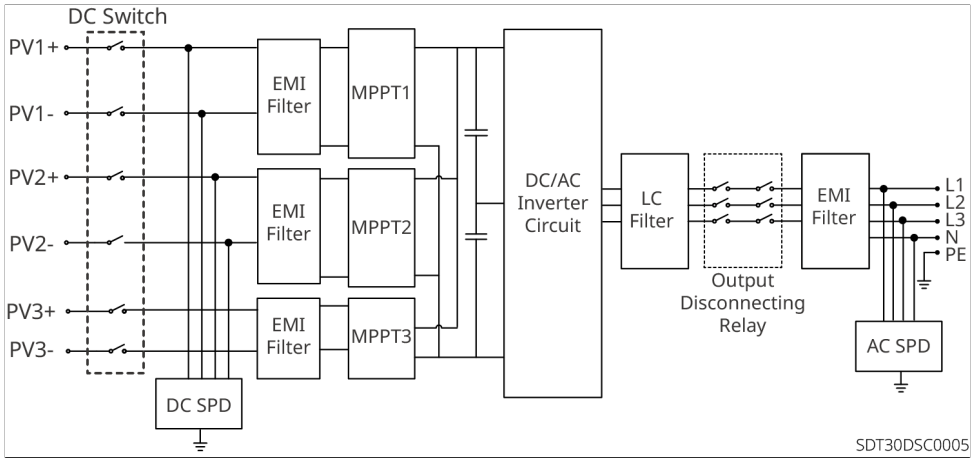
GW12KLV-SDT-C30, GW17K-SDT-30, GW20K-SDT-30, GW25K-SDT-C30:



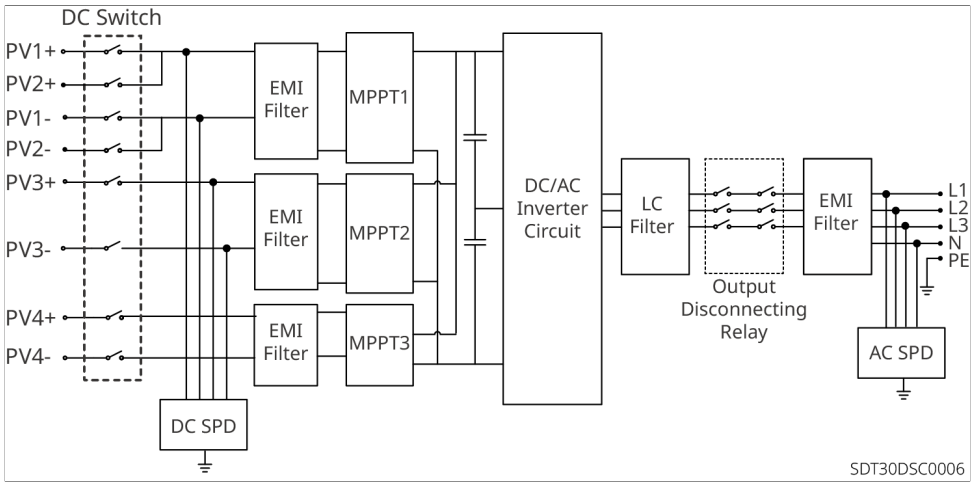
GW17KLV-SDT-C30, GW30K-SDT-C30, GW20K-SDT-31, GW12KLV-SDT-C31, GW25K-SDT-P31:



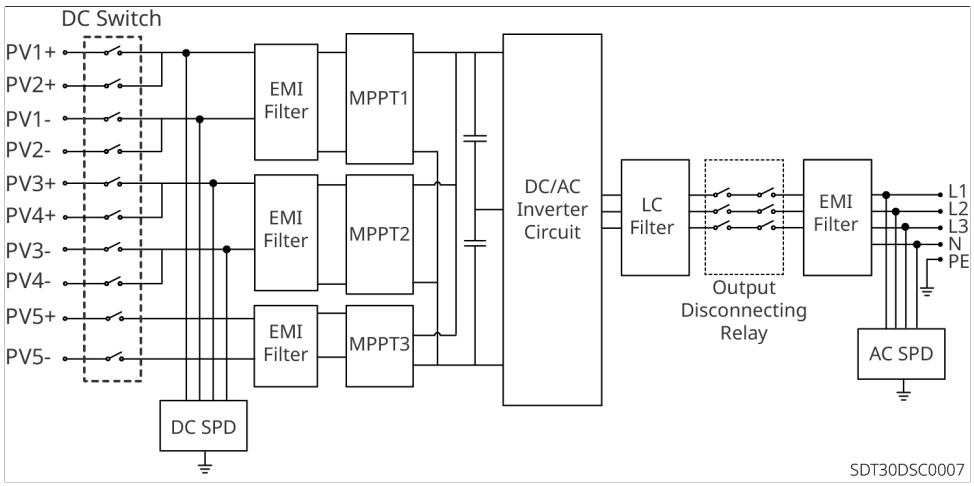
GW5000-SDT-AU30, GW6000-SDT-AU30:



GW8000-SDT-AU30, GW9990-SDT-AU30:

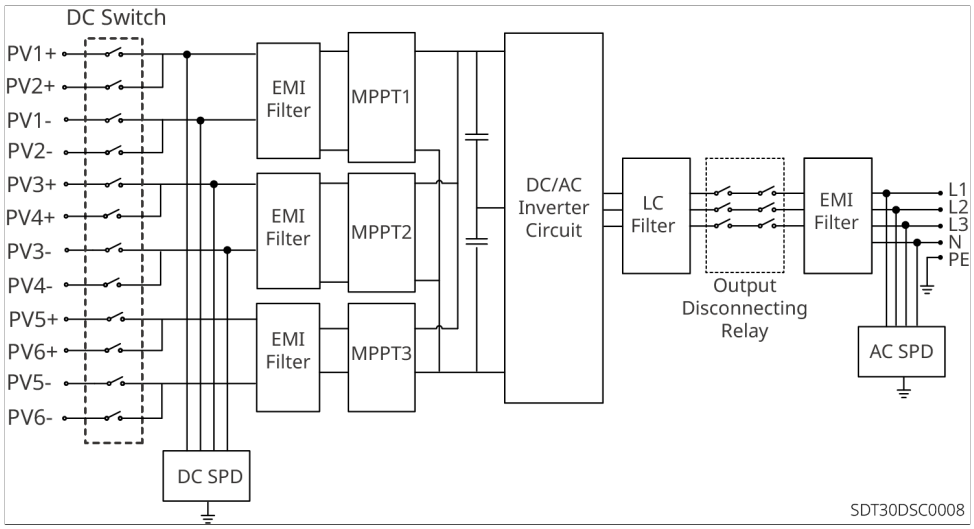


GW15K-SDT-AU30, GW20K-SDT-AU30:

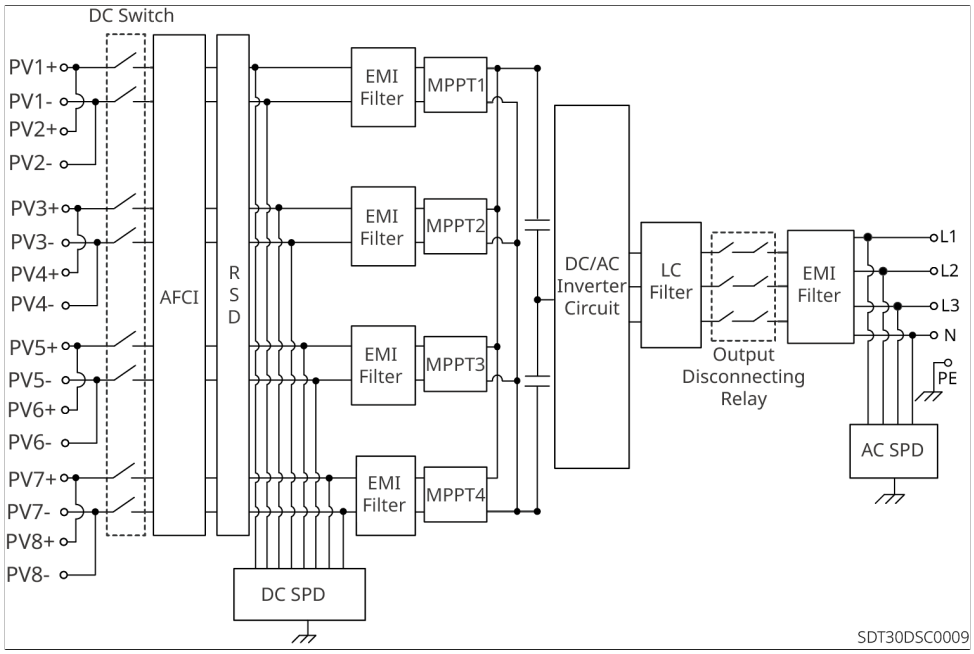


GW25K-SDT-AU30, GW29K9-SDT-AU30, GW25K-SDT-30, GW30K-SDT-30, GW23KLV-

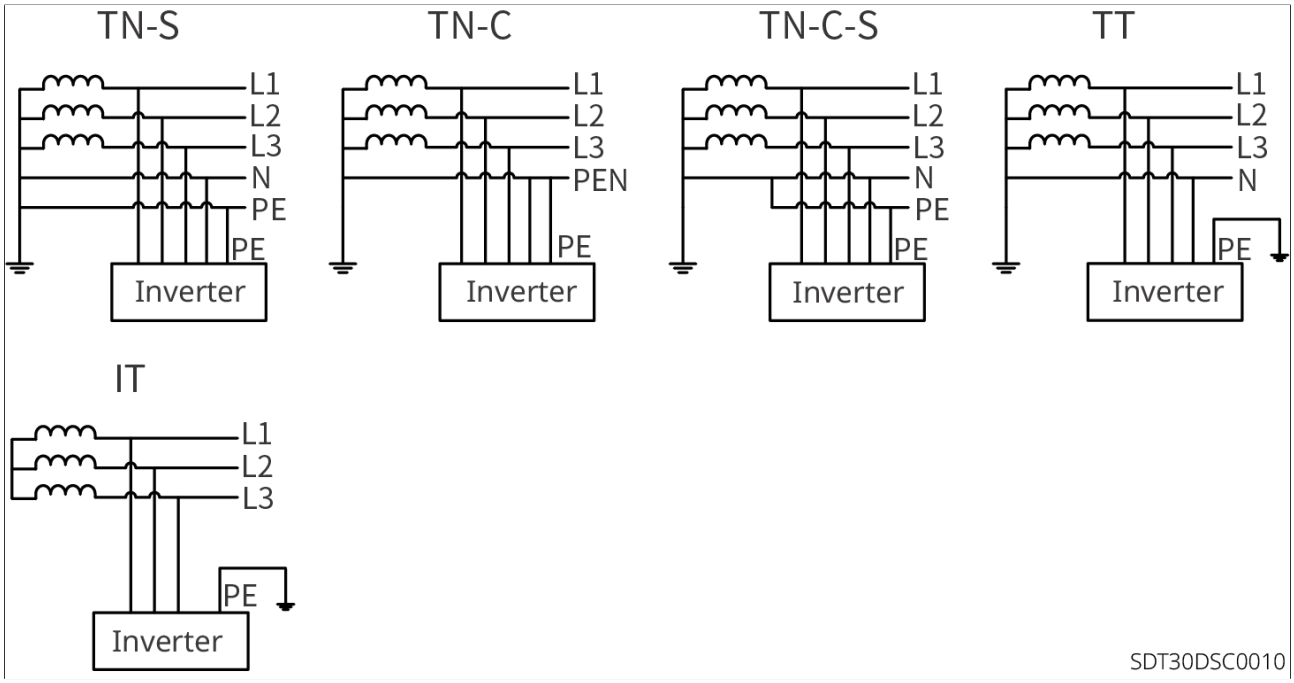
SDT-BR30, GW37K5-SDT-BR30, GW33K-SDT-C30, GW36K-SDT-C30, GW40K-SDT-C30:



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



3.3 Supported Grid Types



3.4 Features

AFCI

The AFCI function is used to detect the arc faults on the DC side of the inverter. When an arc fault occurs, the inverter will automatically provide protection.

Reasons for the occurrence of electric arcs:

- Damaged or improperly connected DC connectors in the PV system.
- Wrong connected or broken cables.
- Aging connectors and cables.

Arc detection methods:

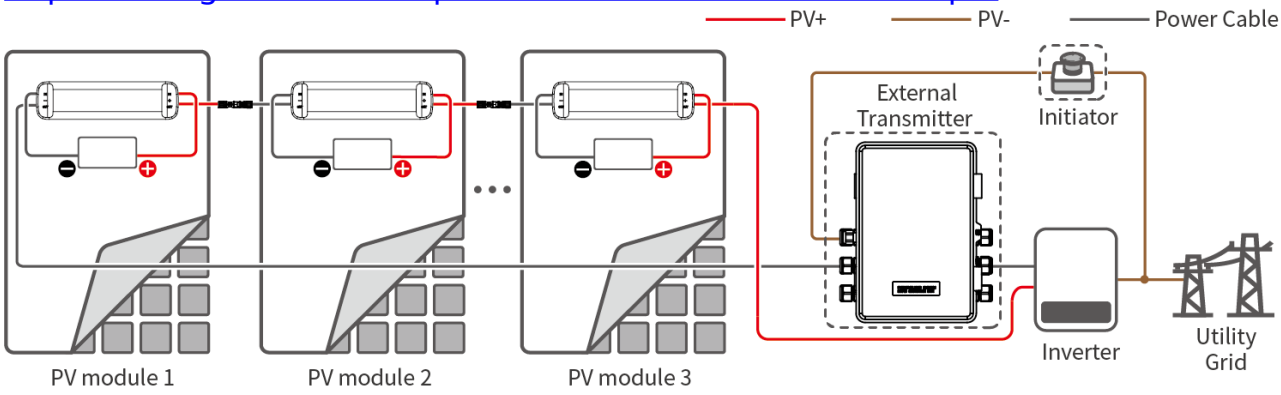
When the inverter detects an arc, the type of fault can be viewed through the App. When arc detection is triggered, the inverter issues an alarm and shuts down for protection. Wait 60 seconds and the machine will automatically resume on-grid status. If multiple shutdown protections occur, check the inverter wiring and eliminate the arc phenomenon. For more details, refer to the SolarGo App User Manual.

RSD

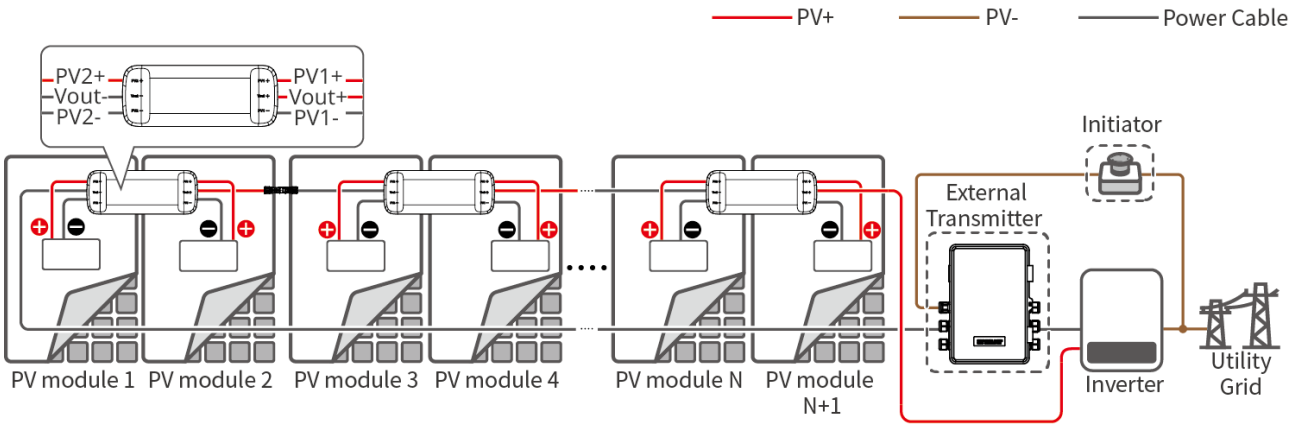
In the rapid shutdown system, the transmitter is used in conjunction with a receiver to achieve the rapid shutdown of the system. The receiver maintains the component

output by receiving signals from the transmitter. The transmitter can be external or built into the inverter. In the event of an emergency, the component can be shut down by enabling an external trigger to stop the transmitter.

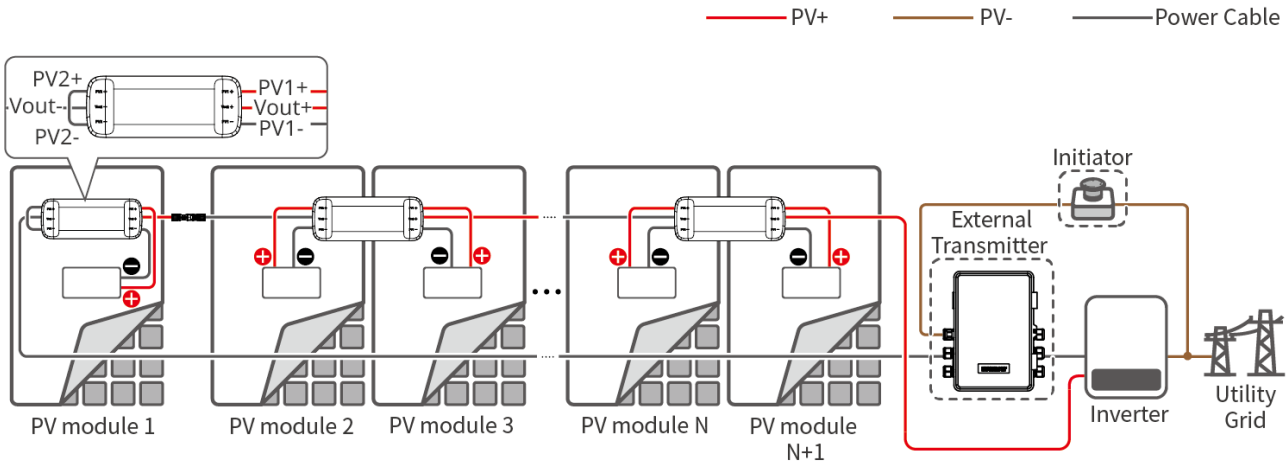
External Transmitter
Transmitter models: GTP-F2L-20 and GTP-F2M-20
https://www.goodwe.com/Ftp/Installation-instructions/RSD2.0-transmitter.pdf
Receiver models: GR-B1F-20、GR-B2F-220
https://www.goodwe.com/Ftp/Installation-instructions/RSD2.0.pdf



RSD20NET0003



RSD20NET0004



Built-in Transmitter:

External trigger device: AC side circuit breaker;

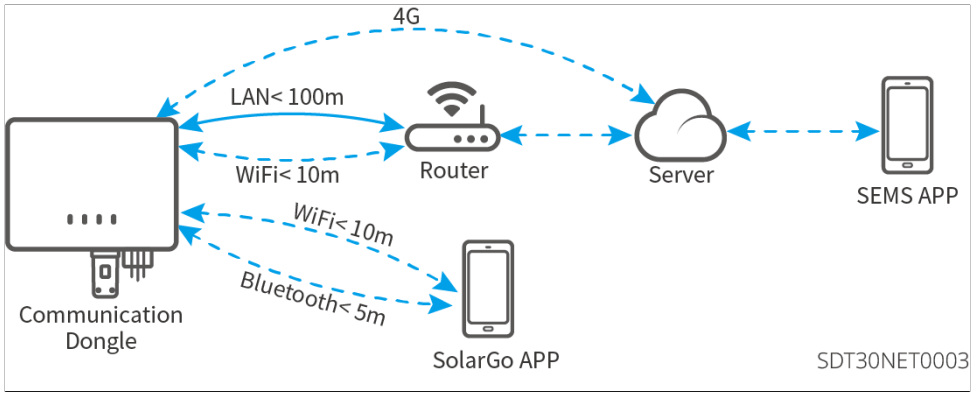
Receiver models: GR-B1F-20 and GR-B2F-+20

https://www.goodwe.com/Ftp/Installation-instructions/RSD2.0.pdf

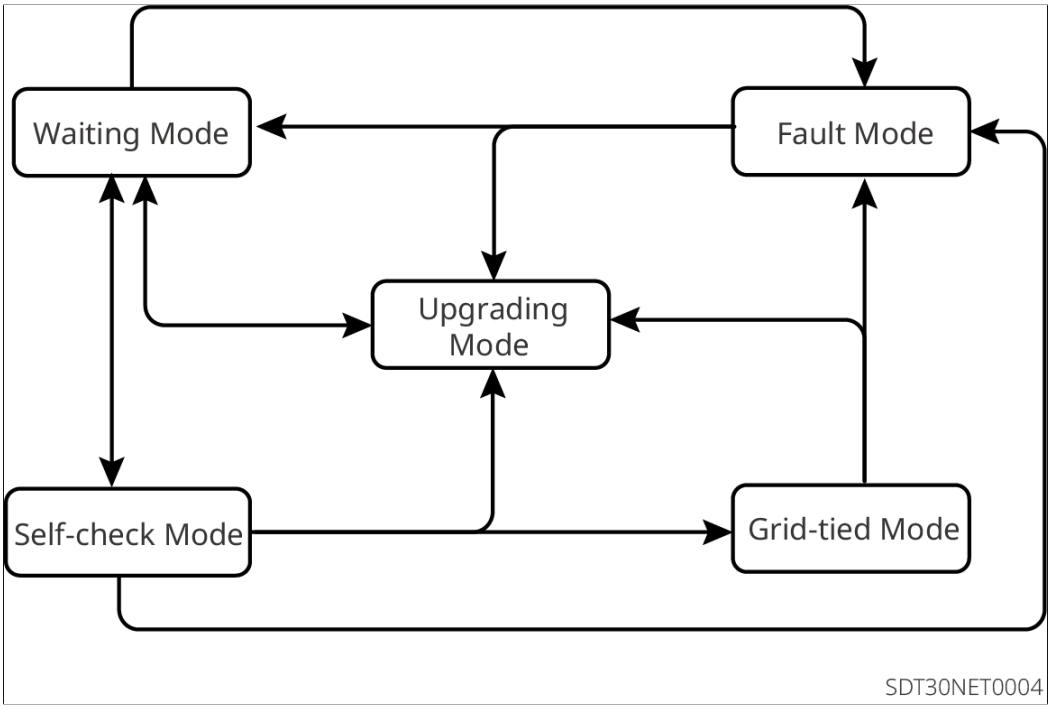
Communication

The inverter supports parameter setting via Bluetooth in the near proximity. It also supports connecting to the monitoring platform via 4G, so as to monitor the operation status of the inverter, the operation conditions of the power station, etc.

- Bluetooth: meets Bluetooth 5.1 standard.
- 4G: It supports connection to a third-party monitoring platform via the MQTT communication protocol.



3.5 Operation Mode of Inverters



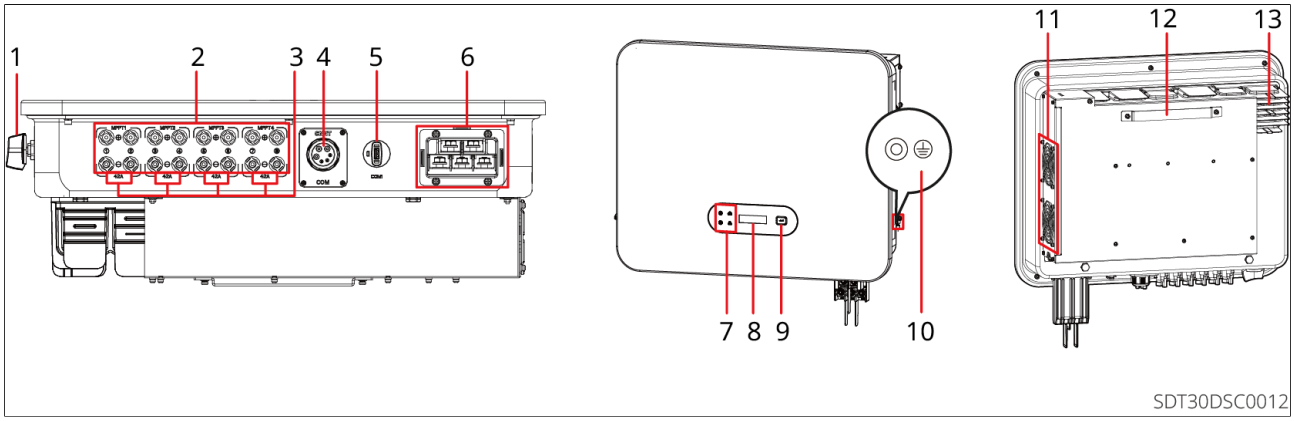
No.	Component	Description
1	Standby Mode	Standby stage after the machine is powered on. • When the conditions are met, enter self-check mode. • If a fault occurs, the inverter enters fault mode. • If an upgrade request is received, enter upgrade mode.
2	Self-check Mode	Before the inverter starts, it continuously performs self-checks, initialization, etc. • If the conditions are met, the on-grid mode is activated and the inverter starts grid connection operation. • If an upgrade request is received, enter upgrade mode. • If the self-check fails, the device enters fault mode.
3	On-grid Mode	The inverter is normal and in the on-grid mode. • If a fault is detected, the system enters fault mode. • If an upgrade request is received, enter upgrade mode.

4	Fault Mode	If a fault is detected, the inverter enters fault mode and waits until the fault is cleared before entering standby mode. After the standby mode ends, the inverter detects the operating status and then enters the next operating mode.
5	Upgrade Mode	The inverter enters this state when the program is updated. When the program update is complete, enter standby mode. After the standby mode ends, the inverter detects the operating status and then enters the next operating mode.

3.6 Appearance

There may be differences in the appearance and color of the product, and it refer to the actual situation.

3.6.1 Component Introduction



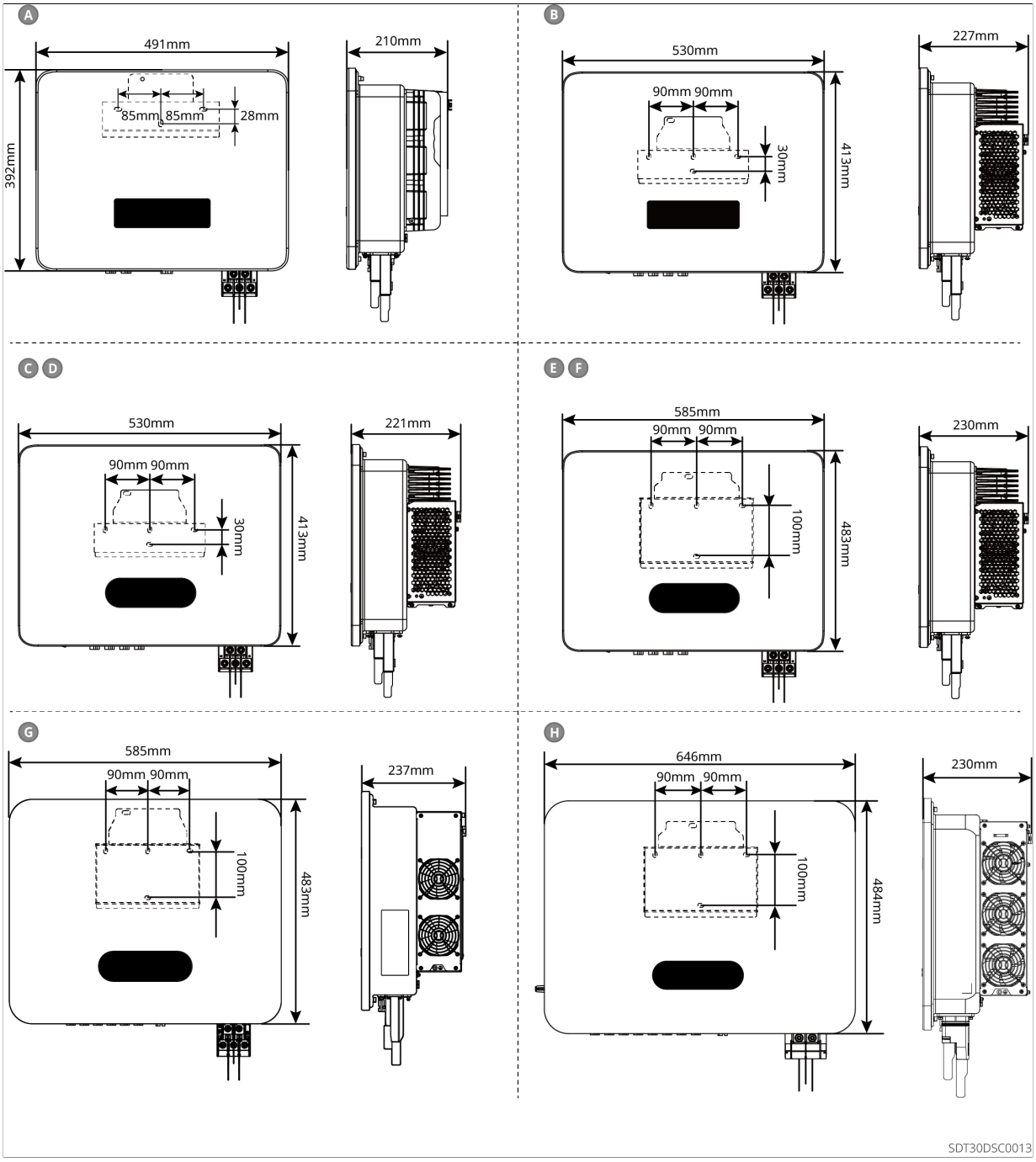
No.	Components / Silk Screen Printing	Description
1	DC Switch	Start or stop DC input.
2	PV Input Terminal	Used to connect the PV module DC input cables.
3	Maximum Input Current per MPPT (Silkscreen)	The maximum current value that can be connected to each MPPT of the inverter.The values vary depending on the inverter model.For specific values, please refer to the inverter technical parameters.

4	Communication Terminal	Can be connected to RS485 and electric meters.
5	Smart Dongle Terminal	To connect the smart dongle, the dongle type may differ depending on actual needs.
6	AC Output Port	To connect the AC output cable, which links the inverter with the utility grid.
7	Indicator	Indicates the operating status of the inverter.
8	LCD (optional)	Used to check the parameters of the inverter.
9	Button (optional)	Works with the display to operate the inverter.
10	Grounding Terminal	Used to connect the PE cable.
11	Fan	The inverter is equipped with an external fan to cool 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	Mountings	Inverter can be hooked up.
13	Heat Sink	Used to cool the inverter.

3.6.2 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



SDT30DSC0013

3.6.3 Indicator Description

Three LEDs

Indicator	Status	Description
Power		STEADY ON= WIRELESS IS CONNECTED/ACTIVE
		SINGLE BLINKING= WIRELESS SYSTEM IS RESETTING
		BLINK 2 = NOT CONNECTED TO ROUTER/NOT CONNECTED TO BASE STATION
		BLINK 4 = NOT CONNECTED TO MONITORING SERVER
		BLINK: RS485 COMMUNICATION NORMAL
		OFF = WIRELESS IS RESTORING FACTORY DEFAULT SETTING
Running		STEADY ON = THE INVERTER IS FEEDING POWER
		POWER OFF: THE INVERTER IS NOT FEEDING POWER
Communication		STEADY ON = A FAULT HAS OCCURRED
		OFF = NO FAULT

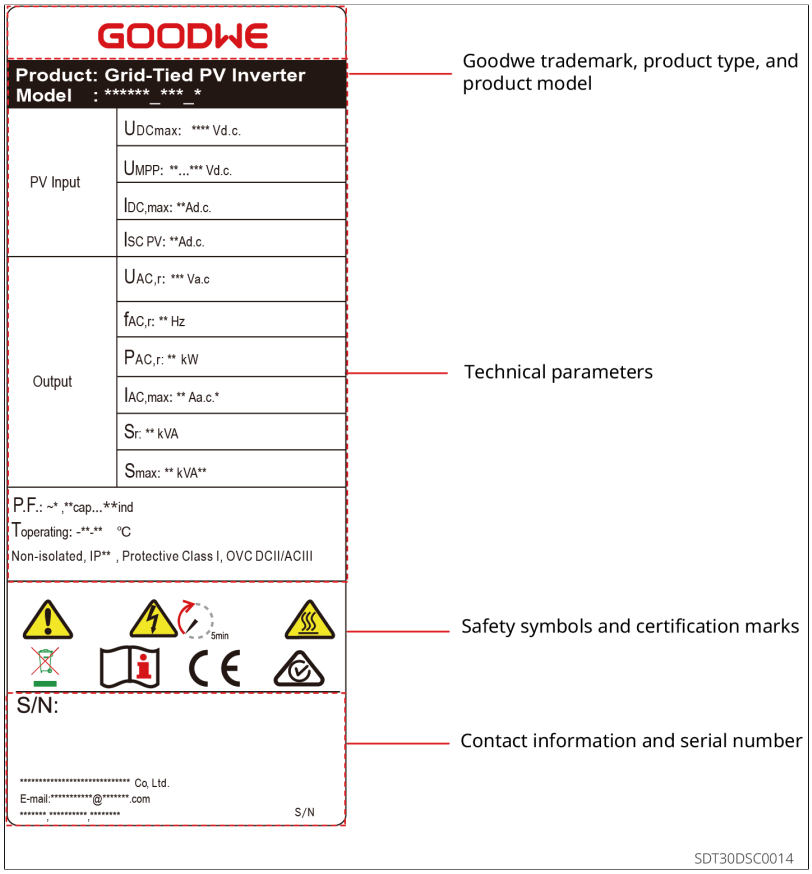
Four LEDs

Indicator	Status	Description
Power		ON: EQUIPMENT POWER ON
		POWER OFF: EQUIPMENT NOT POWER ON

Running		On: THE INVERTER IS FEEDING POWER
		POWER OFF: THE INVERTER IS NOT FEEDING POWER
		SINGLE SLOW BLINKING SELF CHECK BEFORE CONNECTING TO THE GRID
		SINGLE FAST BLINKING CONNECTING TO THE GRID
Communication		On: WIRELESS IS CONNECTED/ACTIVE
		BLINKS 1 TIME: WIRELESS SYSTEM IS RESETTING
		BLINKS 2 TIMES: WIRELESS IS NOT CONNECTED TO ROUTER OR BASE STATION
		BLINKS 4 TIMES: NOT CONNECTED TO MONITORING SERVER
		BLINKS: RS485 COMMUNICATION NORMAL
		POWER OFF: WIRELESS IS RESTORING FACTORY DEFAULT SETTING
Fault		ON: SYSTEM FAILURE
		POWER OFF: NO FAULT

3.6.4 Nameplate Description

The nameplates are for reference only. The actual product may differ.



3.7 Check Before Receiving

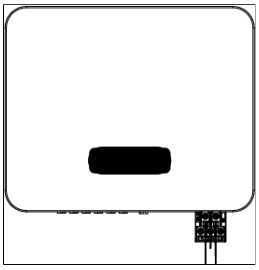
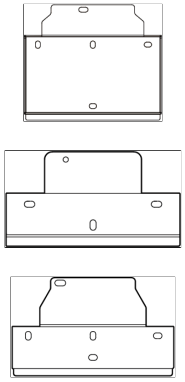
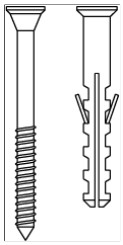
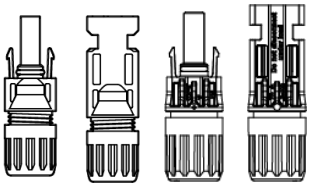
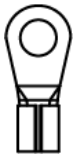
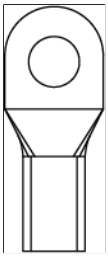
Check the following items before accept.

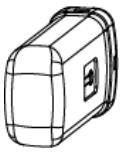
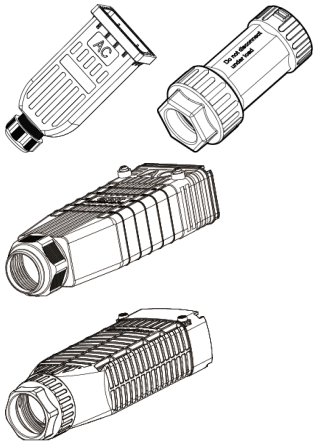
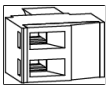
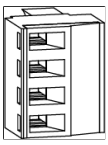
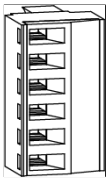
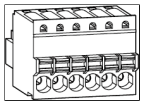
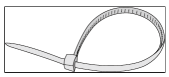
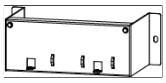
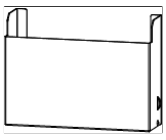
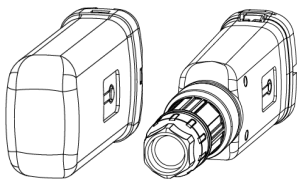
1. Check the outer packing box for damage, such as holes, cracks, deformation, and other signs of equipment damage. Do not unpack the package and contact the supplier as soon as possible if any damage is found.
2. Check the inverter model. If the product model is not what you requested, do not unpack the product and contact the supplier.
3. Check the deliverables for correct model, complete contents, and intact appearance. Contact the supplier as soon as possible if any damage is found.

3.8 Deliverables

NOTICE

[1] The type of mounting plate depends on the type of inverter.
[2] The number of DC connectors is the same as the number of DC terminals of the inverter. You may confirm it according to the number of DC terminals of the inverter.
[3] The number of expansion bolts matches with that of mounting plate holes.
[4] The number of communication terminals and PIN terminals shall match the selected communication mode. You may confirm it according to the communication configuration. The number of 2PIN communication terminals, 3PIN communication terminals, 4PIN communication terminals, or DRED/RCR communication terminals varies for different inverter configuration. The actual situation prevails.
[5] Smart dongle: 4G, WiFi/LAN smart dongle. The actual delivered type depends on the selected inverter communication method.
Positioning plate and shields are only applicable to the following types: 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] The number of GW5000-SDT-AU30, GW6000-SDT-AU30, GW8000-SDT-AU30, GW9990-SDT-AU30, GW15K-SDTAU30, GW20K-SDT-AU30 type AC OT Terminal: 0; the number of GW25K-SDT-AU30, GW29K9-SDT-AU30, GW25K-SDT-30, GW30K-SDT-30 model AC OT Terminal: 5.
[8] The cable ties used to secure the cable harness and protective cover support plate are only applicable to models equipped with a protective cover. 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 model quantity: 3; GW50K-SDT-30 model quantity: 5.

Component	Description	Component	Description
	Inverter x 1		Mounting plate x 1[1]
	Expansion bolt x N[3]		DC Connector x N[2]
	Grounding OT terminal x 1		Documents x 1
	AC OT terminal x N[7]		PIN Terminal x N[4]

Component	Description	Component	Description
	Smart dongle x1		AC terminal shield x 1
	2PIN communication terminals x N[4]		3PIN communication terminals x N[4]
	4PIN communication terminals x N[4]		6PIN communication terminals x 1
	DRED/RCR communication terminals x N[4]		Wire harness and protective cover support plate fixing cable ties x N[8]
 	Protection cover x 1 [6]		Smart dongle x 1[5]

3.9 Storage

If the equipment is not to be installed or used immediately, please ensure that the storage environment meets the following requirements:

1. Do not unpack the outer package or throw the desiccant away.
2. Store the equipment in a clean place. Make sure the temperature and humidity are appropriate and there is no condensation.
3. The height and direction of the stacking inverter should follow the instructions on the packing box.
4. The inverter must be stacked with caution to prevent them from falling.
5. If the inverter has been stored for more than two years or has not been in operation for more than six months after installation, it is recommended to be inspected and tested by professionals before being put into use.
6. To ensure good electrical performance of the internal electronic components of the inverter, it is recommended to power it on every 6 months during storage. If it has not been powered on for more than 6 months, it is recommended to to be inspected and tested by professionals before being put into use.

4 Installation

4.1 Installation Requirements

Installation Environment Requirements

1. Do not install the equipment in a place near flammable, explosive, or corrosive materials.
2. The mounting bracket is sturdy and reliable, capable of supporting the weight of the inverter.
3. The place to install the equipment shall be well-ventilated for heat radiation and large enough for operations.
4. The equipment with a high ingress protection rating can be installed indoors or outdoors.The temperature and humidity at the installation site should be within the appropriate range.
5. Install the inverter in a sheltered place to avoid direct sunlight, rain, and snow.Build a sunshade if it is needed.
6. Do not install the equipment in a place that is easy to touch, especially within children's reach.High temperatures may exist on the surface of the equipment during operation to prevent burns.
7. Install the equipment at a height that is convenient for operation and maintenance, electrical connections, and checking indicators and labels.
8. When the installation altitude of GW5000-SDT-AU30, GW6000-SDT-AU30, GW8000-SDT-AU30, GW9990-SDT-AU30, GW15K-SDT-AU30 , GW20KSDT-AU30 is lower than 3000m and higher than 2000m, the inverter will derate.The installation altitude of 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 is lower than 4000m.
9. The inverter is easy to be corroded when installed in salt areas.A salt-affected area refers to the region within 1000 meters offshore or affected by the sea breeze.The area prone to the sea breeze varies depending on weather conditions (e.g. typhoon, monsoon) or terrain (such as dams and hills).
10. Install the equipment away from electromagnetic interference.If there is any radio or wireless communication equipment below 30MHz near the equipment, you have to:

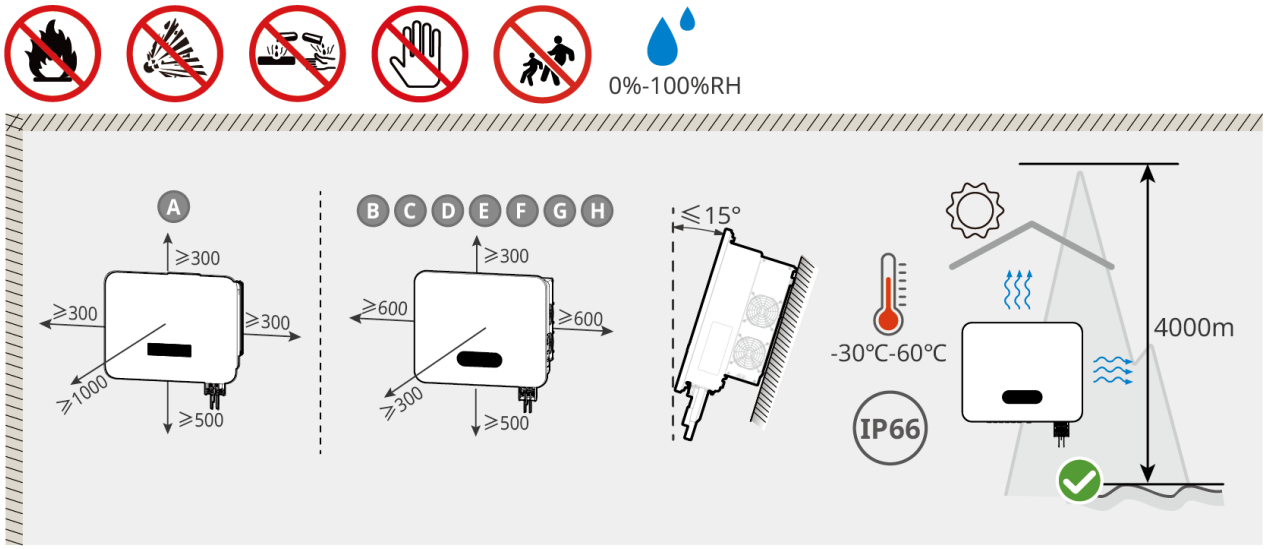
- Add a low pass EMI filter or a multi winding ferrite core to the DC input cable or AC output cable of the inverter.
- Install the inverter at least 30m far away from the wireless equipment.

Installation Support Requirements

- The mounting support shall be nonflammable and fireproof.
- Make sure that the support surface is solid enough to bear the product weight load.
- Do not install the product on the support with poor sound insulation to avoid the noise generated by the working product, which may annoy the residents nearby.

Installation Angle Requirements

- Install the inverter vertically or at a maximum back tilt of 15 degrees.
- Do not install the inverter upside down, forward tilt, back forward tilt, or horizontally.



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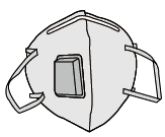
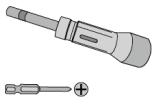
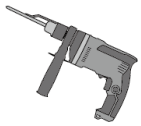
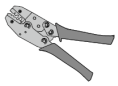
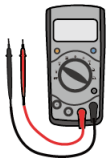
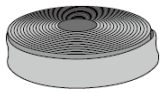
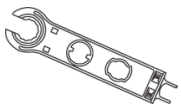
Installation Tool

The following tools are recommended when installing the equipment.Use other auxiliary tools on site if necessary.

Tool Type	Description	Tool Type	Description
	Safety glove		Dust mask

Tool Type	Description	Tool Type	Description
	Goggles		Safety shoes
	Torque wrench M4/M5/M6		Impact drill
	Diagonal pliers		Heat gun
	Wire stripper		Terminal crimping tool
	Rubber hammer		Marker
	Multimeter		Heat shrink tube
	Vacuum cleaner		Track level bar
	MC4 DC unlocking tool		Jinko DC unlocking tool

4.2 Installing the Inverter

4.2.1 Moving the Inverter

⚠CAUTION

Move the inverter to the site before installation. Follow the instructions below to avoid personal injury or equipment damage.

1. Consider the weight of the equipment before moving it. Assign enough personnel to move the equipment to avoid personal injury.
2. Wear safety gloves to avoid personal injury.
3. Keep balance to avoid falling down when moving the equipment.

4.2.2 Installing the Inverter

NOTICE

- Avoid the water pipes and cables buried in the wall when drilling holes.
- Wear goggles and a dust mask to prevent the dust from being inhaled or contacting eyes when drilling holes.
- The anti-theft lock of appropriate size should be prepared by customers.Otherwise it is unable to finish the installation if the size is inappropriate.
- The appearance of graphics in this document is only for reference.There may be differences in the appearance of different models.The actual product prevails.
- Step 4 is only applicable 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: Put the mounting plate on the wall horizontally and mark positions for drilling holes.
Step 2: Drill holes with the hammer drill.
Step 3: Secure the mounting plate using the expansion bolts.
Step 4: Install the inverter on the mounting plate.Tighten the nuts to secure the mounting plate and the inverter.
Step 5 (Optional): Install a security 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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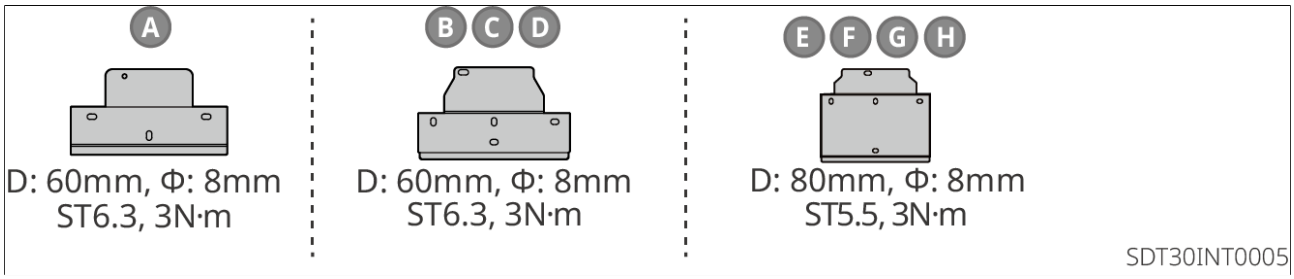
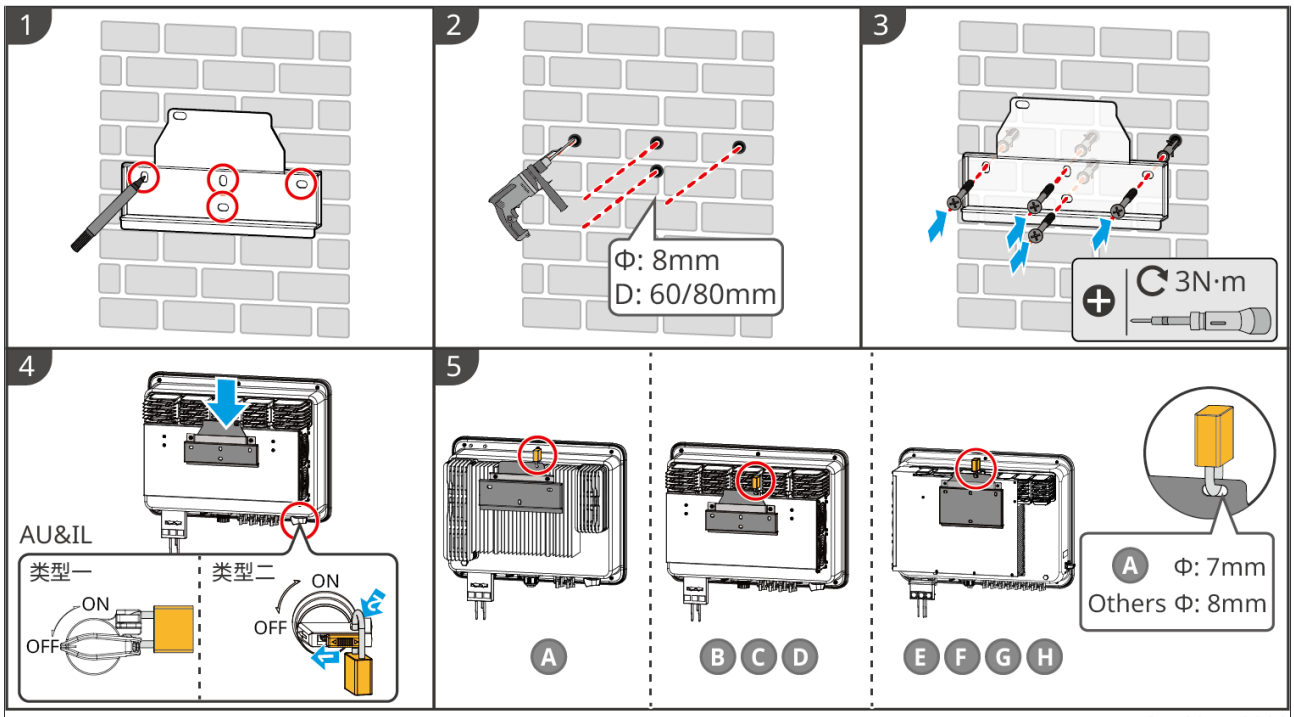


SDT30INT0005



SDT30INT0006

5 Electrical Connection

5.1 Safety Precautions

DANGER

- Disconnect the DC switch and the AC output switch of the inverter to power off the inverter before any electrical connections. Do not work with power on. Otherwise, an electric shock may occur.
- Perform electrical connections in compliance with local laws and regulations, including operations, cables, and component specifications.
- If the cable bears too much tension, the connection may be poor. Reserve a certain length of the cable before connecting it to the inverter cable port.

NOTICE

- Wear personal protective equipment like safety shoes, protective gloves, and insulating gloves during electrical connections.
- All electrical connections should be performed by qualified professionals.
- Cable colors in this document are for reference only. The cable specifications shall meet local laws and regulations.
- The appearance of graphics in this document is only for reference. There may be differences in the appearance of different models. The actual product prevails.

Cable Specification Requirement

Cable	Type	Cable Specification	
		Cable Outer Diameter (mm)	Conductor Cross Sectional Area (mm^2)
DC Cable	PV cable that meets 1100V standard	4.8~6.3	Recommended: 4 to 6
		5.9-8.8	Recommended: 4 to 6

Cable	Type	Cable Specification		
		Cable Outer Diameter (mm)	Conductor Cross Sectional Area (mm^2)	
AC Cable	Single four-core/ five-core outdoor 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 (supports single core or multi-cores 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-31, GW12KLV-SDT-C31, GW25K-SDT-P31: 16~25 GW12KLV-SDT-C30, GW17KLV-SDT-C30: 25 Copper (only supports multi-cores wire):	Aluminum (supports single core or multi-cores 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-SDT-C30: 25 Aluminum (only supports multi-cores wire) GW25K-SDT-AU30, GW29K9-SDT-

Cable	Type	Cable Specification		
		Cable Outer Diameter (mm)	Conductor Cross Sectional Area (mm^2)	
			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	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
PE Cable	Outdoor Cable	-	Copper: 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,	Aluminum: GW25K-SDT-AU, 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 do not support.

Cable	Type	Cable Specification		
		Cable Outer Diameter (mm)	Conductor Cross Sectional Area (mm^2)	
			GW6000-SDT-AU30, GW8000-SDT-AU30, GW9990-SDT-AU30, GW15K-SDTAU30, GW20K-SDT-AU30: 10 GW25K-SDT-AU, 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: 10-16	
Communication Cable	Outdoor Shielded Twisted-Pair Cable Meeting Local Standards [2]	3~7	0.2~0.5	

Note: [1] If you prefer aluminum cables, remember to use copper to aluminum transition terminals.
[2] Overall length of communication cable cannot exceed 1000 m. The values in this table are valid only when the external protective grounding conductor is made of the same metal as the phase conductor. Otherwise, the cross-sectional area of the external protective grounding conductor should be selected to ensure that its conductivity is equivalent to that specified in this table.

5.2 Connecting the PE Cable

WARNING

- The PE cable connected to the enclosure of the inverter cannot replace the PE cable connected to the AC output port. Make sure that both of the two PE cables are securely connected.
- Make sure that all the grounding points on the enclosures are equipotential connected when there are multiple inverters.
- To improve the corrosion resistance of the terminal, you are recommended to apply silica gel or paint on the ground terminal after installing the PE cable.
- PE cable should be prepared by customers. You are recommended to use copper cables as PE cables. If you prefer aluminum cables, remember to use copper to aluminum adapter terminals.
  Copper-aluminum transition terminals should be prepared by customers.

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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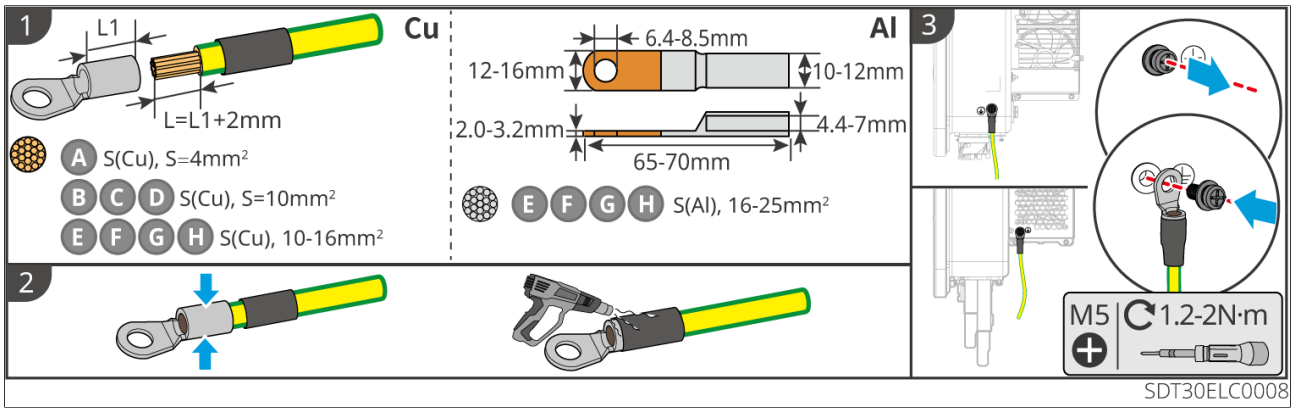

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5.3 Connecting the AC Output Cable

WARNING

- Do not connect loads between the inverter and the AC switch that is directly connected to the inverter.
- The Residual Current Monitoring Unit (RCMU) is integrated into the inverter. The inverter will disconnect the utility grid rapidly once it detects any leak current over the permissible range.

Decide whether to install RCD (Residual Current Device) according to local laws and regulations. A type A RCD shall be added to protect the equipment when the DC component of the leakage current exceeds limits. Recommended RCD specifications:300mA.

NOTICE
Install one AC output circuit switch for each inverter. Multiple inverters cannot share one AC circuit switch.

An AC circuit breaker shall be installed on the AC side to make sure that the inverter can safely disconnect the grid when an exception happens. Select the appropriate AC circuit switch in compliance with local laws and regulations. Recommended Switch specifications:

Inverter Model	AC Circuit Breaker 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

- Pay attention to the L1, L2, L3, N, PE on the AC terminal. Connect the AC cables to the corresponding terminals. The inverter may be damaged if the cables are connected inappropriately.
- Make sure that the whole cable cores are inserted into the AC terminal holes. No part of the cable core can be exposed.
- Make sure that the cables are connected securely. Otherwise, the terminal may be too hot to damage the inverter when the inverter is working.
- The AC output terminal supports both three-phase four-wire and three-phase five-wire connection configurations; the actual wiring configuration should depend on the specific installation scenario. In this document, the three-phase five-wire configuration is described as an example.
- Ensure that extra length is reserved for the protective grounding conductor, so it will be the last conductor to bear stress if the AC output cables experience tension due to force majeure.
- When aluminum conductors are used, copper-aluminum transition terminals must be utilized. AC wiring OT terminals should be prepared by customers. Terminal selection should comply with T/CEEIA 281-2017 or equivalent standards.

Type I:

Step 1: Prepare the AC output cables.

Step 2: Disassemble the AC terminal shield.

Step 3: Crimp the AC output cable, and penetrate it into the AC terminal shield.

Step 4: Disassemble the AC connector.

Step 5: Tighten AC connection.

Step 6: Tighten the AC terminal shield.

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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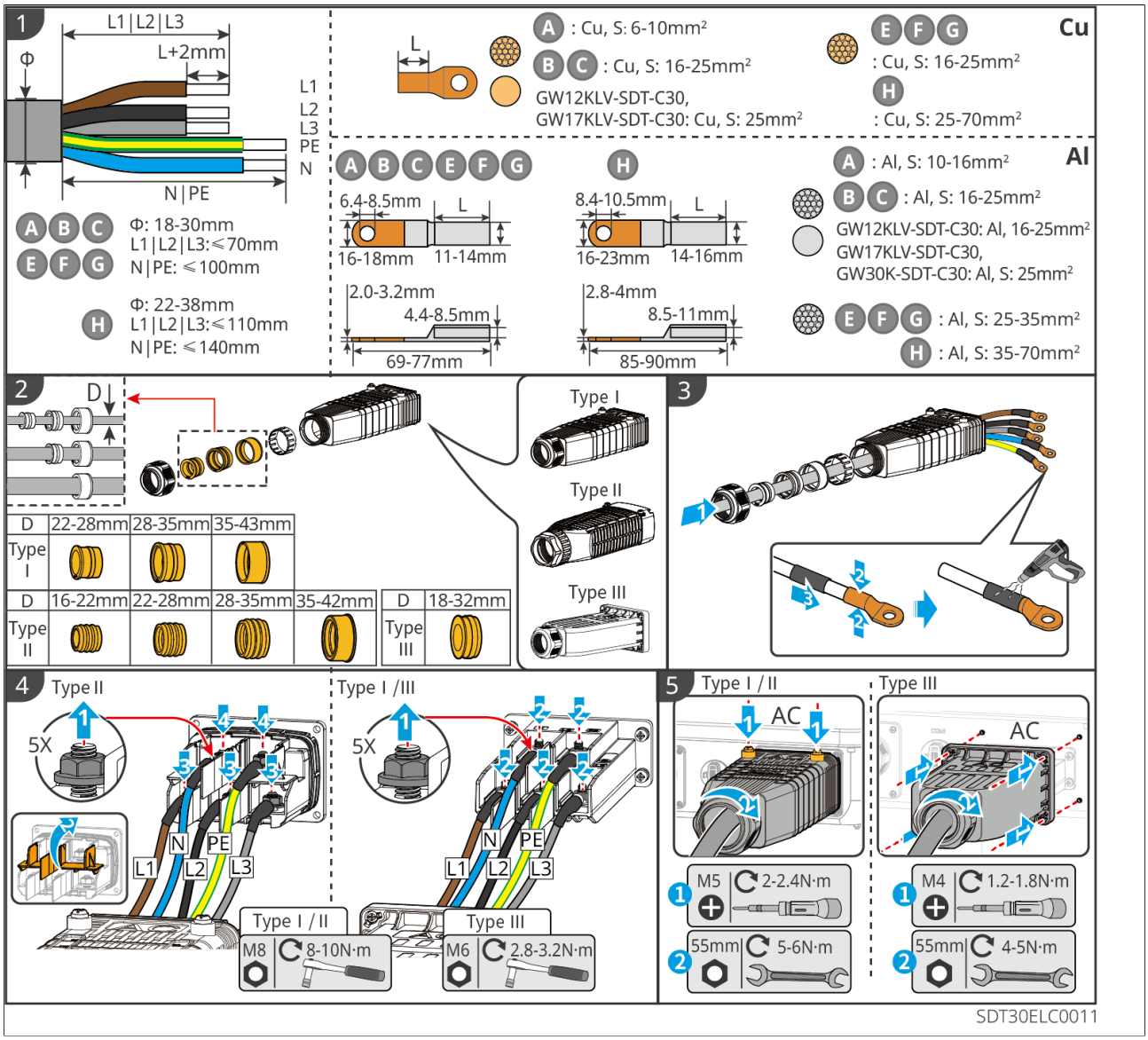

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Type II:

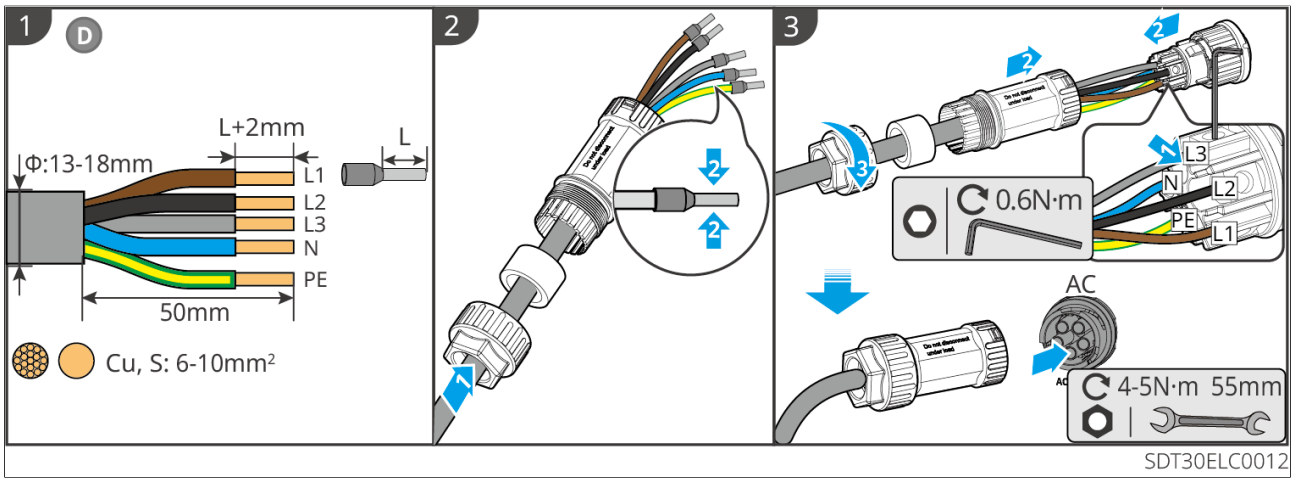
Step 1: Prepare the AC output cables.

Step 2: Disassemble the AC terminal shield.

Step 3: Crimp the AC output cable, and penetrate it into the AC terminal shield.

Step 4: Tighten AC connection.

Step 5: Tighten the AC terminal shield.



5.4 Connecting the DC Input Cable

DANGER

Confirm the following information before connecting the PV string to the inverter. Otherwise, the inverter may be damaged permanently or even cause fire and cause personal and property losses.

1. Make sure the maximum input voltage is within the permissible range of the inverter.
2. Make sure that the positive pole of the PV string connects to the PV+ of the inverter. And the negative pole of the PV string connects to the PV- of the inverter.

WARNING

- Mixing PV modules of different brands or models in the same MPPT or connecting PV modules with different directions or inclination angles in the same PV string may not necessarily damage the inverter, but may lead to a decrease in the system performance.
- It is recommended that the voltage difference between different MPPT circuits does not exceed 160V.
- It is recommended that the sum of the Imp of the PV strings connected to each MPPT shall not exceed the Max. Input Current per MPPT of the inverter.
- When the Max. Input Voltage of the inverter is 1100V, please make sure that the open circuit voltage of the PV string connected to each MPPT shall not exceed 1100V. When the input voltage is between 1000V and 1100V, the inverter enters the waiting mode. When the voltage returns to 140V-1000V, the inverter will resume normal operation.
- When the Max. Input Voltage of the inverter is 850V, please make sure that the open circuit voltage of the PV string connected to each MPPT shall not exceed 850V. When the input voltage is between 700V and 850V, the inverter enters the waiting mode. When the voltage returns to 140V-850V, the inverter will resume normal operation.
- When there are multiple PV strings, it is recommended to maximize the connections of MPPTs.
- Use the delivered DC connectors. The manufacturer shall not be liable for the damage if other incompatible connectors are used.
- The PV strings cannot be grounded. Ensure the minimum isolation resistance of the PV string to the ground meets the minimum isolation resistance requirements before connecting the PV string to the inverter.
- The DC input cable is prepared by the customer.
- DC input cable type: the outdoor photovoltaic cable that meets the maximum input voltage of the inverter.

PV Strings Access Mode

NOTICE
For maximizing power generation, it is recommended to access PV strings in the way as follows:

●: Access one PV string ●●: Access two PV strings

[1]: MPPT4 is only applicable to GW25K-SDT-CN-G41, GW30K-SDT-CN-G40, GW33K-SDT-CN-G40.

PV String Numbers	MPPT1	MPPT2	MPPT3
4	•	•	•
5	••	•	•
6	••	••	•
7	••	••	••
8	••	••	••

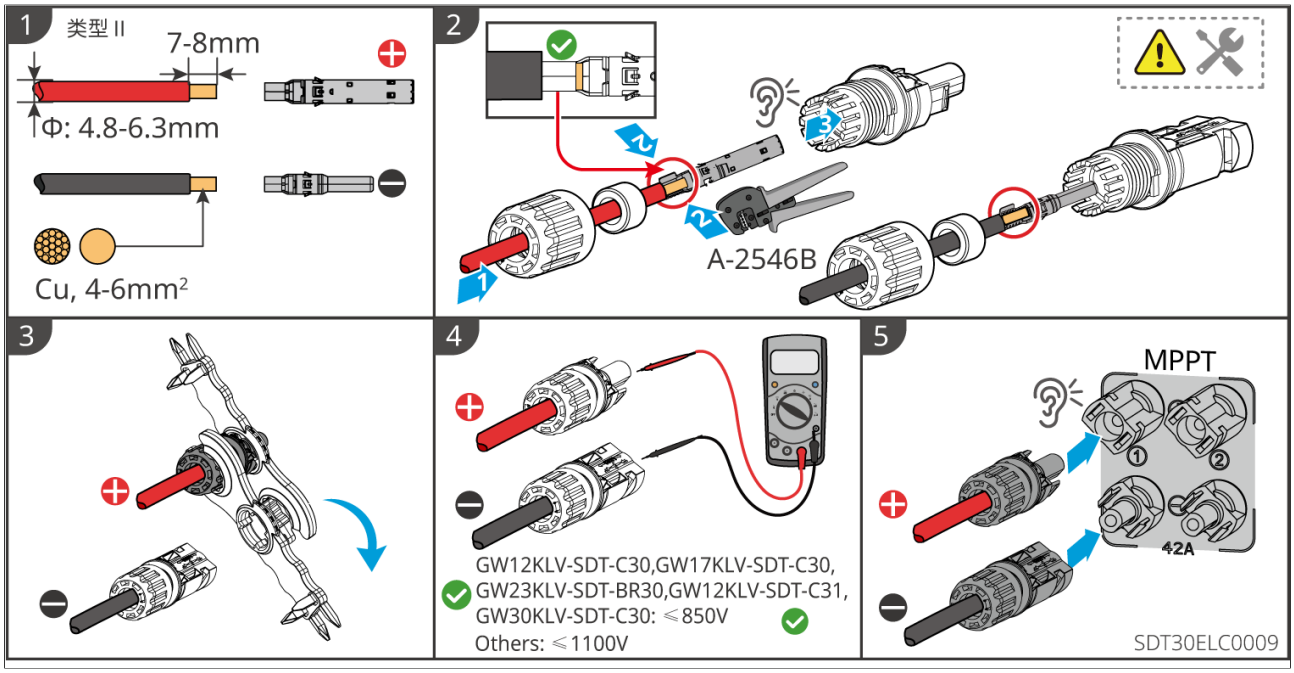
PV Access Mode

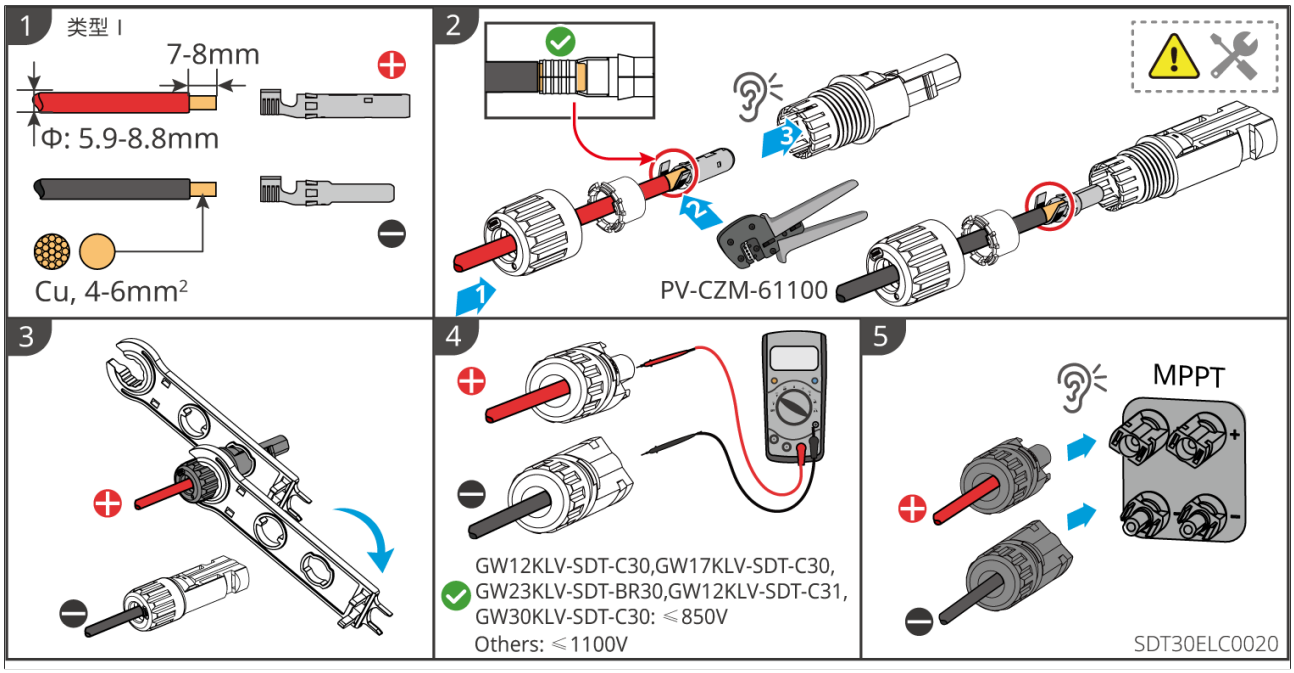
When installing the inverter for the first time, set corresponding MPPT connection mode via LCD (optional) or Solar Go App (contact after-sales for setting details) based on actual wiring mode. After setting completes, disconnect PV and AC power supply, and restart the inverter. If there is no feedback of abnormal PV access mode from the inverter, the setting is successful.

There are three PV access modes:
1. Independent mode (default): MPPT1, MPPT2, and MPPT3 are connected independently.
2. Partially parallel mode: MPPT1 and MPPT2 connected in parallel; and MPPT3 connected independently.
3. Parallel mode: From MPPT1 to MPPT3 connected in parallel to the same PV module.
For specific selection of access modes, refer to Chapter 8 or SolarGo User Manual.

Connecting the DC Input Cable

Step 1: Prepare DC cables.
Step 2: Crimp the DC input terminals and assemble the DC connectors. Crimp the crimp contacts and assemble the DC connectors.
Step 3: Fasten the PV connector.
Step 4: Measure the DC input voltage.
Step 5: Connect the DC connectors to the DC terminals of the inverter.

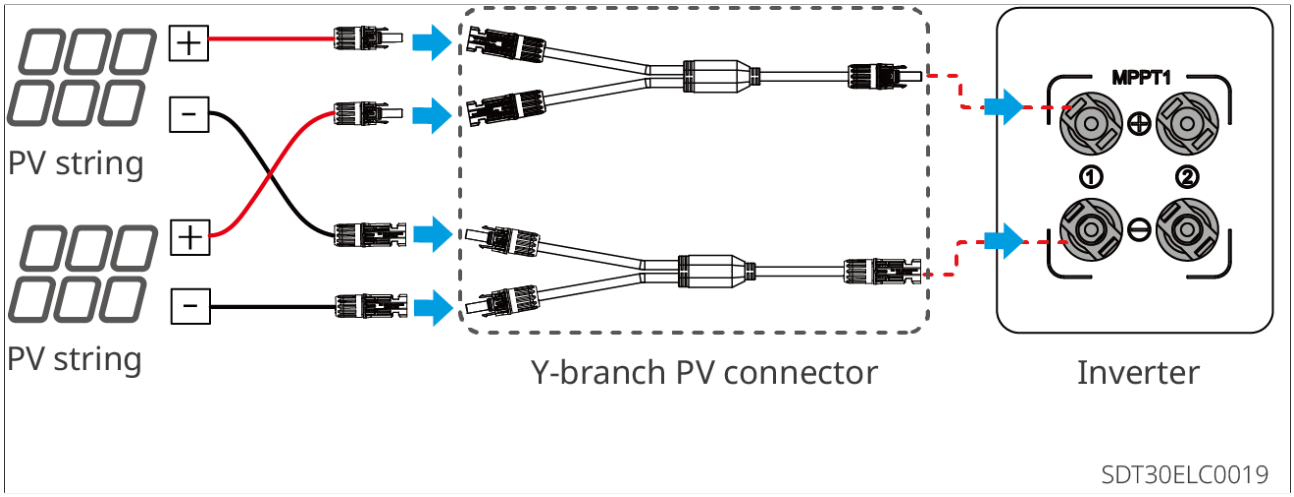




Connect the Y-type PV connector (Optional)

NOTICE

1. If Y-type terminals are needed, make sure the DC connector model of the Y-type terminal is the same as that of PV input terminal of the inverter. The manufacturer shall not be liable for the equipment damage if incompatible Y-type terminal is used.
2. Make sure all PV strings connected to a single MPPT via Y-type connectors need to have same configurations, including model, quantity, tilt angle, and orientation.
3. The total current of strings connected via Y-type connectors needs to be less than the maximum allowable PV current.
4. For photovoltaic strings connected via Y-type terminals, if the total number of photovoltaic strings connected to a single MPPT is ≥3, each string of modules must be equipped with a corresponding fuse.



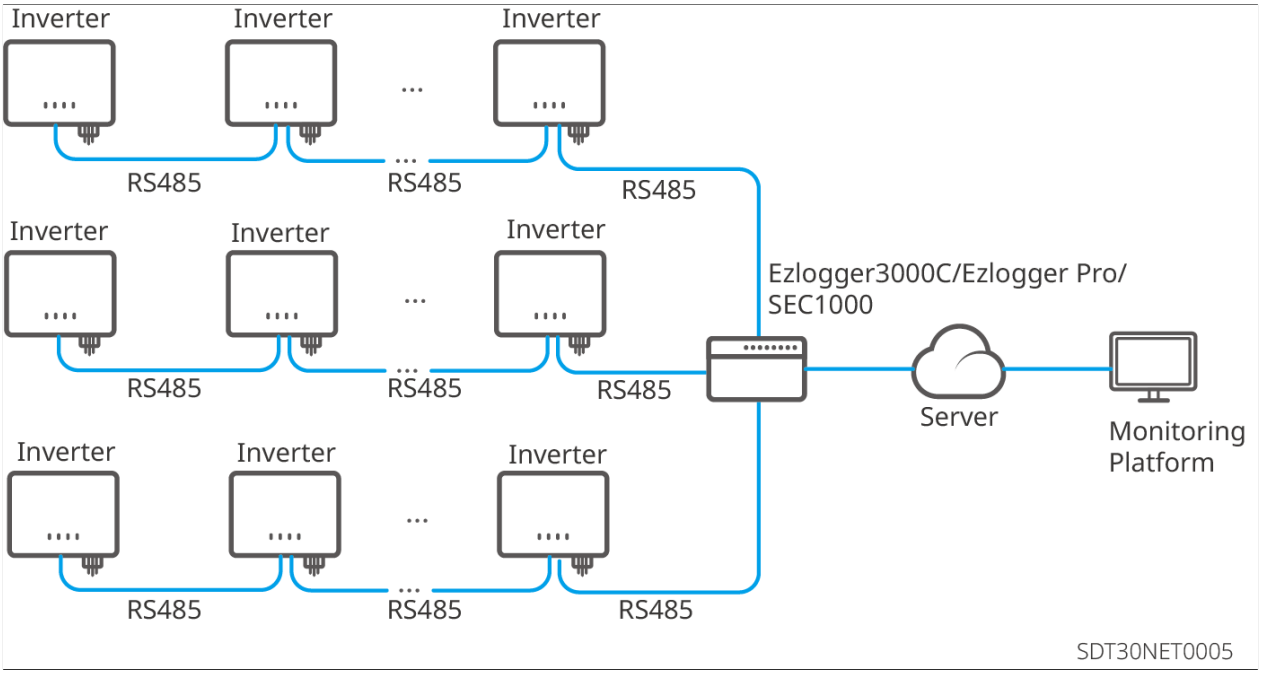
5.5 Communication Connection

NOTICE
The specific functional configuration shall be subject to the actual model in your region.

5.5.1 RS485 Communication Networking

NOTICE

- When using the data collector to connect RS485 and inverters, multiple inverters can be connected to each COM port of the data collector. If the model of Smart DataLogger is Ezlogger Pro or SEC1000, the maximum number of inverters connected to per COM port of the Smart DataLogger is 20; if the model of Smart DataLogger is Ezlogger 3000C, the maximum number of inverters connected to per COM port of the Smart DataLogger is 25. The total length of the connecting cable should not exceed 1000m.
- If multiple inverters are connected in parallel, the DIP switch of the first and last inverter should be turned to ON position （Default）, and the inverters in the middle should be in OFF position.



5.5.2 Power Limitation and Load Monitoring

Power Limit

When all loads in the PV system cannot consume the generated electricity, the surplus power will be fed into the grid. In this case, it is possible to monitor the power generation with a Smart Meter, Smart DataLogger or Smart Energy Controller SEC1000 to control the amount of power fed into the grid.

⚠WARNING

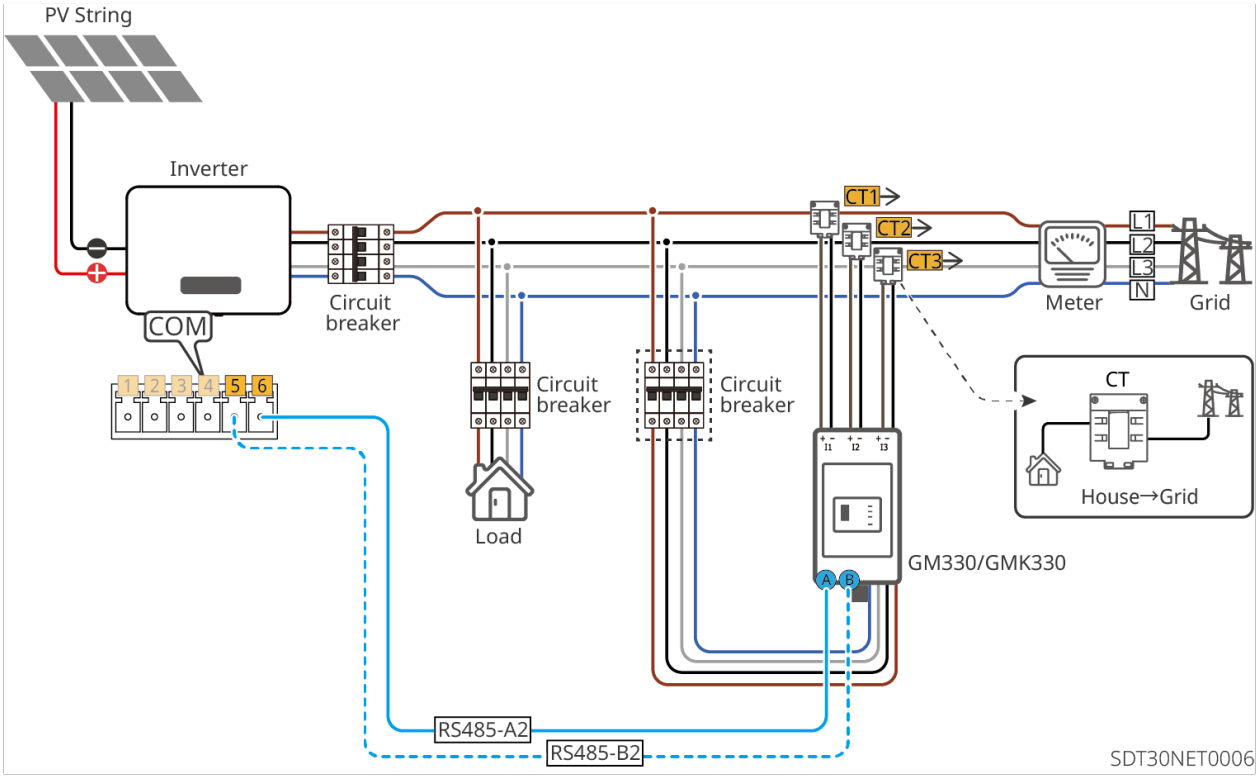
1. The place to snap fit the CT shall be near the grid connection point and the installation direction must be right. “-->” of CT refers that the inverter current flows to the Grid. The inverter will be triggered with an alarm if CT is installed reversely. It is unable to realize the power limit function.
2. The aperture of the CT should be larger than the outer diameter of the AC power line to ensure that the AC power line can pass through the CT.
3. For specific CT wirings, please refer to the documents provided by the respective manufacturer, to ensure that the wiring direction is correct and CT is able to work properly.
4. CT shall be snap fitted on Cable L1, L2 and L3. Do not install it on Cable N.
5. Specification of CT:
   - Choose nA/5A for the current transformation ratio of the CT. (nA: For primary current of the CT, n ranges from 200 to 5000.Set the current value depending on the actual needs. 5A: The output current of the secondary current of the CT.)
   - The recommended precision of the CT: 0.5, 0.5s, 0.2, 0.2s. Ensure the sampling error for the CT current shall be ≤ 1%.
6. To ensure the current detection accuracy of the CT, it is recommended that the length of the CT cable should not exceed 30 m.
7. The inverter supports setting parameters through WiFi, Bluetooth signal near-end, connecting to cell phone or WEB interface to set the device-related parameters, check the device operation information, error information, and timely understand the system status.
   - 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 can be used when there is only one inverter in the system.
   - When the system contains multiple inverters parallel connection, the master inverter needs to be installed with the Ezlink3000 Smart Dongle.

NOTICE

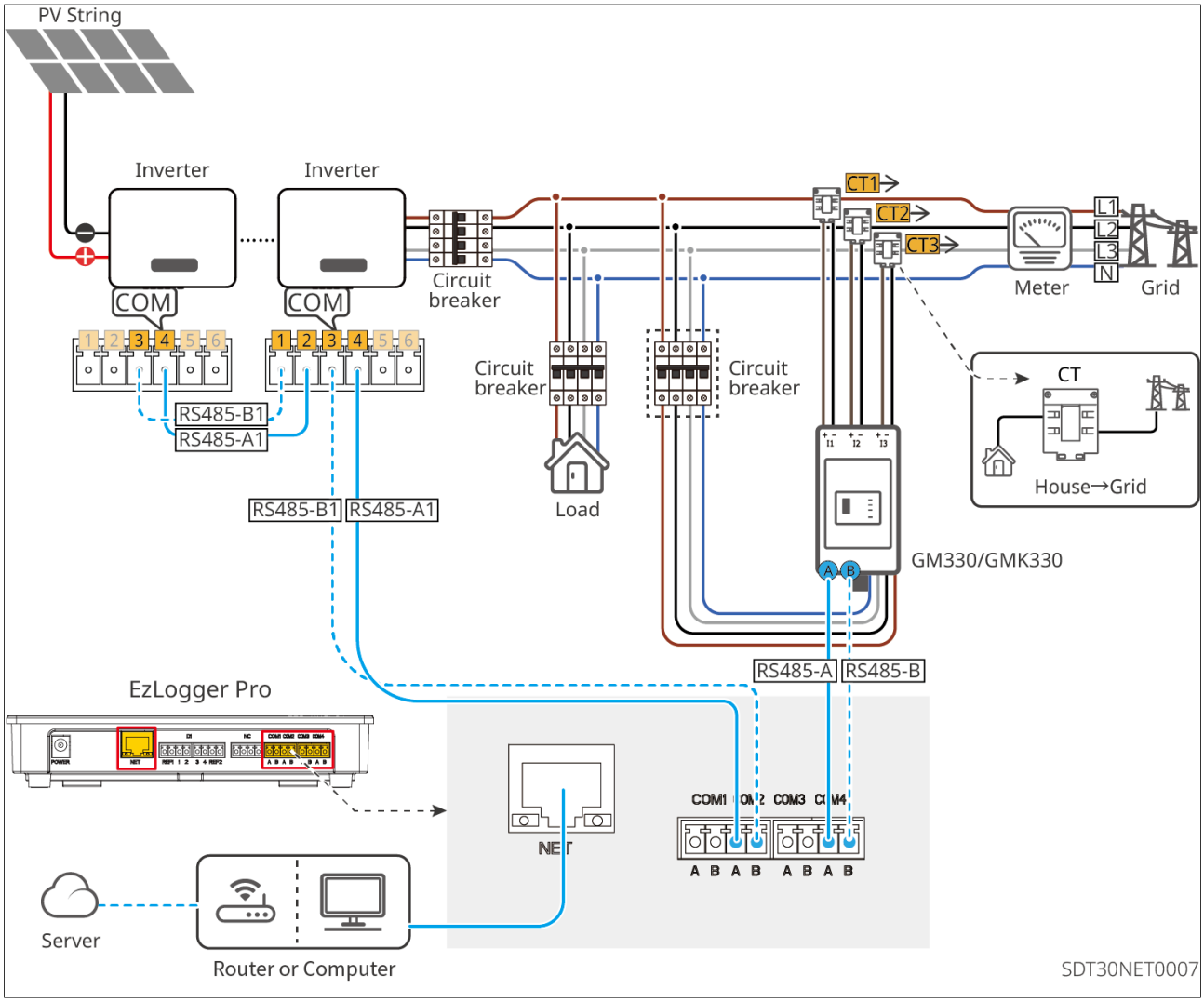
- Please ensure that the meter wiring and phase sequence are correct. Recommended cross-sectional area of the smart meter input power cable: 1mm^2(18AWG).
- Set the CT ratio via SolarGo App. For example, set the CT ratio to 40 if a 200A/5A CT is selected.
- Scan the QR code below to get more information.

SolarGo App
User Manual

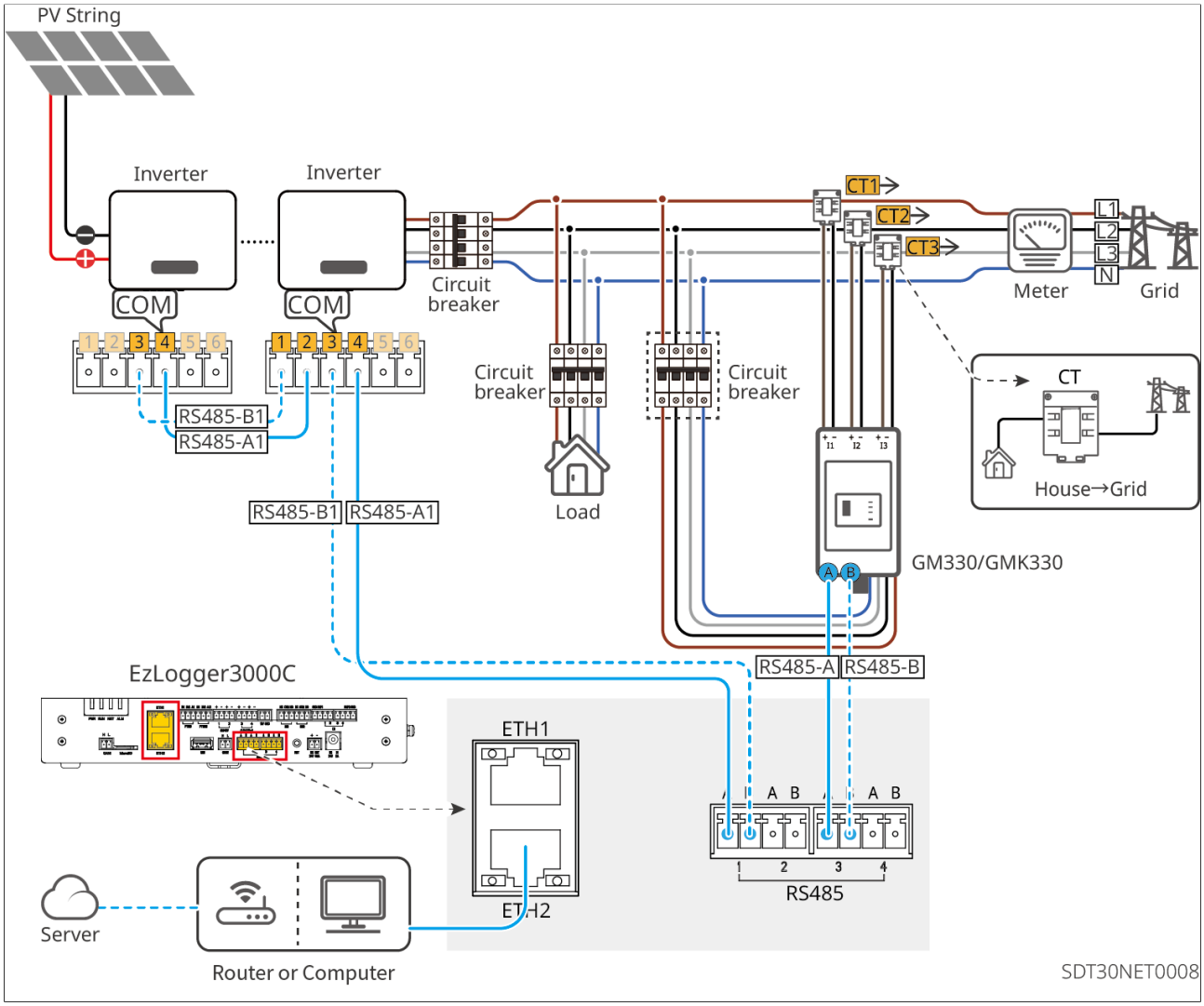
Power limit networking with single inverter (GMK330/GM330)



Multi inverters power limitation networking scheme (EzLogger Pro+GM330 / GMK330)



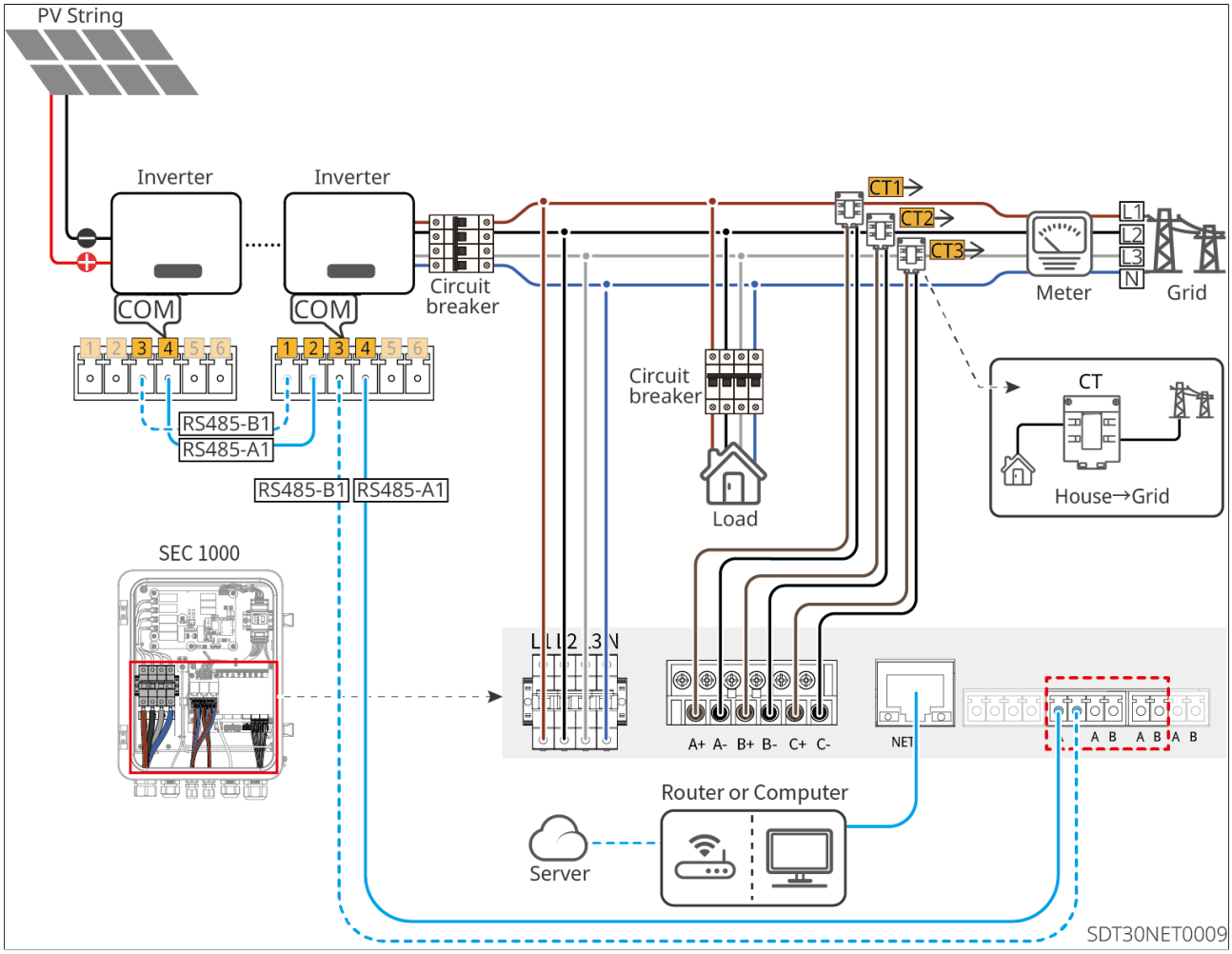
Multi-unit power limitation networking scheme (EzLogger3000C + GM330)



Multi inverters power limitation networking scheme (SEC1000)

⚠WARNING

1. Connect SEC1000 AC cable to a 3L/N/PE Grid. The voltage of the grid shall be within allowable voltage sampling scope of SEC1000.
2. The place to snap fit the CT shall be near the on-grid point. Make sure the connecting direction is right. If CT is installed reversely, it is unable to realize the power limit function.
3. Prepare CT by yourself for external installation when selecting SEC1000.
4. The aperture of the CT should be larger than the outer diameter of the AC power line to ensure that the AC power line can pass through the CT.
5. For specific CT wirings, please refer to the documents provided by the respective manufacturer, to ensure that the wiring direction is correct and CT is able to work properly.
6. CT shall be snap fitted on Cable L1, L2 and L3. Do not install it on Cable N.

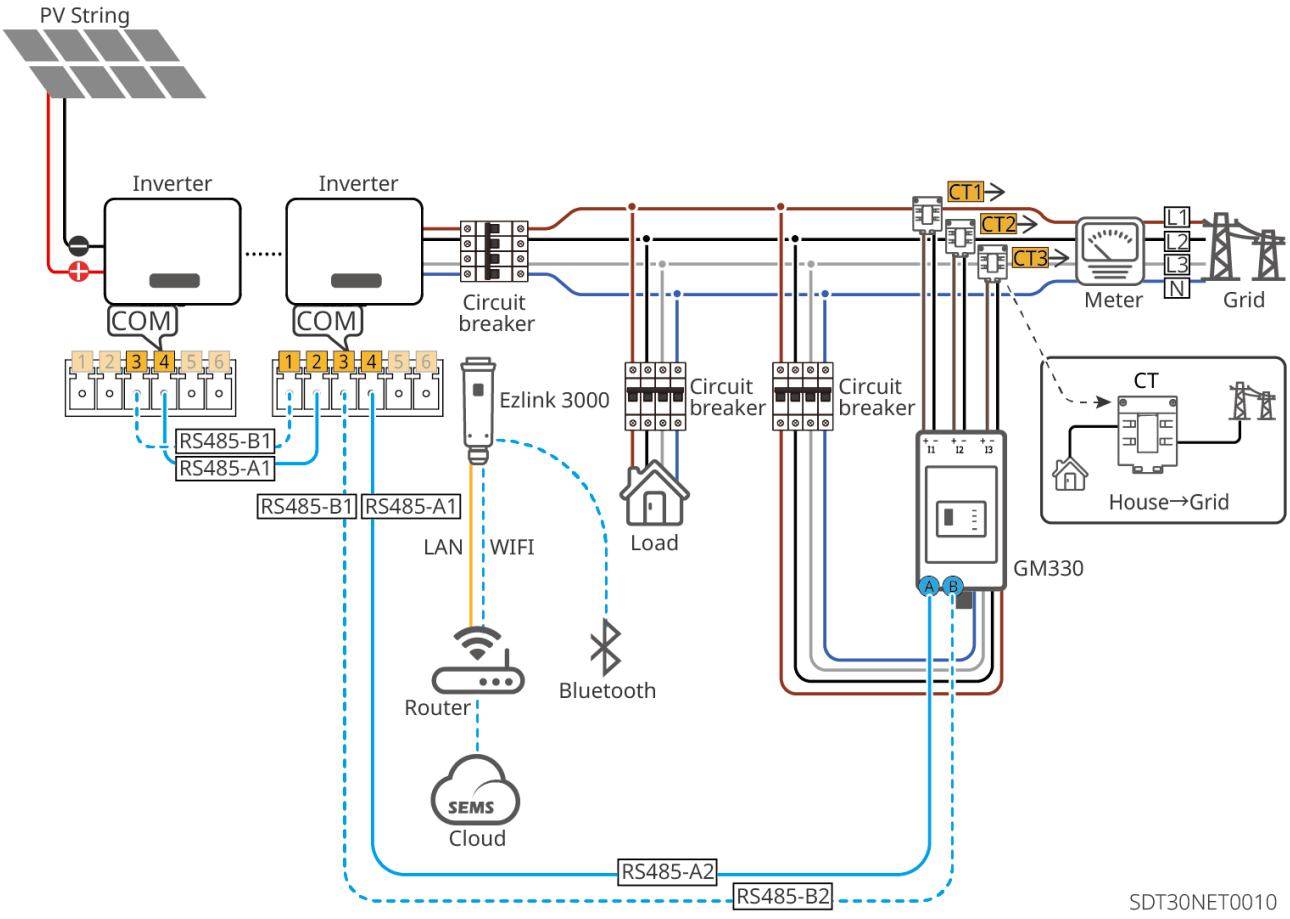


Recommended CT specifications:

No.	Current Scope	Description	Comment
1	Imax < 250A	CT 200A Acrel/AKH-0.66(200A/5A)	CT for power limit, closed type (born dimension 31mm*11mm, Φ22mm)
		CT 250A/5A Acrel/AKH-0.66-K-30x20-250/5	CT for power limit, open type (opening size 32mm*22mm), 0.5% in precision
		CT 250A/5A Acrel/AKH-0.66-K-60x40-250/5	CT for power limit, open type (opening size 62mm*42mm), 1.0% in precision
2	250A ≤ Imax < 1000A	CT 1000A/5A Acrel/AKH-0.66-K-60x40-1000/5	CT for power limit, open type (opening size 62mm*42mm), 0.5% in precision
		CT 1000A/5A Acrel/AKH-0.66-K-80x40-1000/5	CT for power limit, open type (opening size 82mm*42mm), 0.5% in precision
3	1000A ≤ Imax < 5000A	CT 5000A/5A Acrel/AKH-0.66-K-140x60-5000/5	CT for power limit, open type (opening size 142mm*62mm), 0.2% in precision
		CT 5000A/5A Acrel/AKH-0.66-K-160x80-5000/5	CT for power limit, open type (opening size 162mm*82mm), 0.2% in precision

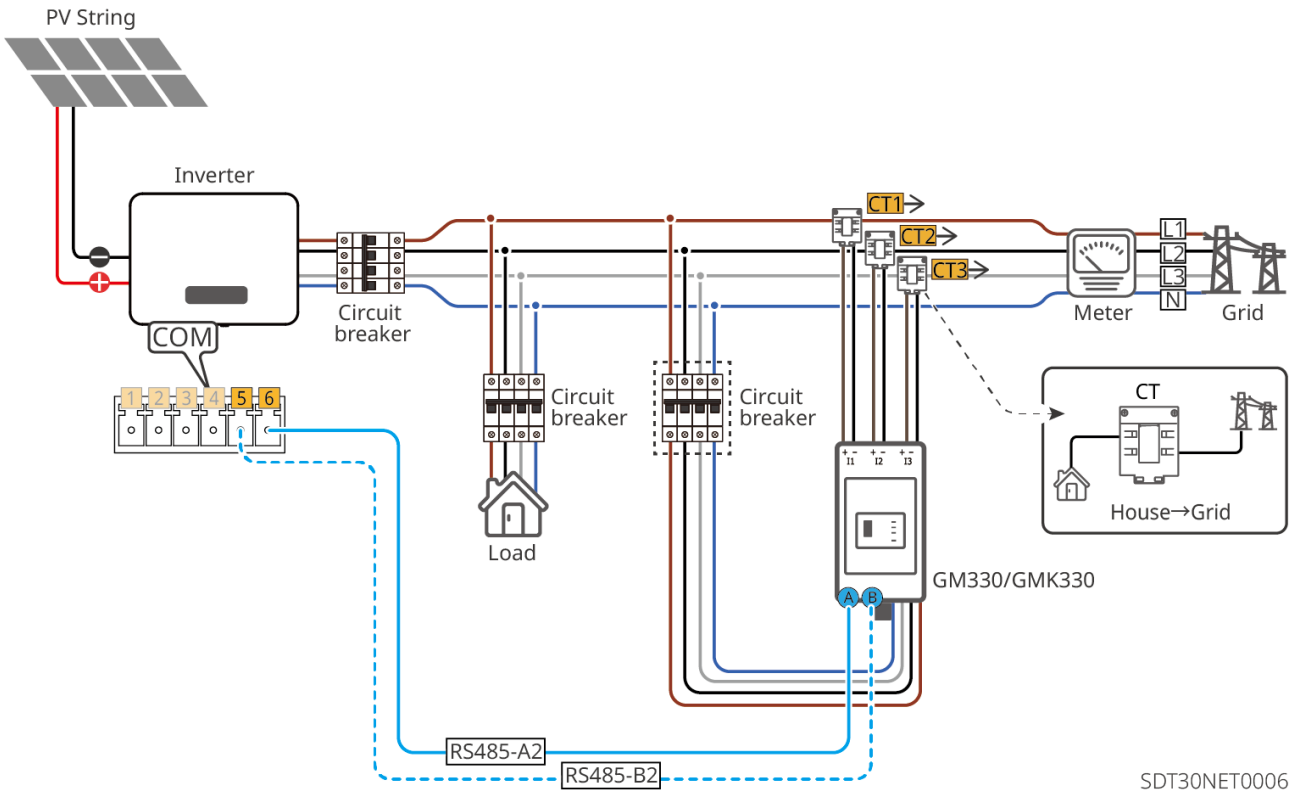
Multi inverters power limitation networking scheme (Ezlink3000 + GM330)

Available only for the following models: 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.



24H Load Monitoring

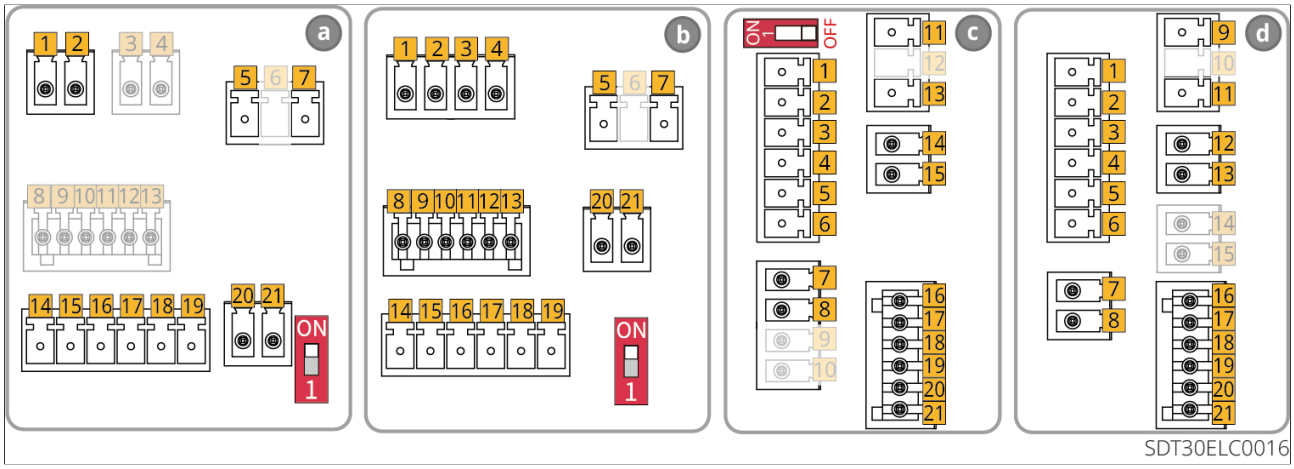
The selected night power supply inverter has a 24-hour load monitoring function. GMK330/GM330 measures on-grid data and transmit it to the inverter. The inverter transmits the power generation information and on-grid data to the monitoring platform via smart dongle. The monitoring platform calculates the load electricity consumption and achieves 24-hour real-time monitoring of the load electricity consumption.



5.5.3 Connecting the Communication Cable

NOTICE

- When connecting the communication cable, make sure that the wiring port definition and the equipment are fully matched, and the cable alignment path should avoid interference sources, power cables, etc., so as not to affect signal reception.
- The remote shutdown and DRED/RCR functions are disabled in default. Enable it via SolarGo App if needed. Detailed steps, refer to SolarGo App User Manual.
- For detailed information on communication modules, please refer to the documentation included with the corresponding module. Get more detailed information about the smart dongle from the official website.



Model a includes: GW36K-SDT-C30, GW40K-SDT-C30 GW23KLV-SDT-BR30, GW37K5-SDT-BR30, GW33K-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

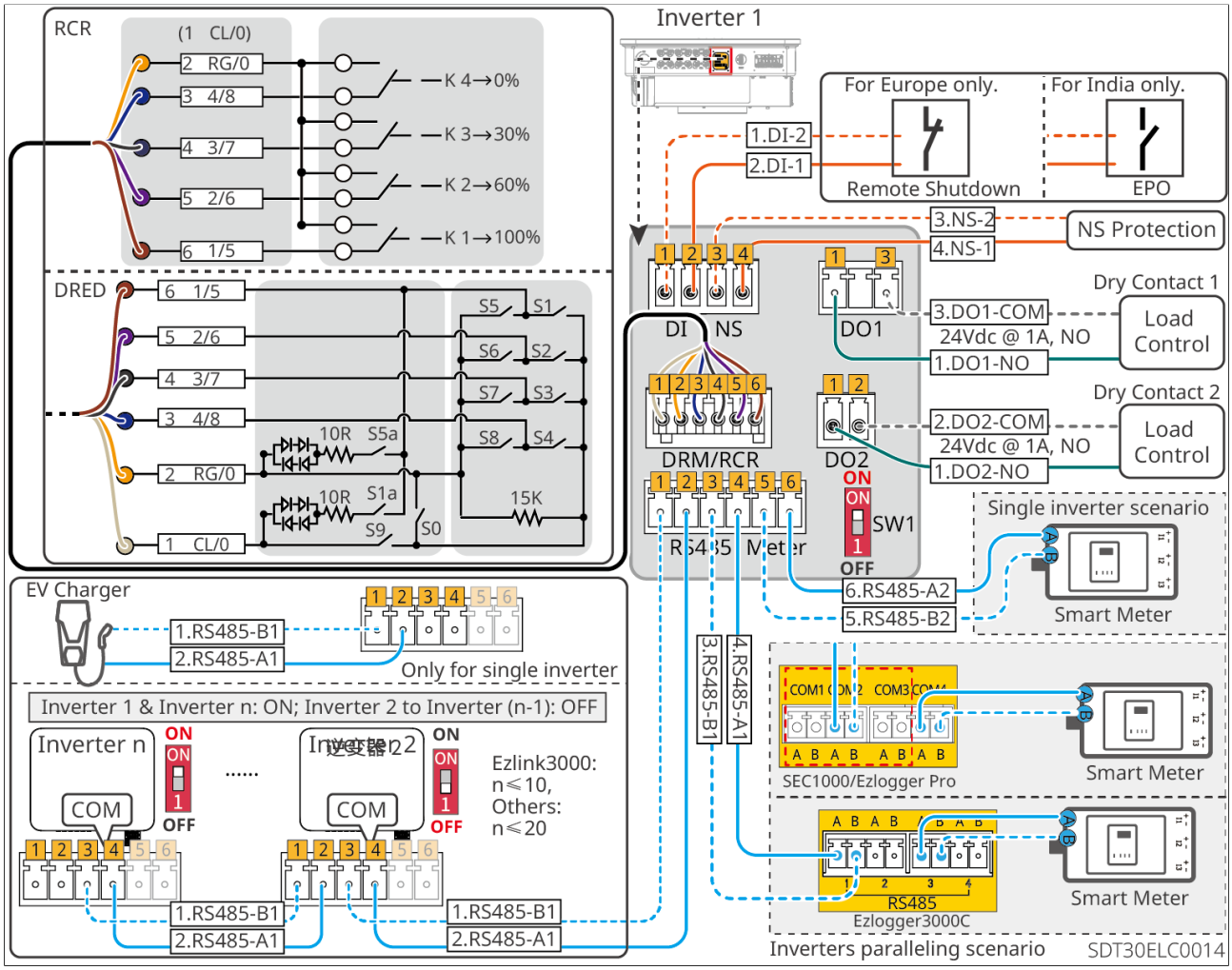
Function	Port definition for model a	Port definition for model b	Port definition for model c	Port definition for model d	Description
Meter	5: RS485-B2 6: RS485-A2	5: RS485-B2 6: RS485-A2	5: RS485-B2 6: RS485-A2	5: RS485-B2 6: RS485-A2	The inverter is paired with CT to achieve the function of preventing output power limitation. If you need supporting equipment, you can contact the inverter manufacturer for purchase.

Function	Port definition for model a	Port definition for model b	Port definition for model c	Port definition for model d	Description
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	RS485 port for connecting multiple inverters or data loggers.
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): Compliant with Australian DRM functionality and provides a DRED signal control port. RCR (Ripple Control Receiver): It provides an RCR signal control port to meet the grid dispatching requirements in regions such as Germany. The inverter has reserved wiring ports, and users need to provide their own related equipment.
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

Function	Port definition for model a	Port definition for model b	Port definition for model c	Port definition for model d	Description
					shutdown signal, the AC side of the inverter will automatically disconnect, and the grid-connection will stop. An external emergency shutdown switch is required and controlled through the DI port: • Remote Shutdown: if the DI port is connected, the machine will be started; if the DI port is disconnected, the machine will be stopped. • Emergency Shutdown: if DI port is connected, it will stop the machine; if DI port is disconnected, it will start the machine.

Function	Port definition for model a	Port definition for model b	Port definition for model c	Port definition for model d	Description
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
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	To connect NS protection device (Only for Germany).

Take b for example:



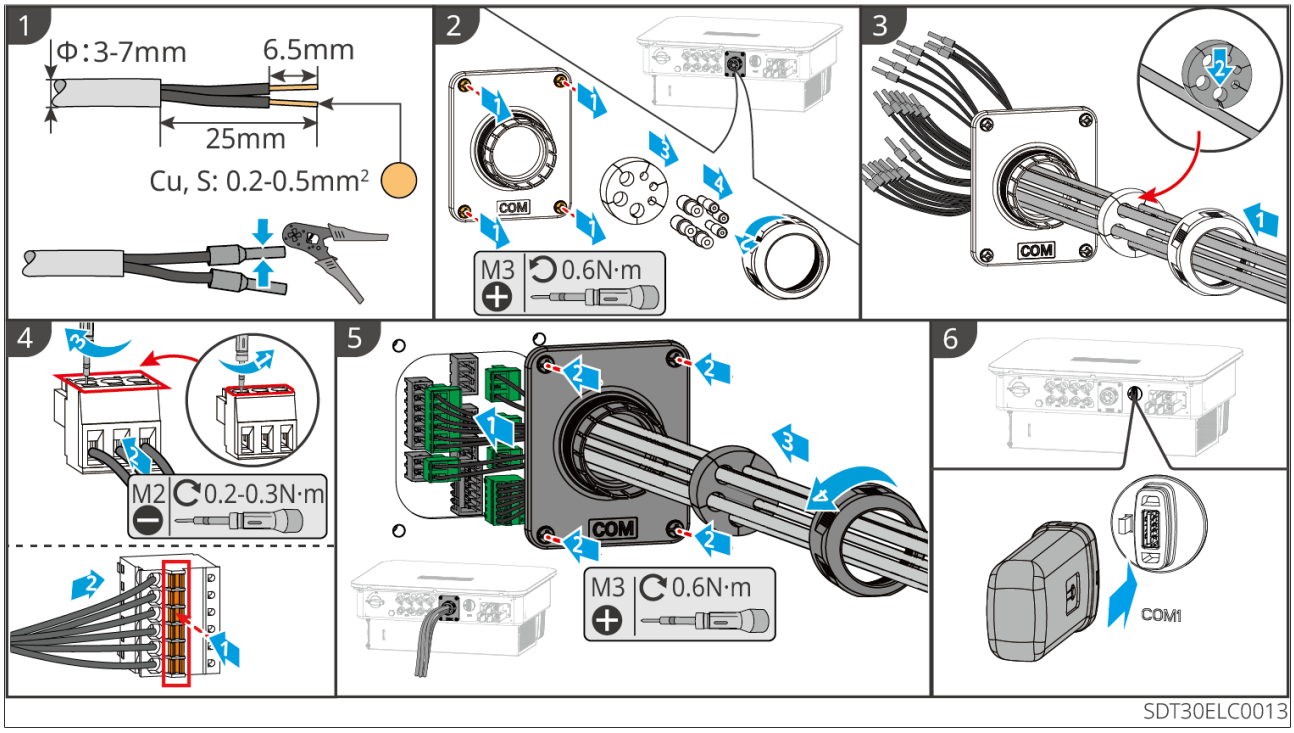
Step 1: Prepare the communication cable.

Step 2: Disassemble the communication connector.

Step 3-4: Connect the communication cable to the communication terminal and fasten it.

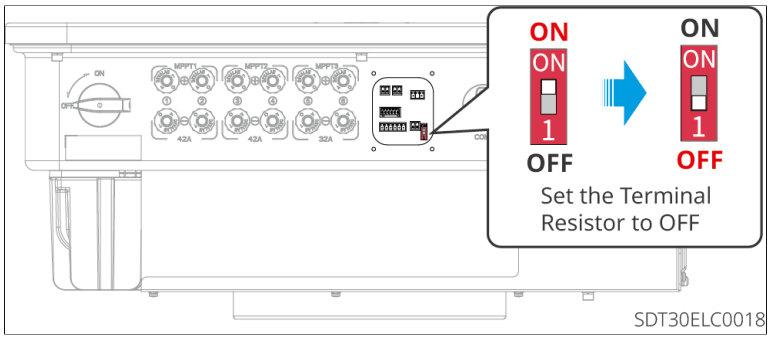
Step 5: Connect the communication terminal to the inverter.

Step 6: Install the Smart Dongle.



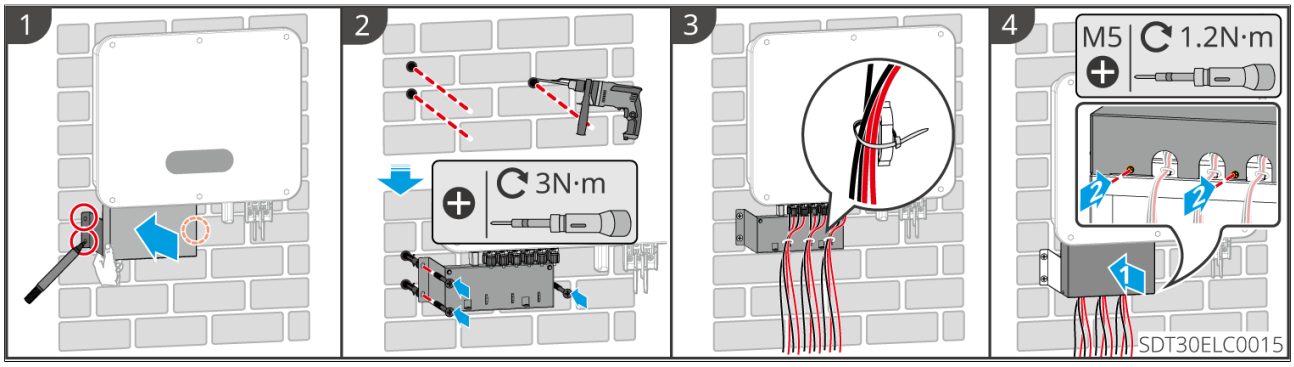
Closing the Terminal Resistance DIP Switch

Some models of inverters are equipped with RS485 terminal resistors, and the dip switch for this terminal resistor is turned on by default. 'ON' represents on, '1' represents off. Operation method: Open the outer cover of the communication port, and use an insulated paddle to turn the terminal resistance dip switch to "1" (OFF).



5.6 Installing Protective Cover

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


1
2
3N·m
3
4
M5
1.2N·m
SDT30ELC0015

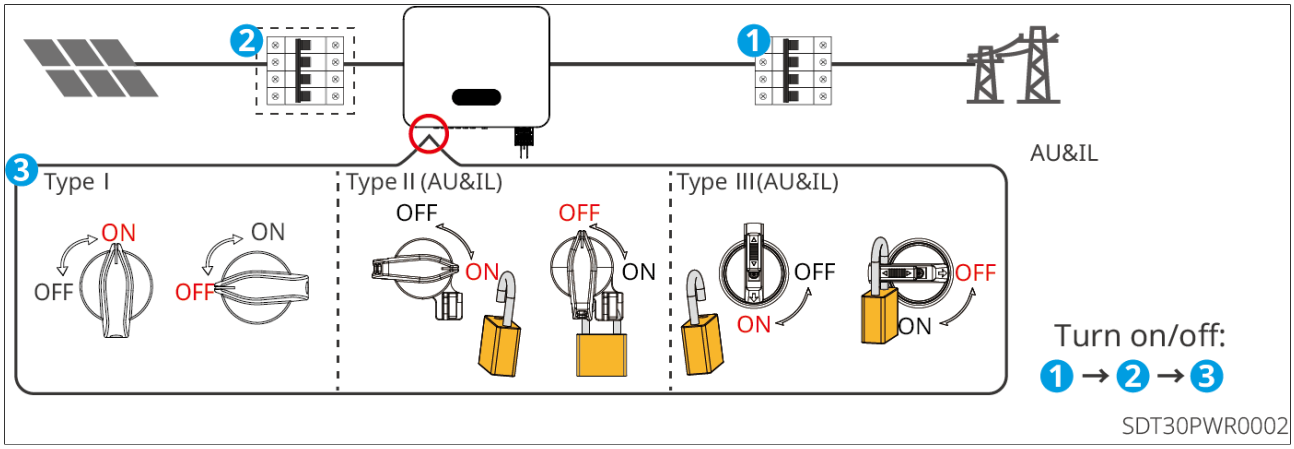
6 Equipment Commissioning

6.1 Check Before Power On

No.	Check Item
1	The inverter is firmly installed in a clean place where is well-ventilated and easy to operate.
2	The PE, DC input, AC output, communication cables are connected correctly and securely.
3	Cable ties are intact, routed properly and evenly.
4	Unused ports and terminals are sealed.
5	The voltage and frequency at the connection point meet the inverter grid connection requirements.

6.2 Equipment Power On

Step 1: Turn on the AC switch between the inverter and the utility grid.
Step 2: (Optional) Turn on the DC switch between the inverter and the PV modules.
Step 3 Turn on the DC switch of the inverter.



7 System Commissioning

7.1 Setting Inverter Parameters via LCD

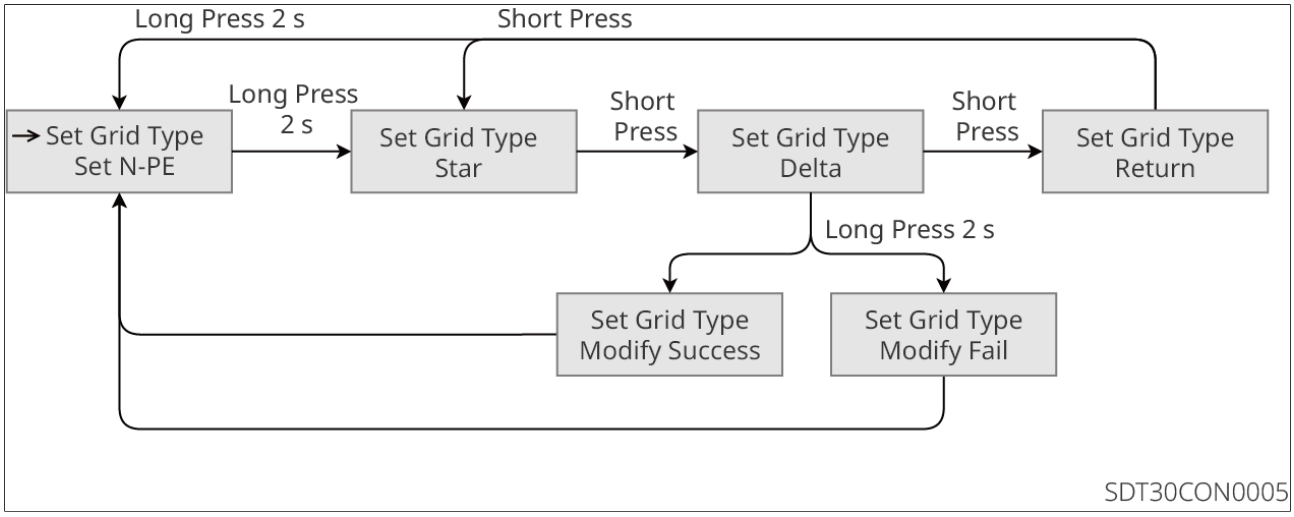
NOTICE

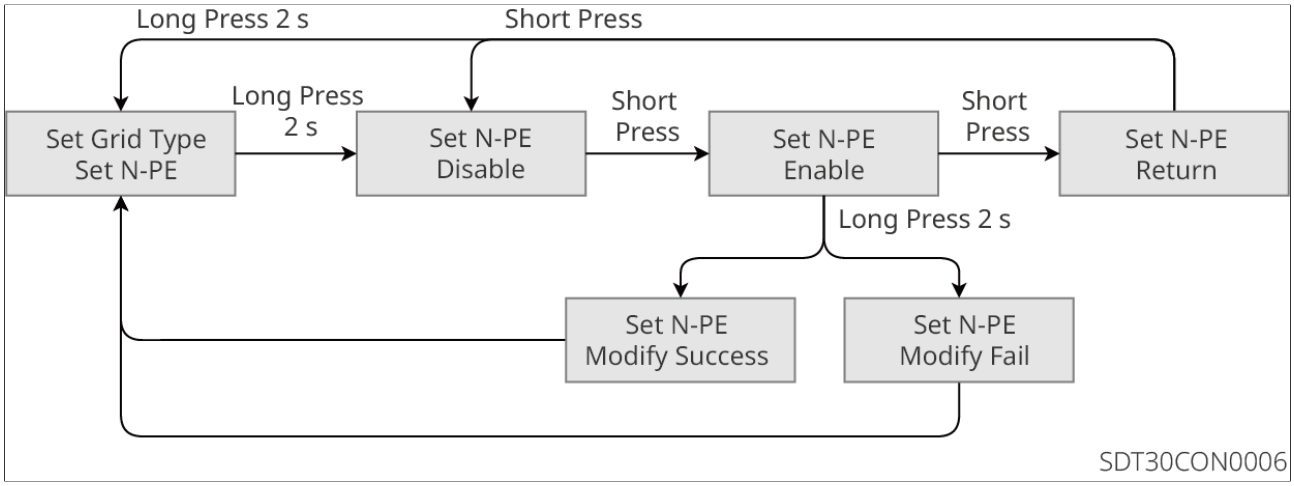
- Inverter software version shown in this document is V1.00.00. The screenshots are for reference only. The actual interface may differ.
- The name, range, and default value of the parameters are subject to change or adjustment. The actual display prevails.
- The power parameters should be set by professionals to prevent the generating capacity from being influenced by wrong parameters.

LCD and Button Description

- Stop pressing the button for a period on any page, the LCD will get dark and go back to the initial page.
- Short press the button to switch menu or adjust parameter values.
- Long press the button to enter the submenu. After adjusting the parameter values, long press to successfully set the parameter; enter the next submenu.

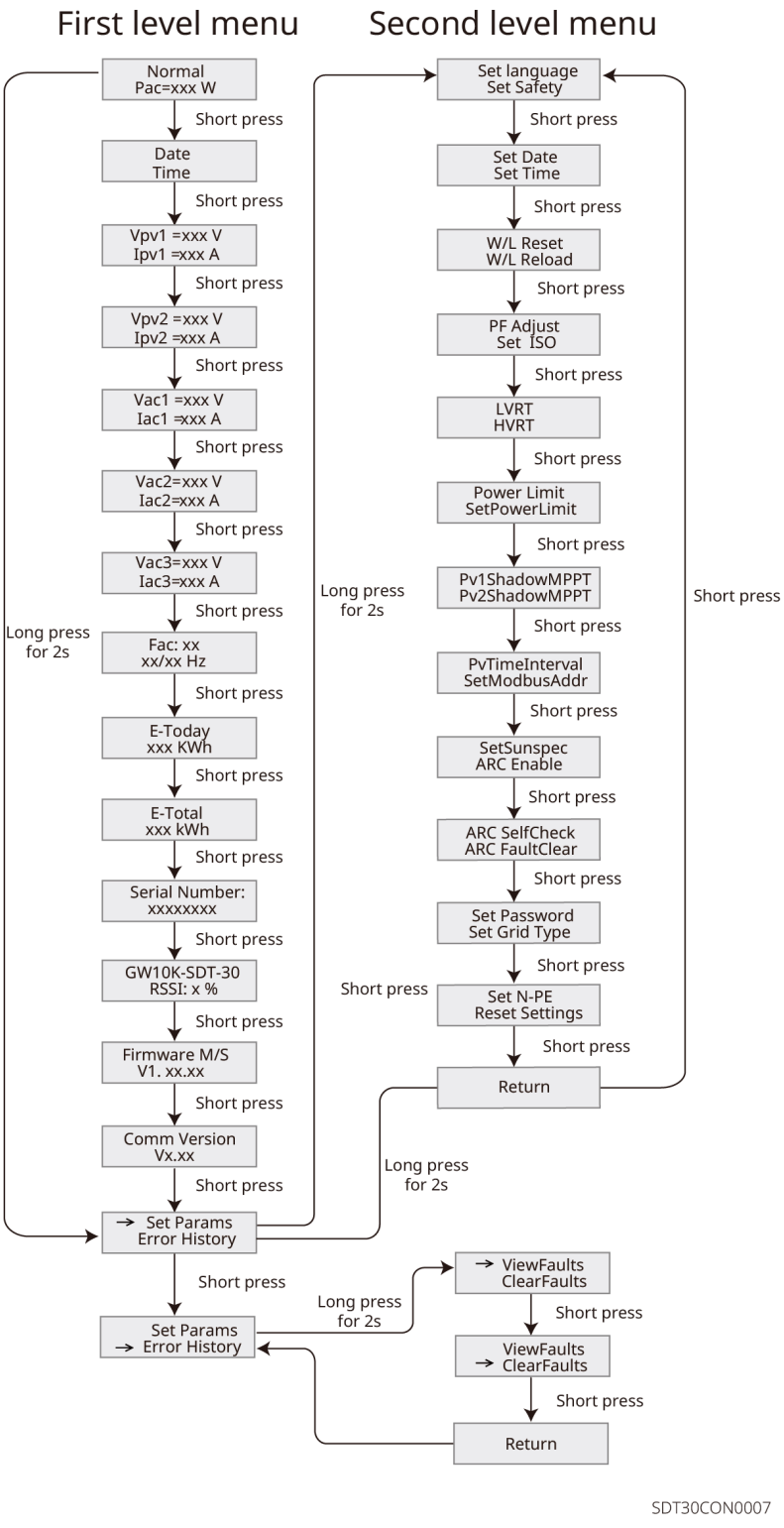
Example:





7.1.1 LCD Menu Overview

This part describes the menu structure, allowing you to view inverter information and to set parameters more conveniently.



7.1.2 Inverter Parameter Overview

Parameter	Description
Connected to the grid Normal=0.0W	Home page. Indicates the real-time power of the inverter.
Date Time	Check the time of the country/region.
Vpv1= xxx V	Check the DC input voltage of the inverter.
Vpv2= xxx V	Check the DC input current of the inverter.
Vac	Check the voltage of the utility grid.
Iac	Check the AC output current of the inverter.
Fac	Check the frequency of the utility grid.
E-Today	Check the genenominal power of the inverter for that day.
E-Total	Check the total genenominal power of the inverter.
Serial Number	Check the serial number of the inverter.
GW10K-SDT-30 RSSI: xx%	Check the signal strength of the Smart Dongle.
Firmware M/S	Check the firmware version.
Comm Version	Check the communication version.
Set Language	Set the display language.
Set Safety	Set the safety country/region in compliance with the local grid standard and application scenario of the inverter.
Set Date	Set time according to the actual time in the country/region where the inverter is located.
Set Time	
W/L Reset	Power off and restart the Smart Dongle.
W/L Reloading	Restore the factory settings of the Smart Dongle. Reconfigure the Smart Dongle network parameters after restoring the factory settings.

Parameter	Description
PF Adjustment	Set the power factor of the inverter according to the actual situation.
Set ISO	Indicates the PV-PE insulation resistance threshold value. When the detected value is under the set value, the IOS fault occurs.
LVRT	With LVRT on, the inverter will stay connected with the utility grid after a short-term utility grid low voltage exception occurs.
HVRT	With HVRT on, the inverter will stay connected with the utility grid after a short-term utility grid high voltage exception occurs.
Power Limit	Set the power fed back into the utility grid according to the actual situation.
Set Power Limit	
Pv1 Shadow MPPT	Enable the shadow scan function if the PV panels are shadowed.
Pv2 Shadow MPPT	
Pv Time Interval	Set the scan time according to the actual need.
Set Modbus Addr	Set the actual Modbus address.
Set Sunspec	Set the Sunspec based on the actual communication method.
ARC Enable	The function is optional and off by default. Please open or close it according to actual need.
ARC Self Check	Detect if the ARC function is normal.
ARC Fault Clear	Clear the ARC Fault.
Set Password	The password can be adjusted. Please record the new password and if you lose the password, please contact the after-sales service center. After changing your password, please remember it. If you forget your password, please contact the after-sales service center for assistance.

Parameter	Description
Set Grid Type	Set the grid type according to the actual situation. Star and Delta grid are supported.
Set N-PE	To enable the detection of N line to ground insulation resistance.
Restore Factory Settings	Restore part of factory settings.
View Faults	Check historical fault records of the inverter.
Clear Faults	Clear historical fault records of the inverter.

7.2 Setting Inverter Parameters via App

SolarGo app is a mobile application that communicates with the inverter via Bluetooth module, WIFi module or inverter. Commonly used functions are as follows:

1. Check the operating data, software version, alarms of the inverter, etc.
2. Set grid parameters and communication parameters of the inverter.
3. Equipment maintenance.

For more details, refer to the SolarGo App User Manual. Get the user manual from the official site or by scanning the QR code below.

SolarGo App

SolarGo App User Manual

7.3 Monitoring via SEMS Portal

SEMS Portal is a monitoring platform that can communicate with devices via WiFi, LAN or 4G. Commonly used functions are as follows:

1. Manage the organization or user information;

2. Add and monitor the power plant information;
3. Equipment maintenance.

SEMS Portal App

8 Maintenance

8.1 Power Off the Inverter

DANGER

- Power off the inverter before operations and maintenance. Otherwise, the inverter may be damaged or electric shocks may occur.
- Delayed discharge. Wait until the components are discharged after power off.

Step1: (Optional) Issue a command to the inverter for halting the grid connection.
Step 2: Turn off the AC switch between the inverter and the utility grid.
Step 3: Turn off the DC switch of the inverter.
Step 4: (Optional) Turn off the switch between the inverter and the PV modules.

8.2 Removing the Inverter

WARNING

- Make sure that the inverter is powered off.
- Wear proper PPE before any operations.

Step 1: Disconnect all the cables, including DC cables, AC cables, communication cables, Smart Dongle, and PE cables.
Step 2: Handle or hoist the inverter to take it down from the wall or the bracket.
Step 3: Remove the bracket.
Step 4: Store the inverter properly. If the inverter needs to be used later, ensure that the storage conditions meet the requirements.

8.3 Disposing of the Inverter

If the inverter cannot work anymore, dispose of it according to the local disposal requirements for electrical equipment waste. Do not dispose of it as household waste.

8.4 Troubleshooting

Perform troubleshooting according to the following methods.Contact the after-sales service if these methods do not work.
Collect the information below before contacting the after-sales service, so that the problems can be solved quickly.

1. Inverter information like serial number, software version, installation date, fault time, fault frequency, etc.
2. Installation environment, including weather conditions, whether the PV modules are sheltered or shadowed, etc. It is recommended to provide some photos and videos to assist in analyzing the problem.
3. Utility grid situation.

No.	Fault	Cause	Solutions/measures to address the issue
1	Utility Loss	1. Utility grid power fails. 2. The AC circuit or the AC breaker is disconnected.	1. The alarm is automatically cleared after the grid power supply is restored. 2. Check whether the AC cable is connected and the AC breaker is on.

2	Grid Overvoltage	The grid voltage exceeds the permissible range, or the duration of high voltage exceeds the requirement of HVRT.	1. If the problem occurs occasionally, the utility grid may be abnormal temporarily.The inverter will recover automatically after detecting that the utility grid is normal. 2. If it occurs frequently, please check if the grid voltage is within the allowable range. • Contact the local power company if the grid voltage exceeds the permissible range. • If the grid voltage is within the allowable range, please modify Overvoltage protection value or HVRT with the consent of the local power operator. 1. Check whether the AC breaker and the output cables are connected securely and correctly if the problem persists.

3	Grid Rapid Overvoltage Protection	The grid voltage is abnormal or ultrahigh.	1. If the problem occurs occasionally, the utility grid may be abnormal temporarily.The inverter will recover automatically after detecting that the utility grid is normal. 2. Check if the grid voltage is running at a high voltage for a long time.If it occurs frequently, please check if the grid voltage is within the allowable range. • Contact the local power company if the grid voltage exceeds the permissible range. • Modify the grid overvoltage rapid protection threshold after obtaining the consent of the local power company if the grid voltage is within the permissible range. 1. Check whether the AC breaker and the output cables are connected securely and correctly if the problem persists.

4	Grid Undervoltage	The grid voltage is lower than the permissible range, or the duration of low voltage exceeds the requirement of LVRT.	1. If the problem occurs occasionally, the utility grid may be abnormal temporarily.The inverter will recover automatically after detecting that the utility grid is normal. 2. If it occurs frequently, please check if the grid voltage is within the allowable range. • Contact the local power company if the grid voltage exceeds the permissible range. • If the grid voltage is within the allowable range, please modify Overvoltage protection value or HVRT with the consent of the local power operator. 1. Check whether the AC breaker and the output cables are connected securely and correctly if the problem persists.

5	Grid 10min Overvoltage	The moving average of grid voltage in 10min exceeds the range of safety requirements.	1. If the problem occurs occasionally, the utility grid may be abnormal temporarily.The inverter will recover automatically after detecting that the utility grid is normal. 2. Check if the grid voltage is running at a high voltage for a long time.If it occurs frequently, please check if the grid voltage is within the allowable range. • Contact the local power company if the grid voltage exceeds the permissible range. • If the grid voltage is within the allowable range, please modify the Grid 10min Overvoltage protection value with the consent of the local power operator.
6	Grid Overfrequency	Utility grid exception.The actual grid frequency exceeds the requirement of the local grid standard.	1. If the problem occurs occasionally, the utility grid may be abnormal temporarily.The inverter will recover automatically after detecting that the utility grid is normal. 2. If the problem occurs frequently, check whether the grid frequency is within the permissible range. • If the grid voltage exceeds the allowed range, please contact local power operator. • If the grid voltage is within the allowable range, please modify the Grid Overfrequency protection value with the consent of the local power operator.

7	Grid Underfrequency	Utility grid exception.The actual grid frequency is lower than the requirement of the local grid standard.	1. If the problem occurs occasionally, the utility grid may be abnormal temporarily.The inverter will recover automatically after detecting that the utility grid is normal. 2. If the problem occurs frequently, check whether the grid frequency is within the permissible range. • If the grid voltage exceeds the allowed range, please contact local power operator. • If the grid voltage is within the allowable range, please modify the Grid Underfrequency protection value with the consent of the local power operator.
8	Anti-islanding	The utility grid is disconnected.The utility grid is disconnected according to the safety regulations, but the grid voltage is maintained due to the loads.	The inverter will resume grid reconnection after the grid to return to normal.
9	LVRT Undervoltage	Utility grid exception.The duration of the utility grid exception exceeds the set time of LVRT.	

10	HVRT Overvoltage	Utility grid exception.The duration of the utility grid exception exceeds the set time of HVRT.	1. If the problem occurs occasionally, the utility grid may be abnormal temporarily.The inverter will recover automatically after detecting that the utility grid is normal. 2. If the problem occurs frequently, check whether the grid voltage is within the permissible range.If not, contact the local power company.If yes, contact the dealer or the after-sales service.
11	Abnormal GFCI 30mA	The input insulation impedance becomes low when the inverter is working.	1. If the problem occurs occasionally, it may be caused by a cable exception.The inverter will recover automatically after the problem is solved. 2. Check whether the impedance between the PV string and PE is too low if the problem occurs frequently or persists.
12	Abnormal GFCI 60mA		
13	Abnormal GFCI 150mA		
14	Abnormal GFCI		
15	DCI Protection L1	The DC component of the output current exceeds the safety range or default range.	1. If the problem is caused by an external fault like a utility grid exception or frequency exception, the inverter will recover automatically after solving the problem. 2. If the problem occurs frequently and the PV station cannot work properly, contact the dealer or the after-sales service.
16	DCI Protection L2		

17	Low Insulation Resistance	The PV string is short-circuited to PE. The installation environment of PV strings is relatively humid for a long time and the insulation of PE cable is poor.	1. Check the impedance of the PV string to the ground.If there is a short circuit phenomenon, please check the short circuit point and rectify it. 2. Check whether the PE cable is connected correctly. 3. If it is confirmed that the impedance is indeed lower than the default value in cloudy and rainy days, please reset the "insulation impedance protection value".
18	Abnormal Ground	1. The PE cable of the inverter is not connected. 2. When the output of the photovoltaic string is grounded, the AC output cables L and N of the inverter are connected reversely.	1. Please confirm if the PE cable of the inverter is properly connected. 2. If the output of the photovoltaic string is grounded, please confirm whether the AC output cables L and N of the inverter are reversely connected.
19	L-PE Short Circuit	The live wire connection of the inverter output terminal is abnormal	Check the wiring of the grid side.If the wiring is wrong, please correct it.

20	Anti Reverse Power Failure	Abnormal fluctuation of load	1. If the exception is caused by an external fault, the inverter will recover automatically after solving the problem. 2. If the problem occurs frequently and the PV station cannot work properly, contact the dealer or the after-sales service.
21	Internal Comm Loss	1. Chip has not be powered on 2. Chip program version error	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
22	AC HCT Check Abnormal	The sampling of the AC HCT is abnormal.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
23	GFCI HCT Check Abnormal	The sampling of the GFCI HCT is abnormal.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
24	Relay Check Abnormal	1. The relay is abnormal or short-circuited. 2. The control circuit is abnormal. 3. The AC cable is connected improperly, like a virtual connection or short circuit.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.

25	Internal Fan Abnormal	1. The fan power supply is abnormal. 2. Mechanical exception. 3. The fan is aging and damaged.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
26	External Fan Abnormal		
27	Flash Fault	The internal Flash storage is abnormal.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
28	DC Arc Fault	1. The DC terminal is not firmly connected. 2. The DC cable is broken.	Read the Quick Installation Guide and check whether the cables are connected properly.
29	AFCI Self-test Fault	AFCI detection equipment is abnormal.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
30	INV Module Overtemperature	1. The inverter is installed in a place with poor ventilation. 2. The ambient temperature exceeds 60℃. 3. A fault occurs in the internal fan of the inverter.	1. Check whether the ventilation of the inverter installation location is good and whether the ambient temperature exceeds the maximum allowable ambient temperature range. 2. If the ventilation is poor or the ambient temperature is too high, please improve the ventilation and heat dissipation conditions. 3. Contact the dealer or after-sales service if both the ventilation and the ambient temperature are proper.

31	1.5V Ref abnormal	The reference circuit is abnormal.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
32	0.3V Ref abnormal	The reference circuit is abnormal.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
33	BUS Overvoltage	The PV voltage is too high. The sampling of the inverter BUS voltage is abnormal. The isolation of the transformer of the inverter is poor, so two inverters influence each other when connected to the grid.One of the inverters reports DC Overvoltage.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
34	P-BUS Overvoltage		
35	N-BUS Overvoltage		
36	BUS Overvoltage(Slave CPU 1)		
37	PBUS Overvoltage(Slave CPU 1)		
38	NBUS Overvoltage(Slave CPU 1)		
39	PV Input Overvoltage	The PV array configuration is not correct.Too many PV panels are connected in series in the PV string.	Check the serial connection of the PV array.Make sure that the open circuit voltage of the PV string is not higher than the maximum operating voltage of the inverter.

40	PV Continuous Hardware Overcurrent	1. The PV configuration is not proper. 2. The hardware is damaged.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
41	PV Continuous Software Overcurrent	1. The PV configuration is not proper. 2. The hardware is damaged.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
42	PV String Reversed(String1~String16)	The PV strings are connected reversely.	Check whether PV strings are connected reversely.
43	PV Voltage Low	Sun light is weak or changing abnormally.	1. If the problem occurs occasionally, the reason might be abnormal sun light.The inverter will recover automatically without manual intervention. 2. If the problem occurs frequently, contact the dealer or the after-sales service.
44	BUS Voltage Low	Sun light is weak or changing abnormally.	1. If the problem occurs occasionally, the reason might be abnormal sun light.The inverter will recover automatically without manual intervention. 2. If the problem occurs frequently, contact the dealer or the after-sales service.

45	BUS Soft Start Failure	Boost driving circuit is abnormal.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
46	BUS Voltage Imbalance	1. The inverter sampling circuit is abnormal. 2. Abnormal hardware.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
47	Gird Phase Lock Failure	The grid frequency is unstable.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
48	Inverter Continuous Overcurrent	Short time sudden changes in the grid or load cause the control overcurrent.	If the problem occurs occasionally, ignore it.If the problem occurs frequently, contact the dealer or the after-sales service.
49	INV Software Overcurrent		
50	R Phase Hardware Overcurrent		
51	S Phase Hardware Overcurrent		
52	T Phase Hardware Overcurrent		

53	PV Hardware Overcurrent	Sun light is weak or changing abnormally.	Disconnect the AC output switch and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
54	PV Software Overcurrent		
55	PV HCT Failure	Abnormal boost current sensor	Disconnect the AC circuit breaker and DC input switch, then connect them 5 minutes later.Contact the dealer or the after-sales service if the problem persists.
56	Cavity Overtemperature	1. The inverter is installed in a place with poor ventilation. 2. The ambient temperature exceeds 60℃. 3. Internal fan working abnormally	1. Check whether the ventilation of the inverter installation location is good and whether the ambient temperature exceeds the maximum allowable ambient temperature range. 2. If the ventilation is poor or the ambient temperature is too high, please improve the ventilation and heat dissipation conditions. 3. Contact the dealer or after-sales service if both the ventilation and the ambient temperature are proper.

57	Incorrect PV Access Mode Setting	The actual PV access mode of the PV panels does not match the PV access mode set in the device.	Check whether the PV access mode is set correctly.If it is incorrect, please reset the PV access mode in the correct way. 1. Confirm whether each PV string actually connected is properly connected. 2. If the PV strings are correctly connected, check through the App or the screen whether the currently set "PV access mode" corresponds to the actual access mode. 3. If the currently set "PV access mode" does not match the actual access mode, you need to set the "PV access mode" to a mode consistent with the actual situation through the App or the screen.After the setting is completed, disconnect the AC output side switch and the DC input side switch, and then close the AC output side switch and the DC input side switch again after 5 minutes. 4. After the setting is completed, if the current "PV access mode" is consistent with the actual access mode, but this fault is still reported, please contact the distributor or our company's customer service center.

8.5 Routine Maintenance

⚠DANGER
Power off the inverter before operations and maintenance. Otherwise, the inverter may be damaged or electric shocks may occur.

Maintaining Item	Maintaining Method	Maintaining Period

System Cleaning	Check the heat sink, air intake, and air outlet for foreign matter or dust.	Once 6-12 months
Fan	Check the fan for proper working status, low noise, and intact appearance.	Once a year
DC Switch	Turn the DC switch on and off ten consecutive times to make sure that it is working properly.	Once a year
Electrical Connection	Check whether the cables are securely connected. Check whether the cables are broken or whether there is any exposed copper core.	Once 6-12 months
Sealing	Check whether all the terminals and ports are properly sealed. Reseal the cable hole if it is not sealed or too big.	Once a year

9 Technical Parameters

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.

10 Explanation of Terms

10 Overvoltage Category Definition

- **Category I**: applies to equipment connected to a circuit where measures have been taken to reduce transient overvoltage to a low level.
- **Category II**: applies to fixed downstream equipment. For example, appliances, portable tools and other plug-connected equipment; Voltage category III is used if there are special requirements for the reliability and suitability of such equipment.
- Category II**I:** applies to fixed downstream equipment, including the main distribution board. For example, switchgear and other equipment in an industrial installation
- Category **IV**: applies to the upstream equipment in the power supply of the distribution device, including measuring instruments and upstream over-current protection devices.
- **Definition of Types of Damp Places**

Environmental Parameters	Level		
	3K3	4K2	4K4H
Temperature Range	0~+40℃	-33~+40℃	-33~+40℃
Humidity Range	5% to 85%	15% to 100%	4% to 100%

- **Definition of Environmental Category:**
  - **Outdoor Inverter**: The ambient air temperature range is -25 to +60℃, and it is suitable for environments with pollution degree 3.
  - **Indoor Type II Inverter:** The ambient air temperature range is -25 to +40℃, and it is suitable for environments with pollution degree 3.
  - **Indoor Type I Inverter:** The ambient air temperature range is 0 to +40℃, and it is suitable for environments with pollution degree 2.
- **Definition of Pollution Degree Categories:**
  - **Pollution Degree 1**: No pollution or only dry non-conductive pollution.
  - **Pollution Degree 2:** In general, there is only non-conductive pollution, but the transient conductive pollution caused by occasional condensation must be taken into account.
  - **Pollution Degree 3:** There is conductive pollution, or the non-conductive pollution becomes conductive pollution due to condensation.

- **Pollution Degree 4:** Persistent conductive pollution, such as pollution caused by conductive dust or rain and snow.

11 Obtaining of Relevant Manuals

Name of the Document	Official Website Link
Smart Meter Quick Installation Guide (GM330, GMK330)	https://en.goodwe.com/Ftp/EN/Downloads/User%20Manual/GW_Smart%20Meter-EU_Quick%20Installation%20Guide-POLY.pdf
Quick Installation Guide for EzLink3000	https://en.goodwe.com/Ftp/EN/Downloads/User%20Manual/GW_EzLink_Quick%20Installation%20Guide-EN.pdf
Ezlogger3000C Quick Installation Guide	https://en.goodwe.com/Ftp/EN/Downloads/User%20Manual/GW_Ezlogger3000C_Quick-Installation-Guide-POLY.pdf
EzLogger Pro Quick Installation Guide	https://en.goodwe.com/Ftp/EN/Downloads/User%20Manual/GW_Ezlogger%20Pro_User%20Manual-EN.pdf
4G Kit-CN-G20, 4G Kit-CN-G21 Quick Installation Guide	https://www.goodwe.com/Ftp/Installation-instructions/4G-KIT.pdf
WiFi, LAN Kit-20, WiFi Kit-20 Quick Installation Guide	https://en.goodwe.com/Ftp/EN/Downloads/User%20Manual/GW_WiFi-LAN-Kit-20_WiFi-Kit-20_Quick-Installation-Guide-POLY.pdf