V1.1 2026-10-20

Micro Inverter

GW1.6K-MIS-G20
GW1.8K-MIS-G20
GW1.875K-MIS-G20
GW2K-MIS-G20
GW2.25K-MIS-G20
GW2.5K-MIS-G20

User Manual

GOODWE

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NOTICE

Due to product version upgrades or other reasons, the content of this document may be updated from time to time. Unless otherwise agreed, the content of this document does not replace the safety precautions on the product labels. All descriptions in this document are for guidance only.

Preface

Overview

This document primarily describes the product information, installation and wiring, configuration and commissioning, troubleshooting, and maintenance of the microinverter. Before installing and using the product, carefully read this manual to understand the product safety information and familiarize yourself with the product functions and features. The document may be updated from time to time; please obtain the latest version and additional product information from the official website.

Applicable Products

This document applies to the following inverter models:

Product Model	Rated Output Power	Rated Output Voltage
GW1.6K-MIS-G20	1600W	220/230/240, L/N/PE
GW1.8K-MIS-G20	1800W	220/230/240, L/N/PE
GW1.875K-MIS-G20	1875W	220/230/240, L/N/PE
GW2K-MIS-G20	2000W	220/230/240, L/N/PE
GW2.25K-MIS-G20	2250W	220/230/240, L/N/PE
GW2.5K-MIS-G20	2500W	220/230/240, L/N/PE

Symbol Definitions

⚠DANGER
Indicates a high potential hazard which, if not avoided, will result in death or serious injury.
⚠WARNING
Indicates a medium potential hazard which, if not avoided, could result in death or serious injury.

⚠CAUTION
Indicates a low potential hazard which, if not avoided, could result in moderate or minor injury.
NOTICE
Emphasizes and supplements the content, and may also provide tips or tricks for optimized use of the product that can help you solve a problem or save time.

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1 Safety Precautions

Always observe the safety precautions contained in this document when operating the equipment.

WARNING

The equipment has been designed and tested in strict accordance with safety regulations. However, as electrical equipment, relevant safety instructions must be observed before any operation on the equipment. Improper operation may cause serious injury or property damage.

1.1 General Safety

NOTICE

- Due to product version upgrades or other reasons, the content of this document may be updated from time to time. Unless otherwise agreed, the content of this document does not replace the safety precautions on the product labels. All descriptions in this document are for guidance only.
- Read this document carefully before installing the equipment to understand the product and precautions.
- When operating the equipment, use insulated tools and wear personal protective equipment to ensure personal safety. When touching electronic components, wear antistatic gloves, antistatic wrist straps, antistatic clothing, etc., and ensure Protection of the equipment from electrostatic damage.
- Unauthorized disassembly or modification may cause equipment damage, which is not covered by the warranty.
-
- Equipment damage or personal injury caused by failure to install, use, or configure the equipment in accordance with this document or the corresponding user manual is not within the responsibility of the equipment manufacturer. For more product warranty information, please visit the official website:https://en.goodwe.com/warranty。

1.2 Personnel Requirements

NOTICE

To ensure the safety, compliance, and efficiency of the entire process of equipment transportation, installation, wiring, operation, and maintenance, the work must be performed by professional or qualified personnel.

1. Professional or qualified personnel include:
   - Personnel who have mastered the equipment working principles, system structure, and knowledge of risks and hazards, and have received professional operation training or possess extensive practical experience.
   - Personnel who have received relevant technical and safety training, possess certain operating experience, are able to recognize dangers that specific operations may cause to themselves, and can take protective measures to minimize risks to themselves and others.
   - Qualified electrical technicians meeting the regulatory requirements of the country/region where they are located.
   - Possess an electrical engineering degree / an advanced diploma in an electrical discipline or equivalent / a professional qualification in the electrical field, and have at least 2/3/4 years of experience in testing and supervision work using electrical equipment safety standards.
2. Personnel involved in special tasks such as electrical work, work at heights, and special equipment operation must hold valid qualification certificates required by the location of the equipment.
3. Medium-voltage equipment operations must be performed by certified high-voltage electricians.
4. Equipment and component replacement is only permitted to be performed by authorized personnel.

1.3 System Safety

DANGER

- Before making electrical connections, disconnect all upstream switches of the equipment to ensure that the equipment is de-energized. Live-line operation is strictly prohibited; otherwise, hazards such as electric shock may occur.
- For equipment that supports PV string connection, the PV input terminals have weak surge current withstand capability. It is strictly prohibited to use a DC voltage source to directly energize the device through the PV port. If energization from the PV port is required, follow the steps below. Any equipment damage caused by non-compliant operation is considered human-caused damage and is not covered by the product warranty.
  - First, limit the output current of the DC voltage source within the range of the Max. Current from Grid permitted by the PV port.
  - Then close the inverter's DC Switch.
  - Finally, slowly increase the DC source output voltage from zero to the target value at a rate of ≤50 V/s.
- Applicable laws, regulations, standards, and specifications shall be observed during all operations such as transportation, storage, installation, operation, use, and maintenance.
- The specifications of cables and components used for electrical connections shall comply with local laws, regulations, standards, and specifications.
- Use the cable connectors delivered with the equipment to connect the equipment cables. If connectors of other models are used, any resulting equipment damage is not the responsibility of the equipment manufacturer.
- Ensure that all equipment cables are correctly connected, tightened, and not loose. Improper wiring may cause poor contact or damage to the equipment.
- To ensure Protection of the equipment and its components from damage during transportation, ensure that transportation personnel are professionally trained. Record the operating steps during transportation, and keep the equipment balanced to prevent it from falling.
- Ensure that the equipment is placed securely and not tilted. Equipment tipping over may cause equipment damage and personal injury.

WARNING

- During equipment installation, avoid placing load on the wiring terminals; otherwise, the terminals may be damaged.
- If cables are subjected to excessive tensile force, poor connection may result. When wiring, reserve a certain length of cable before connecting it to the equipment wiring port.
- Cables of the same type should be bound together. Cables of different types should be laid at least 30 mm apart. Do not intertwine or cross them.
- Using cables in high-temperature environments may cause insulation aging and damage. The distance between cables and heat-generating components or the periphery of heat source areas must be at least 30 mm.

1.3.1 PV String Safety

WARNING

- Ensure that the module frames and mounting system are properly grounded.
- After the DC cables are connected, ensure that the cable connections are tightened and not loose. Improper wiring may cause poor contact or high impedance and damage the inverter.
- Use a multimeter to measure the DC cables to ensure correct polarity and no reverse connection; the voltage should be lower than the maximum DC input voltage. Damage caused by reverse connection and Overvoltage is not the responsibility of the equipment manufacturer.
- The PV string output does not support grounding. Before connecting the PV string to the inverter, ensure that the minimum insulation resistance to ground of the PV string meets the minimum insulation impedance requirement (R = Max. Input Voltage (V)/30 mA).
- Do not connect the same PV string to multiple inverters; otherwise, the inverters may be damaged.
- The PV modules used with the inverter must comply with IEC 61730 Class A standards.
- The DC input port of the microinverter supports connection to PV modules. Do not connect batteries or other power sources.

1.3.2 Inverter Safety

WARNING

- Ensure that the voltage and frequency at the grid-connection point comply with the inverter's grid-connection specifications.
- It is recommended to install Protection devices such as circuit breakers or fuses on the AC side of the inverter. The specifications of the Protection devices must be greater than 1.25 times the Max. Current of the inverter AC output.
-

1.4 Safety Symbols and Certification Mark Descriptions

DANGER

- After the equipment is installed, the labels and warning signs on the enclosure must be clearly visible. Do not cover, alter, or damage them.
- The following descriptions of enclosure warning labels are for reference only. The labels actually used on the equipment shall prevail.

No.	Symbol	Meaning
1		Potential hazards exist during equipment operation. Take proper protective measures when operating the equipment.
2		High voltage hazard. High voltage is present during equipment operation. Before operating the equipment, ensure that the equipment is powered off.
3		The inverter surface may be hot. Do not touch it during equipment operation; otherwise, burns may result.

No.	Symbol	Meaning
4		Delayed discharge. After the equipment is powered off, wait 5 minutes for the equipment to fully discharge.
5		Before operating the equipment, please read the product manual carefully.
6		The equipment must not be disposed of as household waste. Please dispose of the equipment in accordance with local laws and regulations, or return it to the equipment manufacturer.
7		CE Certification mark.
8		ANTEL Certification mark.

1.5 European Declaration of Conformity

1.5.1 Devices with Wireless Communication Function

Equipment with wireless communication function that can be sold in the European market meets the following directive requirements:

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

1.5.2 Devices Without Wireless Communication Function

Equipment without wireless communication function that can be sold in the European market meets the following directive requirements:

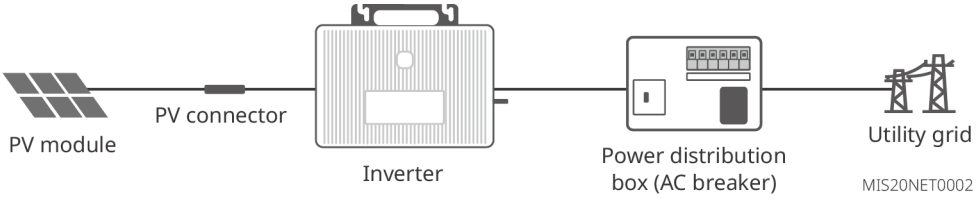
- Electromagnetic compatibility Directive 2014/30/EU (EMC)
- Electrical Apparatus Low Voltage Directive 2014/35/EU (LVD)

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

2 System Introduction

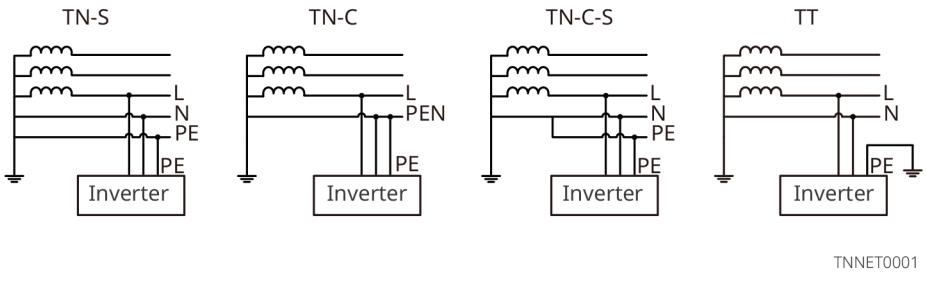
2.1 Function Description

The MIS series inverters are single-phase photovoltaic grid-connected microinverters that can convert the DC power generated by PV modules into AC power meeting grid requirements and feed it into the grid. The main application scenarios of the inverters are as follows:



- Before grid connection, please confirm that approval from the local grid has been obtained.
- Supports connection to a single PV module or multiple PV modules. Ensure that the PV DC input meets the following requirements: open-circuit voltage not exceeding 60 V, short-circuit current not exceeding 26 A.
- Supports local connection and commissioning of microinverters via the SEMS+ App, or remote monitoring of microinverter and plant information.
- The system supports parallel connection of up to 25 microinverters.

2.2 Supported Grid Types



2.3 Features

Power Derating

To ensure safe operation of the inverter and compliance with local safety regulations, the inverter automatically reduces its output power when the Operating Environment

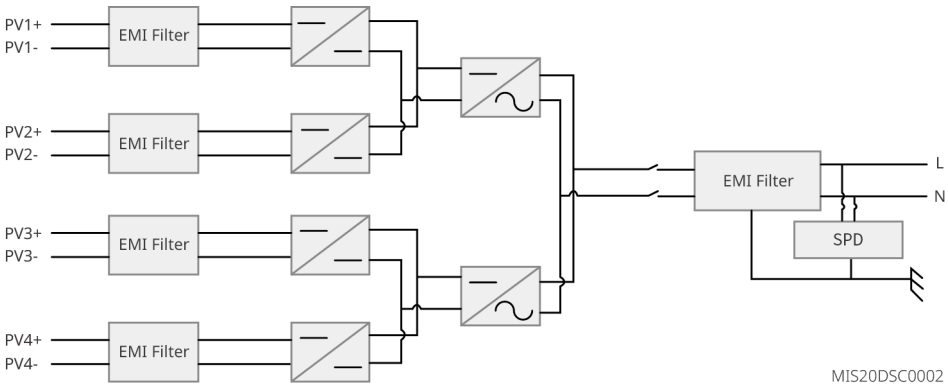
is not ideal. The following factors may cause power derating; please avoid them as much as possible during use.

- Adverse environmental conditions, such as direct sunlight, high temperatures, etc.
- The inverter output power percentage has been set.
- Over-frequency Derating.
- High input current.

Communication

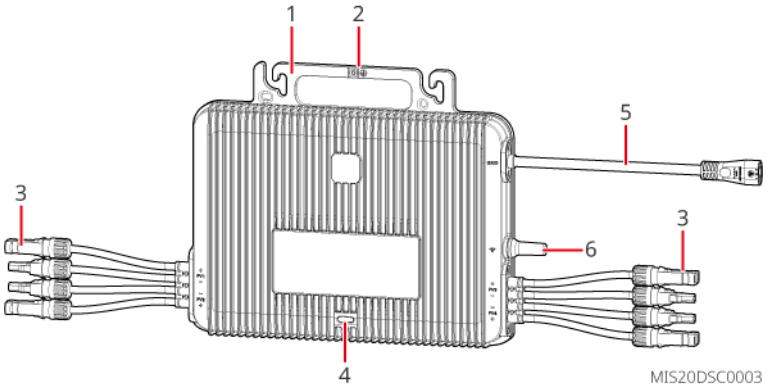
- The inverter supports local configuration via Bluetooth or connection to the cloud via WiFi to monitor inverter operating status, plant operation status, etc.
- Bluetooth: Complies with the Bluetooth 5.0 standard.
- WiFi: Supports the 2.4G band; the router must be set to 2.4G or 2.4G/5G coexistence mode.
- The router SSID supports a maximum input of 32 bytes.
- To ensure communication quality, it is recommended to choose a router with high wireless gain and multiple antennas. If necessary, a wireless repeater or outdoor router can also be used.

2.4 Circuit Block Diagram



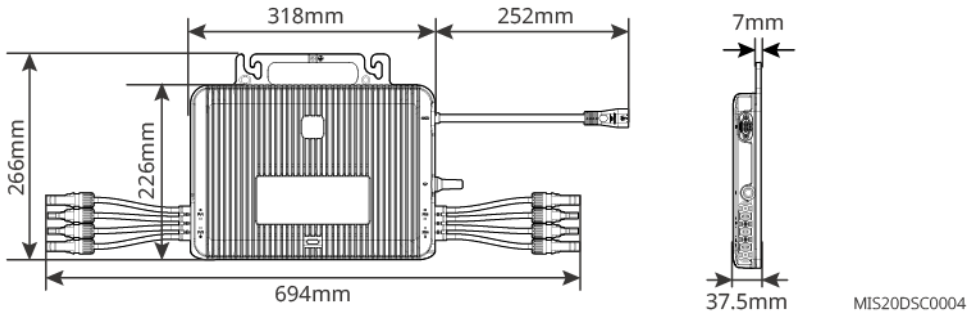
2.5 Appearance Description

2.5.1 Component Description



No.	Component	Description
1	Enclosure handle	Used for carrying or mounting the inverter.
2	Protection grounding	Used for enclosure grounding.
3	DC cable connector	Connect to PV modules. Model: MC4 or Jinko connector.
4	LED indicator	Indicates the operating status of the inverter.
5	AC cable connector	Converge the AC branch cables on the inverter side to the AC bus.
6	Antenna	Used for wireless communication, providing Wi-Fi/Bluetooth signals.

2.5.2 Dimensions

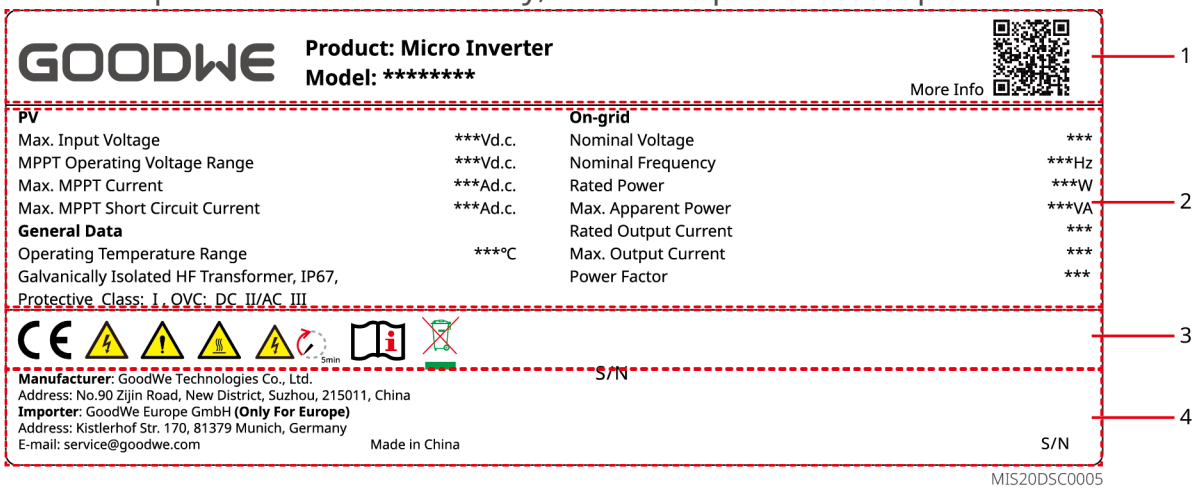


2.5.3 LED Indicator Description

Indicator status	Description
	Green light slow flashing: The device is powered on and in standby mode.
	Green light fast flashing: The device has started and is in self-check mode.
	Green light steady on: The device is operating normally with grid-connected power generation, and all four PV inputs are normal.
	Red and green lights flash alternately: The device is generating grid-connected power, but there is a PV input abnormality.
	Red light flashes twice: Grid fault.
	Red light steady on: Device fault.
	Red and green lights flash alternately quickly: Software is being updated.

2.5.4 Nameplate Description

The nameplate is for reference only; the actual product shall prevail.



MIS20DSC0005

No.	Description	No.	Description
1	GoodWe trademark, product type, and model	2	Product technical specifications
3	Product safety symbols and Certification marks	4	Contact information and serial number information

3 Equipment Inspection and Storage

3.1 Pre-Acceptance Inspection

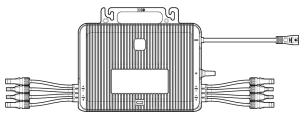
Before signing for receipt of the product, carefully check the following:

1. Check the outer packaging for damage, such as deformation, openings, cracks, or other signs that may cause damage to the equipment in the package. If there is damage, do not open the package and contact your dealer.
2. Check whether the inverter model is correct. If it does not match, do not open the package and contact your dealer.
3. Check whether the types and quantities of delivered items are correct and whether there is any appearance damage. If damaged, contact your dealer.

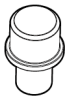
3.2 Delivered Items

NOTICE

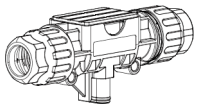
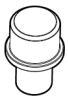
- During electrical connection, prepare connectors of the same model as the inverter-side DC Connector. Equipment damage caused by using incompatible connector models is not covered by the warranty.
- The delivered quantity shall be based on the actual delivery.
- The T-type AC Connector and its accessories vary by region. The actual delivery shall prevail.
- T-type AC Connector Type II is standard in China and Brazil and is not provided in other regions.
- AC Connector Type I and other optional accessories are purchased separately by the customer from the manufacturer according to actual needs and shipped separately. The delivered quantity shall be based on the actual purchased quantity; the quantities described in the manual are for reference only.

Component	Description	Component	Description
	Inverter x 1		Product documentation x 1

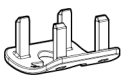
T-type AC Connector Type I:

Component	Description	Component	Description
	T-type AC Connector with cable x 1 The number of connectors matches the number of inverters.		Waterproof rubber plug x 30
	Pin terminals x 30	-	-

T-type AC Connector Type II:

Component	Description	Component	Description
	T-type AC Connector x 1		Waterproof rubber plug x 1
	Pin terminals x 8	-	-

Optional accessories:

Component	Description	Component	Description
	AC Connector removal tool x N		AC Connector removal tool x N
	Dust cap x N	-	-

3.3 Equipment Storage

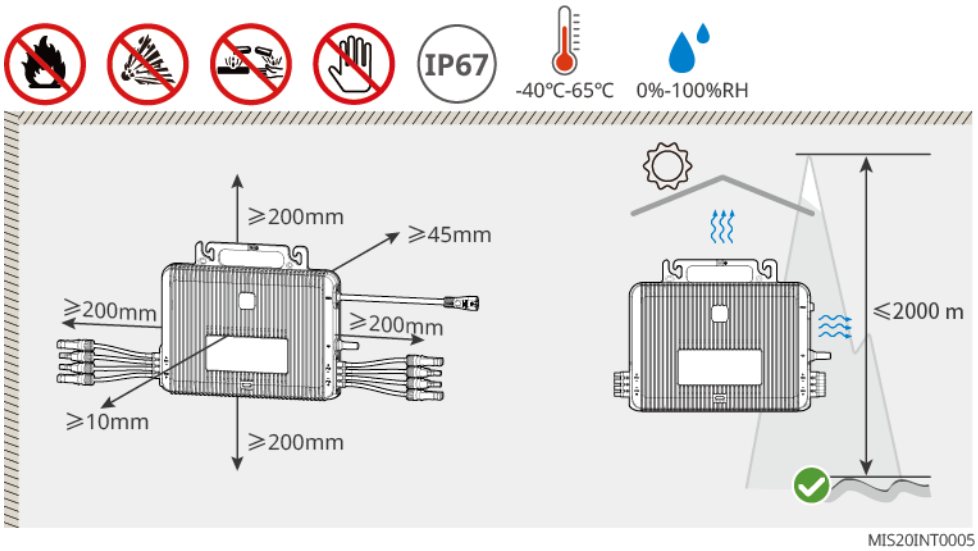
If the inverter is not put into operation immediately, store it in accordance with the

following requirements:

1. Ensure that the outer packaging box is not removed.
2. Ensure that the storage environment is clean, with appropriate temperature and humidity ranges and no condensation.
3. Ensure that the inverter is stacked at the height and in the orientation specified on the packaging box label.
4. Ensure that there is no risk of the inverter tipping over after stacking.
5. If the inverter has been stored for more than two years or has remained non-operational for more than 6 months after installation, it is recommended that it be inspected and tested by professionals before being put into operation.
6. To ensure good electrical performance of the electronic components inside the inverter, it is recommended to energize it once every 6 months during storage. If it has not been energized for more than 6 months, it is recommended that it be inspected and tested by professionals before being put into operation.

4 Installation

4.1 Installation Requirements



Installation Environment Requirements

1. The equipment must not be installed in flammable, explosive, corrosive, or similar environments.
2. Select an installation environment with good ventilation and uniform temperature and humidity distribution, and ensure that the ambient temperature and humidity always meet the operating range specified in the manufacturer's specifications.
3. It is recommended to install the equipment in a sheltered location, avoiding exposure to sunlight, rain, snow accumulation, and similar conditions. If site conditions prevent full sheltering, ensure that ambient temperature, humidity, and other conditions always remain within the permissible range specified in the equipment specifications, and take necessary protective measures.
4. Adverse environmental conditions such as direct sunlight and high temperatures may cause derating of the inverter output power. When selecting the installation site, fully consider heat dissipation conditions and avoid direct sunlight on the equipment itself.
5. The equipment installation and storage site should avoid areas directly exposed to cold air, such as air conditioner outlets. Excessive local temperature differences may cause condensation inside the equipment, which may lead to equipment damage.
6. The installation location must be out of reach of children and avoid positions that

are easy to touch.

7. The surface may be hot during equipment operation. Do not touch the enclosure before it has cooled to prevent burns.
8. The installation space must meet the equipment's ventilation and heat dissipation requirements and operational space requirements.
9. The equipment installation height must facilitate operation and maintenance, ensuring that the equipment indicators and all labels are easy to view and the wiring terminals are easy to operate.
10. The equipment installation altitude must be lower than the Max. Operating Altitude.

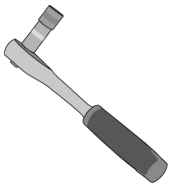
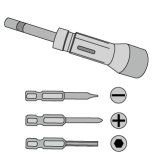
Installation Carrier Requirements

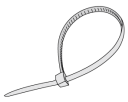
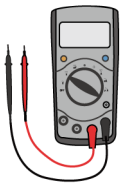
- The installation carrier must not be made of flammable materials and must have fire-resistant performance.
- Ensure that the installation carrier is sturdy and reliable and can bear the Weight of the inverter.

Tool Requirements

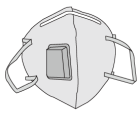
NOTICE

During installation, the following installation tools are recommended. If necessary, other auxiliary tools may be used on site.

Tool Type	Description	Tool Type	Description
	Socket wrench set		Spirit level
	Impact drill (drill bit Φ8 mm)		Torque wrench M4/M8

Tool Type	Description	Tool Type	Description
	Rubber mallet		Marker pen
	Cable ties		Vacuum cleaner
	Multimeter	-	-

Personal protective equipment

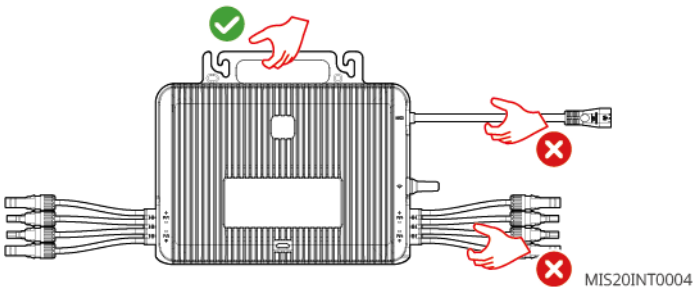
Tool Type	Description	Tool Type	Description
	Insulated gloves, protective gloves		Dust mask
	Safety goggles		Safety shoes

4.2 Installing the Inverter

CAUTION

Before installation, the inverter must be transported to the installation site. During transportation, to avoid personal injury or equipment damage, observe the following precautions:

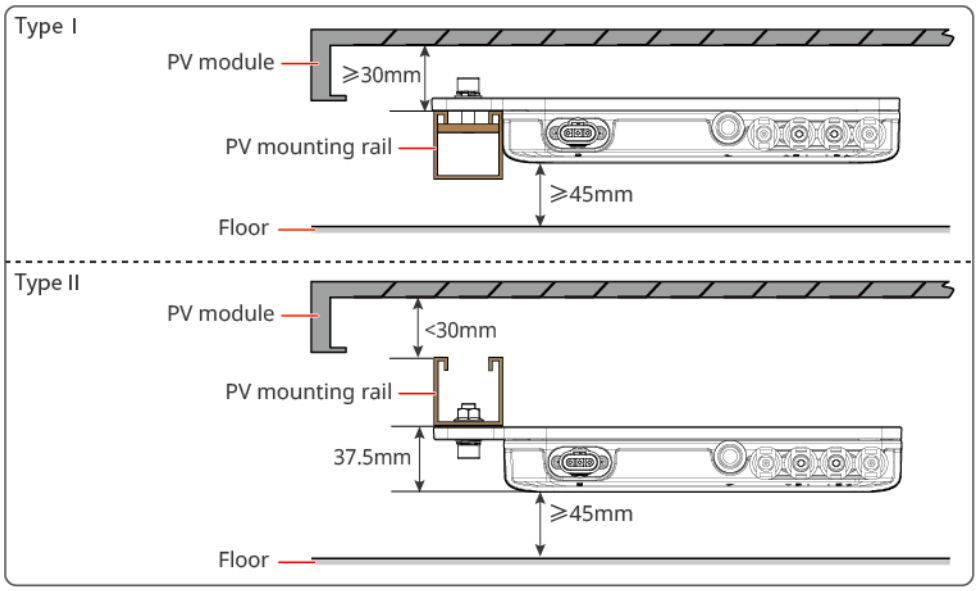
1. Avoid bumping or impacting the antenna during transportation; otherwise, the antenna may be damaged.
2. When carrying the inverter, hold the inverter handles. Do not pull or lift it directly by the cables, as shown in the figure below.



NOTICE

- Before installation, plan the installation position properly to ensure that the DC cables and AC cables are long enough.
- The inverter is installed on the PV module mounting bracket. If the bracket holes are not suitable, prepare aluminum block fixing screws yourself.
- When drilling, wear safety goggles and a dust mask to prevent dust from being inhaled into the respiratory tract or entering the eyes.
- The M8 screws used when installing the inverter on the PV module mounting bracket must be provided by the customer. When preparing the screws, consider the screw length to ensure it suits the actual bracket dimensions and the inverter handle thickness (7 mm).

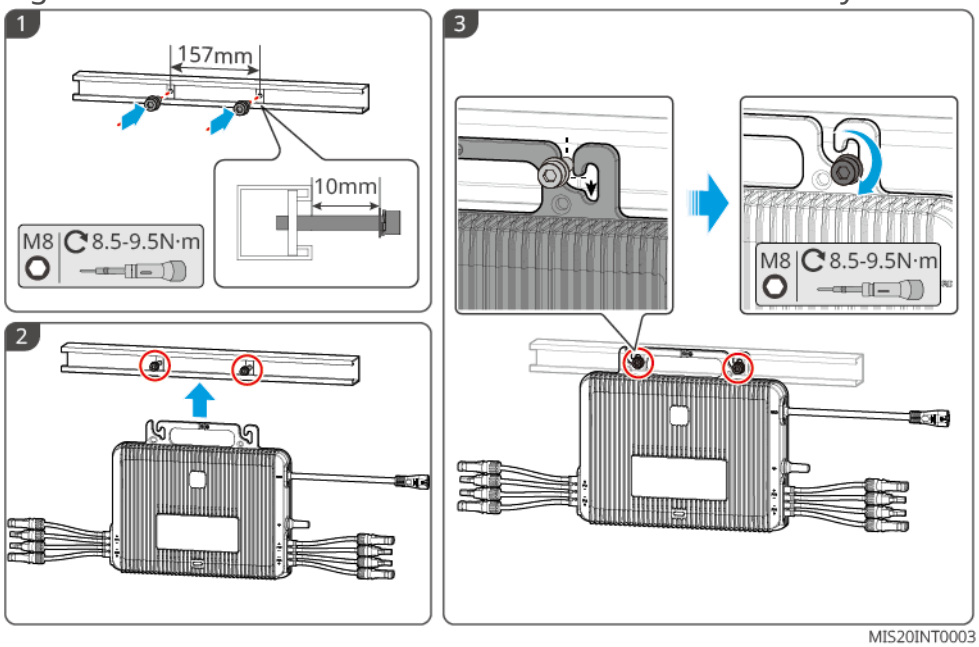
- When the distance between the PV modules and the bracket is greater than or equal to 30 mm, Type 1 Mounting Method is recommended.
- When the distance between the PV modules and the bracket is less than 30 mm and there is sufficient space between the bracket and the ground, Type 2 Mounting Method is recommended.



MIS20INT0002

Inverter installation steps:

1. Secure the M8 screws to the PV module mounting bracket, and reserve sufficient length for hanging the inverter.
2. Hang the inverter handles on the screws.
3. Push the wrench upward gently to confirm that the latch is secured.
4. Tighten the screws to ensure that the inverter is securely installed.



MIS20INT0003

5 Electrical Connection

DANGER

- Before electrical connection, disconnect the inverter's DC Connector and AC output switch to ensure that the equipment is powered off. Live-line operation is strictly prohibited; otherwise, hazards such as electric shock may occur.
- All operations during electrical connection and the specifications of the cables and components used must comply with local laws and regulations.
- If the cables are subjected to excessive tensile force, poor connection may result. During wiring, reserve a certain length of cable before connecting it to the inverter wiring terminals.

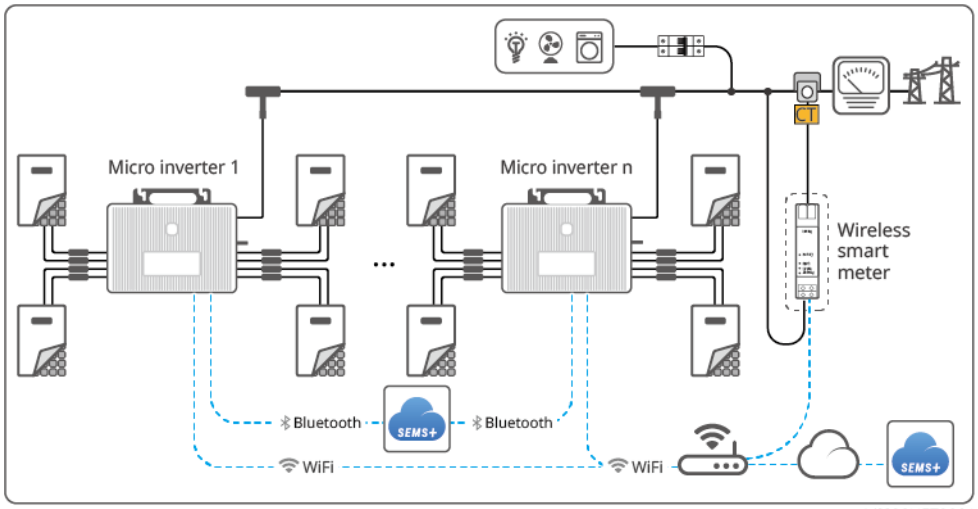
NOTICE

- During electrical connections, wear personal protective equipment such as safety shoes, protective gloves, and insulated gloves as required.
- Only professionals are permitted to perform operations related to electrical connections.
- The cable colors in the figures in this document are for reference only. The specific cable specifications must comply with local regulatory requirements.
- The inverter may be connected to the grid only after approval by the power department of the country/region where it is located.

5.1 System Wiring Diagram

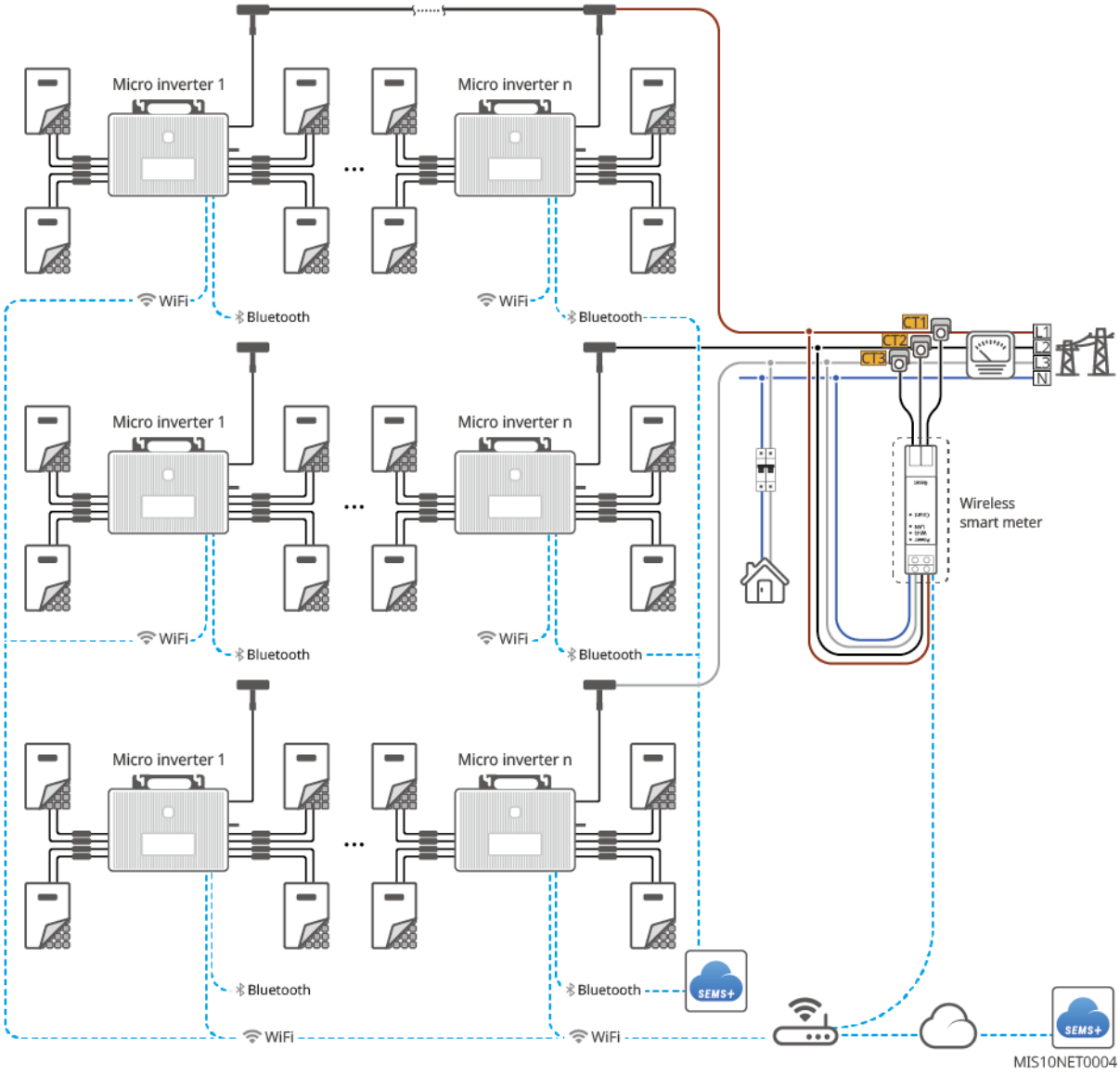
NOTICE

- Please decide on your own whether to install a meter based on actual requirements. If installation is required, please provide your own wireless Intelligent meter and connect to the wireless meter via WiFi to implement functions such as power limitation. For the Mounting Method and precautions of the wireless meter, refer to the corresponding meter manual.
- Currently supported meter models:
  - Single-phase scenario: Fineco EM115-Mod-WL; Eastron SEM3-WL-2.
  - Three-phase scenario: Shelly Pro 3EM; Eastron SEM3-WL-2.



MIS20NET0001

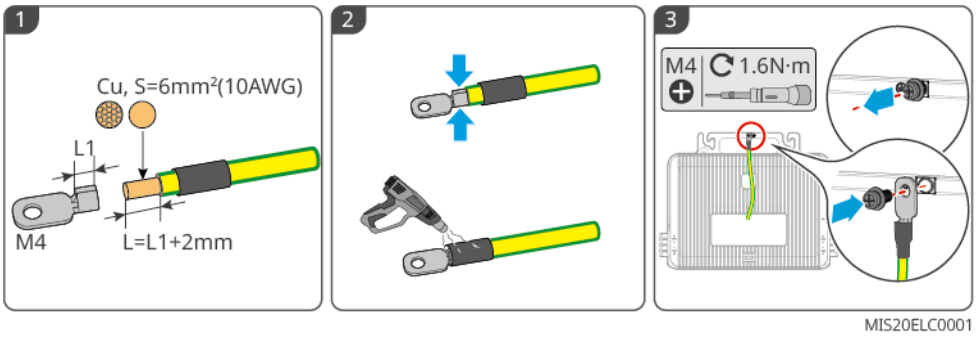
Where permitted by local laws and regulations, multiple inverters can be connected separately to the three-phase grid, as shown in the figure below.



5.2 Connect the Protection Ground Cable

WARNING

- For inverter Protection grounding, it is recommended to connect both the enclosure grounding point and the AC terminal grounding point.
- When connecting multiple inverters, ensure that the Protection grounding points of all inverter enclosure chassis are equipotentially bonded.
- To improve terminal corrosion resistance, after the Protection ground cable is connected and installed, it is recommended to apply silicone gel or paint to the exterior of the grounding terminal for protection.
- Please provide your own Protection ground cable. Recommended specification: 6 mm^2（10AWG）。
- Please provide your own M4 grounding OT terminal.



5.3 Connect the AC Output Cable

WARNING

Do not connect loads between the inverter and the AC Switch directly connected to the inverter.

To ensure that the inverter can be safely disconnected from the grid in the event of an abnormality, connect an AC Switch at the AC-side grid-connection point of the inverter. Select an appropriate AC Switch in accordance with local regulations. The following switch specifications are for reference:

Model	AC Switch Specifications				
	Single inverter	Two inverters	Three inverters	Four inverters	Five inverters
GW1.6K-MIS-G20	10A	25A	32A	40A	50A
GW1.8K-MIS-G20	16A	25A	32A	40A	-
GW1.875K-MIS-G20	16A	25A	32A	40A	-
GW2K-MIS-G20	16A	25A	32A	50A	-
GW2.25K-MIS-G20	16A	32A	40A	-	-
GW2.5K-MIS-G20	25A	42A	50A	-	-

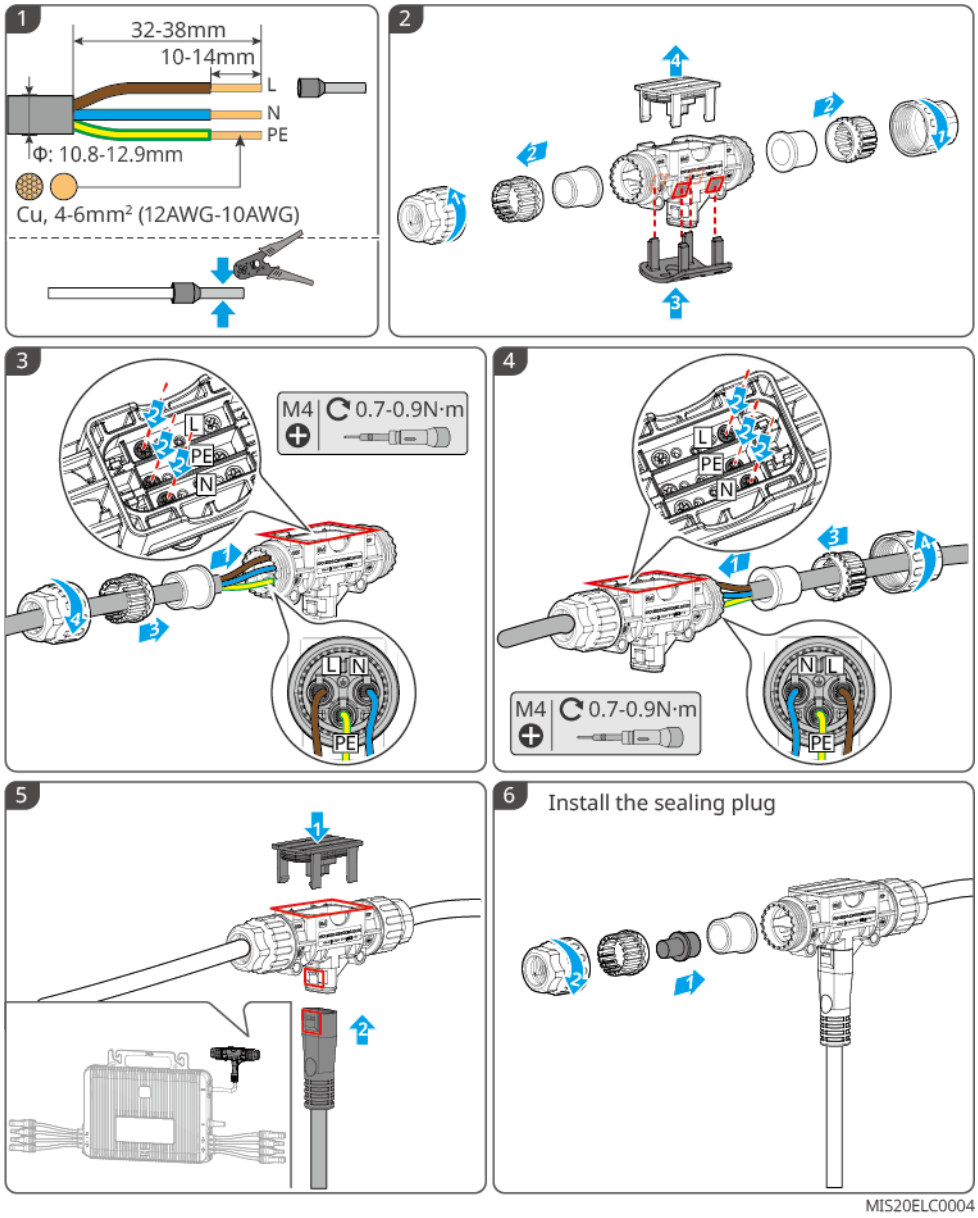
Select whether to install an RCD device in accordance with local laws and regulations. The inverter can be externally connected to a Type A RCD (Residual Current Monitoring device). When the leakage current exceeds the limit, Protection is triggered. When the system power is below 30 kW, the recommended RCD specification is 300 mA; when the system power is above 30 kW, the recommended RCD specification is 30 mA/kVA.

WARNING

- During wiring, the AC bus cable must exactly match the "L", "N", and "PE" ports of the T-type terminal. Incorrect cable connection will cause inverter damage.
- Ensure that the wire core is fully inserted into the wiring hole of the T-type AC terminal with no exposed part.
- Ensure that the cables are securely connected; otherwise, during device operation, the terminals may overheat and cause inverter damage.
- To ensure the Ingress Protection Rating of the device, use the sealing plugs in the accessories to seal unused T-type bus AC terminals.
-
- If necessary, purchase an AC extension cable from the manufacturer, or prepare your own AC bus cable. Recommended specification: 4-6 mm^2（12-10AWG）。
- For the maximum number of microinverters that can be connected to each AC branch, refer to the Technical Specifications chapter.

- **When the T-type AC Connector is not supplied with a cable, refer to the following steps:**

Step 1: Prepare the AC cable.
Step 2: Disassemble the AC Connector.
Step 3: Connect the crimped cable to the connector.
Step 4: Connect the wired connector to the microinverter.
Step 5: Seal unused connectors with blind caps, and secure the AC cable with cable ties.

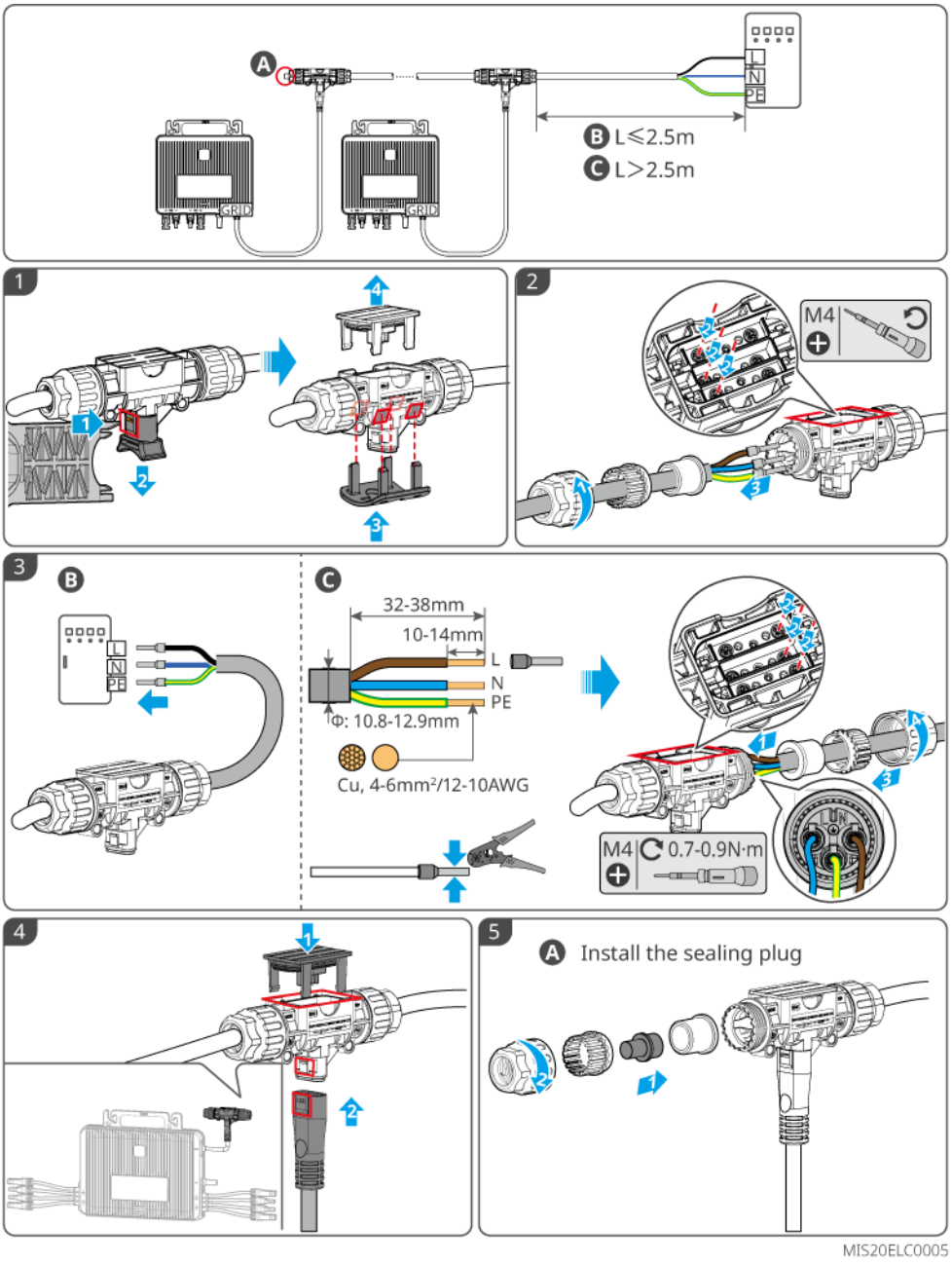


- **When the T-type AC Connector is supplied with a cable, refer to the following steps:**

NOTICE

- The AC cable is supplied with 21 units of T-type AC Connector by default. Before use, separate the AC cable according to the number of inverters, and ensure that the number of retained T-type connectors matches the number of inverters.
- For the AC cable shipped with the package, the spacing length of each section is 2.5 m. If it does not meet the application requirements, prepare an AC cable that meets the specification requirements.

Step 1: Take out the AC cable and confirm the required number of T-type connectors. Use the connector unlocking tool shipped with the package to disassemble the T-type connector at the end of the AC cable.
Step 2: Loosen the screws inside the disassembled T-type connector, and remove the crimped AC cable.
Step 3: The AC cable shipped with the package is 2.5 m long. If the cable length meets the application requirements, connect the AC cable at the end directly to the distribution box. If the cable length does not meet the application requirements, remove the AC cable at the end, connect the self-provided AC extension cable to the T-type connector, and then connect it to the distribution box.
Step 4: Connect each inverter-side AC Connector to the T-type connectors on the AC cable side in sequence.
Step 5: Install a waterproof plug at the tail of the starting T-type connector of the AC cable.



5.4 Connect the DC Input Cable

DANGER

1. Before connecting the PV modules to the inverter, confirm the following information; otherwise, it may cause permanent damage to the inverter and, in severe cases, may cause a fire resulting in personal injury and property loss.

- Ensure that the maximum short-circuit current and Max. Input Voltage of the modules in each MPPT are within the allowable range of the device.
- Ensure that the positive pole of the module is connected to the inverter's PV+, and the negative pole of the module is connected to the inverter's PV-.

2. Do not plug or unplug connectors while the device is operating.

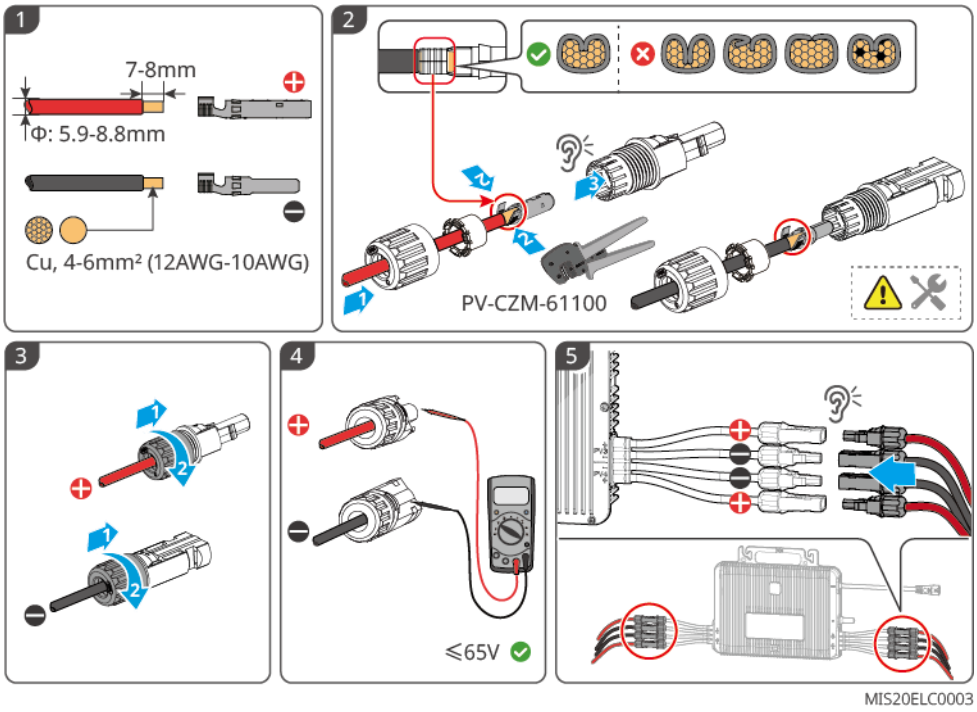
WARNING

- Ensure that the PV DC Connector on the PV string side is the same model as the DC Connector on the inverter side. Device damage caused by using incompatible connector models is not covered by the warranty.
- The PV module output does not support grounding. Before connecting the modules to the inverter, ensure that the minimum insulation resistance to ground of the modules meets the minimum insulation impedance requirement.
- Please ensure that the DC Connector of the same PV module is connected to the same pair of DC Connector terminals on the inverter.
-
- Recommended PV Module Specifications:
  - GW1.6K-MIS-G20：320W - 540W
  - GW1.8K-MIS-G20: 360W - 610W
  - GW1.875K-MIS-G20: 360W - 610W
  - GW2K-MIS-G20: 400W - 675W
  - GW2.25K-MIS-G20: 450W - 760W
  - GW2.5K-MIS-G20: 500W - 850W
- If necessary, purchase DC extension cables from the manufacturer, or prepare DC extension cables yourself. Recommended cable specification: 4-6mm^2（12AWG-10AWG）。

NOTICE

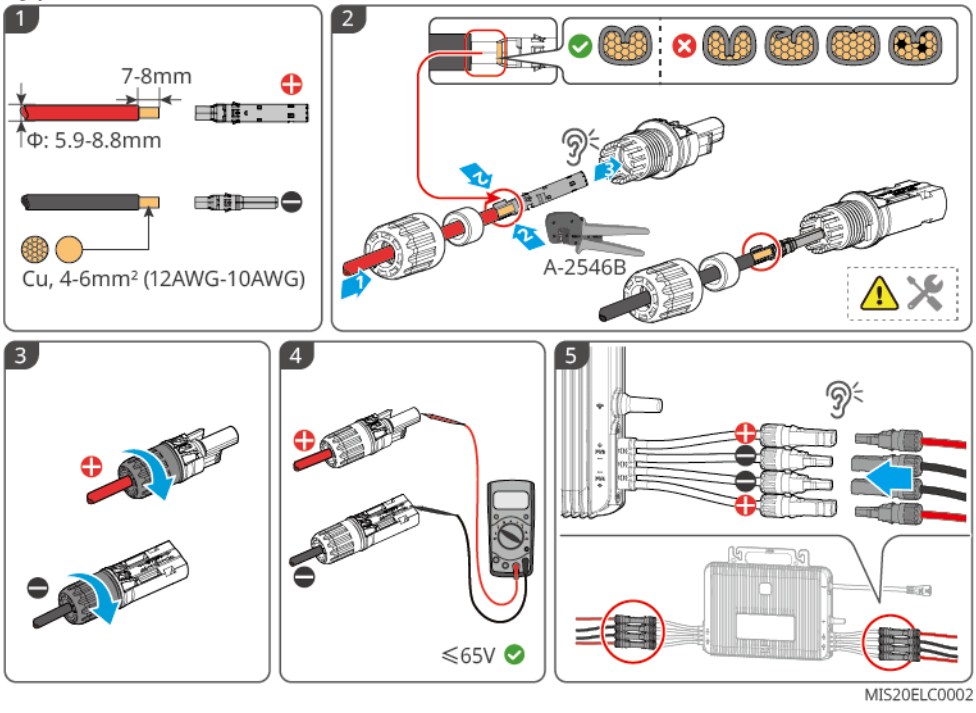
- If the inverter DC input terminals do not need to be connected to PV strings, use waterproof covers to seal the terminals; otherwise, the Ingress Protection Rating of the equipment will be affected.
- The DC Connector models suitable for different regions vary; please refer to the actual product.
- To meet relevant legal and regulatory requirements, ensure that the cable length is less than 3 meters.

Type 1:



MIS20ELC0003

Type 2:



MIS20ELC0002

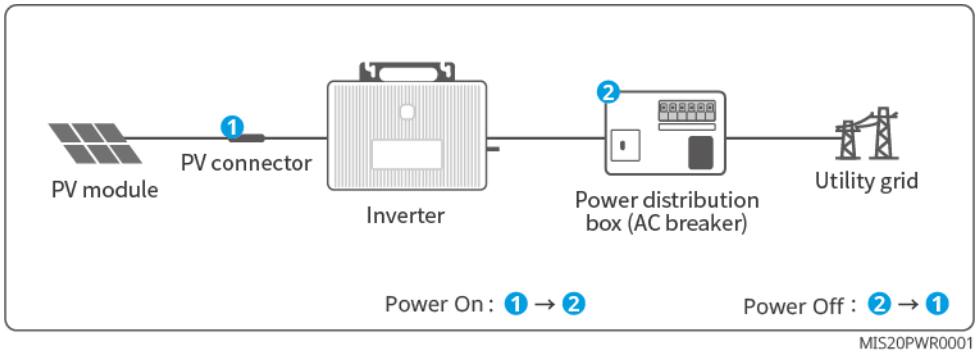
6 Equipment Trial Operation

6.1 Pre-Power-on Inspection

No.	Inspection Items
1	The inverter is installed securely; the installation position is convenient for operation and maintenance; the installation space facilitates ventilation and heat dissipation; and the installation environment is clean and tidy.
2	The Protection ground wire, DC input cables, and AC output cables are connected correctly and securely.
3	Cables are tied in compliance with routing requirements, distributed reasonably, and free from damage.
4	Unused ports are sealed.
5	The voltage and frequency at the inverter's grid connection point meet grid connection requirements.

6.2 Powering on the Equipment

Step 1: Connect the DC Connector between the inverter and the PV strings.
Step 2: Close the AC Switch between the inverter and the grid.



7 System Commissioning

SEMS+ App is software used for remote PV plant monitoring or local device commissioning.
Installers or owners can:

- Remotely monitor the operating status of the PV plant and set operating parameters for the plant and devices.
- Use Local Access to connect to devices, view device operating status, and set device parameters.

Scan the following QR code to download and install.



SEMS0164

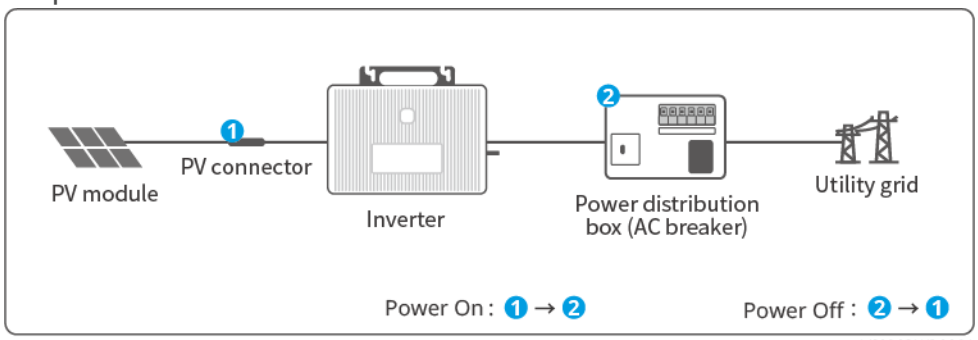
For detailed functions, please refer to the SEMS+ User Manual. The user manual can be obtained from the official website or by scanning the following QR code.

SEMS+ App User Manual

8 System Maintenance

8.1 Powering off the Inverter

Step 1:Disconnect the AC Switch between the inverter and the grid.
Step 2: Disconnect the DC Connector between the inverter and the PV string.



MIS20PWR0001

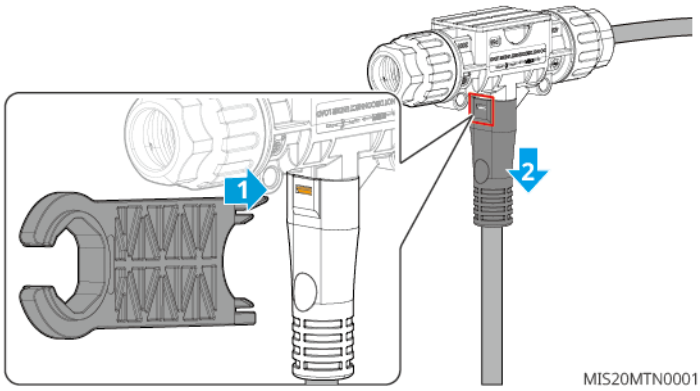
8.2 Removing the Inverter

WARNING

- Ensure that the equipment is de-energized.
- Wear personal protective equipment when operating the equipment.

Step 1: Disconnect all electrical connections of the equipment, including DC cables and AC cables.
Step 2: Remove the equipment.
Step 3: Store the equipment properly. If the equipment will be put into use later, ensure that the storage conditions meet the requirements.

Refer to the following figure for the procedure to remove the AC Connector:



8.3 Scrapping the Inverter

When the equipment can no longer be used and needs to be scrapped, dispose of it in accordance with the electrical waste disposal requirements of the laws and regulations of the country/region where the equipment is located. Do not dispose of the equipment as domestic waste.

8.4 Periodic Maintenance

DANGER

- Before maintaining the equipment, ensure that necessary safety protection equipment is worn to prevent electric shock.
- During maintenance, ensure that both the upstream and downstream switches of the equipment are disconnected.
- During maintenance, strictly follow correct operating procedures.

WARNING

- If exposed copper wires are found inside a conductive cable, do not touch them. High voltage hazard. Contact after-sales personnel. Do not disassemble the equipment without authorization.
- If other emergencies occur, contact after-sales personnel immediately, operate under their guidance, or wait for after-sales personnel to operate on site.

Maintenance content	Maintenance method	Maintenance interval	Maintenance purpose
System cleaning	Check whether the installation space meets the requirements and whether there is debris accumulated around the equipment.	Once every six months	Ensure proper heat dissipation.
System Installation	1. Check whether the equipment is installed securely and whether the fastening screws are loose. 2. Check the equipment appearance for damage and deformation.	Once every 6 months to once a year	Verify that the equipment is installed securely.
Electrical Connection	Check electrical connections for looseness and cable appearance for damage or exposed copper.	Once every 6 months to once a year	Confirm electrical connection reliability.
Sealing	Check whether the sealing of the equipment cable entry holes meets the requirements. If the gaps are too large or the holes are unsealed, reseal them.	Once a year	

8.5 Troubleshooting

Please troubleshoot according to the following methods. If the troubleshooting methods do not resolve the issue, contact the after-sales service center.
When contacting the after-sales service center, please collect the following information to facilitate rapid problem resolution.

1. Product information, such as serial number, software version, equipment installation date, fault occurrence time, fault occurrence frequency, etc.
2. Equipment installation environment, such as weather conditions and whether

modules are obstructed or shaded; it is recommended to provide photos, videos, and other files to assist in problem analysis.

3. Grid conditions.

No.	Fault Name	Fault Cause	Corrective Measures
1	Grid Overvoltage Protection	The grid voltage is above the permissible range, or the high-voltage Duration exceeds the high voltage ride-through setting value.	1. If it occurs occasionally, it may be a short-term grid abnormality. The inverter will resume normal operation after detecting that the grid is normal, and manual intervention is not required. 2. If it occurs frequently, check whether the grid voltage is within the permissible range. If not, contact the local power operator. If yes, modify the Grid Overvoltage Protection point only after obtaining consent from the local power operator. 3. If it cannot recover for a long time, check whether the AC circuit breaker and output cables are connected properly.
2	Grid Undervoltage Protection	The grid voltage is below the permissible range, or the Low Voltage Duration exceeds the Low Voltage ride-through setting value.	1. If it occurs occasionally, it may be a short-term grid abnormality. The inverter will resume normal operation after detecting that the grid is normal, and manual intervention is not required. 2. If it occurs frequently, check whether the grid voltage is within the permissible range. If not, contact the local power operator. If yes, modify the Grid Overvoltage Protection point only after obtaining consent from the local power operator. 3. If it cannot recover for a long time, check whether the AC circuit breaker and output cables are connected properly.

No.	Fault Name	Fault Cause	Corrective Measures
3	Grid Rapid Overvoltage Protection	An abnormality occurs in grid voltage detection, or an ultra-high voltage triggers the fault.	1. If it occurs occasionally, it may be a short-term grid abnormality. The inverter will resume normal operation after detecting that the grid is normal, and manual intervention is not required. 2. If it occurs frequently, check whether the grid voltage is within the permissible range. If not, contact the local power operator. If yes, modify the Grid Undervoltage Protection point only after obtaining consent from the local power operator. 3. If it cannot recover for a long time, check whether the AC circuit breaker and output cables are connected properly.
4	10minOvervoltage	The10minsliding average value of the grid voltage exceeds the range specified by safety regulations.	Check whether the grid voltage has been operating at a high voltage for a long time. If it occurs frequently, check whether the grid frequency is within the allowed range. If not, contact your local power operator. If yes, after obtaining approval from the local power operator, it is also necessary to modify the10minOvervoltage protection point.

No.	Fault Name	Fault Cause	Corrective Measures
5	Grid Overfrequency	Grid abnormality: The actual grid frequency is higher than the local grid standard requirement.	1. If it occurs occasionally, it may be a short-term grid abnormality. The inverter will resume normal operation after detecting that the grid is normal, and manual intervention is not required. 2. If it occurs frequently, check whether the grid frequency is within the allowed range. If not, contact your local power operator. If yes, after obtaining approval from the local power operator, it is also necessary to modify the Grid Overfrequency protection point.
6	Grid Underfrequency	Grid abnormality: The actual grid frequency is lower than the local grid standard requirement.	1. If it occurs occasionally, it may be a short-term grid abnormality. The inverter will resume normal operation after detecting that the grid is normal, and manual intervention is not required. 2. If it occurs frequently, check whether the grid frequency is within the allowed range. If not, contact your local power operator. If yes, after obtaining approval from the local power operator, it is also necessary to modify the Grid Overfrequency protection point.

No.	Fault Name	Fault Cause	Corrective Measures
7	Grid Frequency Instability	Grid abnormality: The actual grid frequency rate of change does not comply with the local grid standard.	1. If it occurs occasionally, it may be a short-term grid abnormality. The inverter will resume normal operation after detecting that the grid is normal, and manual intervention is not required. 2. If it occurs frequently, check whether the grid frequency is within the allowed range. If not, contact your local power operator.
8	Voltage Ride-Through Undervoltage Fault	Grid abnormality: The duration of Grid Voltage Abnormal exceeds the time specified for high and low voltage ride-through.	1. If it occurs occasionally, it may be a short-term grid abnormality. The inverter will resume normal operation after detecting that the grid is normal, and manual intervention is not required. 2. If it occurs frequently, check whether the grid voltage and frequency are within the allowed range and stable. If not, contact your local power operator.
9	HVRT Overvoltage	Grid abnormality: The duration of Grid Voltage Abnormal exceeds the time specified for high and low voltage ride-through.	1. If it occurs occasionally, it may be a short-term grid abnormality. The inverter will resume normal operation after detecting that the grid is normal, and manual intervention is not required. 2. If it occurs frequently, check whether the grid voltage and frequency are within the allowed range and stable. If not, contact your local power operator.

No.	Fault Name	Fault Cause	Corrective Measures
10	DCIProtection Level1	The High DC Component of the inverter output current exceeds the allowable range specified by safety regulations or the machine default.	1. If the abnormality is caused by an external fault, the inverter will automatically resume normal operation after the fault disappears, without manual intervention. 2. If this alarm occurs frequently and affects the normal power generation of the plant, contact your distributor or after-sales service center.
11	DCIProtection Level2	The High DC Component of the inverter output current exceeds the allowable range specified by safety regulations or the machine default.	1. If the abnormality is caused by an external fault, the inverter will automatically resume normal operation after the fault disappears, without manual intervention. 2. If this alarm occurs frequently and affects the normal power generation of the plant, contact your distributor or after-sales service center.

No.	Fault Name	Fault Cause	Corrective Measures
12	Low Insulation Resistance	1. PV string short-circuited to Protection ground. 2. The environment where the PV strings are installed has been humid for a long time, and the line-to-ground insulation is poor.	1. Check the impedance from the PV string/battery port to Protection ground. A resistance greater than80kΩis normal. If the measured resistance is less than80kΩ, identify and rectify the short-circuit point. 2. Check whether the inverter's Protection ground cable is correctly connected. 3. If it is confirmed that the impedance is indeed lower than the default value in rainy weather, use the Appto reset the inverter's“Insulation Resistance Protection Point”。 For inverters in the Australian and New Zealand markets,when an insulation resistance fault occurs, alarms can also be provided in the following ways: 1. The inverter is equipped with a buzzer. When a fault occurs, the buzzer sounds continuously for1minute; if the fault is not resolved, the buzzer sounds again every30minutes. 2. If the inverter is added to the monitoring platform and alarm notification methods are configured, alarm information can be sent to the customer by email.

No.	Fault Name	Fault Cause	Corrective Measures
13	DAB Overtemperature	1. The inverter installation location is not ventilated. 2. Ambient Overtemperature.	1. Check whether the ventilation at the inverter installation location is adequate and whether the ambient temperature exceeds the maximum allowable ambient temperature range. 2. If there is no ventilation or Ambient Overtemperature, improve the ventilation and heat dissipation conditions. 3. If both ventilation and ambient temperature are normal, contact your dealer or after-sales service center.
14	PV IGBT short-circuit fault	1. IGBTshort circuit. 2. The inverter sampling circuit is abnormal.	Disconnect the AC output side switch and PV strings,5 minutes later, close the AC output side switch and connect the PV strings. If the fault persists, contact your dealer or after-sales service center.
15	Model identification fault	The model identification result is outside the series range.	1. Confirm whether the program type and version number match the device model. 2. Disconnect the AC output side switch and PV strings,5 minutes later, close the AC output side switch and connect the PV strings. If the fault persists, contact your dealer or after-sales service center.

No.	Fault Name	Fault Cause	Corrective Measures
16	Bus Overvoltage	1. The DCDC switching transistor on the inverter side is damaged. 2. InverterBUSvoltage sampling is abnormal.	Disconnect the AC output side switch and PV strings,5 minutes later, close the AC output side switch and connect the PV strings. If the fault persists, contact your dealer or after-sales service center.
17	PVInput Overvoltage	The PV array configuration is incorrect. Too many PV modules are connected in series in the string, causing the string open-circuit voltage to be higher than the inverter maximum operating voltage.	Check the series configuration of the corresponding PV array string to ensure that the string open-circuit voltage does not exceed the inverter maximum operating voltage. After the PV array is correctly configured, the inverter alarm will automatically clear.
18	PVContinuous Hardware Overcurrent	1. Improper module configuration 2. Hardware damage	Disconnect the AC output side switch and PV strings,5 minutes later, close the AC output side switch and connect the PV strings. If the fault persists, contact your dealer or after-sales service center.

No.	Fault Name	Fault Cause	Corrective Measures
19	String reverse connection	PVString reverse connection	Check whether the string is reversely connected.
20	PV Input Undervoltage	Low irradiance or abnormal irradiance variation.	1. If it occurs occasionally, it may be due to abnormal irradiance; the inverter will automatically resume normal operation without manual intervention. 2. If this alarm occurs frequently, contact your dealer or after-sales service center.
21	Inverter Continuous Overcurrent	The inverter current exceeds the hardware Protection value.	If it occurs occasionally, no manual intervention is required. If it occurs frequently, contact your dealer or after-sales service center.
22	INV Software Overcurrent	Overcurrent caused by a brief sudden change in the grid or load.	If it occurs occasionally, no manual intervention is required. If it occurs frequently, contact your dealer or after-sales service center.
23	Inverter Single Hardware Overcurrent	Overcurrent caused by a brief sudden change in the grid or load.	If it occurs occasionally, no manual intervention is required. If it occurs frequently, contact your dealer or after-sales service center.
24	PV Hardware Overcurrent	Abnormal change in irradiance.	If it occurs occasionally, no manual intervention is required. If it occurs frequently, contact your dealer or after-sales service center.

No.	Fault Name	Fault Cause	Corrective Measures
25	PV Software Overcurrent	Abnormal change in irradiance.	If it occurs occasionally, no manual intervention is required. If it occurs frequently, contact your dealer or after-sales service center.
26	DAB Continuous Hardware Overcurrent	Overcurrent caused by a brief sudden change in the grid or load.	If it occurs occasionally, no manual intervention is required. If it occurs frequently, contact your dealer or after-sales service center.
27	DAB Resonant Tank Single Hardware Overcurrent	Overcurrent caused by a brief sudden change in the grid or load.	If it occurs occasionally, no manual intervention is required. If it occurs frequently, contact your dealer or after-sales service center.
28	Flash R/W Abnormal	1. Flash content has changed. 2. Flash lifetime exhausted.	1. Upgrade to the latest firmware. 2. Contact your dealer or after-sales service center.
29	DAB Bus Undervoltage	Overcurrent caused by a brief sudden change in the grid or load.	If it occurs occasionally, no manual intervention is required. If it occurs frequently, contact your dealer or after-sales service center.

9 Technical Data

Technical Data	GW1.6K-MIS-G20*1	GW1.8K-MIS-G20	GW1.875K-MIS-G20	GW2K-MIS-G20	GW2.25K-MIS-G20	GW2.5K-MIS-G20
PV Side						
Max. Input Power (kW)	2.34	2.63	2.75	2.92	3.29	3.65
Max. Input Voltage (V) *2	60	60	60	60	60	60
MPPT Operating Voltage Range (V) *3	12~60	12~60	12~60	12~60	12~60	12~60
MPPT Voltage Range at Nominal Power (V)	32~50	32~50	32~50	32~50	32~50	35~50
Start-up Voltage (V)	15	15	15	15	15	15
Nominal Input Voltage (V)	42	42	42	42	42	42
Max. Input Current per MPPT (A)	20/20/20/20	20/20/20/20	20/20/20/20	20/20/20/20	20/20/20/20	20/20/20/20

Technical Data	GW1.6K-MIS-G20*1	GW1.8K-MIS-G20	GW1.875K-MIS-G20	GW2K-MIS-G20	GW2.25K-MIS-G20	GW2.5K-MIS-G20
Max. Short Circuit Current per MPPT (A)	26/26/26/26*4	26/26/26/26*4	26/26/26/26*4	26/26/26/26*4	26/26/26/26*4	26/26/26/26*4
Max. Backfeed Current to The Array (A)	0	0	0	0	0	0
Number of MPP Trackers	4	4	4	4	4	4
Number of Strings per MPPT	1	1	1	1	1	1
AC Side (On-Grid)						
Rated Power (kW)	1.6	1.8	1.875	2	2.25	2.5
Max. Power (kW)	1.6	1.8	1.875	2	2.25	2.5
Rated Power at 40℃ (kW)	1.6	1.8	1.875	2	2.25	2.5
Max. Power at 40℃ (kW)	1.6	1.8	1.875	2	2.25	2.5

Technical Data	GW1.6K-MIS-G20*1	GW1.8K-MIS-G20	GW1.875K-MIS-G20	GW2K-MIS-G20	GW2.25K-MIS-G20	GW2.5K-MIS-G20
Rated Apparent Power (kVA)	1.6	1.8	1.875	2	2.25	2.5
Max. Apparent Power (kVA)	1.6	1.8	1.875	2	2.25	2.5
Nominal Voltage (V)	220/230/240, L/N/PE	220/230/240, L/N/PE	220/230/240, L/N/PE	220/230/240, L/N/PE	220/230/240, L/N/PE	220/230/240, L/N/PE
Voltage Range (V)	176~286 (According to local standard)	176~286 (According to local standard)	176~286 (According to local standard)	176~286 (According to local standard)	176~286 (According to local standard)	176~286 (According to local standard)
Nominal Frequency (Hz)	50/60	50/60	50/60	50/60	50/60	50/60
Frequency Range (Hz)	45~55 /55~65	45~55 /55~65	45~55 /55~65	45~55 /55~65	45~55 /55~65	45~55 /55~65
Rated Output Current (A)	7.3@220V 7.0@230V 6.7@240V	8.2@220V 7.8@230V 7.5@240V	8.5@220V 8.2@230V 7.8@240V	9.1@220V 8.7@230V 8.3@240V	10.2@220V 9.8@230V 9.4@240V	11.4@220V 10.9@230V 10.4@240V

Technical Data	GW1.6K-MIS-G20*1	GW1.8K-MIS-G20	GW1.875K-MIS-G20	GW2K-MIS-G20	GW2.25K-MIS-G20	GW2.5K-MIS-G20
Max. Output Current (A)	7.3@220V 7.0@230V 6.7@240V	8.2@220V 7.8@230V 7.5@240V	8.5@220V 8.2@230V 7.8@240V	9.1@220V 8.7@230V 8.3@240V	10.2@220V 9.8@230V 9.4@240V	11.4@220V 10.9@230V 10.4@240V
Max. Output Fault Current (Peak and Duration) (A)	13.4，4us	15.1，4us	15.6，4us	16.7，4us	18.8，4us	20.9，4us
Inrush Current (Peak and Duration) (A)	8.8，12ms	9.8，12ms	10.2，12 ms	10.9，12 ms	12.2，12 ms	13.6，12 ms
THDi	<3%	<3%	<3%	<3%	<3%	<3%
Maximum Output Overcurrent Protection (A)	9.5	10.6	11.1	11.8	13.2	14.8
Max. Units Per 4mm2 Branch*5	4	3	3	3	2	2
Max. Units Per 6mm2 Branch*5	5	4	4	4	3	3
Efficiency						

Technical Data	GW1.6K-MIS-G20*1	GW1.8K-MIS-G20	GW1.875K-MIS-G20	GW2K-MIS-G20	GW2.25K-MIS-G20	GW2.5K-MIS-G20
Max. Efficiency	96.0%	96.0%	96.0%	96.0%	96.0%	96.0%
European Efficiency	95.0%	95.0%	95.0%	95.0%	95.0%	95.0%
MPPT Efficiency	99.80%	99.80%	99.80%	99.80%	99.80%	99.80%
Protection						
PV String Current Monitoring	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated

Technical Data	GW1.6K-MIS-G20*1	GW1.8K-MIS-G20	GW1.875K-MIS-G20	GW2K-MIS-G20	GW2.25K-MIS-G20	GW2.5K-MIS-G20
AC Overvoltage Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Surge Protection	Type III	Type III	Type III	Type III	Type III	Type III
Rapid Shutdown	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
General Data						
Operating Temperature Range (℃)	-40 ~ +65（>50 derating）	-40 ~ +65（>50 derating）	-40 ~ +65（>50 derating）	-40 ~ +65（>50 derating）	-40 ~ +65（>50 derating）	-40 ~ +65（>50 derating）
Power Factor	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging	0.8 leading ... 0.8 lagging
Operating Environment	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor	Indoor/Outdoor
Storage Temperature (℃)	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85	-40 ~ +85
Relative Humidity	0~100%	0~100%	0~100%	0~100%	0~100%	0~100%
Max. Operating Altitude (m)	2000	2000	2000	2000	2000	2000

Technical Data	GW1.6K-MIS-G20*1	GW1.8K-MIS-G20	GW1.875K-MIS-G20	GW2K-MIS-G20	GW2.25K-MIS-G20	GW2.5K-MIS-G20
Cooling Method	Natural Convection	Natural Convection	Natural Convection	Natural Convection	Natural Convection	Natural Convection
User Interface	LED、APP	LED、APP	LED、APP	LED、APP	LED、APP	LED、APP
Communication	WiFi、Bluetooth	WiFi、Bluetooth	WiFi、Bluetooth	WiFi、Bluetooth	WiFi、Bluetooth	WiFi、Bluetooth
Communication Protocols	Modbus	Modbus	Modbus	Modbus	Modbus	Modbus
Weight (kg)	≤5.1kg	≤5.1kg	≤5.1kg	≤5.1kg	≤5.1kg	≤5.1kg
Dimension (W×H×D mm)	318×226×37.5	318×226×37.5	318×226×37.5	318×226×37.5	318×226×37.5	318×226×37.5
Noise Emission (dB)	≤20	≤20	≤20	≤20	≤20	≤20
Topology	Isolated	Isolated	Isolated	Isolated	Isolated	Isolated
Power Self-consumption at Night (W)	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
Ingress Protection Rating	IP67	IP67	IP67	IP67	IP67	IP67
Anti-corrosion Class	C4M	C4M	C4M	C4M	C4M	C4M

Technical Data	GW1.6K-MIS-G20*1	GW1.8K-MIS-G20	GW1.875K-MIS-G20	GW2K-MIS-G20	GW2.25K-MIS-G20	GW2.5K-MIS-G20
DC Connector	Staubli MC4 (6mm²)	Staubli MC4 (6mm²)	Staubli MC4 (6mm²)	Staubli MC4 (6mm²)	Staubli MC4 (6mm²)	Staubli MC4 (6mm²)
AC Connector	Plug and play connector (16AWG / 1.5mm²)	Plug and play connector (16AWG / 1.5mm²)	Plug and play connector (16AWG / 1.5mm130)	Plug and play connector (16AWG / 1.5mm130)	Plug and play connector (16AWG / 1.5mm130)	Plug and play connector (16AWG / 1.5mm130)
Environmental Category	4K4H	4K4H	4K4H	4K4H	4K4H	4K4H
Pollution Degree	III	III	III	III	III	III
Overvoltage Category	DC II / AC III	DC II / AC III	DC II / AC III	DC II / AC III	DC II / AC III	DC II / AC III
Protective Class	I	I	I	I	I	I
Decisive Voltage Classification (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	PV: C AC: C Com: A	PV: C AC: C Com: A
Mounting Method	Wall Mounted	Wall Mounted	Wall Mounted	Wall Mounted	Wall Mounted	Wall Mounted
Active Anti-islanding Method	AFDPF + AQDPF *6	AFDPF + AQDPF *6	AFDPF + AQDPF *6	AFDPF + AQDPF *6	AFDPF + AQDPF *6	AFDPF + AQDPF *6

Technical Data	GW1.6K-MIS-G20*1	GW1.8K-MIS-G20	GW1.875K-MIS-G20	GW2K-MIS-G20	GW2.25K-MIS-G20	GW2.5K-MIS-G20
Type of Electrical Supply System	TN、TT、IT	TN、TT、IT	TN、TT、IT	TN、TT、IT	TN、TT、IT	TN、TT、IT
Country of Manufacture	China	China	China	China	China	China
Certification						
Grid Standard	Please refer to the official website.					
Safety Regulation						
EMC						

*1：Brazil only has 1.875kW, 2kW, 2.25kW, and 2.5kW. Europe only has 1.6kW, 1.8kW, 2kW, and 2.25kW. In China, only 2kW, 2.25kW, and 2.5kW are available.

*2：When the input voltage exceed 65V, the inverter will enter the standby mode, and the voltage returns to 63V to enter the normal operation state.

*3: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.

*4：The Brazilian version is 20/20/20/20A

*5：Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

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

10 Appendix

10.1 Terminology

- **Overvoltage Category Description**
  - **Overvoltage Category I**: Equipment connected to circuits in which measures are taken to limit transient overvoltages to a suitably low level.
  - **Overvoltage Category II**: Energy-consuming equipment supplied from a fixed electrical installation. Such equipment includes appliances, portable tools, and other household and similar loads. If special requirements are imposed on the reliability and suitability of such equipment, Overvoltage Category III shall be used.
  - **Overvoltage Category III**: Equipment in fixed electrical installations where the reliability and suitability of the equipment must meet special requirements. This includes switchgear and controlgear in fixed electrical installations and industrial equipment permanently connected to fixed electrical installations.
  - **Overvoltage Category IV**: Equipment used upstream in the power supply of a distribution installation, including measuring instruments and upstream overcurrent Protection devices, etc.
- **Wet Location Category Definitions**

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%

- **Environmental Category Description:**
  - **Outdoor inverter**: ambient air temperature range is -25 to +60°C, suitable for environments with Pollution Degree 3;
  - **Indoor Type II inverter**: ambient air temperature range is -25 to +40°C, suitable for environments with Pollution Degree 3;
  - **Indoor Type I inverter**: ambient air temperature range is 0 to +40°C, suitable for environments with Pollution Degree 2;
- **Pollution Degree Category Description**
  - **Pollution Degree 1**: no pollution or only dry, non-conductive pollution;

- **Pollution Degree 2**: normally only non-conductive pollution occurs, but temporary conductive pollution caused by occasional condensation must be considered;
- **Pollution Degree 3**: conductive pollution occurs, or non-conductive pollution becomes conductive due to condensation;
- **Pollution Degree 4**: persistent conductive pollution, for example, pollution caused by conductive dust or rain and snow.

11 Contact Information

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