MARSTEK MST-MI Series Single Phase Microinverter User Manual

MARSTEK

MST-MI SERIES SINGLE PHASE MICROINVERTER
MST-MI0600W//MST-MI0800W//MST-MI1000W
MST-MI0600G//MST-MI0800G//MST-MI1000G
USER MANUAL

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MST-MI Series Single Phase Microinverter

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FOR READERS

This document mainly describes the installation, electrical connection, commissioning, maintenance and troubleshooting methods of the MST-MI series. Before installing and using the inverter, read this manual carefully to understand the safety information and familiarize yourself with the functions and features of the inverter.
This manual is for the MST-MI series of micro inverters, for the sake of safety, all installation operations must and only allow professional technicians to complete. Professional and technical personnel must have the corresponding qualifications, receive relevant training, master relevant skills, and strictly follow the instructions in this manual.

SYMBOL CONVENTION

The following symbols may appear in this document. They represent the following meanings.

	**Danger**	This symbol indicates a dangerous situation that could cause a fatal electrocution hazard, serious personal injury, or fire.
	**Warning**	This symbol indicates that to avoid potential safety hazards, appropriate instructions must be followed.
	**Caution**	This symbol indicates that this operation is prohibited. The operation shall be aborted by the person concerned only with full care and understanding of the said operation.

MODIFICATION OF RECORDS

Change history The description of each document update is accumulated. The latest document version contains all changes made in previous document versions.
Issue 01 (2024-05-10) First Edition of Documentation.

Safety Precautions

- The MST-MI series microinverters have been designed and tested according to international safety requirements. However, safety specifications must still be followed when installing and operating this series of microinverters. Installers must carefully read, fully understand, and strictly follow all instructions, precautions, and warnings in this installation manual.
- Do not reverse engineer, decompile, disassemble, adapt, implant, or otherwise derive the device software, study the internal implementation logic of the device in any way, obtain the source code of the device software, or infringe intellectual property rights, nor disclose the results of any device software performance tests.
- All operations such as transportation, storage,installation,operation,use and maintenance shall comply with applicable laws, regulations, standards and specifications.
- The equipment should be used in an environment that meets the design specifications; otherwise, the possible equipment failure, abnormal function of the equipment or component damage are not within the scope of equipment quality assurance. Otherwise, the company shall not be liable for any personal injury, death or property loss that may be caused.
- The Company shall not be liable for any of the following circumstances or the results thereof:
  – Equipment damage caused by earthquake, flood, volcanic eruption, debris flow, lightning strike, fire, war, armed conflict, typhoon, hurricane, tornado, extreme weather, force majeure; Not operating under the conditions of use described in this manual;
  – The installation and use environment does not meet the relevant international, national or regional standards;
  – Equipment installation and use by unqualified personnel;
  – Failure to follow the operation instructions and safety warnings in the product and documentation;
  – Disassemble, change the product or modify the software code without authorization;
  – Damage caused by transportation by you or a third party entrusted by you;
  – Damage caused by storage conditions that do not meet product documentation requirements;
  – Your own materials and tools do not meet the requirements of local laws and regulations and related standards;
  – Damage caused by your or a third party’s negligence, intent, gross negligence, improper operation or not caused by our company.

1.1 Personal Safety

	Live operation is strictly prohibited during installation. Do not install or remove cables with power on. Transient contact between the cable core and the conductor may gene rate electric arcs or sparks, which may cause fire or personal injury.
	When the device is powered on, improper or incorrect operations may cause fire, elec tric shock, or explosion, resulting in personal injury or property damage.
	It is strictly forbidden to wear conductive objects such as watches, bracelets, bracelets, rings, and necklaces during operation to avoid being burned by electric sho cks.
	Special insulation tools must be used during operation to avoid electric shock injury or short circuit fault. The insulation voltage resistance level must meet the requirements of local laws, regulations, standards and specifications.
	Special protective equipment must be used during the operation, such as wearing pro tective clothing, insulation shoes, goggles, safety hats, insulation gloves, etc.

General Requirements

- Do not ignore warnings, warnings and precautions in manuals and equipment.
- During the operation of the equipment, if a fault is found that may cause personal injury or equipment damage, stop the operation immediately, report the fault to the person in charge, and take effective protective measures.
- Do not power on the device before it has been installed or confirmed by professional personnel.
- Do not touch the power supply device directly, using other conductors, or indirectly through damp objects.
- Before touching any conductor surface or terminal, measure the voltage at the contact point to ensure that there is no danger of electric shock.
- Do not touch the outer shell when the device is running at a high temperature, which may cause burns.
- In case of fire, immediately evacuate the building or equipment area and press the fire alarm bell, or call the fire alarm number. Do not re-enter a burning building or equipment area under any circumstances.

Personnel Requirements

- Personnel to operate the equipment include professionals and trained personnel.
- The personnel responsible for the installation and maintenance of the equipment must undergo strict training, master the correct operation methods, and understand various safety precautions and relevant standards of the country/region.
- Only qualified professionals or trained personnel are allowed to install, operate and maintain the equipment.
- Only qualified professionals are allowed to remove safety features and overhaul equipment.
- Personnel in special scenarios such as electrical operations, climbing operations, and special equipment operations must have special operation qualifications required by the local country/region.

1.2 Electrical Safety

- Check the equipment before installation to make sure it has not suffered any damage during transportation. If damaged, the insulation integrity or safety of the device may be compromised. Choose your installation location carefully and follow prescribed cooling requirements. Unauthorized removal of necessary protective equipment,

improper use, improper installation and improper operation may result in damage to the equipment, and may even cause serious safety accidents and electric shock.

- Contact your local grid operator for approval before connecting your micro inverter to the grid. All connection operations described in this manual must be done by professional technicians who have received relevant training.
- Microinverters are allowed to connect only one PV module per input. Do not connect batteries or other power sources. If the installation environment or connected device does not meet the technical parameters required by the micro inverter, please stop using the micro inverter.
- If the site installation environment does not meet the standard installation conditions, please inform the manufacturer in advance.
- If the equipment needs to be repaired, be sure to use qualified and compliant parts for maintenance. The relevant parts must be installed by an authorized contractor or an authorized service representative of Marstek Energy Co., Limited. and the relevant parts can only be used for the intended purpose of the part.
- After the micro inverter is disconnected from the public power grid, some parts of the micro inverter may still be charged. Please be careful to avoid electric shock. Before touching the micro inverter, please ensure that the surface temperature of the equipment is safe and the voltage potential of the entire equipment is not beyond the safe range.
- Electrical installation and maintenance work should be completed by qualified electricians, wiring should comply with the corresponding local regulations.
- Do not operate equipment without a ground conductor installed.
- Do not damage the grounding conductor.
- Periodically check the screw of the device connection terminal to ensure that it is tight and not loose.
- The ground impedance of the device must meet the requirements of the local electrical standards.
- Equipment should be permanently connected to the protective ground. Before operating the equipment, check the electrical connections of the equipment to ensure that the equipment is reliably grounded.
- Cables used in high temperatures may cause aging or damage to the insulation layer. Keep at least 30mm away from the heating device or the heat source area.
- All cables must be securely connected, properly insulated, and of appropriate specifications.
- The cable slots and holes must be free of sharp edges, and the positions of the cable conduits and holes must be protected to prevent sharp edges and burrs.
- During the routing of power cables, do not circle or twist. If it is found that the length of the power cord is not enough, it is necessary to replace the power cord. Do not make joints or solder joints in the power cord.
- The selection, erection and routing of cables must comply with local laws, regulations and norms.

Product Introduction

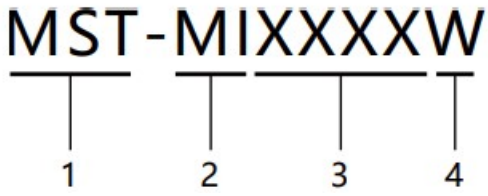
2.1 Product Model

Model Description

This article mainly covers the following product models

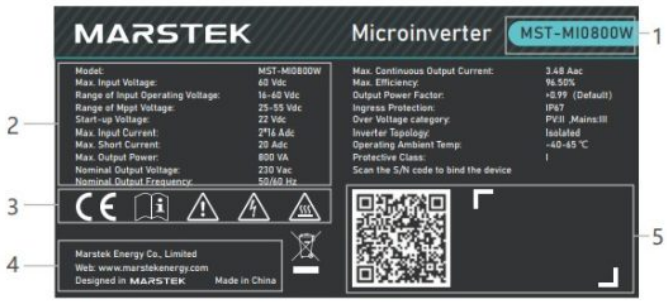
MST-MI0600G//MST-MI0800G//MST-MI1000G MST-MI0600W//MST-MI0800W//MST-MI1000W

Model Identification



1	Company name	MST: Marstek Energy Co., Limited.
2	Series name	MI: Microinverter
3	Power identification	XXXX:0600 means 600W, 0800 means 800W, 1000 means 1000W
4	Communication signs	W:WIFI communication G:4G communication

Model Identification
The micro inverter model can be viewed on the nameplate on the back of the product.



1. Product model
2. Important technical parameters
3. Compliance with the certification system identification
4. Company name and origin
5. Barcode and two-dimensional code identification

The nameplate illustration is for reference only. The actual product shall prevail.

2.2 Product Briefing
Function Description
Micro inverter is a module level solar inverter that can track the maximum DC power point of each PV module through maximum power point tracking technology (MPPT).Compared with other forms of inverters, micro-inverters not only have the MPPT function of the module level, but also allow other components to continue to generate power at the maximum power point when individual photovoltaic modules fail or are blocked, and improve the overall power generation of the system; Micro-inverters can also monitor the current, voltage and power of each component to achieve component-level data monitoring.In addition, the DC voltage of the micro inverter is only 60V, which minimizes safety hazards.

Product Characteristics

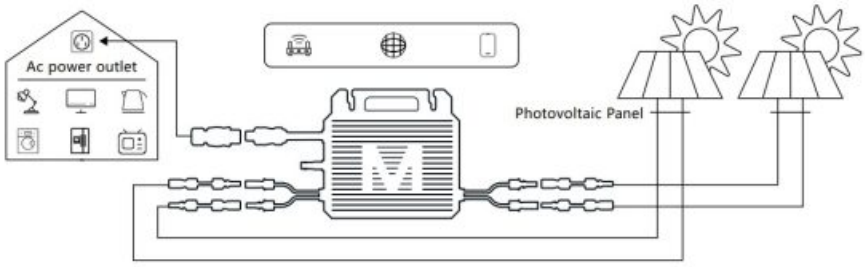
- High power micro inverter, output power up to 1000W.
- Safe, reliable, 60V voltage minimizes safety hazards.
- Component level MPPT and data monitoring, higher power generation, more convenient operation

and maintenance, MPPT efficiency reached 99.80%.

- One tow two design, more convenient installation, lower cost.

Grid-connected Applications

MST-MI series micro inverters have all the above functional features, known for efficiency and safety.
In a typical MST-MI series micro inverter system, the micro inverter is responsible for the conversion of photovoltaic DC to AC, and the data transfer is connected to the mobile phone client through the router. The system architecture diagram is shown in the figure below.



Communication Mode

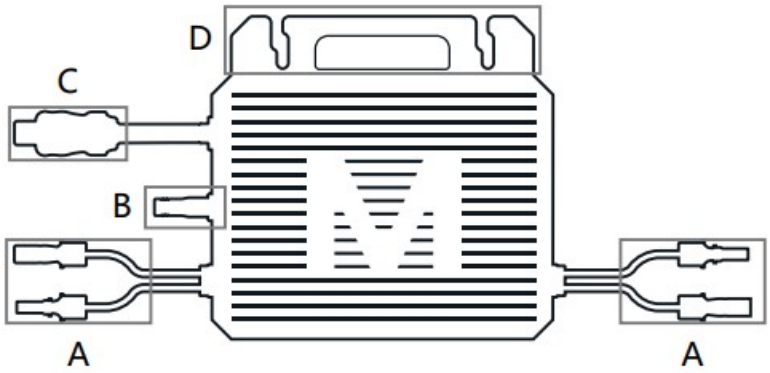
MST-MI series micro inverter adopts WIFI/4G wireless communication mode, which can meet the needs of different users, and the connection with APP is simple, fast and stable.

2.3 Box Identification

	Waste disposal sign	In order to comply with the European Directive 2002/96/EC on end-of-life Electrical and Electronic Equipment and other end-of-life regulations for electronic equipment implemented as national law, electrical equipment that has rea ched the end of its useful life must be separately collected and sent to an approved recycling plant. If the micro inverter is in a used state, be sure to return it to an authorised dealer or appro ved recycling plant.
	Electric Shock Hazard Labeling	When the micro inverter is working, there is high pressure. Do not touch it to prevent electric shock.
	Anti-scalding warning sign	The shell temperature of the micro inverter is high when workin g, and there is a risk of scalding. Do not touch it.
	Operation warning label	A microinverter is potentially dangerous after it is powered on. Take proper precautions when operating the inverter.
CE	CE Marking	Microinverters comply with the EU Low Voltage Directive.
	Check the manual	Read the user’s manual before installing.

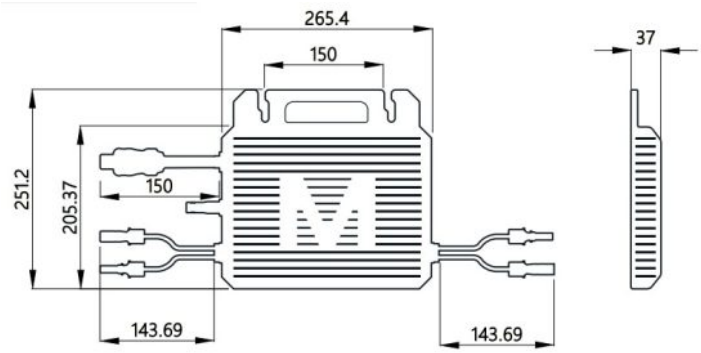
2.4 Appearance Description

Product Appearance



A	Dc terminal
B	WIFI or 4G wireless communication terminal
C	AC terminal
D	Handle mount secure

Product Dimensions



Indicator State

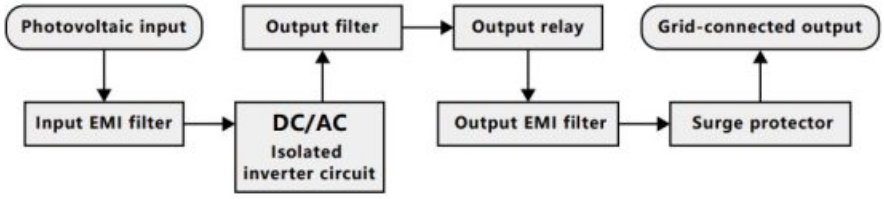
During start-up	Green flash six times (0.3s apart) : Startup successful
	Blinking red six times (0.3s interval) : Startup failure
During run	Green light flashes rapidly (1s interval): Both channels are grid-tied and generating powe r
	Green light flashes slowly (2s interval): One channel generating power
Other indications	Red light flashes quickly (1s interval): Grid fault
	Yellow light flashes quickly (0.3s interval): Self-test in progress
	Red light flashes slowly (2s interval): Other fault
	Red light flashes quickly (0.3s interval): Hardware fault 1
	Steady light: Hardware fault 2

* **Note:** The micro inverter is powered by the DC side. If the LED indicator is not on, check the DC side wiring. If the wiring and input voltage are normal, contact your local dealer or MARSTEK technical support team.

2.5 How It Works

Circuit Block Diagram

MST-MI series micro inverter is connected to 2 PV PV panels, the maximum power point tracking of PV panels is carried out by MPPT circuit, and then the conversion from DC to single-phase AC is realized by microinverter circuit.



Working Mode

MST-MI series micro inverter has two working modes, respectively: running mode and shutdown mode.

Run	Microinverters convert the direct current of the photovoltaic panel to alternating curr ent and feed it into the grid.
	The microinverter carries out maximum power point tracking to maximize the energy output of the photovoltaic panel.
	The micro inverter detects that the output power of the photovoltaic panel cannot re ach the conditions of grid-connected power generation, then it enters the shutdown state.
Power Off	When there is no sunlight on the photovoltaic panel (at night), the micro inverter enters the shutdown state.

Installation Instructions

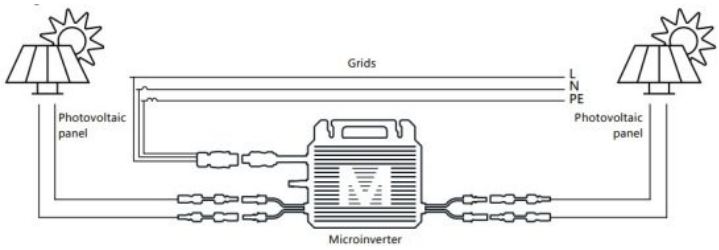
3.1 Position And Spacing Requirements

- Install the micro inverter and all DC side terminals under the photovoltaic module, avoid direct sunlight, rain, snow or ultraviolet light.
- Place the label side of the micro inverter facing up, facing the PV module.

- A gap of at least 2 cm should be left around the shell of the micro inverter for ventilation and heat dissipation.

3.2 Multiple PV Modules Are Connected To A Microinverter

- Connect the photovoltaic module to the DC input port of the micro inverter.
- The grid-connected output of the micro-inverter is connected to the AC line and connected to the power grid.
- Wiring method, see the figure below.



*** Note:**

- In the actual installation environment, the open circuit voltage of the photovoltaic module shall not exceed the maximum voltage that the DC input side of the micro inverter can withstand.If the input voltage of the DC side of the micro inverter exceeds this voltage, the microinverter may be damaged.
- The DC terminal of the micro inverter is printed with a “+” and “-” mark. This mark does not refer to the positive or negative of the current, only refers to the category of the terminal. Where, “+” indicates the male head and “-” indicates the female head.

3.3 Installing Tools

Installation tools include, but are not limited to, the recommended tools listed in the table below.
When installing on-site, use other auxiliary tools as appropriate.

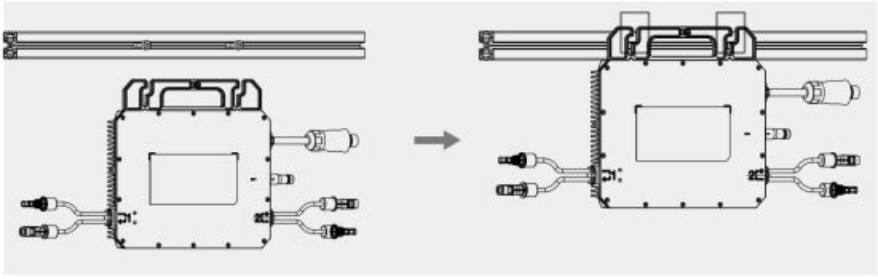
Screwdrivers		Multimeter	
Wrench		Measuring tape	
Diagonal pliers		Cable ties	
Insulating gloves		Insulated shoes	
Tool knife		Protective glasses	
Wire strippers		Marker	

3.4 Precautions

- The installation location of the micro inverter should meet the following conditions:
  – Environmental conditions in line with the micro inverter “technical specifications” part of the protection level, temperature, humidity, altitude and other requirements.
  – The installation site is well ventilated, away from gas or flammable substances.
- Please note the following points when installing a micro inverter:
  – Before installation, ensure that the entire system is free of any electrical connections and shade or isolate the photovoltaic modules.
  – The micro inverter needs to be installed on the dedicated structure of the photovoltaic module (provided by the installation technician).
  – The micro inverter should be well ventilated around to avoid the power derating caused by the increase in the internal temperature of the micro inverter.
  – The micro inverter should be installed under the PV module to ensure that it works in a shaded environment, otherwise it may lead to a decrease in the power generation of the micro inverter.
  – Avoid electromagnetic interference, otherwise it may affect the normal operation of the electronic equipment.

3.5 Installation Procedure
Step 1: Fixed microinverter

- According to the PV module layout, hang the micro inverter on the screw with the label face facing the PV panel, then tighten the screw. The AC cable contains a ground cable, which can be directly grounded.

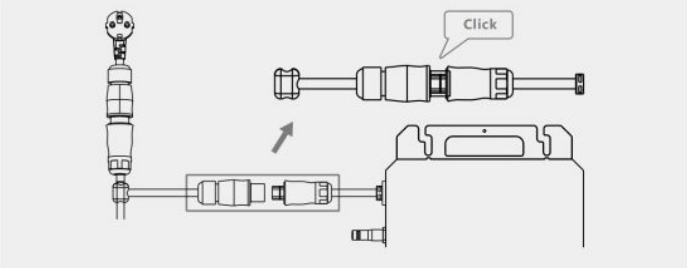


- If the area where the PV system is located requires the micro inverter to be grounded externally, use screws to secure the ground cable to the ground hole of the micro inverter.

Step 2: Connect the AC cable

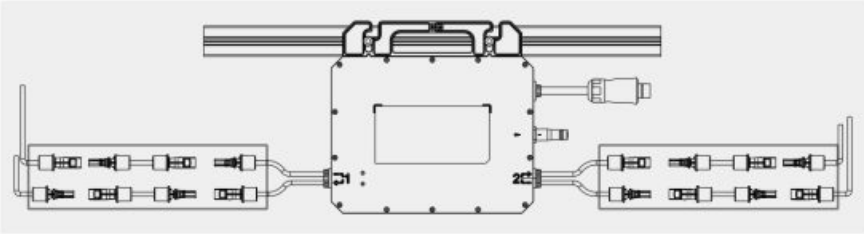
- Select the specifications of the AC bus according to the number of micro-inverters planned on each AC branch.
- Insert the AC terminal of the micro inverter into the matching AC line, and the sound of “click” proves that it is inserted in place.
- Insert the plug of the AC line into the bar jack and connect to the local power grid.

Note: If you need to remove the AC connection cable of the micro inverter, please insert the AC port disconnect tool into the side of the AC terminal for easy removal. (Need to confirm whether AC terminal disassembly tool is required).



Step 3: Connect the DC cable

- Connect the DC output wire to the DC input side of the microinverter.



Stop Debugging

4.1 Stop Debugging

Disconnect all DC and AC side connections to the micro inverter, remove all connection cables from the micro inverter, and then remove the micro inverter from the rack. Place the micro inverter in its original packaging. If the original packaging is no longer there, use a carton with a load-bearing capacity of 5kg that closes completely.

4.2 Storage And Shipping

- Microinverters are stored at temperatures from -40°C to 85°C.
- For easy transportation and subsequent handling, MARSTEK packaging is specially designed to protect the components. When transporting equipment, especially by road, it is necessary to take the correct method to protect the components (especially electronic devices) from violent shock, moisture, vibration and other factors.
- Check the condition of the parts to be transported. After receiving the micro inverter, you should inspect the appearance of the package for damage and confirm receipt of all items. If there is any appearance damage or missing parts, call the carrier immediately. If the parts of the micro inverter are damaged, contact the supplier or authorized dealer to request repair/replacement and consult the relevant procedures.
- Dispose of packing materials properly to avoid accidental personal injury.

4.3 Scrap Disposal

- If the equipment will not be put into use immediately or needs long-term storage, please make sure that the packaging is in good condition.
- Long-term storage of micro inverters, the equipment must be stored in a well-ventilated indoor area that will not cause damage to equipment components.
- When restarting the equipment that has been disabled for a long time, the equipment must be comprehensively inspected.
- Discarding discarded micro inverters at will may harm the environment, please properly dispose of discarded

micro inverters in accordance with local regulations.

Troubleshooting

5.1 Troubleshooting Checklist

Codes	Alarm range	Alarm status	Suggested treatments
404		Overheat protection	1. Please check whether the ventilation and heat dissi pation conditions are good. 2. If the fault persists or triggers frequently please cont act the technical team.
406/415	Grid side	Grid overvoltage	1. Grid fluctuations and loose wiring may trigger this fa ult. 2. If the fault persists or triggers frequently please cont act the technical team.
408	Grid side	Grid undervoltage	1. Grid fluctuations and loose wiring may trigger this fa ult. 2. If the fault persists or triggers frequently please cont act the technical team.
409	Grid side	Grid overfrequency	1. Grid fluctuations and loose wiring may trigger this fa ult. 2. If the fault persists or triggers frequently please cont act the technical team.
410	Grid side	Grid underfrequency	1. Grid fluctuations and loose wiring may trigger this fa ult. 2. If the fault persists or triggers frequently please cont act the technical team.
414	Grid side	Grid islands detected	1. Please check that the grid-side line connection is normal. 2. If the fault persists or triggers frequently please cont act the technical team.
416	Grid side	Reconnected grid freq uency out of range	1. Grid fluctuations and loose wiring may trigger this fa ult. 2. If the fault persists or triggers frequently please cont act the technical team.
417	Grid side	Reconnected grid freq uency out of range	1. Grid fluctuations and loose wiring may trigger this fa ult. 2. If the fault persists or triggers frequently please cont act the technical team.
418	PV-1	overcurrent	If frequent triggers occur, please contact the technical t eam.
419	PV-2	overcurrent	If frequent triggers occur, please contact the technical t eam.

420/421		PE grounding anomaly	1. Check that PE is grounded correctly. 2. If the fault persists or is triggered frequently, contact the technical team.
422	Grid side	Grid fluctuations	1. Power grid fluctuations, loose lines may trigger this fault. 2. If the fault persists or is triggered frequently, contact the technical team.
510	PV-1	No input	1. Please check the line connection on the DC side of PV1 and the light condition of the PV panel. 2. If the fault persists please contact the technical tea m.
511	PV-2	No input	1. Please check the PV2 DC side line connection and t he PV panel light condition. 2. If the fault persists please contact the technical tea m.
528	PV-1	Input Overvoltage	Please check the PV1 port input voltage, if the voltage is within the allowable range of the PV input voltage pl ease contact the technical team.
529	PV-1	Input undervoltage	Please check the PV1 port input voltage, if the voltage is within the allowable range of the PV input voltage pl ease contact the technical team.
520	PV-2	Input Overvoltage	Please check the PV2 port input voltage, if the voltage is within the allowable range of the PV input voltage pl ease contact the technical team.
521	PV-2	Input undervoltage	Please check the PV2 port input voltage, if the voltage is within the allowable range of the PV input voltage pl ease contact the technical team.
530		Temperature limit	1. Please check whether the ventilation and heat dissi pation conditions are good. 2. If the fault persists or triggers frequently please cont act the technical team.
40A/40 B/ 40C/40 D/ 40E/40 F/ 41A/41 B		Equipment failure	If the fault is triggered frequently please contact the te chnical team.

5.2 On-site Inspection

If the micro inverter is faulty, please check according to the following steps (only professional technicians).

1	Check that the grid voltage and frequency are within the range specified in the “Technical Specifications” section of this manual.
2	Check the connection to the grid. 1. Disconnect the AC power supply and DC power supply. Please note that when the inverter is r unning, disconnect the AC power supply first, cut off the inverter power supply, and then disconne ct the DC power supply. 2. Reconnect the PV module to the microinverter. the LED will flash red, indicating normal DC wiri ng. 3. Reconnect the AC power supply. the LED will flash green six times, indicating that the DC wirin g and AC wiring are normal. Reconnect the DC component terminals and wait for the LED to flash briefly six times.
3	Check the interconnections between the microinverters on the AC branch circuit. Confirm that each microinverter is powered from the grid as described in the steps above.
4	Verify that each AC circuit breaker is functional and closed.
5	Check the DC connection between the microinverter and the PV module.
6	Verify that the PV module DC voltage is within the limits specified in the “Technical Specifications” section of this manual.
7	If the problem persists, call technical support.
8	1. Do not disconnect the DC cable when the microinverter is generating electricity. 2. Please do not repair the microinverter without permission. If you can not troubleshoot the probl em, please return it to the factory for replacement.

5.3 Routine Maintenance

- Maintenance work shall be carried out by authorized personnel, and abnormal report shall be responsible for by authorized personnel.
- Please wear personal protective equipment during maintenance.
- During the normal operation of the micro inverter, please check the environmental conditions regularly to ensure that the environmental conditions meet the requirements of the “technical specifications” and ensure that the equipment is not exposed to bad weather.
- If you find any problems, do not use the equipment. Please return to normal use after the fault is solved.
- Check the various components of the micro inverter regularly every year to ensure that the components are in good condition, and the heat dissipation parts are not blocked by any.
- If you need to clean the equipment, please use a vacuum cleaner or a special brush.

Danger	Never disassemble and repair a micro inverter without permission! In order to ens ure safety and insulation performance, users are prohibited from repairing internal parts!
Warnings	Do not replace the AC output harness (the AC tap cable on the micro inverter). If t he wire is damaged, the device should be scrapped.
Warnings	Unless otherwise stated, when maintaining, it is necessary to disconnect the devi ce from the power grid (disconnect the power switch) while masking or isolating th e photovoltaic modules.
Warnings	Never clean the equipment with rags made of filamentous or corrosive materials, as they may generate static electricity or cause corrosion.
Warnings	Do not repair the product without authorization. When repairing, use qualified part s.
Tips	Each branch line should be equipped with a circuit breaker, but no central protecti on is required.

5.4 Equipment Replacement
A. Remove the microinverter

- Disconnect the power to the AC branch circuit breaker.
- Remove the PV module from the rack.
- Measure the equipment with an electric meter and confirm that there is no current in the DC line between the
- PV module and the micro inverter.
- Using the DC disconnect tool, remove the DC terminal.
- Using the AC disconnect tool, remove the AC branch terminal.
- Unscrew the top holding screw of the micro inverter and remove it from the PV rack.

B. Replace the microinverter in the monitoring platform

- Make a note of the serial number of the new micro inverter.
- Verify that the AC branch circuit breaker is turned off, then install the replacement by following the steps for installing the micro inverter.

Technical Specifications

Warnings
Before installing a MARSTEK micro inverter system, be sure to note the following:

- Check and ensure that the photovoltaic module and the micro inverter voltage and current specifications are consistent.
- The maximum open circuit voltage of the photovoltaic module must be within the working voltage range of the micro inverter.
- The maximum rated current of MPPT shall not exceed the maximum input current on the DC side of the micro inverter.
- The DC power of the output side of the photovoltaic module shall not exceed 1.35 times the AC power of the output side of the micro inverter.

- For more information, please refer to the “MARSTEK Warranty Terms and Conditions”.

6.1 4G Communication Version Specifications

Specification Type	MST-MI0600G	MST-MI0800G	MST-MI1000G
DC Input			
Max. Input Voltage		60V	
PV Typical Input Power	240W-405W+	320W-540W+	400W-670W+
Range of Input Operating Voltage		16-60V	
Range of Mppt Voltage		25-55V	
Start-up Voltage		22V	
Max. Input Current		16A×2	
Max. Short Current		20A	
Max. inverter backfeed current to the a rray		0A	
MPPT No.		2	
MPPT Efficiency		99.80%	
AC Output			
Max. Output Power	600VA	800VA	1000VA
Nominal Output Voltage(AC)		230V	
Output Voltage Range		180-275V	
Nominal Output Frequency & Range		50Hz/45~55Hz 60Hz/55~65Hz	
Max. Continuous Output Current(AC)		3.48A	4.35A
Max. Overcurrent		10A	
Max.Fault Current		24A	
Current (In rush)		2A	
Max. Efficiency		96.50%	
Output Power Factor		>0.99 Default)	
THD		<3%	
General Parameter			
Night Power Consumption		<50mW	
Ingress Protection		IP67	
Over Voltage category		PV:Ⅱ Mains:Ⅲ	
Inverter Topology		Isolated	
Operating Ambient Temp.		-40~+65 ℃	

Relative humidity		≤95%RH	
Cooling Strategy		Natural Convection	
Protective Class		I	
Standard	VDE4105/0124,TOR R25,NF EN 50549,C10/110,PTPIREE,CEI0-21,UNE217001,UNE217002,G98,A2LA,DAKKS		
Supported Communication Interface		4G	
Size		565.3mm×251.1mm×37.7mm	
Weight		3.85kg	
Monitoring Platform		Power Zero	
Maintenance		10 Year	
Pollution Degree		Outdoor PD:Ⅲ Indoor PD:Ⅱ	
Max operation Altitude		2000m	

*** Note 1:** The rated voltage/frequency range can be changed according to the requirements of the local power department.
* **Note 2:** Please refer to the local electrical code requirements to determine the number of microinverters that can be connected to each road.

6.2 WIFI Communication Version Specifications

Specification Type	MST-MI0600W	MST-MI0800W	MST-MI1000W
DC Input			
Max. Input Voltage	240W-405W+	60V	400W-670W+
PV Typical Input Power		320W-540W+	
Range of Input Operating Voltage		16-60V	
Range of Mppt Voltage		25-55V	
Start-up Voltage		22V	
Max. Input Current		16A×2	
Max. Short Current		20A	
Max. inverter backfeed current to the array		0A	
MPPT No.		2	
MPPT Efficiency		99.80%	
AC Output			
Max. Output Power	600VA	800VA	1000VA
Nominal Output Voltage(AC)		50Hz/45~55Hz 60Hz/55~65Hz	

Output Voltage Range	2.61A	3.48A	4.35A
Nominal Output Frequency & Range		230V	
Max. Continuous Output Current(AC)		180-275V	
Max. Overcurrent		10A	
Max.Fault Current		24A	
Current (In rush)		2A	
Max. Efficiency		96.50%	
Output Power Factor		>0.99 Default)	
THD		<3%	
General Parameter			
Night Power Consumption		<50mW	
Ingress Protection		IP67	
Over Voltage category		PV:Ⅱ Mains:Ⅲ	
Inverter Topology		Isolated	
Operating Ambient Temp.		-40~+65 ℃	
Relative humidity		≤95%RH	
Cooling Strategy		Natural Convection	
Protective Class		Ⅰ	
Standard	VDE4105/0124,TOR R25,NF EN 50549,C10/110,PTPIREE,CEI0-21,UNE217001,UNE217002,G98,A2LA,DAKKS		
Supported Communication Interface		WIFI	
Size		565.3mm×251.1mm×37.7 mm	
Weight		3.85kg	
Monitoring Platform		Power Zero	
Maintenance		10 Year	
Pollution Degree		Outdoor PD:Ⅲ Indoor PD:Ⅱ	
Max operation Altitude		2000m	

*** Note 1:** The rated voltage/frequency range can be changed according to the requirements of the local power department.
*** Note 2:** Please refer to the local electrical code requirements to determine the number of microinverters that can be connected to each road.

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Power Anywhere & Anytime.

https://eu.hamedata.com/ems/resource/agreement/micro_inverse_v1.pdf

Documents / Resources

	MARSTEK MST-MI Series Single Phase Microinverter [pdf] User Manual MST-MI0600W, MST-MI0800W, MST-MI1000W, MST-MI0600G, MST-MI0800G, MST-MI1000G, MST-MI Series Single Phase Microinverter, MST-MI Series, Single Phase Microinverter, Phase Microinverter

References

- Energy Management System
- User Manual