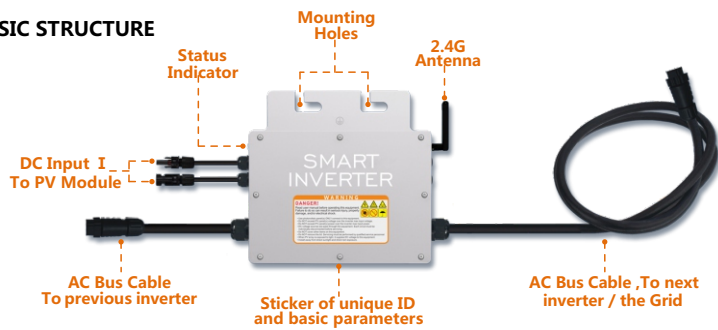


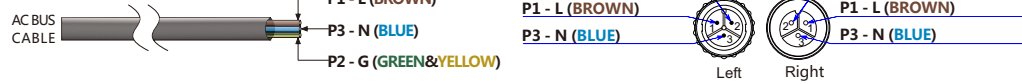
## BASIC STRUCTURE



## PACKING LIST

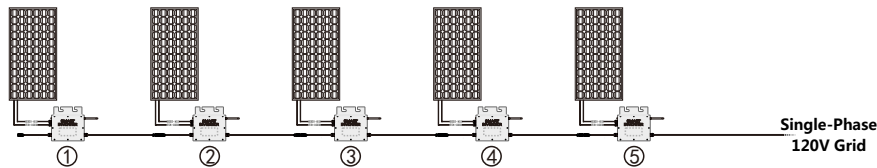
- Micro inverter / 1pcs
- Mounting screws / 1pcs
- User Manual / 1pcs
- Antenna / 1pcs

## AC Bus Cable And Connectors



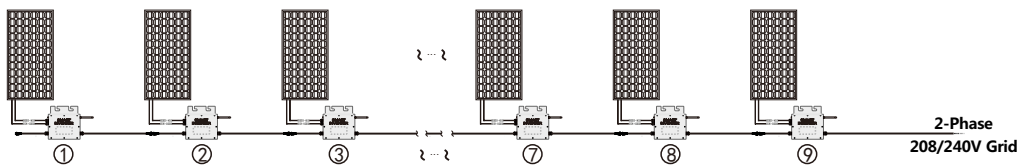
## INSTALLATION SCHEMATIC

### SG500 Series Microinverter @ Single-Phase 120V



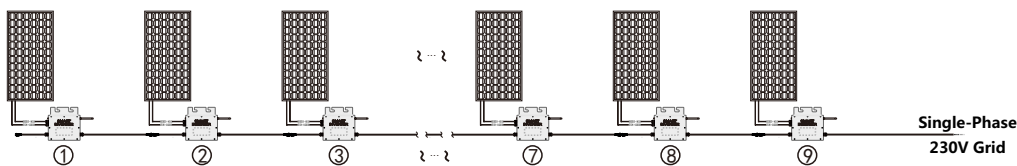
1. SG500 Series @Single-Phase 120V grid, Maximum 5 units SG500 Microinverters per branch.
2. The max DC input power of each inverter is 500W (the PV module max output power is 500W).
3. The VOC of PV modules should not be greater than the max DC input voltage of Microinverters.

### SG500 Series Microinverter @ 2-Phase 208/240V(Single -Phase 120V)



1. SG500 Series @2-Phase 208/240V grid, Maximum 9 units SG500 Microinverters per branch.
2. The max DC input power of each inverter is 500W (the PV module max output power is 500W).
3. The VOC of PV modules should not be greater than the max DC input voltage of Microinverters.

### SG500 Series Microinverter @ Single-Phase 230V



1. SG500 Series @Single-Phase 230V grid, Maximum 9 units SG500 Microinverters per branch.
2. The max DC input power of each inverter is 500W (the PV module max output power is 500W).
3. The VOC of PV modules should not be greater than the max DC input voltage of Microinverters.

# Solar Smart Microinverter SG500 Series User Manual

## DANGER!

Read user manual before operating this equipment. Failure to do so can result in serious injury, property damage, and/or electrical shock.



- Use photovoltaic panel(s) ONLY connect to this equipment.
- This equipment is ON-GRID Microinverter. To make it work properly, it must be connected to the power grid correctly, and the power grid is working properly. When the power grid stopped working, it will also stop generating.
- Do NOT exceed PV panel(s) voltage over the inverter max input voltage.
- Do NOT exceed PV panel(s) power over the inverter max input power.
- DC voltage sources are pass through this equipment. Each circuit must be individually disconnected before servicing.
- Do NOT cover other items on this equipment.
- Do NOT remove the lid. Servicing must be performed by qualified service personnel.
- When PV array is exposed to light, it supplies DC voltage to this equipment.
- Install away from direct sunlight and direct rain exposure.

## PARAMETER TABLE

Product Series	SG500 Series
Model	SG500MS
<b>Input Data(DC,PV)</b>	
Number of Input MC4 Connector	1sets
MPPT Voltage Range	24V-40V
Operation Voltage Range	18V-50V
Maximum Input Voltage	50V
Startup Voltage	18V
Maximum Input Power	500W
Maximum Input Current	20A
<b>Output Data(AC)</b>	
Single-Phase Grid Type	120V & 230V
Rated Output Power	495W
Maximum Output Power	500W
Nominal Output Current	@120VAC : 4.16A / @230VAC : 2.17A
Nominal Output Voltage	120VAC / 230VAC
Default Output Voltage Range	@120VAC : 80V-160V / @230VAC : 180V-280V
Nominal Output Frequency	50Hz / 60Hz
Default Output Frequency Range	@50Hz : 47.5Hz-52.5Hz / @60Hz : 57.5Hz-62.5Hz
Power Factor	>0.99
Total Harmonic Distortion	THD <5%
Maximum Units per Branch	@120VAC : 5 units / @230VAC : 9 units
<b>Efficiency</b>	
Peak Efficiency	95%
CEC Weighted Efficiency	@120VAC : 92.5% / @230VAC : 93.5%
Nominal MPPT Efficiency	99.9%
Night Power Consumption	<700mW
<b>Mechanical Data</b>	
Operating Ambient Temperature Range	-40°C to +65°C
Storage Temperature Range	-40°C to +85°C
Dimensions (W x H x D)	185mm x 180mm x 38.5mm (not include connectors and cable)
Weight	1.5kg
Max Current of AC Bus Cable	20A
Waterproof Grade	IP65
Cooling Mode	Natural Convection - No Fans
<b>Other Features</b>	
Communication(Inverter to DataBox)	2.4G Wireless
Transformer Design	High Frequency Transformers, Galvanically Isolated
Integrated Ground	Equipment ground is provided by the PE in the AC cable. No additional ground is required.
Protection Functions	Isolated Island Protection, Voltage Protection, Frequency Protection, Temperature Protection, Current Protection, etc.
Design Compliance	NB/T32004:2013,NB/T32004:2013,EN61000-3-2, EN62109,VDE0126,UL1741 etc.

\*\* Specifications subject to change without notice\*\*

## LED DISPLAY

### 1.Green light steady

=Microinverter in generating.

### 2. Red flash

=Microinverter in waiting.

### 3.Red light steady

=

- Island protection.
- Over-temperature protection.
- Over / low AC voltage protection.
- Over / low DC voltage protection.
- Over / low AC frequency protection.
- Fault.

## INSTALLATION PROCEDURES

**\*Prior to installing the Microinverters, Please verify that the utility voltage at the point of common grid connection matches the voltage rating on the Microinverter label.**

### Step 1 -

Attaching the Microinverters to the Racking.  
 a. Mark the location of the Microinverter on the rack, with respect to the PV module junction box or any other obstructions.  
 b. Mount one Microinverter at each of these locations using hardware recommended by your module racking vendor.

### Step 2 -

Connecting the Microinverter AC bus cable one by one, **Please do NOT exceed the Maximum Units per Branch.**

### Step 3 -

Connecting Microinverters to the PV Module, **Please do NOT exceed PV panel(s) VOC over inverter max. input voltage.**

### Step 4 -

Tighten the Bus Cable End Cap at the end of AC bus cable.

### Step 5 -

Install the AC Branch Circuit Junction Box, Wire the conductors of the AC bus cable: **L-BROWN, N-BLUE, G-GREEN&YELLOW.** Connect the AC branch circuit junction box to the point of utility-grid Interconnection.

### Step 6 -

Double check all Microinverters, connectors and cables are correctly and well connected.

### Step 7 -

Turn ON the AC circuit breaker on each AC branch circuit of Microinverter .

### Step 8 -

Turn ON the main AC circuit breaker of utility-grid. Your system will start producing power after a 30sec safety delay period.

## WIRING SCHEMATIC

