# SOLAR / PHOTOVOLTAIC SMART MICRO INVERTER

| Series / Model | Max. Power | First Impression |
|---|---|---|
| **SG(x)MS Series Micro Inverters - WIFI Cloud Monitoring** | | |
| SG300MS | 300Wp |  |
| SG350MS | 350Wp | |
| SG400MS | 400Wp | |
| SG500MS | 500Wp | |
| **SG(x)MD Series Micro Inverters - WIFI Cloud Monitoring** | | |
| SG600MD | 600Wp |  |
| SG700MD | 700Wp | |
| SG800MD | 800Wp | |
| SG1000MD | 1000Wp | |
| **SG(x)MQ Series Micro Inverters - WIFI Cloud Monitoring** | | |
| SG1200MQ | 1200Wp |  |
| SG1400MQ | 1400Wp | |

New Energy + Smart Life

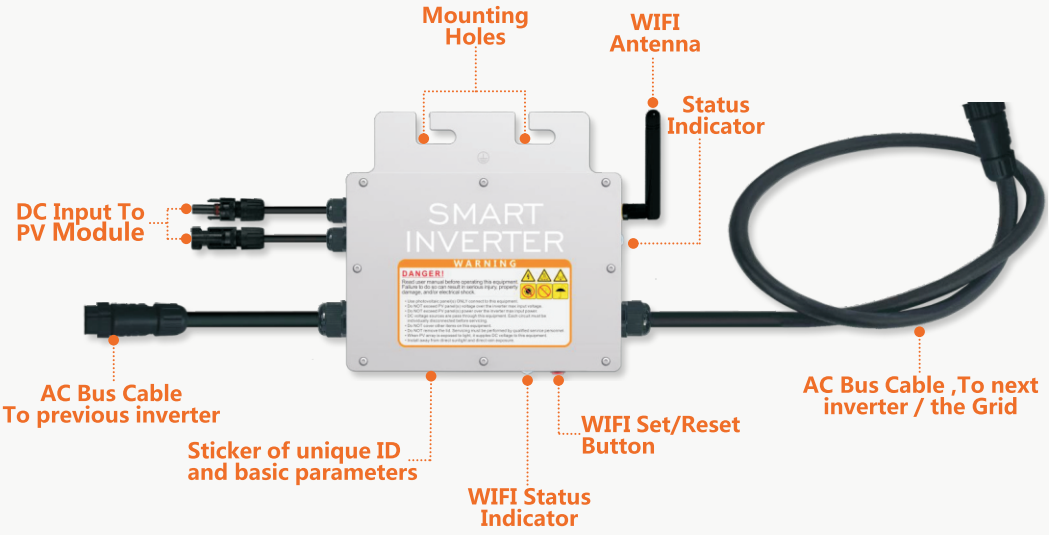
Maywah Electronics

# SG(x)MS Series

**1 PV Panel To 1 Micro Inverter, Wide input voltage, WiFi cloud monitoring, Single phase output, Flexible three-phase,High efficiency MPPT and output, Integrated bus cable, Plug and play, Quick installation by hand in hand.**

## SOLAR / PHOTOVOLTAIC SMART MICRO INVERTER


## Basic Structure




## Features

- ☑Single unit connects to one PV module, Accurate tracking.
- ☑Maximum 300/350/400/500W AC output power.
- ☑Single-phase output, Flexible 3-phase PV systems.
- ☑WIFI communication and Cloud monitoring.
- ☑Hand in hand connection, multiple units per branch.
- ☑Customizable various input (DC, PV) voltage range.
- ☑Integrated AC bus cable, Ready-To-Use, Plug and Play.
- ☑Low cost, Easy installation.



V: 2.0 2022-02-22

# SG(x)MS Series Main Parameters

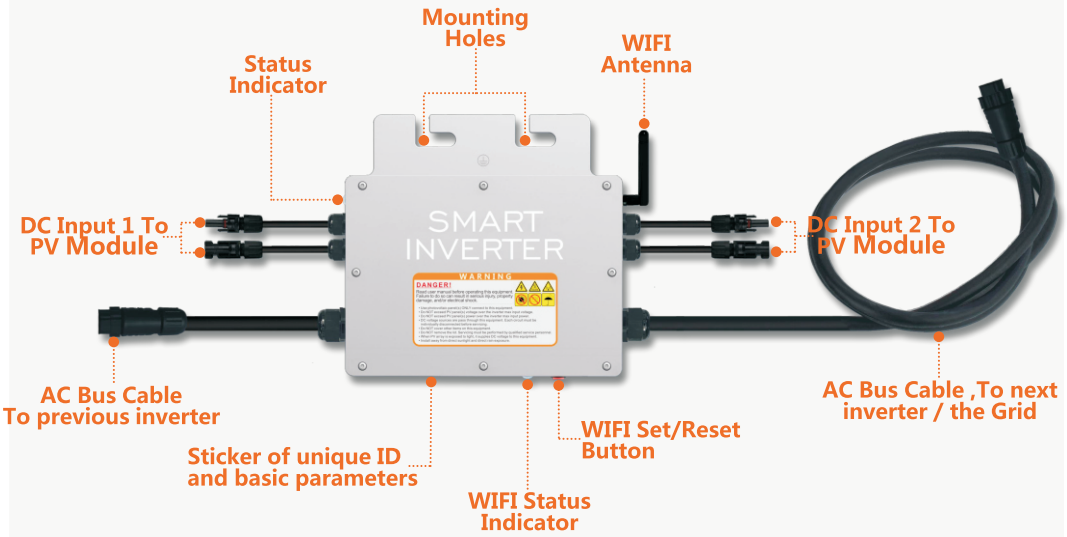
| Model | | SG300MS | SG350MS | SG400MS | SG500MS |
|---|---|---|---|---|---|
| **Input Data(DC,PV)** | | | | | |
| Number of Input MC4 Connector | | 1set | | | |
| MPPT Voltage Range | | 28V-55V | | | |
| Operation Voltage Range | | 20V-60V | | | |
| Maximum Input Voltage | | 60V | | | |
| Startup Voltage | | 20V | | | |
| Maximum Input Power | | **300W** | **350W** | **400W** | **500W** |
| Maximum Input Current | | 10A | 11.66A | 13.33A | 16.66A |
| **Output Data(AC)** | | | | | |
| Single-Phase Grid Type | | 120V / 230V | | | |
| Rated Output Power | | 295W | 330W | 380W | 480W |
| Maximum Output Power | | 300W | 350W | 400W | 500W |
| Nominal Output Current | @120VAC | 2.5A | 2.75A | 3.16A | 4.16A |
| | @230VAC | 1.3A | 1.43A | 1.65A | 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 | **8 units** | **7 units** | **5 units** | **4 units** |
| | @230VAC | **16 units** | **14 units** | **11 units** | **9 units** |
| **Efficiency** | | | | | |
| Peak Efficiency | | 95% | | | |
| CEC Weighted Efficiency | | @120VAC : 92.5% / @230VAC : 93.5% | | | |
| Nominal MPPT Efficiency | | 99.9% | | | |
| Night Power Consumption | | <700mW | | | |
| **Mechanical Data** | | | | | |
| Operating Ambient Temperature Range | | -40°C to +65°C | | | |
| Storage Temperature Range | | -40°C to +85°C | | | |
| Dimensions (W x H x D) | | 145mm x 140mm x 37mm (not include connectors and cable) | | | |
| Weight | | 0.8kg | | | |
| Max Current of AC Bus Cable | | 20A | | | |
| Waterproof Grade | | IP65 | | | |
| Cooling Mode | | Natural Convection - No Fans | | | |
| **Other Features** | | | | | |
| Communication | | WIFI With Cloud Monitoring | | | |
| 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 | | CE, ROHS, RED etc. | | | |

# SG(x)MD Series

**2 PV Panels To 1 Micro Inverter, Wide input voltage, WiFi cloud monitoring, Single phase output, Flexible three-phase,High efficiency MPPT and output, Integrated bus cable, Plug and play, Quick installation by hand in hand.**

SOLAR / PHOTOVOLTAIC
SMART MICRO INVERTER


## Basic Structure




## Features

- ☒One unit connects to dual PV modules, Accurate tracking.
- ☒Max. 600/700/800/1000W AC output power.
- ☒Single-phase output, Flexible 3-phase PV systems.
- ☒WIFI communication and Cloud monitoring.
- ☒Hand in hand connection, multiple units per branch.
- ☒Customizable various input (DC, PV) voltage range.
- ☒Integrated AC bus cable, Ready-To-Use, Plug and Play.
- ☒Low cost, Easy installation.



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# SG(x)MD Series Main Parameters

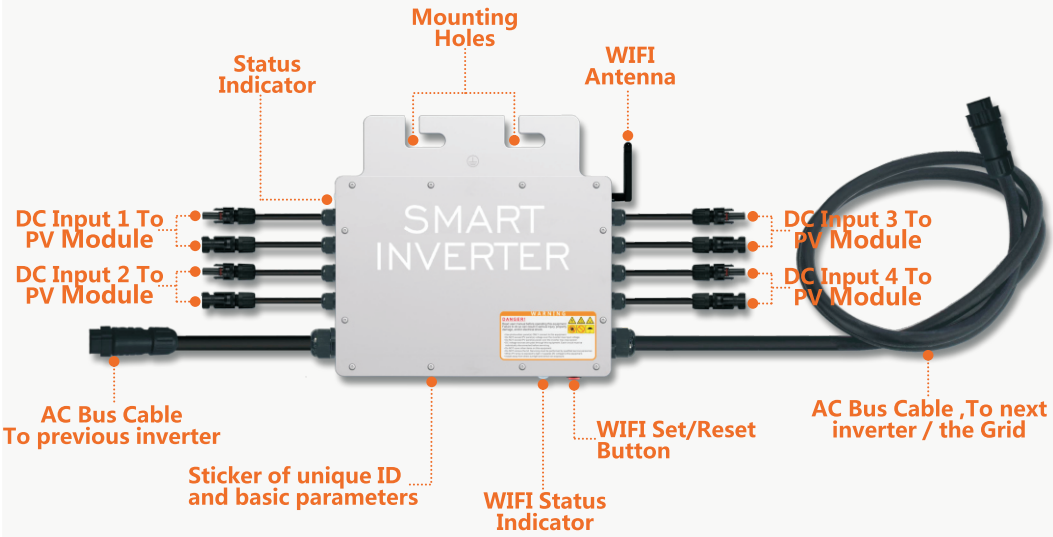
| Model | | SG600MD | SG700MD | SG800MD | SG1000MD |
|---|---|---|---|---|---|
| **Input Data(DC,PV)** | | | | | |
| Number of Input MC4 Connector | | 2 sets | | | |
| MPPT Voltage Range | | 28V-55V | | | |
| Operation Voltage Range | | 20V-60V | | | |
| Maximum Input Voltage | | 60V | | | |
| Startup Voltage | | 20V | | | |
| Maximum Input Power | | **2*300W** | **2*350W** | **2*400W** | **2*500W** |
| Maximum Input Current | | 2*10A | 2*11.66A | 2*13.33A | 2*16.66A |
| **Output Data(AC)** | | | | | |
| Single-Phase Grid Type | | 120V & 230V | | | |
| Rated Output Power | | 590W | 650W | 760W | 950W |
| Maximum Output Power | | 600W | 700W | 800W | 1000W |
| Nominal Output Current | @120VAC | 4.91A | 5.41A | 6.33A | 7.91A |
| | @230VAC | 2.56A | 2.82A | 3.3A | 4.13A |
| 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 | **4 units** | **4 units** | **3 units** | **2 units** |
| | @230VAC | **8 units** | **7 units** | **6 units** | **4 units** |
| **Efficiency** | | | | | |
| Peak Efficiency | | 95% | | | |
| CEC Weighted Efficiency | | @120VAC : 92.5% / @230VAC : 93.5% | | | |
| Nominal MPPT Efficiency | | 99.9% | | | |
| Night Power Consumption | | <700mW | | | |
| **Mechanical Data** | | | | | |
| 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 | | | |
| **Other Features** | | | | | |
| Communication | | WIFI With Cloud Monitoring | | | |
| 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 | | CE, ROHS, RED etc. | | | |

# SG(x)MQ Series

**4 PV Panels To 1 Micro Inverter, Wide input voltage, WiFi cloud monitoring, Single phase output, Flexible three-phase,High efficiency MPPT and output, Integrated bus cable, Plug and play, Quick installation by hand in hand.**

## SOLAR / PHOTOVOLTAIC SMART MICRO INVERTER


## Basic Structure




## Features

- ☑One unit connects to quad PV modules, Accurate tracking.
- ☑Maximum 1200/1400W AC output power.
- ☑Single-phase output, Flexible 3-phase PV systems.
- ☑WIFI communication and Cloud monitoring.
- ☑Hand in hand connection, multiple units per branch.
- ☑Customizable various input (DC, PV) voltage range.
- ☑Integrated AC bus cable, Ready-To-Use, Plug and Play.
- ☑Top-est Low cost, Easy installation.



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# SG(x)MQ Series Main Parameters

| Model | | SG1200MQ | SG1400MQ |
|---|---|---|---|
| **Input Data(DC,PV)** | | | |
| Number of Input MC4 Connector | | 4 sets | |
| MPPT Voltage Range | | 28V-55V | |
| Operation Voltage Range | | 20V-60V | |
| Maximum Input Voltage | | 60V | |
| Startup Voltage | | 20V | |
| Maximum Input Power | | **4*300W** | **4*350W** |
| Maximum Input Current | | 4*10A | 4*11.66A |
| **Output Data(AC)** | | | |
| Single-Phase Grid Type | | 120V & 230V | |
| Rated Output Power | | 1150W | 1350W |
| Maximum Output Power | | 1200W | 1400W |
| Nominal Output Current | @120VAC | 9.58A | 11.25A |
| | @230VAC | 5A | 5.86A |
| 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 | **4 units** | **3 units** |
| | @230VAC | **8 units** | **6 units** |
| **Efficiency** | | | |
| Peak Efficiency | | 95% | |
| CEC Weighted Efficiency | | @120VAC : 92.5% / @230VAC : 93.5% | |
| Nominal MPPT Efficiency | | 99.9% | |
| Night Power Consumption | | <700mW | |
| **Mechanical Data** | | | |
| Operating Ambient Temperature Range | | -40°C to +65°C | |
| Storage Temperature Range | | -40°C to +85°C | |
| Dimensions (W x H x D) | | 250mm x 230mm x 38.5mm (not include connectors and cable) | |
| Weight | | 2.5kg | |
| Max Current of AC Bus Cable | | 40A | |
| Waterproof Grade | | IP65 | |
| Cooling Mode | | Natural Convection - No Fans | |
| **Other Features** | | | |
| Communication | | WIFI With Cloud Monitoring | |
| 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 | | CE, ROHS, RED etc. | |

# WIFI Cloud Monitoring

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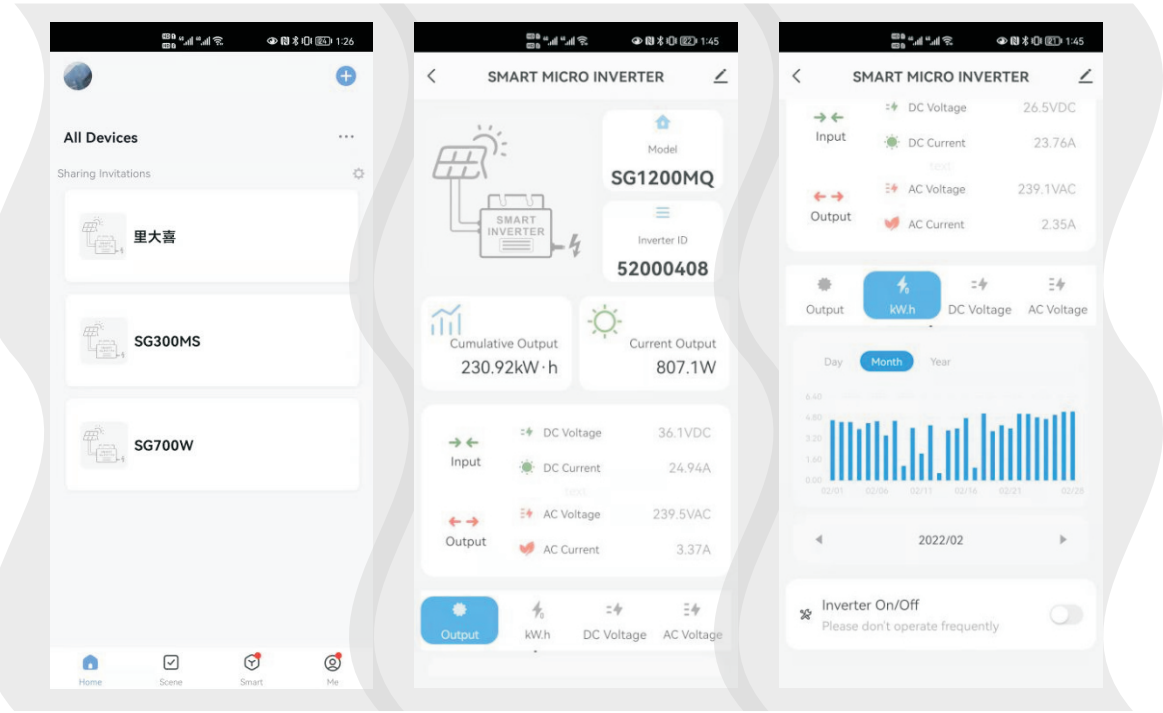


## Main Parameters

| Basic Parameters | |
|---|---|
| Applicable Microinverter | All Microinverter of SG series |
| Prerequisites for cloud monitoring | 1. A wireless network device (such as a wireless router) that can provide WiFi and Internet service。<br>2. a smart device (smart phone or tablet) with Bluetooth function and Android or IOS system. |
| Internet connection mode | WIFI |
| WiFi communication distance | Sight distance: 50m |
| DTU required? | No |
| QR code scanning connection required? | No |
| Reset the WiFi connection again? | Yes |
| WiFi setting method | 1. Press the self reset switch for 5 seconds to enter the setting state。<br>2. App automatically searches the inverter, and uses Bluetooth to transmit setting parameters to the inverter and complete the setting. |
| **App of Cloud Monitoring** | |
| Operating System | Android, IOS |
| System Language | Chinese, English |
| Max. Microinverter Supported | Unlimited |
| Auto Data Collect Interval | Update every minute |
| Add inverters in batch ? | Yes |
| support multiple mobile devices to monitor the same inverter? | Yes |
| Check data at night? | Yes, but the inverter will not upload data to the cloud server at night. |
| Data Storage Location | Saved in the cloud server |
| Data retention period | Permanently Store |

## Schematic of cloud monitoring




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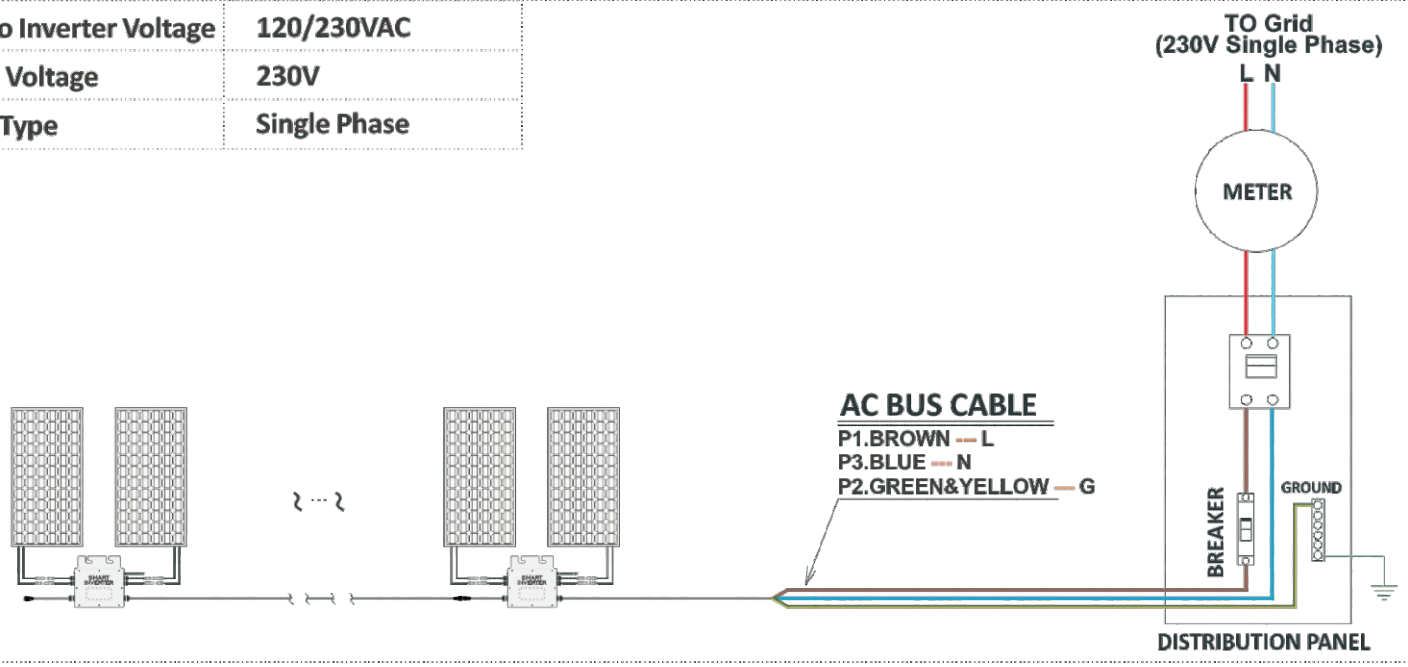
# Sample System - Wiring Schematic

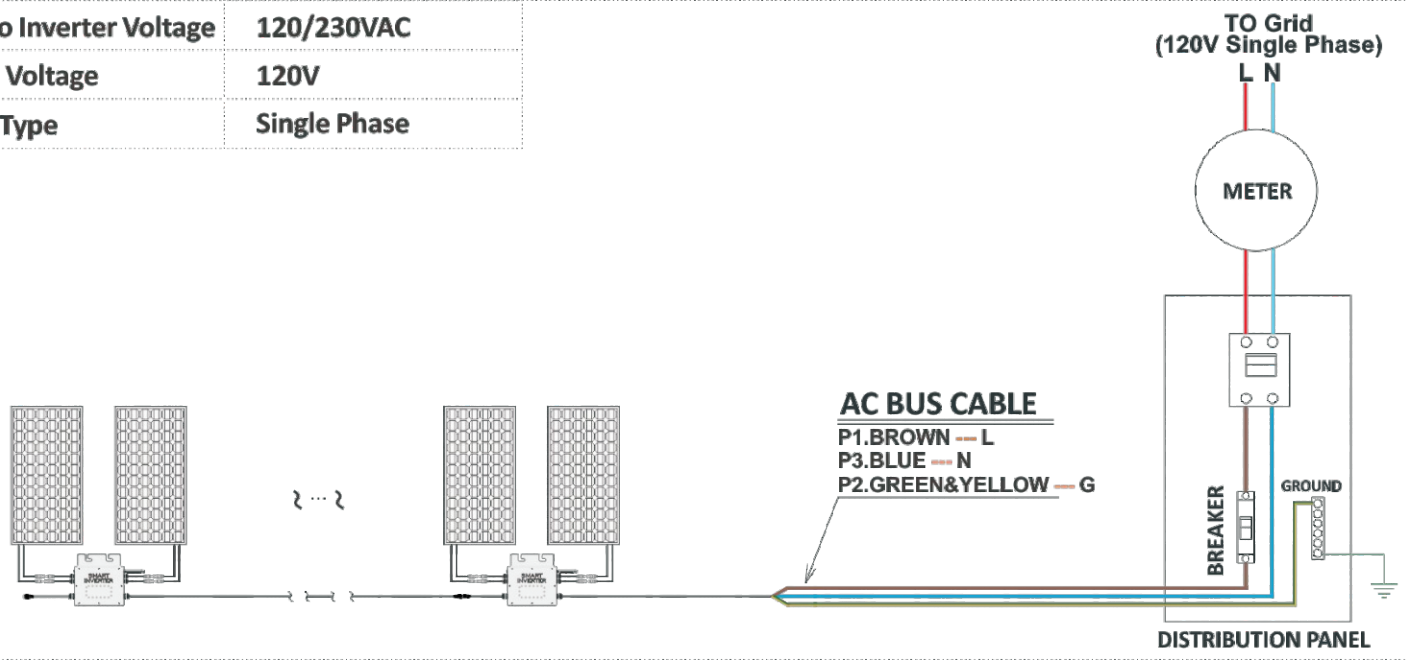
## SG(x)MD Series Micro inverter <@> Single-Phase 230V Grid

| | |
|---|---|
| Micro Inverter Voltage | 120/230VAC |
| Grid Voltage | 230V |
| Grid Type | Single Phase |




## SG(x)MD Series Micro inverter <@> Single-Phase 120V Grid

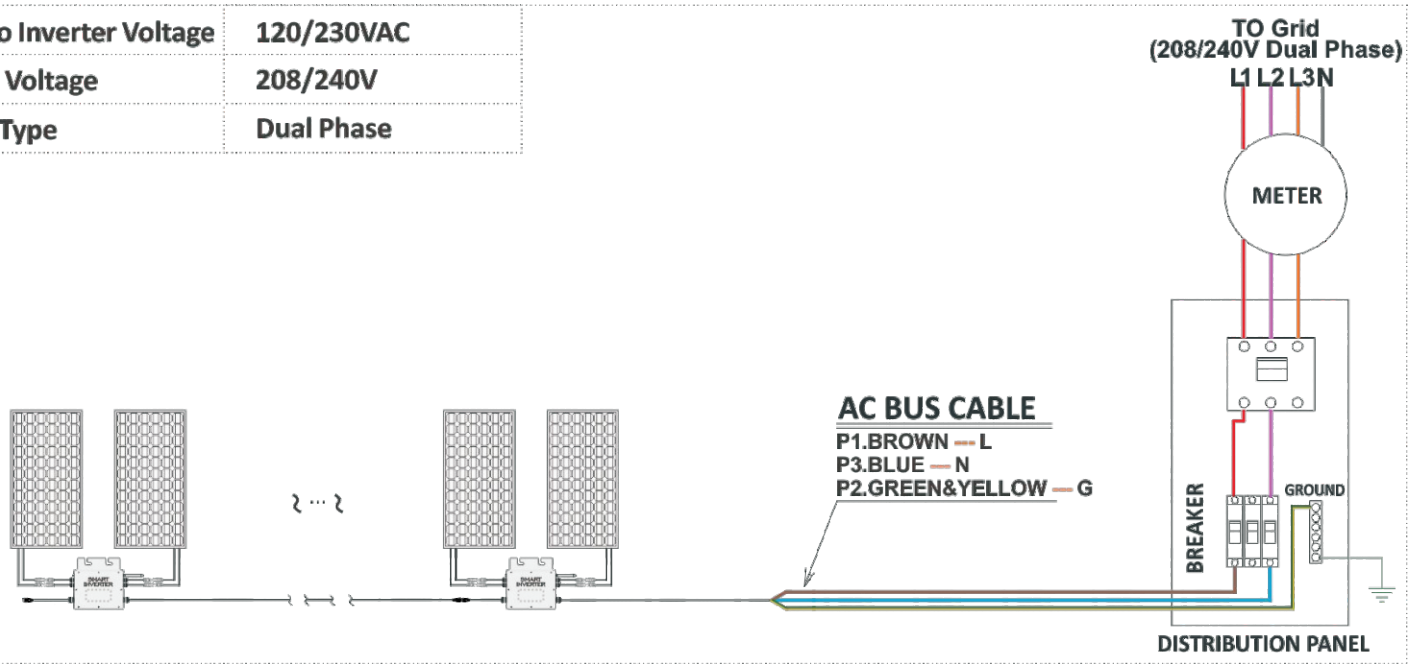
| | |
|---|---|
| Micro Inverter Voltage | 120/230VAC |
| Grid Voltage | 120V |
| Grid Type | Single Phase |



# Sample System - Wiring Schematic

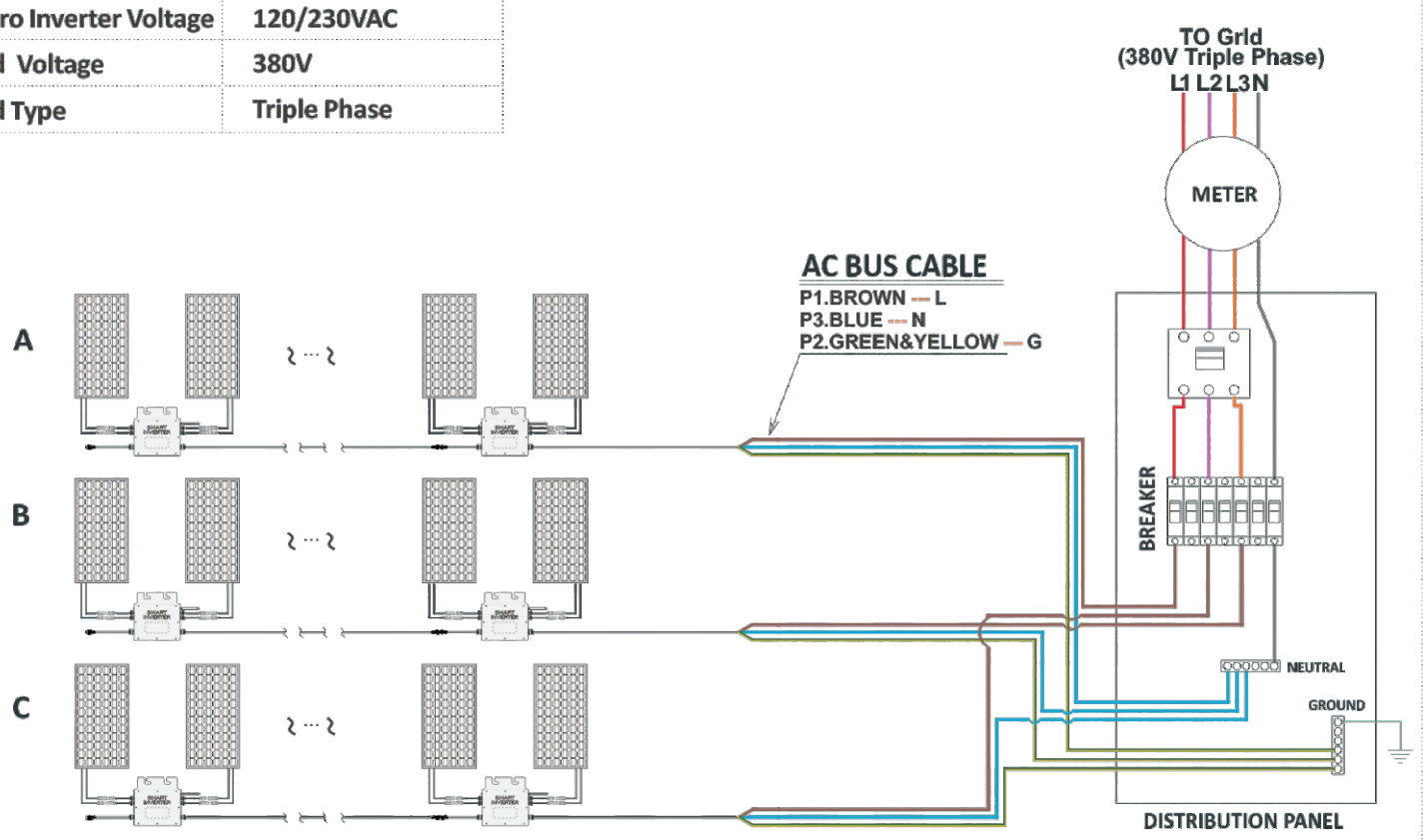
## SG(x)MD Series Micro inverter <@> 2-Phase 208/240V(Single-Phase 120V)

| | |
|---|---|
| Micro Inverter Voltage | 120/230VAC |
| Grid Voltage | 208/240V |
| Grid Type | Dual Phase |




## SG(x)MD Series Micro inverter <@> 3-Phase 380V(Single-Phase 230V) Grid

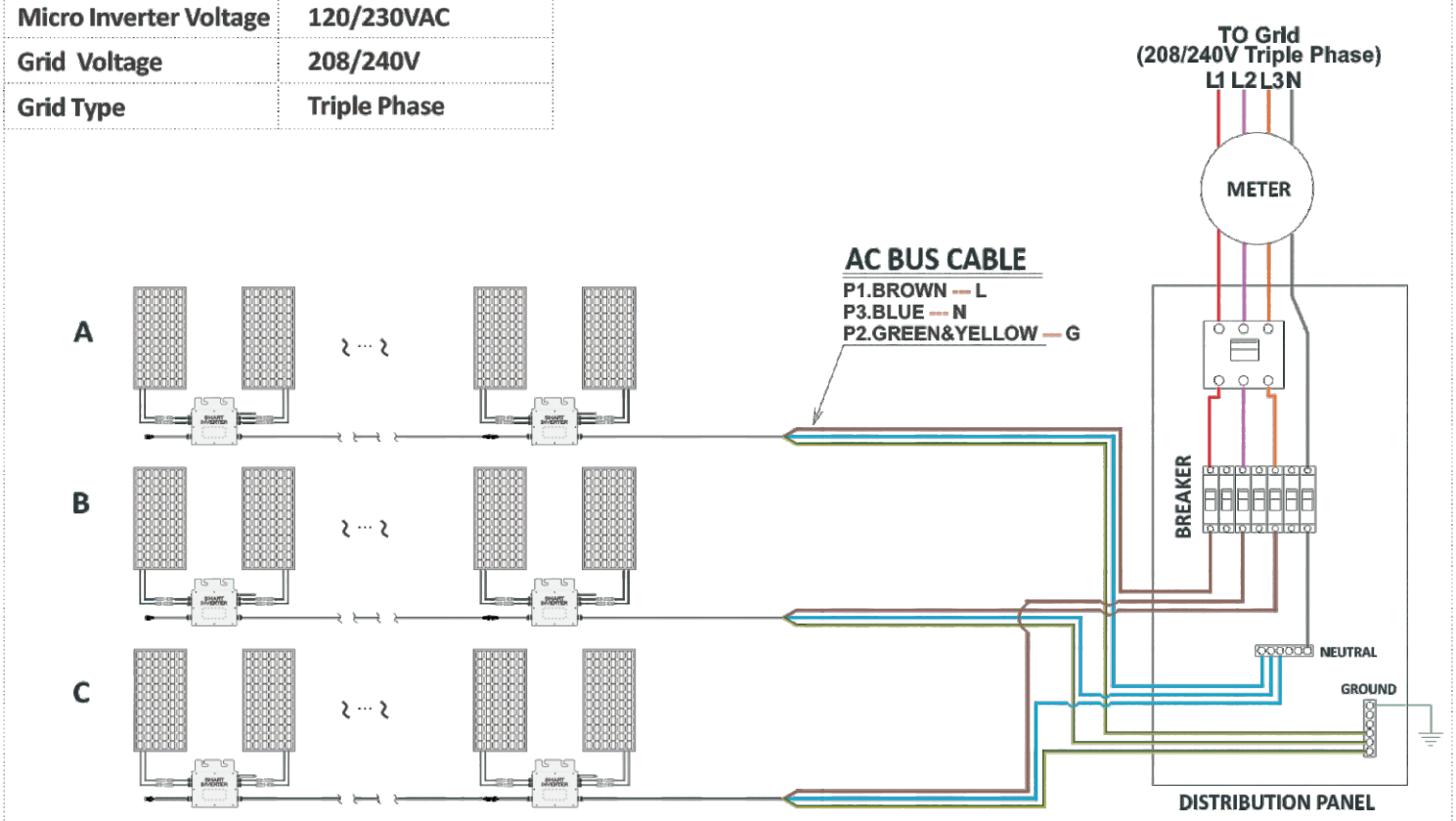
| | |
|---|---|
| Micro Inverter Voltage | 120/230VAC |
| Grid Voltage | 380V |
| Grid Type | Triple Phase |



# Sample System - Wiring Schematic

## SG(x)MD Series Micro inverter <@> 3-Phase 208/240V(Single-Phase 120V) I

| | |
|---|---|
| Micro Inverter Voltage | 120/230VAC |
| Grid Voltage | 208/240V |
| Grid Type | Triple Phase |




## SG(x)MD Series Micro inverter <@> 3-Phase 208/240V(Single-Phase 120V) II

| | |
|---|---|
| Micro Inverter Voltage | 120/230VAC |
| Grid Voltage | 208/240V |
| Grid Type | Triple Phase |