

Instruction manual

McShine Inverter for solar panel, 5m cable

Dear customer

congratulations on the purchase your McShine Inverter for solar panel.

With this choice you have chosen a product, which combines appealing design and design and technical features.

Please read the following connection and and operating instructions carefully and follow them and follow them, in order to get the longest and safest from your product for as long as possible.

Please read the operating instructions carefully before carefully before using the device.

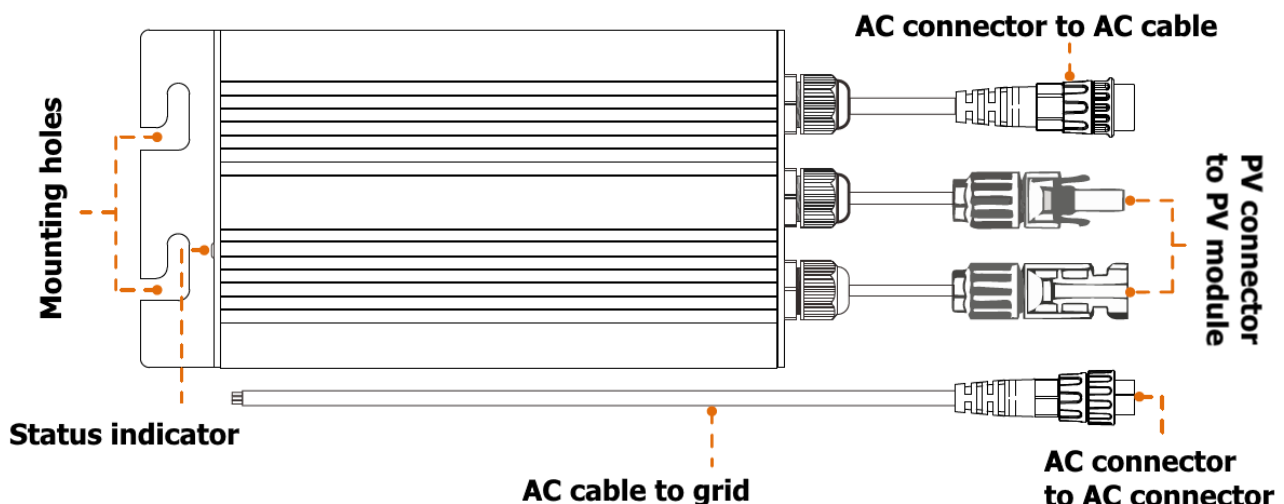
We wish you much pleasure with your new product!

Safety instructions

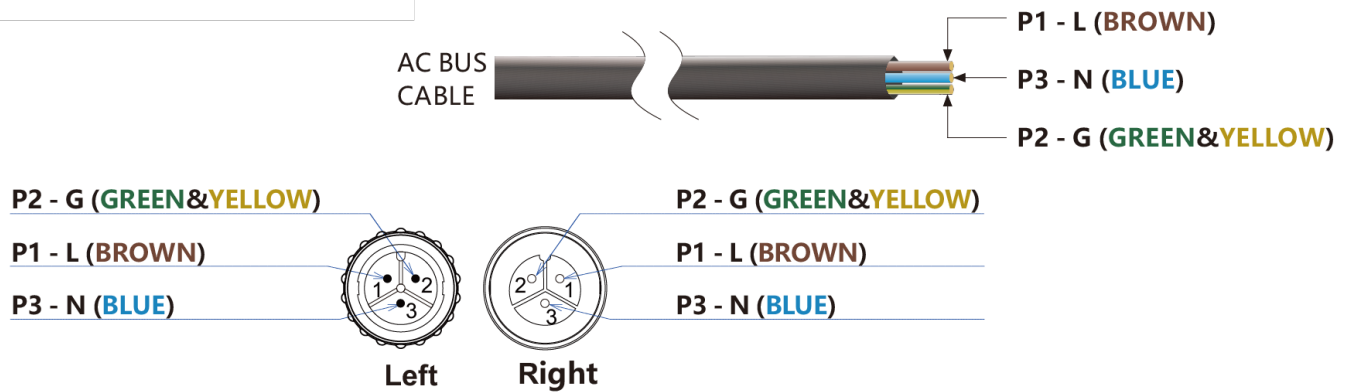
Read the user manual before operating the unit. Failure to do so may result in serious injury, property damage and/or electric shock. May only be installed by qualified personnel.

- Do not use the photovoltaic modules unless they have been connected to this device.
- This device is an on-grid inverter. In order for it to function properly, it must be correctly connected to the power grid. If the power grid stops working, power generation will also stop.
- The voltage of the PV panels must not exceed the maximum input voltage of the inverter.
- Do not exceed the maximum input power of the PV panel(s).
- DC voltage sources are routed through this unit. Each circuit must be disconnected individually before servicing.
- Do not cover the unit.
- Do not remove the cover. Maintenance must be performed by qualified service personnel.
- When exposed to light, the PV module supplies DC voltage to this unit.
- Install the device away from direct sunlight and direct rain.

Structure



AC bus cable and connector



LED display

- green steady light: inverter working
- red flashing: inverter in waiting state
- red continuous light:
 - a) island protection
 - b) Overtemperature protection
 - c) Protection against over/undershooting of the AC voltage
 - d) protection against over/undershooting of the DC voltage
 - e) Protection against too high/low AC frequency
 - f) Fault

Installation

Before installing the inverters, check that the mains voltage at the point of common mains connection matches the rated voltage on the inverter label. 1.

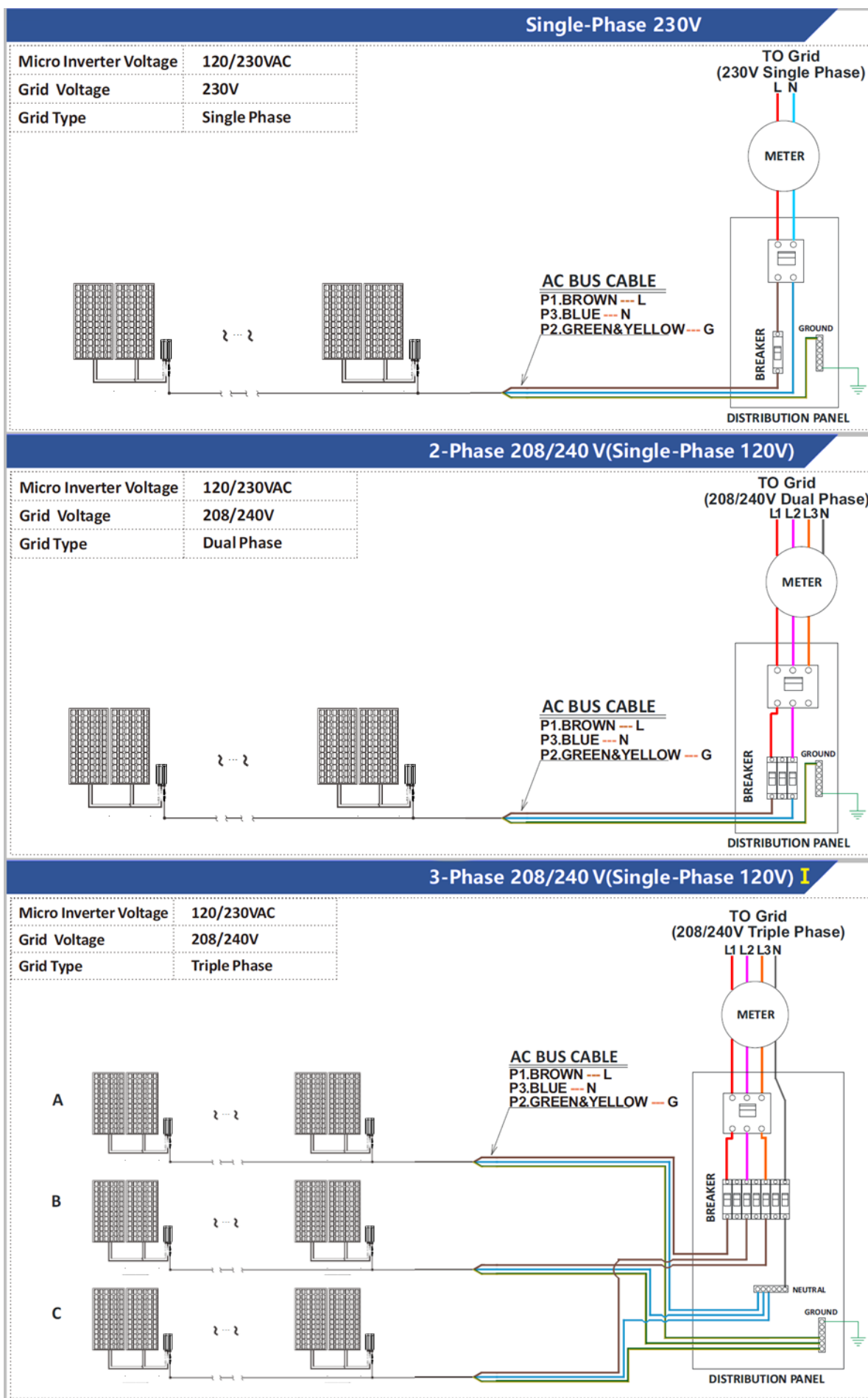
1. Mark the position of the inverter on the rack in relation to the PV module junction box or other obstacles. Mount the inverter.
2. connect the AC bus cable of the inverter. Do not exceed the maximum units per branch.
3. connect the inverter to the PV module. Do not exceed the VOC of the PV module(s). Observe the maximum input voltage of the inverter.
4. Tighten the bus cable end cap on the end of the AC bus cable.
5. install the AC junction box. Wire the wires of the AC bus cable: L (brown), N (blue), G (green-yellow). Connect the AC circuit junction box to the point of power connection.
6. check if all inverters, plugs and cables are connected correctly and well.
7. Turn on the AC circuit breaker on each AC branch circuit of the inverter.
8. turn on the AC main circuit breaker of the power system. Your system will begin producing power after a safety delay time of 30 seconds.

Disposal instructions

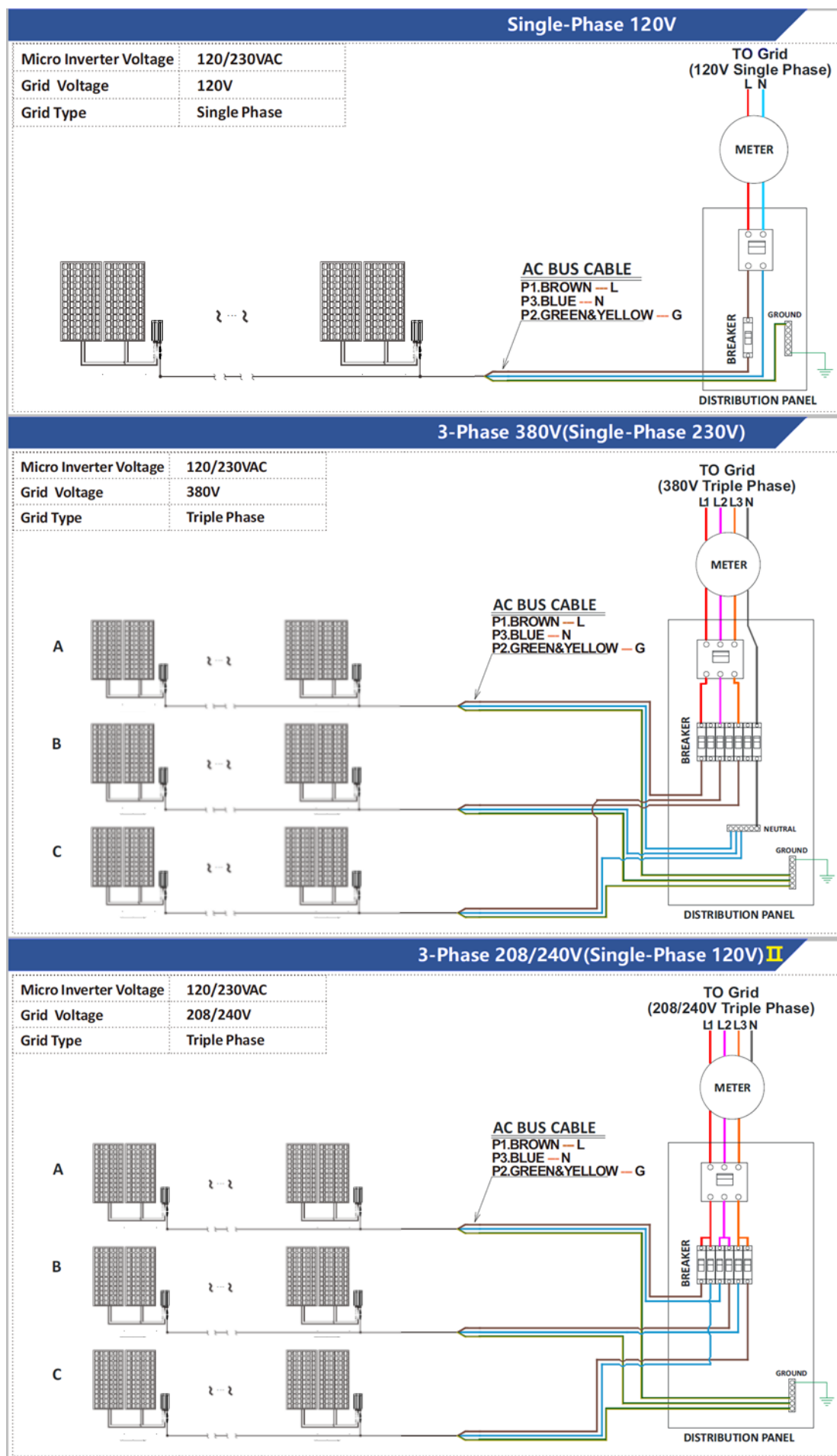
According to the European WEEE Directive, electrical and electronic devices must not be disposed of with household waste. Their components must be recycled or disposed of separately, because toxic and hazardous components can cause lasting damage to health and the environment if disposed of improperly. As a consumer, you are obliged under the Electrical and Electronic Equipment Act (ElektroG) to return electrical and electronic equipment free of charge at the end of its service life to the manufacturer, the point of sale or to public collection points set up for this purpose. Details are regulated by the respective state law. The symbol on the product, the operating instructions and/or the packaging indicates these regulations. By separating, recycling and disposing of old equipment in this way, you are making an important contribution to protecting our environment. Packaging can be disposed of free of charge at the appropriate collection points - paper in the paper garbage can, plastics in the yellow bag and glass in the used glass container.

PARAMETER TABLE

Model	1480009 / 300W	1480010 / 600W
Input Data (DC, PV)		
Number of Input MC4 Connector	1 set	
MPPT Voltage Range	24V-40V	
Operation Voltage Range	18V-50V	
Maximum Input Voltage	50V	
Startup Voltage	18V	
Maximum Input Power	300W	600W
Maximum Input Current	12A	24A
Output Data (AC)		
Single-Phase Grid Type	120V / 230V	
Rated Output Power	280W	580W
Maximum Output Power	300W	600W
Nominal Output Current	120V: 2.33A / 230V; 1.21A	120V: 4.83A / 230V; 2.52A
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%	
Efficiency		
Peak Efficiency	92.5%	
CEC Weighted Efficiency	@120VAC: 90.5% / @230VAC: 91.5%	
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)	35mm x 76mm x 233mm	41mm x 106mm x 282mm
Weight	0.5kg	0.95kg
Waterproof Grade	IP55	
Cooling Mode	Natural Convection - No Fans	
Other Features		
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, Voltage, Frequency, Temperature, Current etc.	



Note: The 300W variant omits the second PV module.



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