

User Manual

TSOL-MT-F

TSOL-MT-M

TSOL-MP-F

TSOL-MP-M

TSOL-MC200-G2

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Read Me First

Dear customer, thank you for choosing the TSOL micro inverter from TSUN. We hope you will find our products meet your needs for renewable energy. Meantime, we appreciate your feedbacks regarding our products.

This manual contains important instructions for the accessories of TSOL-M350 / M400 / M800 / M1600 micro inverter and must be read in its entirety before installing or commissioning the equipment. For safety, only qualified technician, who has received training or has demonstrated skills can install and maintain these optional accessories under the guide of this document.

Warning

- Only qualified personnel should install, troubleshoot, or replace these accessories.
- Before installation, check the unit to ensure absence of any transport or handling damage, which could affect insulation integrity or safety clearances.
- All repairs should be carried out using only qualified spare parts, which must be installed in accordance with their intended use and by a licensed contractor or authorized TSUN service representative.
- Please ensure the inverter system is not under working conditions firstly when installing connectors, the human body cannot simultaneously contact the connector's positive and negative pole, in order to avoid electric shock accidents.

Contact

If you have technical problems about our products, contact the TSUN Service line.

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Female AC Connector (TSOL-MT-F)

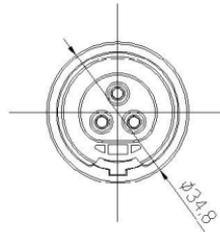
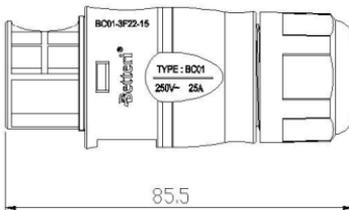
Recommended



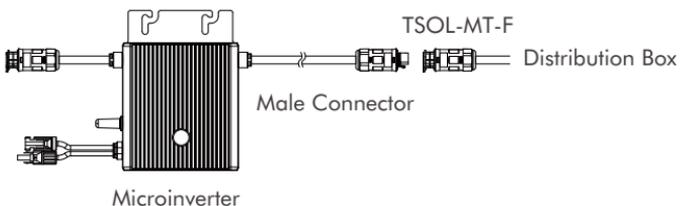
AC connectors are used to connect the micro-inverter in terrestrial PV systems to the distribution box. The connection of pin and wire is screw type which is easy for field installation.

For each project the usage quantity of AC connectors is depended on the system design and at least 1 pcs. TSUN recommend the use of female AC connector.

Accessory Size



Connection Diagram



Technical Data

Item	Parameter
Type	TSOL-MT-F
Applicable environment temperature	-40℃ ~ +85℃
Relative humidity	≤95%
Electrode number	2P+PE
Nominal voltage	TUV: 250V AC
Nominal current	25A (4mm ²)
Material of pin	Copper alloy & silver plated
Contact resistance	≤1mΩ
Pollution degree	2
Enclosure flame class	UL94-V0
Over-voltage category	III
Wiring Connection	Screw type
Insulation resistance	≥100MΩ
Rated impulse withstand voltage	4000V AC
Degree of protection	IP68 (1.5m,24h)
Insertion and withdraw force(unlocked)	10~50N
Applicable wire gauge	2.5/4.0 mm ²
Outer cable diameter	10~13mm
Standards	UL6703A,EN 61535,PPP 59015A:2013

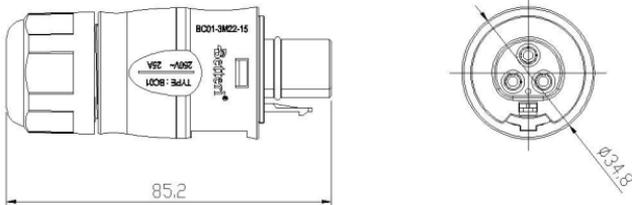
Male AC Connector (TSOL-MT-M)



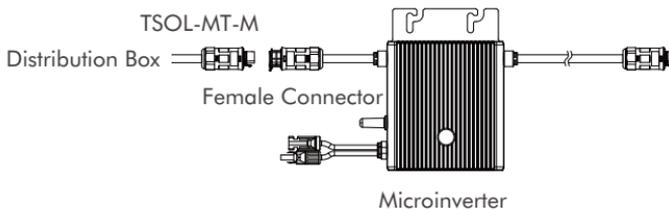
AC connectors are used to connect the micro-inverter in terrestrial PV systems to the distribution box. The connection of pin and wire is screw type which is easy for field installation.

For each project the usage quantity of AC connectors is depended on the system design and at least 1 pcs.

Accessory Size



Connection Diagram



Technical Data

Item	Parameter
Type	TSOL-MT-M
Applicable environment temperature	-40 C ~ +85 C
Relative humidity	≤ 95%
Electrode number	2P+PE
Nominal voltage	TUV: 250V AC
Nominal current	25A (4mm ²)
Material of pin	Copper alloy & silver plated
Contact resistance	≤ 1mΩ
Pollution degree	2
Enclosure flame class	UL94-V0
Over-voltage category	III
Wiring Connection	Screw type
Insulation resistance	≥ 100MΩ
Rated impulse withstand voltage	4000V AC
Degree of protection	IP68 (1.5m,24h)
Insertion and withdraw force(unlocked)	10~50N
Applicable wire gauge	2.5/4.0 mm ²
Outer cable diameter	10~13mm
Standards	UL6703A,EN 61535,PPP 59015A:2013

Female Protection Cap (TSOL-MP-F)



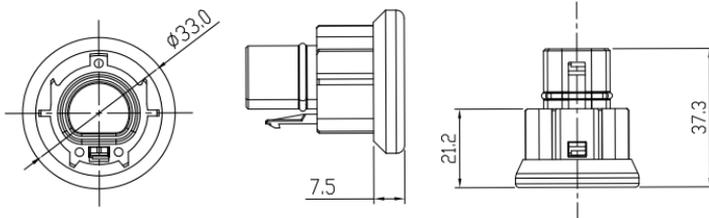
Recommended



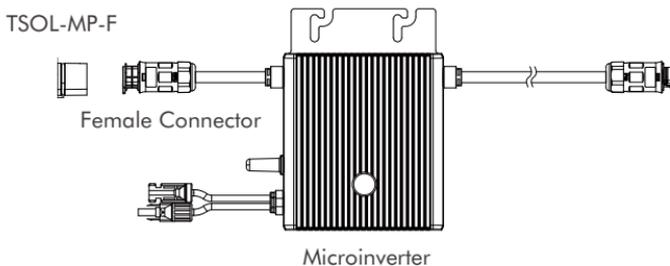
Protection Cap are used to give the unused AC connector an IP67 protection from water and dust.

For each project the usage quantity of protection caps is depended on the system design and at least 1 pcs. TSUN recommend the use of female protection caps.

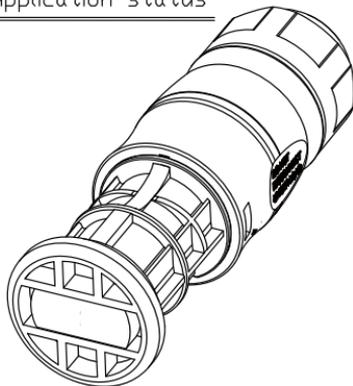
Accessory Size



Connection Diagram



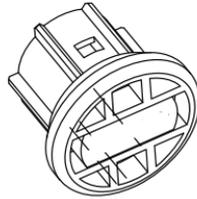
Application status



Technical Data

Item	Parameter
Type	TSOL-MP-F
Material	silicone rubber
Degree of protection	IP67
Flame retardant rating	UL94-V0
Standards	ROHS

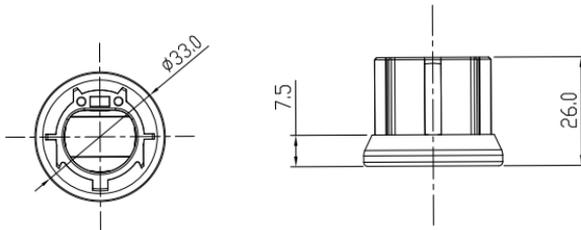
Male Protection Cap (TSOL-MP-M)



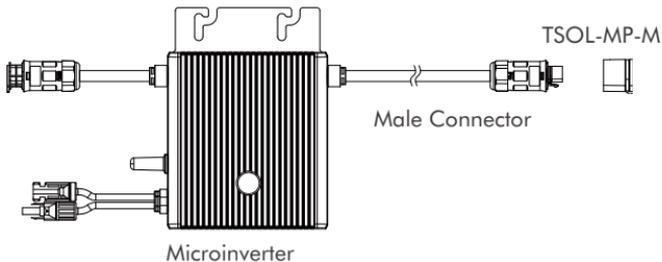
Protection Cap are used to give the unused AC connector an IP67 protection from water and dust.

For each project the usage quantity of protection caps is depended on the system design and at least 1 pcs.

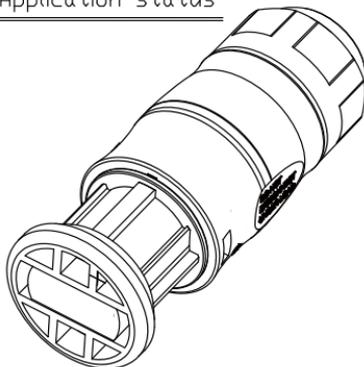
Accessory Size



Connection Diagram



Application status



Technical Data

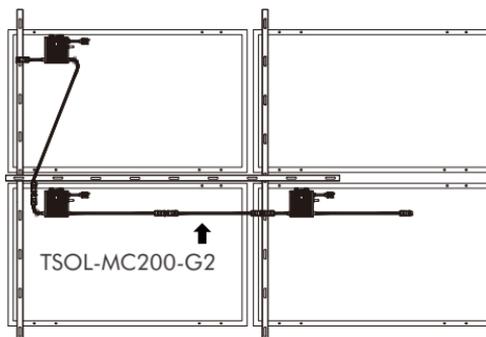
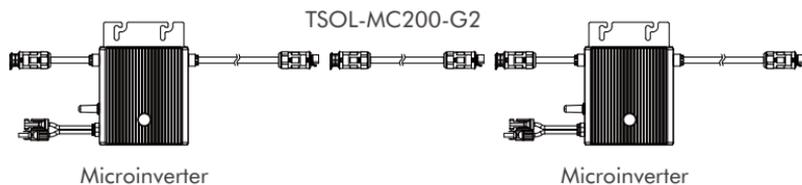
Item	Parameter
Type	TSOL-MP-M
Material	silicone rubber
Degree of protection	IP67
Flame retardant rating	UL94-V0
Standards	ROHS

AC Extension Cable (TSOL-MC200-G2)



AC connectors are used to connect the micro-inverter in terrestrial PV systems to the distribution box. The connection of pin and wire is screw type which is easy for field installation.

Connection Diagram

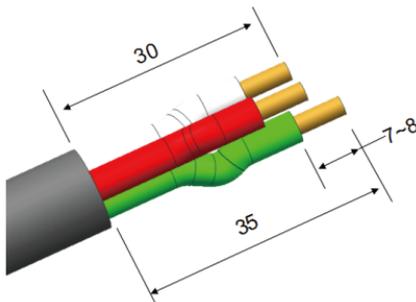


Technical Data

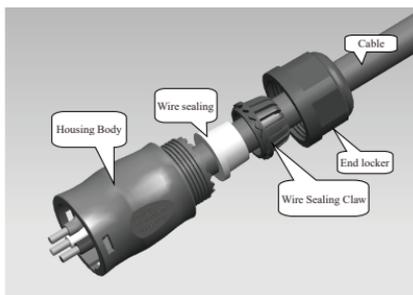
Item	Parameter
Type	TSOL-MC200-G2
Connector type	TSOL-MT-F * 1 pcs TSOL-MT-M * 1 pcs
Nominal voltage for connector	250V AC
Nominal current	25A (4mm ²)
Wire gauge	4.0 mm ²
Length	2m
UV resistant	UL1581
Fire performance of cable	Vertical-Tray flame test UL1277
Operating Temperature	-40 to +90
Product Standard of cable	UL44 UL1277 UL1581 ROHS

Connector Assembly

Only multiple strands of copper wire can be used. Please cut and strip the wire according to the requirements, and the ground wire needs to be 5mm longer than live and naught wire, and the applicable stripping length is 7 ~ 8mm.



Screwing off the tail parts (End Locker, Wire Sealing Claw and Wire Sealing) from male or female cable connector, and then pulling the wire which was cut and stripped through them in turn.

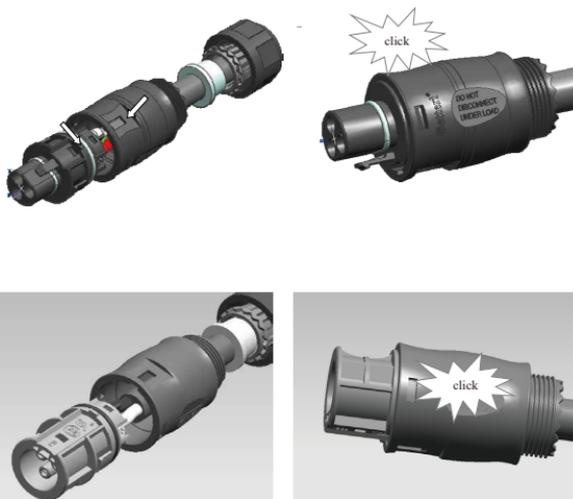


Inserting the stripped wires correctly into the corresponding pin holes according to the identification and then tightening all screws firmly, Screw twisting torque $0.4 \pm 0.1 \text{ N} \cdot \text{m}$. after it , giving a reverse pull force lightly (about 10N) by manual to test crimping result. Please pay attention to avoiding damage of pins and pin-holder.

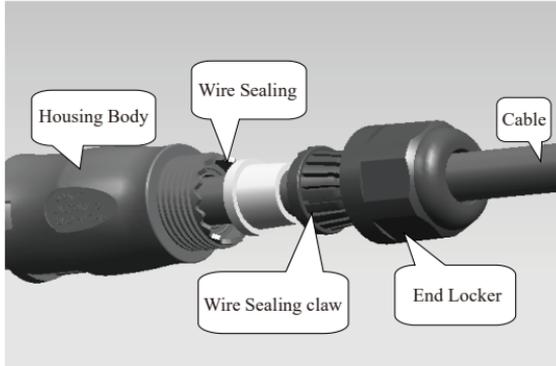
After crimping, the tensile strength shall meet the requirements listed in the following table:



Push the male or female cable body into housing body correctly according to the position of the clamping groove, and will hear a crisp “click” sound in place.



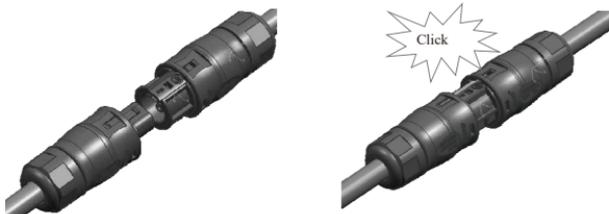
Push the sealing body and sealing claw into the housing body, and then tighten the end locker, torque $4.0 \pm 0.5 \text{ N} \cdot \text{m}$.



Instructions of Operation

Please switch off the system power and ensure the male and female connector are of the same type before using;

When mating connectors, align mate-locker on the male connector with grooves on the female connector, and insert gradually .Connected in place, there will be a sound of "click";

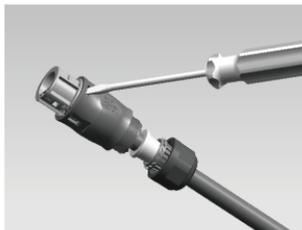


If the connectors are separated, choose a corresponding flat screwdriver to push mate-locker step slightly out of position, and then give a force along the axial direction until separation.



If the connector to be disassembly for rewire, please according to the following steps:

- 1) Loosen tail parts (End Locker, Wire Sealing Claw and Wire Sealing body);
- 2) Use a suitable flat screwdriver to press the elastic tongue on the male or female cable body inward and push forward slightly, and when the tongue comes off a little, use the same method to the tongue on other side. Give a force along the axial direction until separation.





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