

3 pin AC Connector For PV System

Instruction Book

(BC01 Cable to Cable)



2015 - 9 Version: 4th

Warning: Do Not Connect Or Disconnect Under Load!

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Dear Customer, Thank you for choosing our product “ Multi-pole AC Connectors For PV system”, which are referred to as “Connectors” hereinafter. Please read this instruction book carefully in order to use the product correctly, quickly and safely.

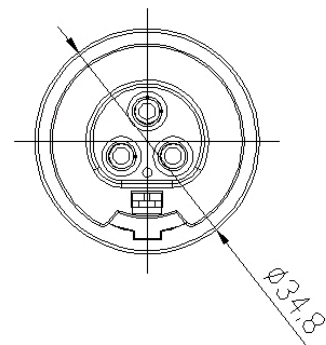
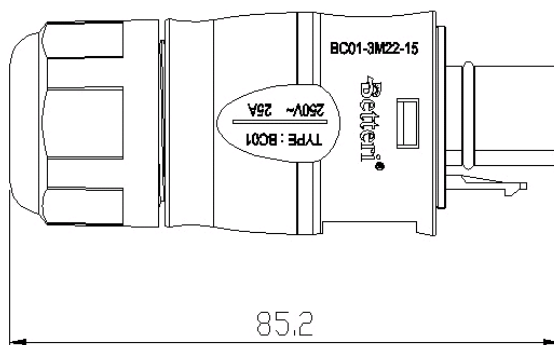
1. Application & Structure

- 1.1. The connectors are specialized for the connection of inverter equipment in terrestrial PV systems;
- 1.2. The connection of pin and wire is screw type which is easy for field installation , and the connection of the male and the female connector is snap-fit type;
- 1.3. Easy operation, reliable performance on mechanical and electrical properties;

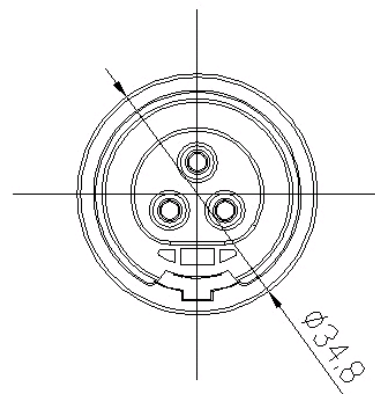
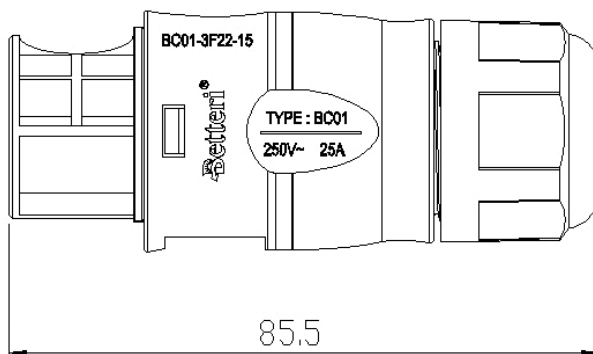
The connector may be used in other areas and industries; we will not assume any unstated quality responsibility if the product is used in other fields and industries.

2. Product Outline Size

2.1. Outline of male cable connector (2+PE):



2.2. Outline of female cable connector (2+PE)



3. Type

3.1. BC01(CC) Connector type:BC01(CC)

3.2. Male cable connector type:

| | |
|--------------------|--------------|
| TUV, CSA: 250V 25A | BC01-3M22-15 |
| CSA: 350V 25A | BC01-3M32-15 |



3.3. Female cable connector type:

| | |
|--------------------|--------------|
| TUV, CSA: 250V 25A | BC01-3F22-15 |
| CSA: 350V 25A | BC01-3F32-15 |



4. Main Technical Features

| Item | Parameter | Item | Parameter |
|------------------------------------|------------------------------|--|--|
| Applicable environment temperature | -40°C ~ +85°C | Over-voltage category | III |
| Relative humidity | ≤95% | Wiring Connection | Screw type |
| electrode number | 2P+PE | Insulation resistance | ≥100MΩ |
| Rated voltage | TUV: 250V AC CSA: 350V AC | Rated impulse withstand voltage | 4000V AC |
| Rated current | 25A(4mm ²) | Degree of protection | IP68 (1.5m,24h) |
| Material of pin | Copper alloy & silver plated | Insertion and withdraw force(unlocked) | 10~50N |
| Contact resistance | ≤1mΩ | Applicable wire gauge | 2.5/4.0mm ² |
| Pollution degree | 2 | Outer cable diameter | 10~13mm |
| Enclosure flame class | UL94-V0 | Standards | UL6703A EN 61535 PPP 59015A:2013 |

5. Safety Precautions

- 5.1. Please be careful during loading, unloading and transportation. Avoid outer heavy pressure to protect connectors;
- 5.2. If the internal parts do not match the instructions after opening the package, please stop using it immediately and contact sales or our company directly;
- 5.3. 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;
- 5.4. The operator who installs or maintains the product shall be trained and have related electrical installation and maintenance skill.

6. For Assembly

6.1. Tools:

6.1.1. Wire striper



6.1.2. Flat screwdriver and #1 cross screwdriver

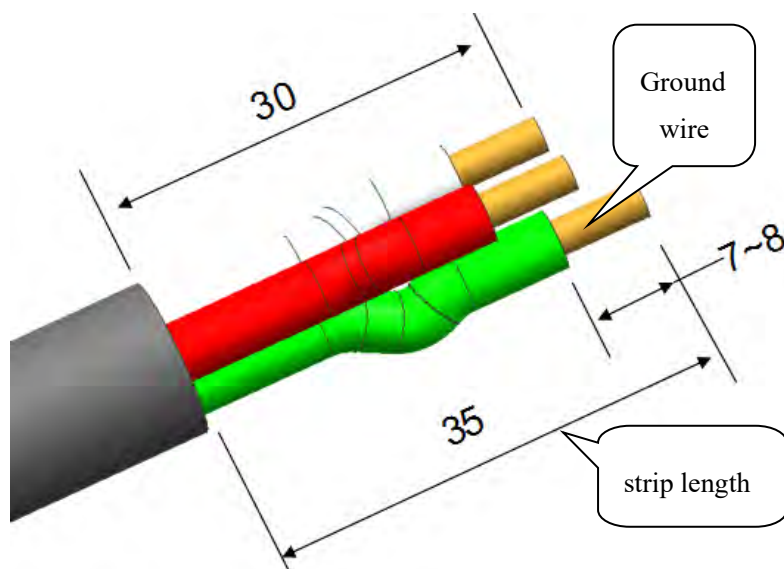


6.1.3. Monkey wrench wider than 3cm and 30# solid wrench



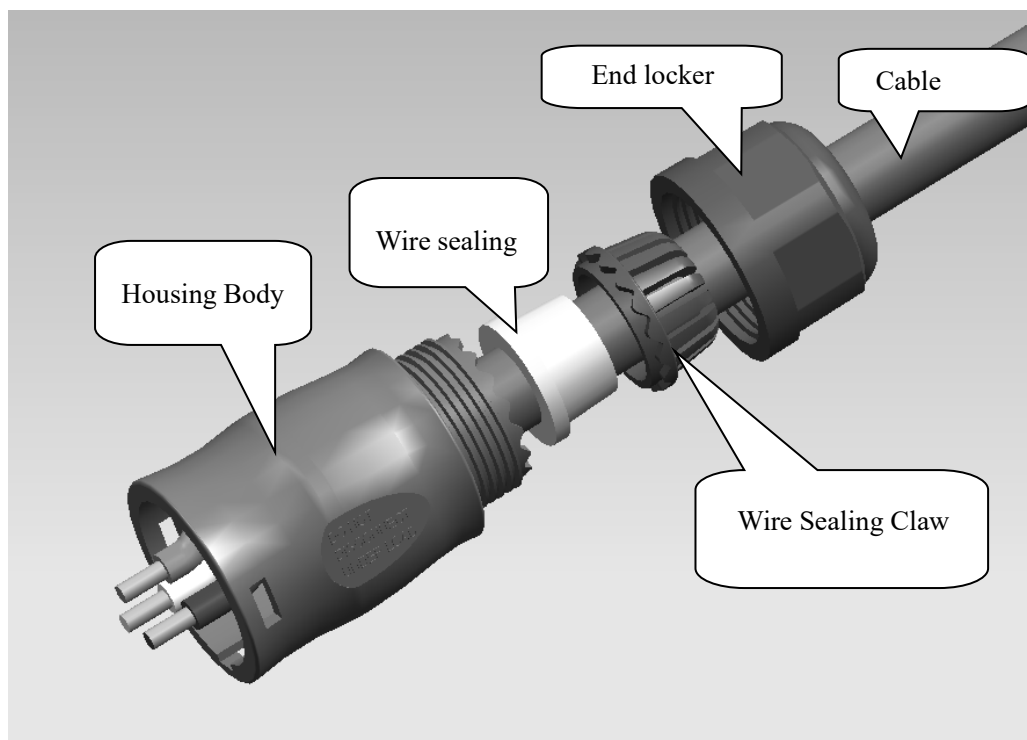
6.2. Strip cables

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.



6.3. Instruction of cable connector assembly:

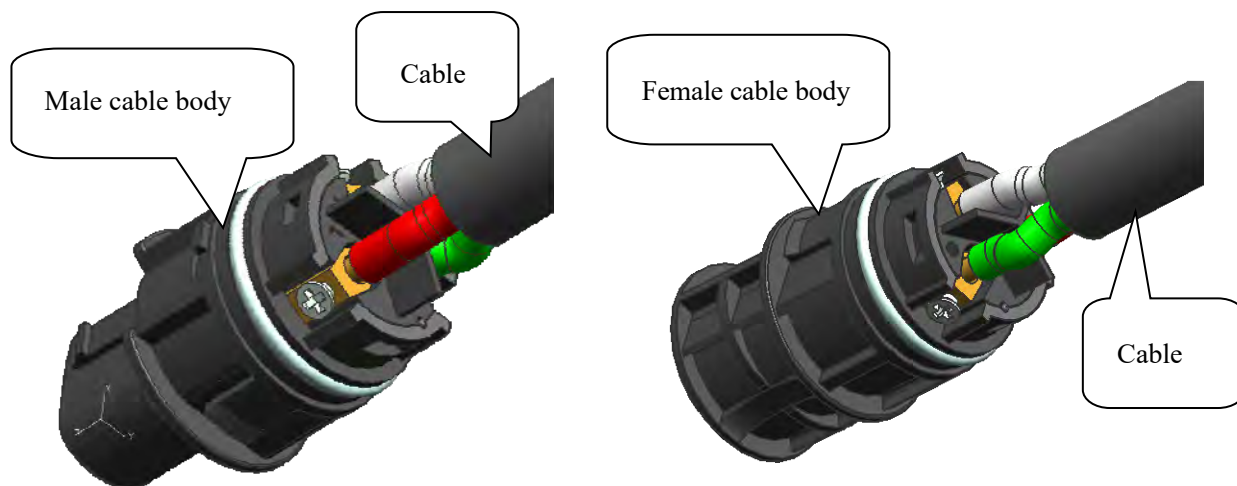
6.3.1. Screwing off the tail parts (End Locker, Wire Sealing Claw and Wire Sealing) from male or female cable connector, and then pulling the wire which was cut and stripped through them in turn.



6.3.2. Crimp the wire

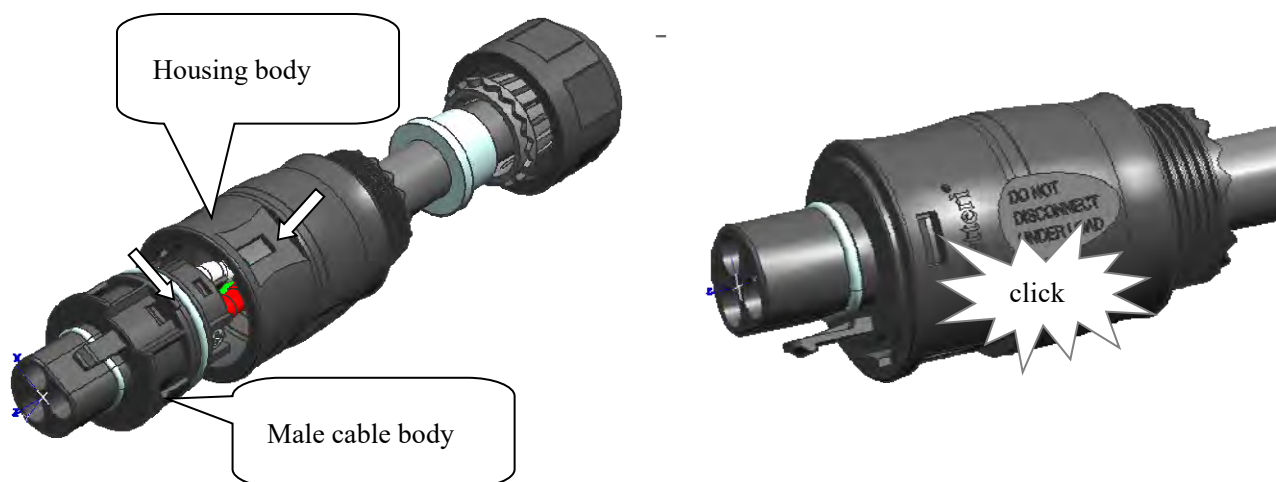
Inserting the stripped wires correctly into the corresponding pin holes according to the identification and then tightening all screws firmly, Screw twisting torque $0.4 \pm 0.1 \text{N} \cdot \text{m}$. after it , giving a reverse pull force lightly (about 10N by manual to test crimping result. Please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

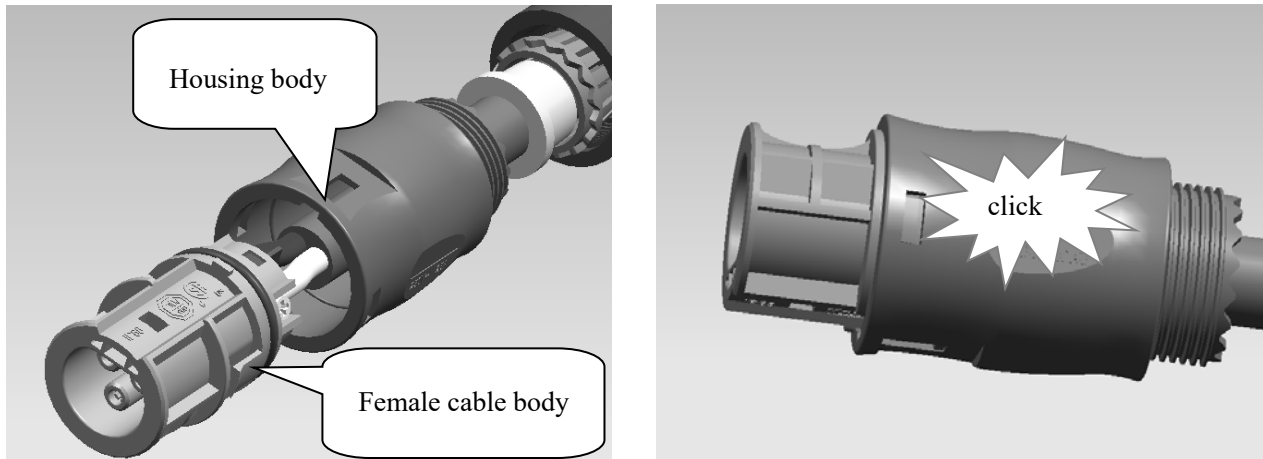
| Conductor cross-section area (mm ²) | Required tensile strength (N) |
|---|-------------------------------|
| 2.5 | > 50 |
| 4.0 | > 60 |



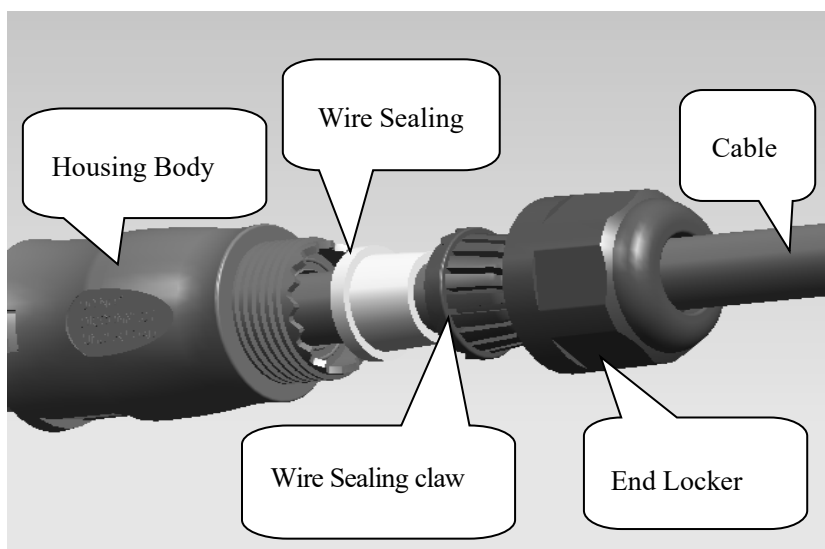
6.3.3. Install male & female cable body to plastic housing

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.





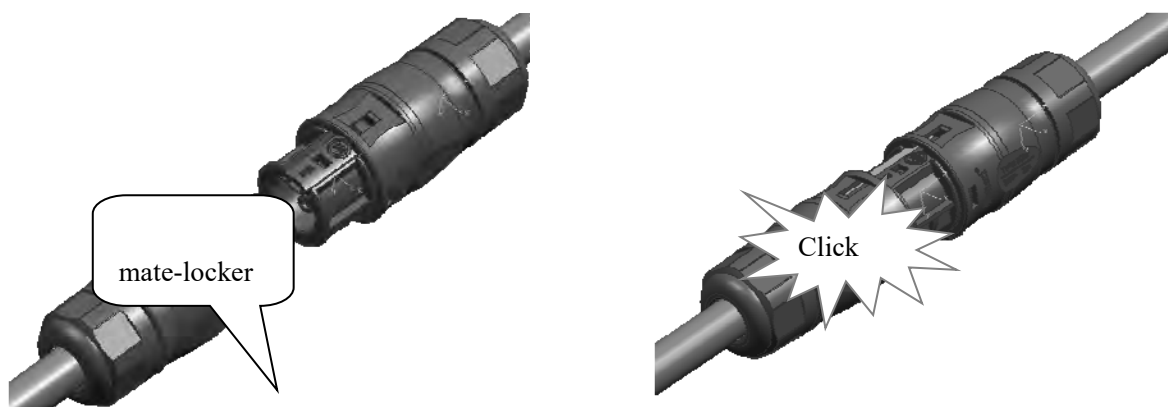
6.3.4. Push the sealing body and sealing claw into the housing body, and then tighten the end locker, torque $4.0 \pm 0.5 \text{N} \cdot \text{m}$.



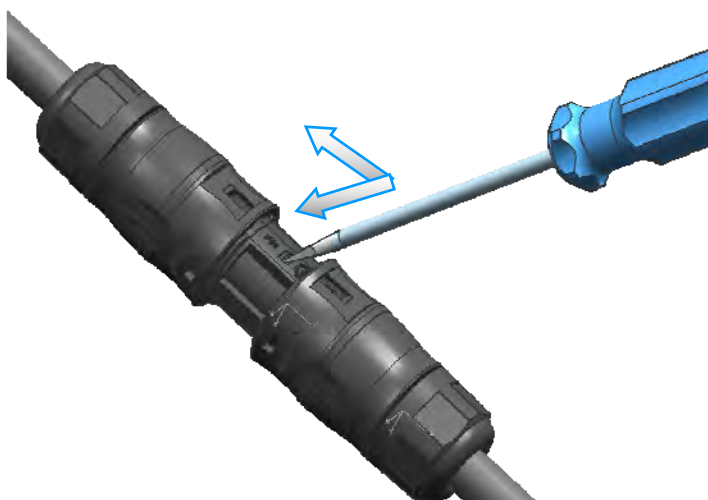
7. Instructions of Operation

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

7.2. 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";



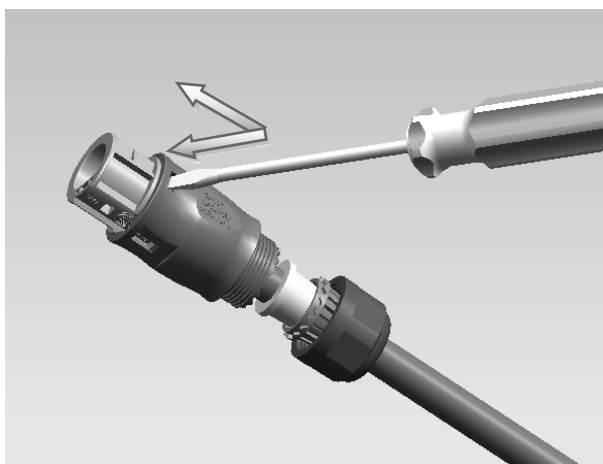
7.3. If the connectors are separated, choose a corresponding flat screwdriver to push mate-locker step slightly out of position, and then give a force along the axial direction until separation.



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

7.4.1. Loosen tail parts (End Locker, Wire Sealing Claw and Wire Sealing body);

7.4.2. 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.



8. Maintenance

The user should do maintenance work according to the different operating environments and frequencies. If discovering any damage of connector systems, please stop using and change it immediately. Please do not separate and mate the connector system frequently if not for repairing or maintenance reason which may reduce the waterproof performance of the system.

9. Statement

If this instruction is inconsistent with the received product, the received product shall prevail. One instruction book will come with one standard box. Please contact us or view our company's website for downloading if you need more copies. All technical data is for reference only when using the product. Any commercial purpose application is forbidden.

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