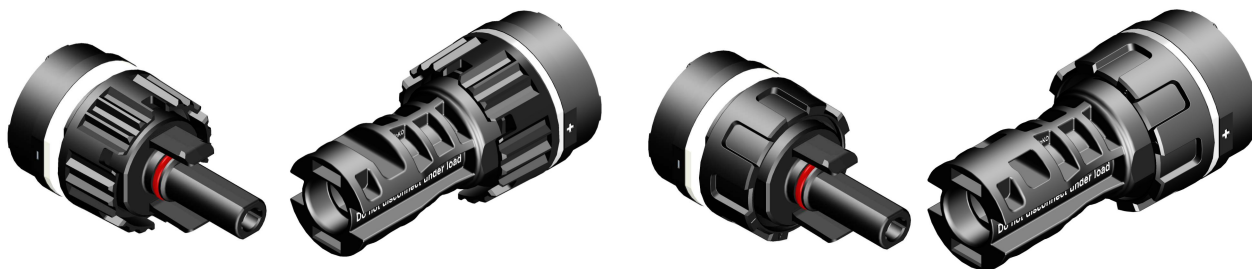


# 连接器安装说明书 PV-JC005 Series

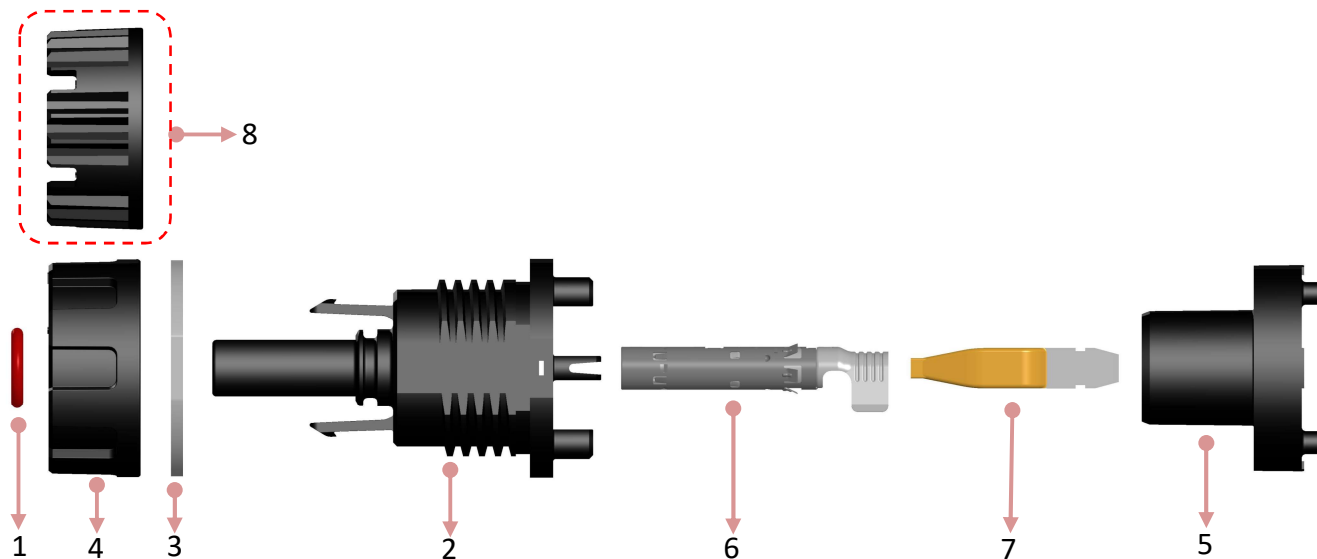
## Installation Manual for PV-JC005 Series Panel Connector



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## 1.产品简介 Products Overview



1 O 型圈 (O Ring)

2 母面板插座 (Female Panel Receptacle)

3 密封垫圈 (Seal Gasket)

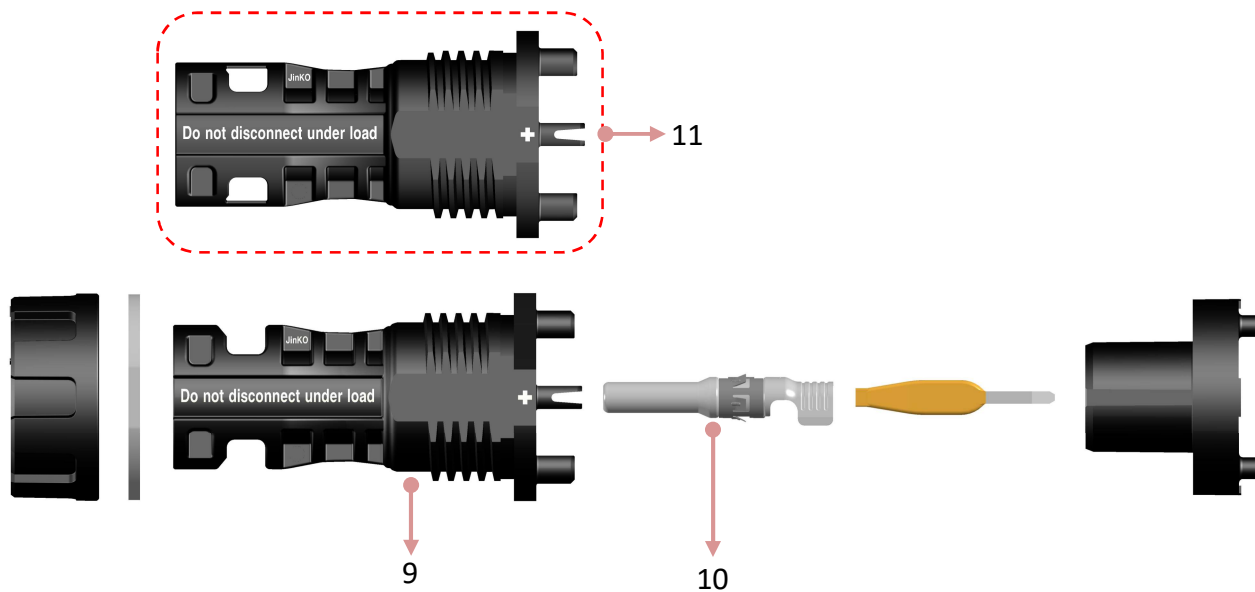
4 塑胶螺母-标配 (Gland Nut-Standard Equipment)

5 后盖 (Cover)

6 插套 (Female Terminal)

7 编织端子 (Braided Terminal)

8 塑胶螺母-选配 (Gland Nut-Optional)

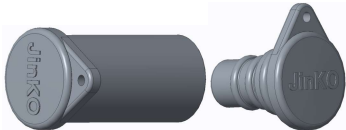


9 公面板插座-标配 (Male Panel Receptacle-Standard Equipment)

10 插针 (Male Terminal)

11 公面板插座-选配 (Male Panel Receptacle-Optional)

## 2.工具及配件简介 Tools and Parts Overview

| Item | Tool Type                  | Tool Name                                | Pic.                                                                                |
|------|----------------------------|------------------------------------------|-------------------------------------------------------------------------------------|
| 1    | JKT-012                    | 组装工具<br>Assembly Tool<br>Open-end-Wrench |  |
| 2    | JKT-013                    | 组装工具<br>Assembly Tool<br>Open-end-Wrench |  |
| 3    | JKT-04                     | 通用工具<br>Universal Tool                   |  |
| 4    | 4JB03M31005<br>4JB03M31007 | 防尘塞<br>Dust plug                         |   |

### 3.技术参数 Technical Data

|                                                          |                                                                                                           |
|----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------|
| 型号名称 Type Name or Model No.                              | PV-JC005/xyab Series (IEC)<br>PV-JC005-F/xyabc Series (female) and<br>PV-JC005-M/xyabc Series (male) (UL) |
| 额定电压 Rated Voltage (V DC)                                | 1500 V DC (IEC/UL)                                                                                        |
| 额定绝缘测试电压<br>Rated Insulation Test Voltage                | 8000 V (1500V DC)                                                                                         |
| 额定电流 (IEC 85℃)<br>Rated Current (IEC 85℃) (A DC)         | 50 A, for y=A (IEC/UL)<br>45 A, for y=B (IEC)                                                             |
| 应用等级 Application Class                                   | Class A                                                                                                   |
| 过电压等级 / 污染等级<br>Over Voltage Category / Pollution Degree | CAT III / 2                                                                                               |
| 工作温度范围<br>Operating Temperature Range                    | - 40℃ to + 85℃                                                                                            |
| 温度上限 Upper Limiting Temperature                          | 115℃ (IEC)                                                                                                |
| 防护等级 Protection Class                                    | Class II                                                                                                  |
| 防火等级 Flame Class                                         | UL94 V-0                                                                                                  |

|                                                                     |                                                                     |
|---------------------------------------------------------------------|---------------------------------------------------------------------|
| 防护等级, 插合状态 / 未插合状态<br>Degree of Ingress Protection, mated / unmated | IP65 / IP68(1m, 2h) in mated condition<br>IP2X in unmated condition |
| 解锁方式 Unlock method                                                  | 开口式 Latching type, for a=1<br>闭口式 Locking type, for a=2             |
| 塑胶螺母 Gland nut                                                      | 有缺口 With notch, for b=1<br>无缺口 Without notch, for b=2               |
| 接触电阻 Contact Resistance                                             | ≤0. 50mΩ                                                            |
| 触点材料 Contact material                                               | 铜, 镀锡 Copper, tin plated                                            |
| 绝缘材料 Insulation Material                                            | PA                                                                  |
| 焊接方式 Soldering Method                                               | 波峰焊 Wave soldering                                                  |
| 焊接温度 Soldering Temperature                                          | 260°C, 10 seconds                                                   |
| 认证标准 Certification Standard                                         | IEC 62852<br>UL 6703                                                |

Note: IEC PV-JC005-F/xyab ; PV-JC005-M/xyab (x=1, y=A or B, a=1 or 2, b=1 or 2)  
 UL PV-JC005-F/xyabc ; PV-JC005-M/xyabc (x=1, y=A, a=1 or 2, b=1 or 2, c=1 or 2 or 3)

## 4.工具使用说明 Tools Instruction

◇ 通用工具 JKT-04 一套=1 把；

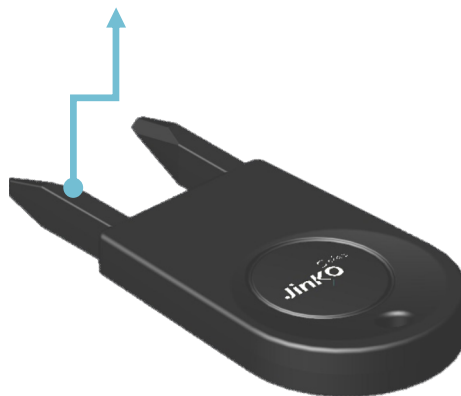
Universal tool JKT-04, there are one assembly tools per tool set.

作用：用于拆卸连接器。

Function: Disassembling connectors.

作用：打开紧锁装置

Function: To open the locking device



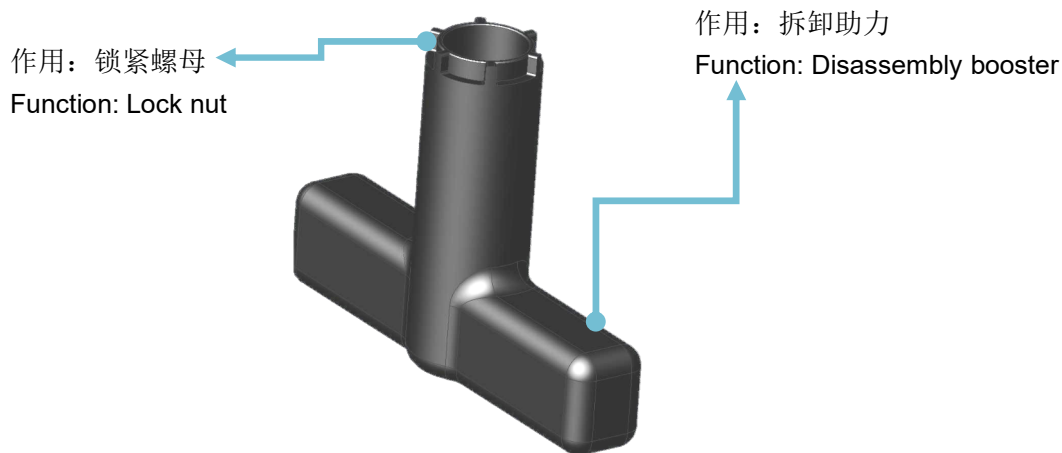
**Universal Tool -JKT-04**

✧ 组装工具-JKT-012: 适用带缺口螺母, 一套=1 把;

Assembly tool JKT-012: Applicable to notched nut, there are two assembly tools per tool set.

作用: 用于组装拆卸连接器。

Function: Assembling and disassembling connectors.



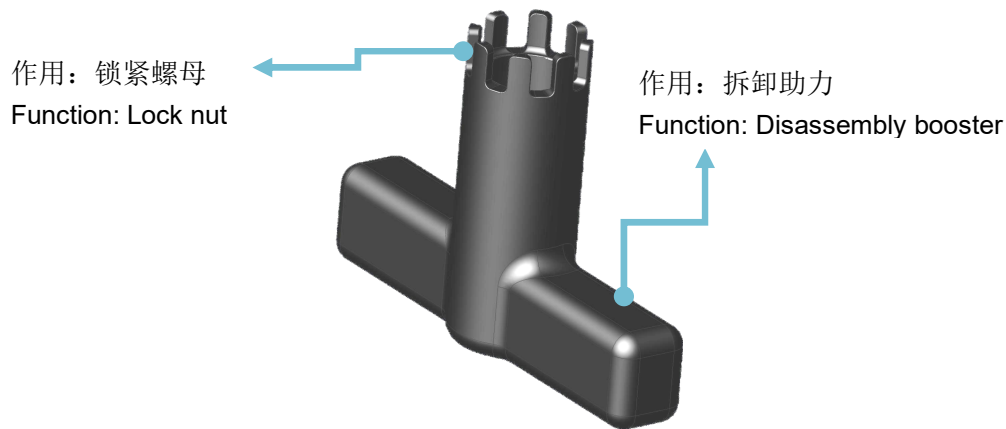
**Assembly Tool -JKT-12**

✧ 组装工具 JKT-013: 适用无缺口螺母, 一套=1 把;

Assembly tool JKT-013: Applicable to no-notched nut, there are two assembly tools per tool set.

作用: 用于组装拆卸连接器。

Function: Assembling and disassembling connectors.



**Assembly Tool -JKT-13**

## 5.安装说明 Installation Instruction

### 5.1 插座安装 Installation of Receptacles

- ✧ PCB 钻孔的建议尺寸及安装如图 1，所有钻孔边缘的毛刺需要清除。建议无论水平或垂直结构，间距值（Y）至少要有 30mm，建议 PCB 板厚  $2.5 \pm 0.1\text{mm}$ ；由焊接工艺将插座固定在 PCB 板孔内。

Drill the panel wall. Recommended bore dimension see fig.1, all burrs must be removed from the edges of all bores. For both horizontal and vertical mounting, a spacing (Y) of at least 30mm is recommended; the socket is fixed in the holes of the PCB board by the welding process.

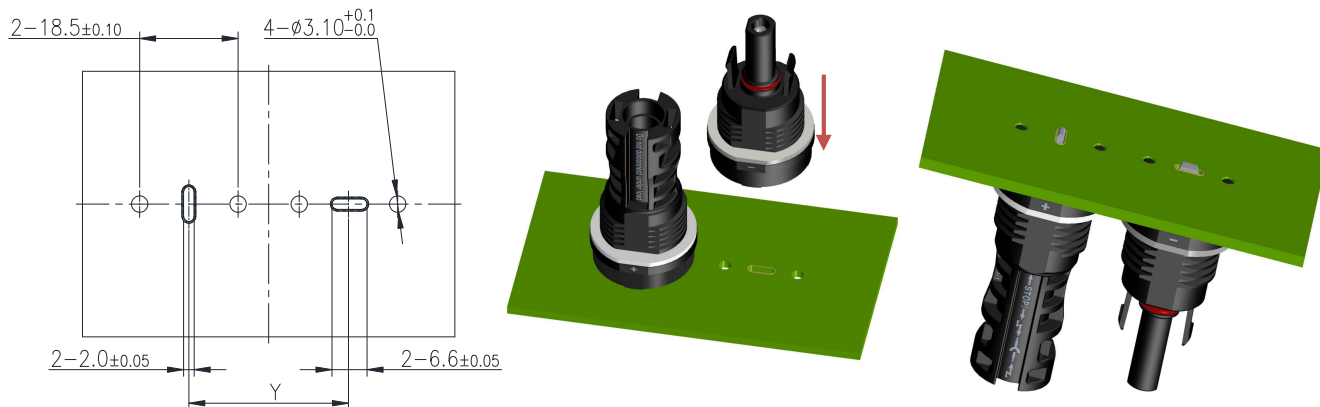


Figure 1

- ✧ 请确保面板厚度不小于 2mm 且最大不超过 2.5mm。在面板厚度小于 2mm 的情况下，验证过程需由客户来完成。  
Ensure a housing wall thickness not less than 2mm and a maximum of 2.5mm. If using a wall thickness below 2mm, the validation process has to be done by the customer.
- ✧ 面板钻孔。钻孔的建议尺寸如图 2，所有钻孔边缘的毛刺需要清除。我们建议，无论水平或垂直结构，间距值（X）至少要有 30mm。

Drill the panel wall. Recommended bore dimension see fig.2, all burrs must be removed from the edges of all bores. For both horizontal and vertical mounting, a spacing (X) of at least 30mm is recommended.

- ✧ 在公/母面板连接器插入钻孔前，请确保已安装防水垫圈，且防水垫圈安装在墙板的外侧(如图 2)。  
Please ensure seal gasket is located and positioned outside of the mounting surface before the male or female panel connector inserts the drilled hole (Fig.2).

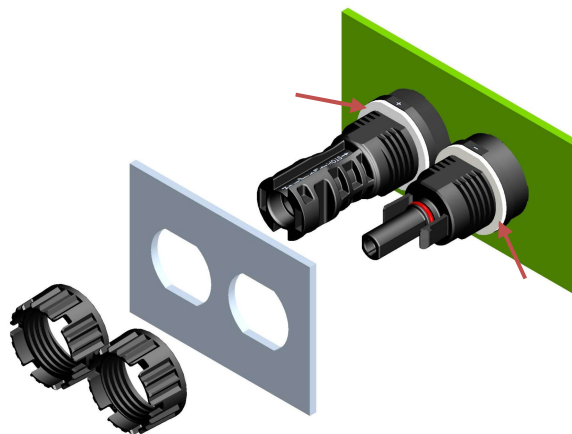
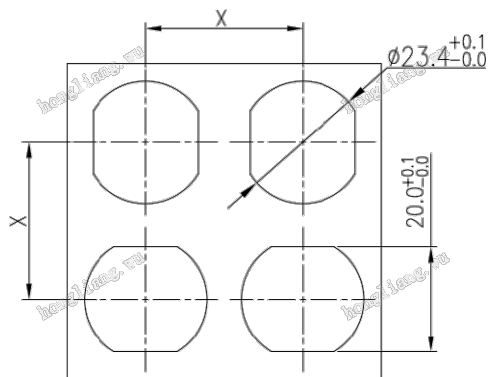


Figure 2

- ✧ 安装公/母面板连接器时，推荐用 2.0 N.m 的扭矩锁紧螺母。具体情况，需要由终端用户根据不同的面板验证合适的扭矩 (如图 3)。

When installing the male or female panel connector, it is recommended to lock nut by 2.0 N.m torque. The appropriate torque has to be verified in the end use according to the respective housing (Fig.3).

- ✧ 安装后目测检查，确保防水垫圈没有破裂、折痕及其他干扰物。

No cracks, folds or other disturbances during a visual check after assembly.

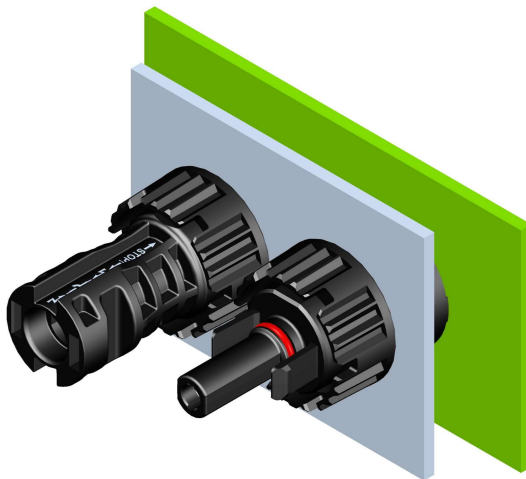


Figure 3

## 5.2 连接器安装 Installation of Connector

- ✧ 公母连接器插合：将公/母电缆连接器插入母/公面板连接器，直至其啮合。轻轻拉动，以检查是否啮合牢固（如图 4&5）。同时检查公母连接器有无对配不到位现象（如图 6）。

Insert the Male/ female cable connector into the female/ male panel connector until they engaged. And pull lightly to check correct engagement (Fig. 4&5). At the same time, check whether the male and female connectors are in place or not (Figure 6).

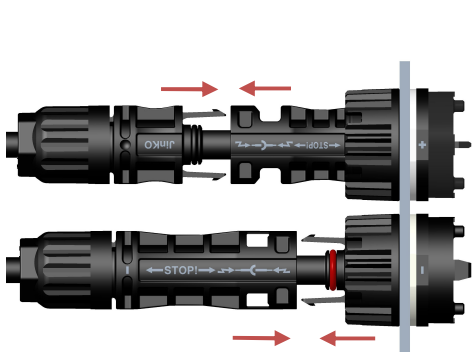


Figure 4

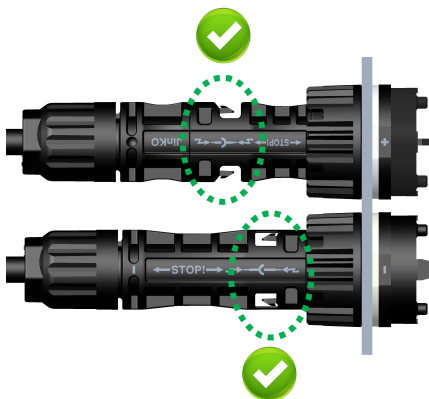


Figure 5

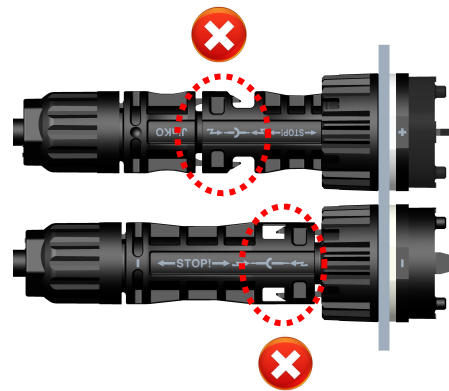


Figure 6

### 5.3 连接器拆卸 Disconnecting Connector

- ✧ 使用组装工具带有插销的一端插入连接器的卡扣位置（如图 7）。  
Insert the forks into the buckle of the connector by the assembly tool (Fig. 7).
- ✧ 拉拔电缆连接器，即可分开公母连接器（如图 8&9）。  
Pull the cable connector by hand respectively. The connector can now be separated (Fig.8&9).

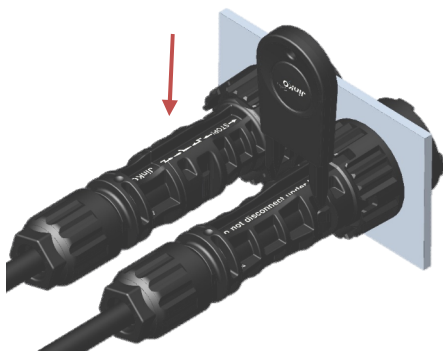


Figure 7

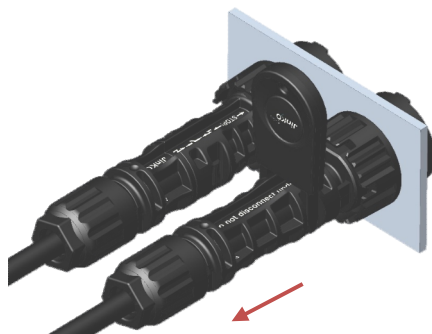


Figure 8

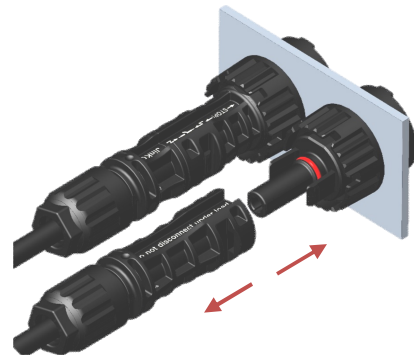


Figure 9

## 5.4 安装提示 Installation Warning

- ✧ 在自行安装时，如果所用的部件和工具不是 JinKO 官方指定的，或者没有按照官方要求进行准备和安装操作，我们将不保证产品的安全性和技术参数的一致性。

If parts and tools used are not specified by JinKO or not prepared and assembled as JinKO described during installation, the safety and technical data on products are not guaranteed.

- ✧ 产品在运输、储存过程中，不可有过分承压，撞击等破坏产品的行为。

During the transportation and storage, there should be no excessive pressure, impact and other acts of damaging the product;

- ✧ 产品在运输、储存时应注意避光、防水、防尘等。

The product should be protected from light, water and dust during transportation and storage

- ✧ 连接器只有按照安装说明指定的方式组装时，才被认定符合 UL 6703。

The connector is considered to be in compliance with UL 6703 only when assembled in the manner specified by these assembly instructions.

- ✧ 在安装过程中，应避免接触汽油、机油、丙酮、酒精、脱膜剂、灌密封胶、TBP、清洗剂、除草剂、防锈剂、除垢剂等可能会造成连接器功能失效的物质，同时需注意施工人员的手套不能带有以上物质。被污染的连接器不能插合使用。

During the installation process, it should be avoided to contact with gasoline, oil, acetone, alcohol, mold release agent, potting glue, TBP, cleaning agent, herbicide, rust inhibitor, scale remover and other substances that may cause connector function failure. At the same time, the construction personnel's gloves must not contain the above substances. The contaminated connector cannot be inserted and used.

- ✧ 连接器在安装、使用过程中，不可将连接器拖在水中、草丛中、地上等，防止连接器使用前内部受到污染，降低产品性能。

During installation and using, the connector must not be dragged in the water, grass, ground, etc., to prevent the connector from internal pollution and reduction of product performance before using.

- ✧ 在负载的情况下，禁止断开光伏连接器。可通过关闭直流/交流转换器或切断交流电信号，使其处于无载状态，则可在允许范围带电插拔。

PV connectors must not be disconnected while under load. They can be placed in a not load state by switching off the DC/AC converter or breaking the AC circuit, then insertion and removal is permitted within the allowable range.

- ✧ 长期不对插连接或断开连接时必须盖上防尘塞（4JB03M31005&4JB03M31007）以防止灰尘和湿气。同时产品在沿海、沙漠等粉尘、粉尘、灰尘多的地域使用，产品出厂前必须带防尘帽。

When disconnected for a long time, the dust plug (4JB03M31005&4JB03M31007) must be covered to prevent dust and moisture. On the other hand, if the product is going to be used in dust areas such as coastal and desert, it should come from factory directly with the dust plugs.

- ✧ 插合状态后的连接器符合 IP68 水密性的标准。但是它们不适合长期在水下使用。请勿将连接器直接放置在屋顶表面。连接器在未耦合情况下，产品将不能满足任何 IP 防护等级，也不能正常使用。

The connector in the plugged state meets the IP68 watertight standard. They are not suitable for long-term underwater use. Also, do not place the connector directly on the roof surface. If the connector are not coupled, the product will not meet any IP protection class and will not be used normally.

- ✧ 连接器电缆不能承受持续的机械拉伸。电缆应该由扎带固定。

The cable cannot withstand continuous mechanical stretching. The cable should be fixed with cable ties.

- ✧ 出于安全原因，强烈建议不要使用 PVC 导线或无镀锡电缆。

For safety reason, the use of PVC cables and untinned cables are prohibited.

- ✧ 此连接器只适用于 B 类和 C 类铜导线(参见 NFPA NEC 70 第 9 章，表 10)。

This connector is only suitable for copper wires of Class B and Class C (Refer to Table 10, Chapter 9, NFPA NEC 70).

- ✧ 电气安装说明应包含根据美国国家电气规范 ANSI/NFPA 70 所使用的布线方法的详细描述。

The electrical installation instructions shall include a detailed description of the wiring method to be used in accordance with the National Electrical Code, ANSI/NFPA 70.

- ✧ 基于安全方面的考虑，禁止将 JinKO 的连接器（或零件）与非 JinKO 原产的连接器（或零件）连接。如果这些连接器（未经 JinKO 认证）与 JinKO 连接器（或零件）连接并产生损害，我们对此不承担任何责任。

For safety reasons, it is prohibited to connect JinKO connectors (or parts) with those not originally produced by JinKO. We assume no liability for any damage that occurs when these connectors (not certified by JinKO) are connected to JinKO connectors (or parts).

**备注：连接器安装过程中操作困难或无法操作，请参照如下联络方式询问、查询：**

**Notes: If you have any questions during installation, please contact us as follows:**

**江西晶科光伏材料有限公司**

**Jiangxi Jinko PV Material Co., Ltd.**

地址：江西省上饶市经济技术开发区兴业大道 10 号

Add: No.10, Xingye Road, Economic Development Zone, Shangrao, Jiangxi Province, P.R. China

电话 Tel.: (+86) 0793-8876086

邮编 Postcode: 334100

网址 Website: [www.jinkopvm.com](http://www.jinkopvm.com)

**销售联系方式**

**Sales Contact Information**

电话 Tel.: (+86) 0793-8876028

邮箱 E-mail: [sale.pvm@jinkosolar.com](mailto:sale.pvm@jinkosolar.com)

**技术联系方式**

**Technician Contact Information**

电话 Tel.: (+86) 0793-8876018

邮箱 E-mail: [rd.pvm@jinkosolar.com](mailto:rd.pvm@jinkosolar.com)



## 6.变更清单 Change List

| 版本号<br>Ver. | 修订内容<br>Rev. content                                                                                                                  | 修订日期<br>Rev. date |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------|-------------------|
| A0          | 初版发行<br>First edition                                                                                                                 | 2024.06.26        |
| A1          | 增加变更清单<br>Add change list                                                                                                             | 2024.10.10        |
| A2          | 调整插座、后盖、编织端子结构; 增加安装提示说明<br>Adjust the structure of the socket, rear cover and braided terminal; add installation prompt instructions | 2025.05.26        |
| A3          | 增加 UL 材质描述及安装提示内容<br>Add description of UL material and installation instructions.                                                    | 2025.09.01        |