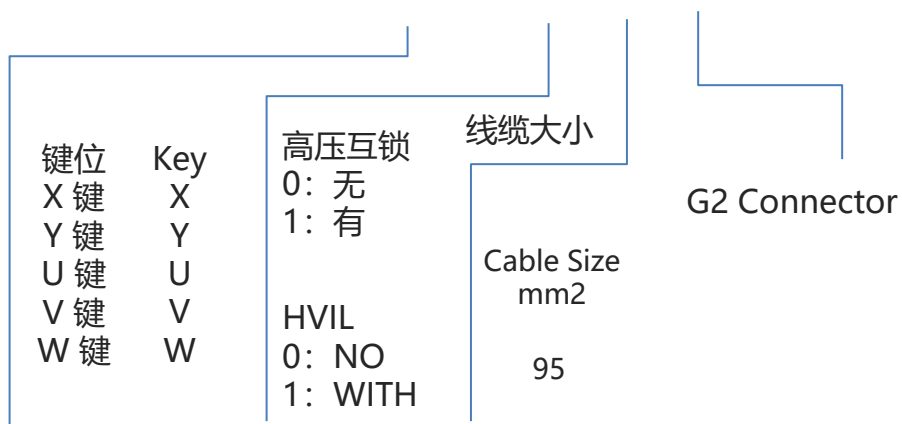


PLS28X-501-95-2 单芯2代弯头连接器安装说明

PLS28X-501-95-2 1POS G2 90D Right Angle Plug Assembly Manual



PLS28(X)-50(X)-95-2



第一部分：包装清单

Part 1 : Package contents



- ① 接头主体 connector body ×1
- ② 一套绝缘套 A set of Insulation sleeve ×1
- ③ 螺旋弹簧 Coil spring ×1
- ④ 外铜环 Outer Copper ring ×1
- ⑤ 内铜环 Inside Copper ring ×1
- ⑥ 后壳 Back Shell ×1
- ⑦ 密封圈 Cable Sealing ×1
- ⑧ 尾盖 End cap ×1

第二部分：插头组装

Part 2 : Plug Assembly

步骤1：选择下表电缆，按要求的长度切线。

Step1 : Select the cable in the table below and cut it to the required length.

表1：线材规格
Table 1 : Cable size

| 连接器 Connector | 线缆尺寸 Cable size | 线缆外径 Accepted cable OD (mm) | 屏蔽线缆 Shield Cable |
|------------------------------|--------------------|--------------------------------|----------------------|
| 500/501 系列 500/501 Series | 95mm ² | 21.0±0.4 | 7P3095S |

步骤2：按表2尺寸剥离线缆绝缘皮和外被。

Step2 : Strip off cable insulation and jacket as following size from the table 2.

表2：剥线长度
Table 2 : Strip length

| 连接器 Connector | 线缆尺寸 Cable size | 外被剥线长度 A Stripping jacket (mm) | 绝缘皮剥线长 B Stripping insulation (mm) |
|-----------------------------|--------------------|-----------------------------------|---------------------------------------|
| 500/501系列 500/501 Series | 95mm ² | 36±1 | 20+/-0.5 |



步骤3：取各1pcs的⑧尾盖，⑦密封圈，⑥后壳和⑤内铜环，依次穿入线缆。

Step3 : Take each 1pcs of ⑧ end cap, ⑦ cable sealing, ⑥ back shell and ⑤ Inside Copper ring, and make them pass through the cable in sequence.



为便于装配，建议在密封圈内壁涂一层硅脂油，推荐型号为：BSR-3201A。

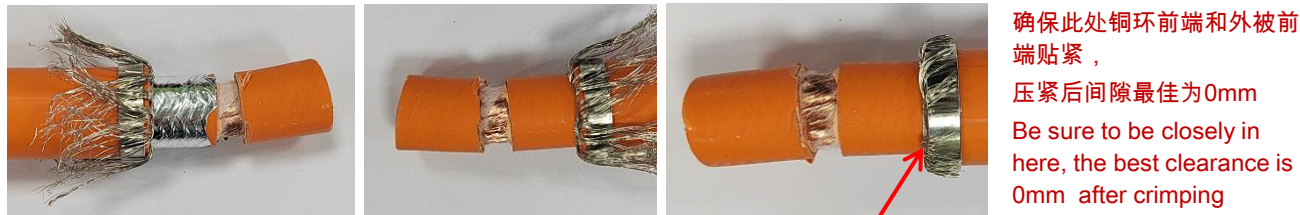
To facilitate assembly, it is recommended to coat the inner wall of the cable sealing ring with silicone oil. The recommended model is BSR-3201A.

步骤4：压接铜环

Step4：Crimping Copper Ring

4-1 将 ⑤ 内铜环移动到外被口，将编织均匀打散反折齐铜环后端剪齐。

4-1 Move the ⑤ inside copper ring to the jacket end, Break the braid evenly and fold it back then cut it to the end of the copper ring.



4-2 取1pcs ④外铜环，将其从左端安装到屏蔽线上，装入压接工装的辅助治具推到底，确认内外铜环后端平齐，再将铜环压接好(规格参照表3)

4-2 Take 1pcs ④ outer copper ring, install it from the left end to the shielding, insert the auxiliary tool of the crimping tool and push it to the end, make sure that the back end of the inner and outer copper ring is flush, and then crimp the copper ring (see Table 3 for specifications).

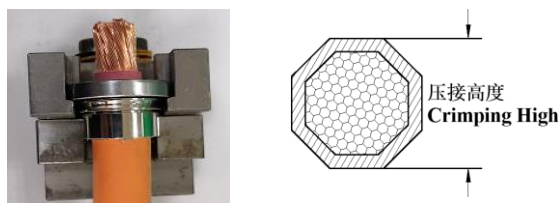


表3：铜环与线缆屏蔽编织层压接规格&拉拔力要求

Table3：Copper Ring and Cable braids Crimping spec & retention force requirement

| 连接器 Connector | 线缆尺寸 Cable size | 线缆外径 (1) Accepted cable OD (mm) | 压接高度 (2) Crimping height (mm) | 参考抗拉拔力 (3) Retention Force |
|------------------------------|--------------------|------------------------------------|----------------------------------|-------------------------------|
| 500/501 系列 500/501 Series | 95mm ² | 21.0±0.4 | 23.5±0.30 | 150N |

压接工具：油压机
Crimping tool：Hydraulic press
95mm²Die：TY-094
95mm²压模：TY-094



(1) 线材型号参照表1

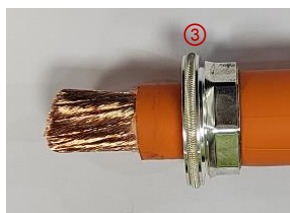
Refer to Table 1 for wire type

(2) 压接高度仅供参考，需保证拉力大于要求且不影响产品绝缘性能。

The crimping height is for reference only. Ensure that the retention force exceeds the requirements and does not affect the insulation performance of the product.

步骤5：取1pcs的③螺旋弹簧安装在外铜环上。

Step5 : Take 1pcs ③Coil spring and install it on Outer Copper Ring.



步骤6：取出①接头主体（样品参照下面的图片）

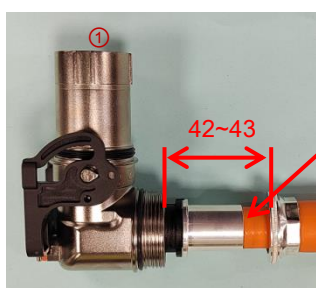
Step6 : Take each 1pcs of ① connector body(sample refer to picture below)



| | | | | | |
|--------------------------------|--------------|-------------|--------------|-------------|-----------|
| Key mark on connector 连接器标示 | X | Y | U | V | W |
| Inner Pin color 防触摸Pin颜色 | Orange 橙色 | Black 黑色 | Yellow 黄色 | Green 绿色 | Red 红色 |

步骤7：取1pcs的①接头主体自左端穿上线缆，确认尺寸符合要求，并压接在其上(规格参照表4)

Step7 : Take a ①Connector body, load it to the cable end on the left, Confirm that the dimensions meet the requirements, then crimp it (refer to table 4)



可调整此处
Can adjust here

装上绝缘套后间隙为
0~1mm
After the insulation sleeve
is installed, the clearance
is 0 to 1mm

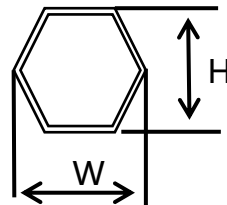


表4：端子与线缆压接规格&拉拔力要求

Table 4 : Contact and Conductor Crimping spec & retention force requirement

| 连接器 Connector | 线缆尺寸 Cable size | 线缆外径 (A) Accepted cable OD (mm) | 压接高度 (B) Crimping height (mm) | 参考抗拉拔力 (C) Retention Force |
|-------------------------------|--------------------|------------------------------------|----------------------------------|-------------------------------|
| 500/501 系列 500 /501 Series | 95mm ² | 21.0±0.4 | 15.0±0.30 (REF) | 4200N |

压接工具：
BZW-6C 免换模六边压接机
Crimping tool：
Hexagon shape terminal crimping machine



压接高度仅供参考，会因为机器不同而产生差异。
The crimp height is for reference only and will vary depending on the machine.

(1) 线材型号参照表1

Refer to Table 1 for wire type

(2) 压接高度和拉拔力需要配合压接截面的金相分析，客户才能判断压接质量合格，芯线压缩比要求为 80~90%。

Customers need to reconfirm cross section on crimping area and pull out force test to confirm the quality of crimp process, Terminal crimping must meet the compression ratio of conductor requirements: 80~90%.

(3) 横截面仅供参考（其他举例：六边带点的横截形状），客户负责采购压接工具或刀模

Cross section only reference tooling geometry (ex. hex and indent dimensions), customer will take liability for sourcing tools or dies

步骤8：取出一套②绝缘套，将绝缘套卡入端子处

Step8：Take a set of ② Insulation sleeve, install it into the terminal



步骤9：把接头前端固定，以26~28N•M拧紧后壳

Step9：Secure the front end of the connector back shell tight with torque 26~28N•M



步骤10：将⑦密封圈推入接头主体内部的底部，接着将⑧尾盖扣住接头主体，完成此端线束的组装。

Step10：Push the ⑦cable sealing to the bottom of Connector body. The ⑧ end cap is then fastened to the Connector body, one end assembly done.



步骤11：在线缆组装好后需要做绝缘电阻和耐压测试，建议客户参考下面的测试参数

Step11：Need to do the Insulation Resistance and DWV test after cable assembly, It is recommended that the customer refer to the following test parameters

11-1 绝缘电阻测试

11-1 Insulation Resistance test

| Positions 位置 | Test voltage (DC) 测试电压 (直流) | 测试时间 (推荐) Test Time (recommended) | Insulation resistance 绝缘电阻 |
|---------------------------------------|------------------------------------|---|-------------------------------|
| Cable(power) to back shell 电缆芯线到壳体 | 1000 V | 5S | > 500 MΩ |
| Cable(power) to HVIL 电缆芯线到高压互锁 | 1000 V | 5S | > 500 MΩ |
| HVIL to back shell 高压互锁到壳体 | 1000 V | 1S | > 100 MΩ |

11-2 耐压测试

11-2 Dielectric Withstand Voltage test

| Positions 位置 | Test voltage (DC) 测试电压 (直流) | 测试时间 (推荐) Test Time (recommended) | Leakage Current 漏电流 |
|---------------------------------------|------------------------------------|---|------------------------|
| Cable(power) to back shell 电缆芯线到壳体 | 5000 V | 10S | < 5mA |
| Cable(power) to HVIL 电缆芯线到高压互锁 | 5000 V | 10S | < 5mA |
| HVIL to back shell 高压互锁到壳体 | 500 V | 1S | < 5mA |

11-3 测试说明：

警告:建议的电气测试及其参数应根据终端应用要求进行审查，以确保安全性并防止损坏其他部件。提供的参数是基于PowerLok连接器和其峰值1000VDC额定。提供的测试参数可能超出电缆组件或设备上使用的其他部件/材料的限制。

11-3 Test note:

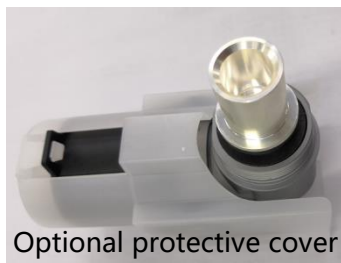
caution: Recommended electrical tests and their parameters should be reviewed against end application requirements to ensure safety and to prevent damage to other components. Parameters provided are based on the PowerLok connectors and their peak 1000VDC rating. Test parameters provided may exceed the limit of other components/materials used on the cable assembly or device.

步骤12：补充说明

Step 12: Other notes

12-1：在连接器搬运，和高压线束搬运过程中，推荐使用插头防尘盖，和插头防护盖。避免搬运过程中碰伤损坏。要求详见 安装指引 8P1129。

12-1: In the process of connector handling and high-voltage harness handling, it is recommended to use plug dust cover and plug protective cover. Avoid bumping and damage during handling. See installation guideline 8P1129 for detail requirements.



此HVIL保护套使用前需移除
This HVIL cap must be removed before use

12-2：对配接头型号为PLS00X-50X-10XX-2(-B)。

12-2: The mated connector type is PLS00X-50X-10XX-2(-B).

12-3：对配安装与其它装配说明参照8P1129《PowerLok G2插头线束安装说明》。

12-3: Mating and other assembly instructions Refer to 8P1129 《PowerLok G2 Plug Harness Installation Instructions》。

版本记录 Revision history

| 序号 Number | 版本 Revision | 变更内容 Content of change | 日期 Date |
|--------------|----------------|----------------------------|------------|
| 1 | 00 | 新出试行版 New trial version | 20240812 |



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