

Manual P/N: 8P1115
Rev.01 2024/04/03

PLS18X-501-95-2 G2 单芯直头组装规范
PLS18X-501-95-2 G2 1 POS 180D Plug
Assembly Manual

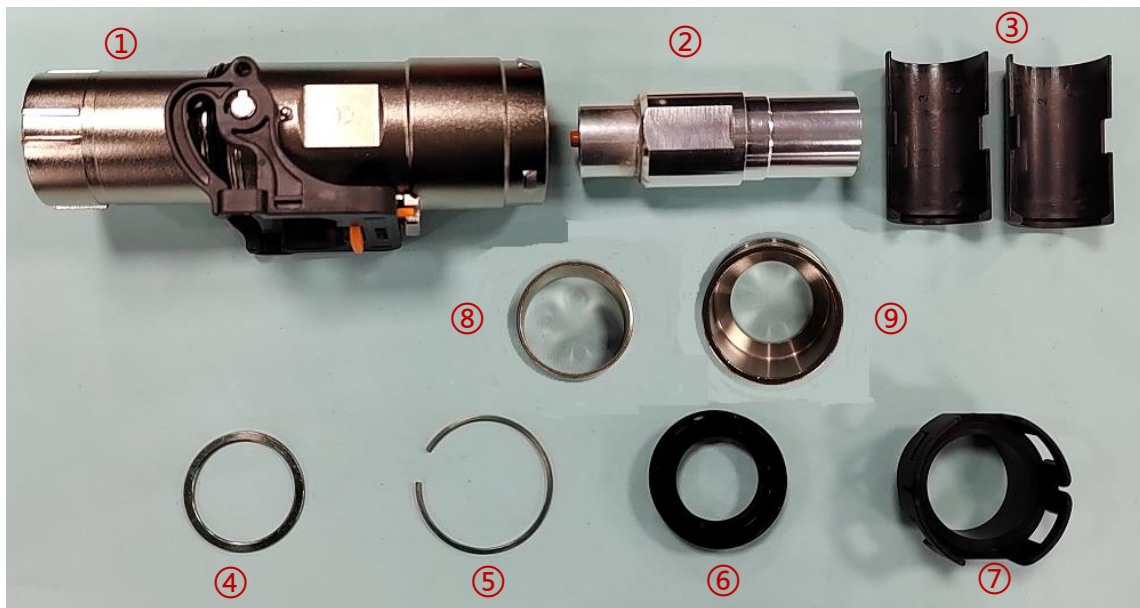


PLS18(X)-50(X)-95-2

键位	Key	高压互锁	线缆大小
X 键	X	0: 无	Cable Size
Y 键	Y	1: 有	mm2
U 键	U		
V 键	V	HVIL	
W 键	W	0: No	
		1: Yes	95

第一部分：包装清单

Part 1 : Package contents



- ① 屏蔽壳组件 Shielding shell assembly ×1
- ② R4端子组件 R4 terminal Assy ×1
- ③ 塑料套 Plastic sleeve ×2
- ④ 金属垫片 Metal Gasket ×1
- ⑤ 金属卡夹 Metal Clip×1
- ⑥ 密封圈 Sealing ×1
- ⑦ 尾盖 Tail cap ×1
- ⑧ 内铜环 Inner Copper Sleeve ×1
- ⑨ 外铜环 Outer Copper Sleeve ×1

安装步骤 Assembly Instruction

步骤1：取出连接器，如上页图示拆开零件
Step1：Take out the connector and take it apart as the picture shown on the previous page.

步骤2：选取合适线缆(参考手册最后的附录)，按照表1尺寸剥离绝缘皮和外皮
Step2：Select the right cable(refer to the appendix), prepare the cable according to the sketch and Table 1 below

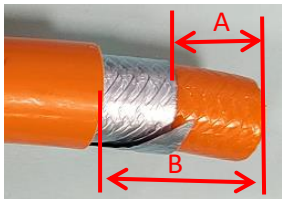
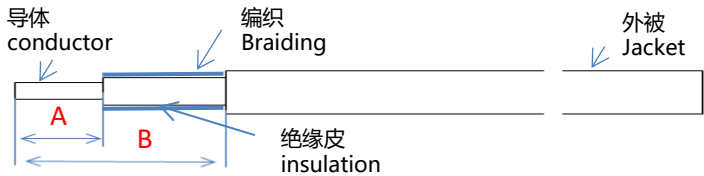


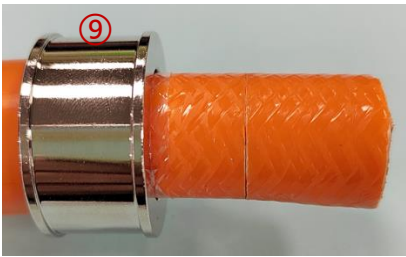
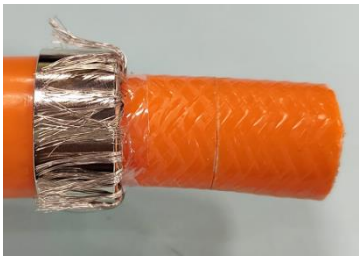
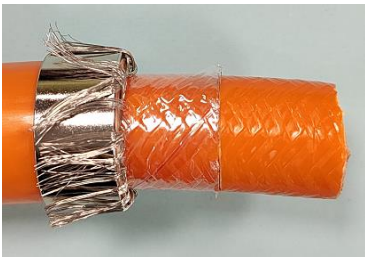
表1：剥皮尺寸
Table 1: Strip length

线材尺寸 Cable Size	A (mm)	B (mm)
95mm ² (7P0095S)	19±0.5	34 ±0.5

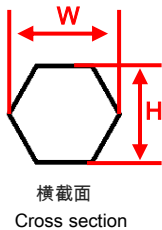
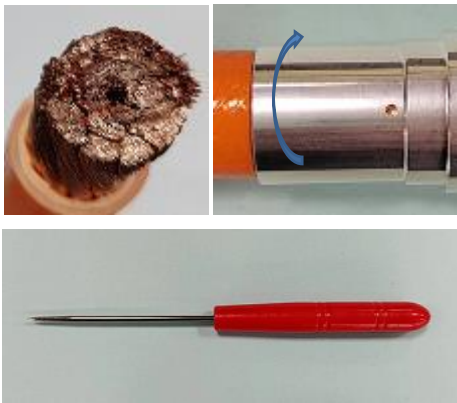
步骤3：取各1pcs的⑦尾盖，⑥密封圈，⑤金属卡夹，④金属垫片和⑧内铜环，依次穿过线缆。
Step3：Take the 1pcs tail cap, the ⑥ sealing, the ⑤ metal clip, the ④ metal gasket and the ⑧ inner copper ring, and pass through the cable in turn.



步骤4：铝箔齐外被口剪齐，将内铜环推至外被口，将编织均匀打散反折，齐内铜环后端剪齐，再将⑨外铜环套在内铜环上如图示。
Step4：Cut the aluminum foil is cut in line with the jacket mouth, push the inner copper ring to the jacket mouth, break the braid evenly, fold it back and trim it to the end of the inner copper ring, and then put the outer copper ring on the inner copper ring as shown in the figure.



步骤5：用挑针在导体中心开个孔，将端子接线孔对准导体旋入到底，再调试好免换模压接机BZW-6C，将②端子组件压接在线材上(详细规格参照手册最后的附录)。
Step5：Make a hole in the center of the conductor with a pick pin and screw the terminal holder into the conductor, Then set up the Hexagon crimp machine BZW-6C, And crimp the terminal Assy on the wire (please refer to the appendix at the end of this manual for more crimping information) .



(1) 建议使用附录中的线材，如果要使用其它的线材，请联系当地销售，让他们提供延伸的产品。

Cables written in the appendix are highly recommended for crimping, please contact our local sales for help if you want to use other cables out of this table.

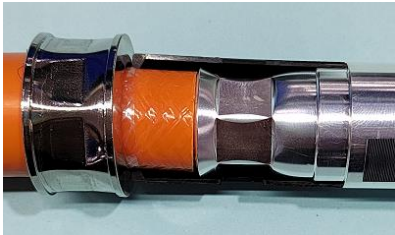
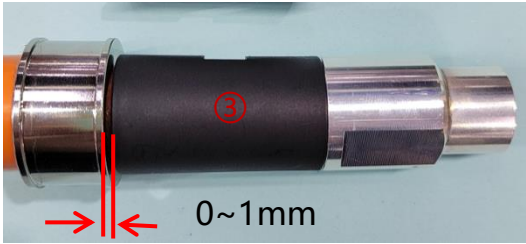
(2) 压接高度和拉拔力需要配合压接截面的金相分析，客户才能判断压接质量合格，芯线压缩比要求为 80~90%。Customers need to reconfirm cross section on crimping area and pull out force test to confirm the quality of crimp process, Terminal crimping must meet the conduct compression ratio requirements: 80~90%

(3) 横截面仅供参考，客户负责采购压接工具或刀模。

The cross section is for reference only. The customer is responsible for purchasing crimping tool or dies.

步骤6：取1PCS③塑料套装到端子组件的脖颈处的台阶处，确认塑料套末端与外铜套距离符合要求。

Step6 : Take 1PCS ③ plastic sleeve to the step at the neck of the terminal assembly, and confirm that the distance between the end of the plastic sleeve and the outer copper sleeve meets the requirements.



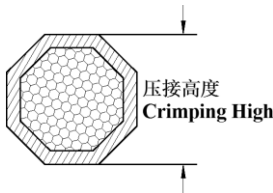
步骤7：将外铜环推到底，确认上下端均与内铜环对齐，调试好压接机器，居中将外铜环压接在线材上。

Step7 : Push the outer copper ring to the bottom, make sure that the upper and lower ends are aligned with the inner copper ring, adjust the crimping machine, and crimp the outer copper ring on cable in the center.

表2：铜环与线缆屏蔽编织层压接规格&拉拔力要求

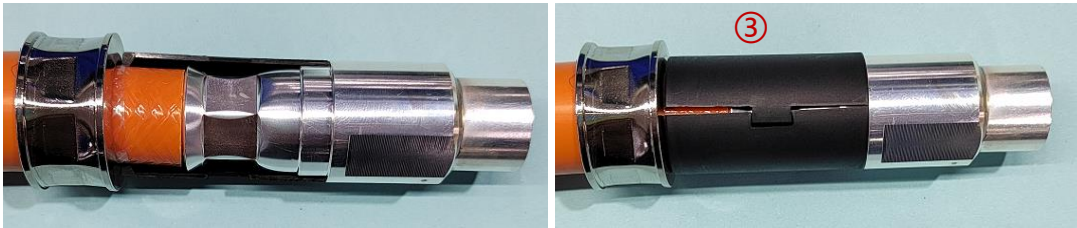
Table3 : Copper Ring and Cable braids Crimping spec & retention force requirement

连接器 Connector	线缆尺寸 Cable size	压接模具 Crimping Die	压接高度 Crimping height (mm)	参考抗拉拔力 Retention Force
500/501 系列 500/501 Series	95mm ²	TY-043	26.3±0.30	150N



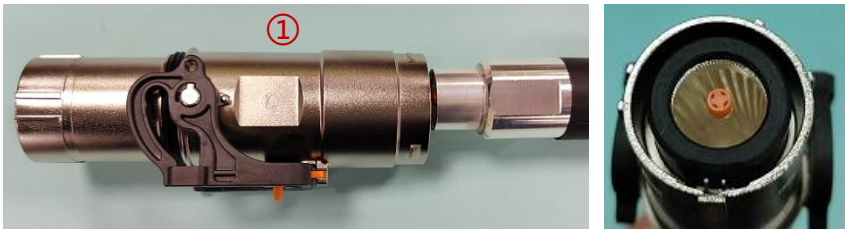
步骤8：如图示将③塑料套组装到端子组件上。

Step8：Assemble the ③ plastic sleeve to the terminal assembly as shown.



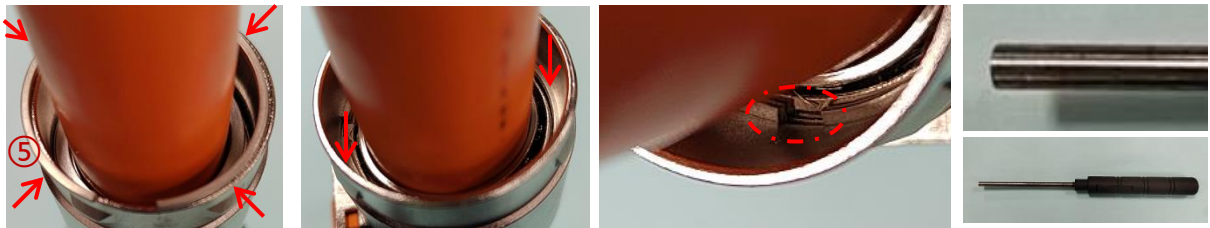
步骤9：如图示方向将端子组件推入到①屏蔽壳组件底部。

Step9：Push the terminal assembly into the bottom of the shielding shell assembly as shown in the direction shown.



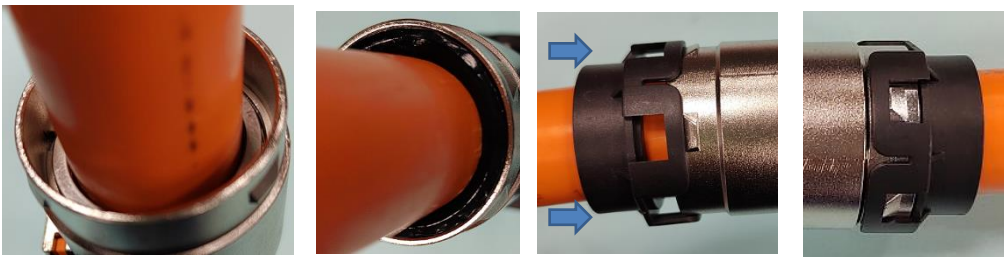
步骤10：挤压⑤金属卡夹到屏蔽壳组件中，用治具将其均匀推入到卡槽中。

Step10：Extrude ⑤ the metal clip into the shielding shell assembly and push it evenly into the slot with a tool.



步骤11：将金属垫片放入底部，再将密封圈推到图示位置，最后将尾盖对准接头卡扣推入，直到四个卡位均听到“咔”声响，表示已装到位，此时卡扣完全露出。

Step11：Put the metal gasket into the bottom, and then push the sealing to the position as shown, and finally align the tail cap with the connector buckle and push it in until hear the “click” sound in the four place , indicating that it has been installed in place, and the buckle is completely exposed.



步骤12：建议客户参考下面的测试参数，对线束进行绝缘电阻测试和耐压测试。
Step12：Insulation resistance and dielectric withstand voltage tests are obligated to be done according to below test parameters to guarantee the good electric performance of the whole harness.

12-1 绝缘电阻测试
12-1 Insulation Resistance Test

位置 Positions	测试电压 Test Voltage	测试时间 (推荐) Test Time (recommended)	绝缘电阻 Insulation Resistance
电缆芯线到壳体 Cable(power) to shell	1000 VDC	5S	> 500 MΩ
电缆芯线到高压互锁 Cable(power) to HVIL	1000 VDC	5S	> 500 MΩ
高压互锁到壳体 HVIL to shell	1000 VDC	1S	> 100 MΩ

12-2 耐压测试
12-2 Dielectric Withstand Voltage Test

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

12-3 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。

12-3 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.

附录APPENDIX

线缆压接的参考规范
Reference specification for cable crimping

电线尺寸 Cable Size	导体结构 (mm) Conductor	导体外径 (mm) Conductor OD	电线外径 (mm) Wire OD	压接高度 H(mm) Crimping height	压接宽度 W(mm) Crimping Width	参考保持力 Retention Force	刀模编号 Crimping Tool No.
95mm ²	5365*0.15	13.60	22.6±0.50	15.6±0.3	17.8±0.3	4200N	BZW-6C

版本记录 Revision history

序号 Number	变更内容 Content of change	日期 Date
01	新出 New issue	2024/04/03



Amphenol Technical Products International provides the above product specifications for the standard PowerLok™ series of connectors to assist users in identifying the correct product for the system to which the connectors may be applied. Specifications are subject to change without notice. Contact your nearest Amphenol Corporation Sales Office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable but are presented without guarantee, warranty, or responsibility of any kind, expressed or implied. Statements of suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement and are not recommendations to infringe any patent. Specifications are typical and may not apply to all connectors. Note that these specifications are derived from relevant global standards used in the automotive and industrial transportation markets, but they are not a substitute for system level design validation testing, which is the sole responsibility of the system designer and/or end user.

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