PowerLok™ 8.0 单芯直头插头组装规范
PowerLok™ 8.0 1POS 180D Plug Assembly Manual



PL 18 Y - 201 - 50

产品类型 Product Type		插头类型 Plug Type		键位&颜色 Key & Color		系列 Series		线材尺寸 Cable Size	
PL	PowerLok™	18	插头连接器，直头，屏蔽 Plug connector, Straight , Shield	X	1芯，X 键位 橙色 1POS , Key "X" Orange	200	200系列 200 Series	25	25mm²
				Y	1芯， Y 键位 黑色 1POS , Key "Y" Black				
				U	1芯，U 键位 黄色 1POS , Key "U" Yellow			35	35mm²
				V	1芯， V键位 绿色 1POS , Key "V" Green	201	带高压互锁的200系列 200 Series With HVIL		
				W	1芯， W 键位 红色 1POS , Key "W" Red			50	50mm²
				T	1芯， T 键位 蓝色 1POS , Key "T" Blue				

安装步骤 Assembly Instruction

步骤1：取一套产品, 拆包零件
Step1：Take out the connector and take it apart as the picture shown below



① 尾盖 End Cap×1
② 胶圈 Rubber Ring ×1
③ 铜环1 Copper Ring1×1
④ 铜环2 Copper Ring2×1
⑤ R4 Holder×1
⑥ 绝缘套 Insulation Sleeve×1
⑦ 绝缘筒 Insulation Housing ×1
⑧ 合金外壳 Alloy Shell ×1

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

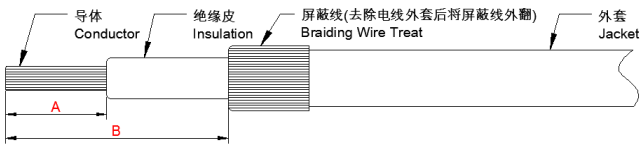
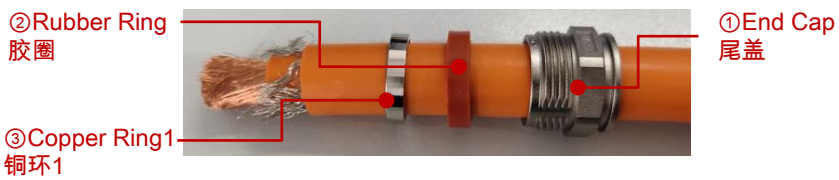


表1：剥皮尺寸
Table 1: Strip length

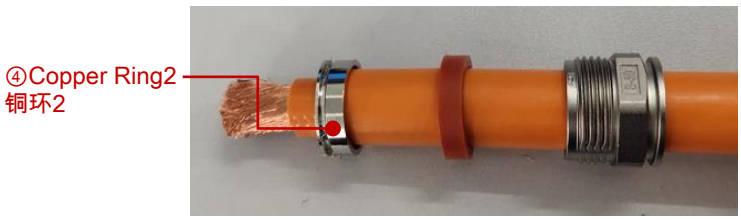
线材尺寸 Cable Size	A (mm)	B (mm)
25mm²	18±1	27 ±1
35mm²	18±1	27 ±1
50mm²	18±1	27 ±1

步骤3：取各1pcs的①尾盖, ②胶圈和③铜环1, 依次穿过线缆
Step3：Take 1pcs of ①end cap, ②rubber ring and ③copper ring 1 and make them through the cable in the right order as the picture shown below



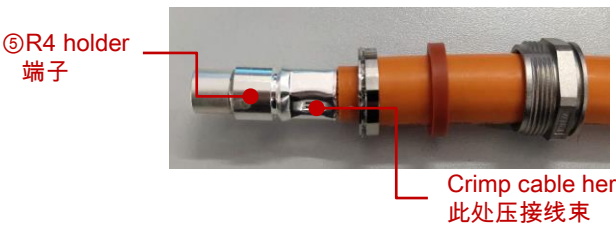
步骤4：取1pcs的④铜环2穿过线缆，与③铜环1按压在一起，并剪去突出的线头

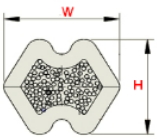
Step4：Take 1pcs of ④copper ring 2 and make it through the cable, and clip the braid between ④copper ring 2 and ③copper ring 1 then cut off any excessive braid



步骤5：取1pcs的⑤R4 holder 穿上线缆，并压接在其上(规格参照手册最后的附录,附录数据仅供参考)

Step5：Take 1pcs of ⑤R4 holder and crimp it with the cable conductor, as the picture shown below. (please refer to the appendix for details at the end of this manual)





横截面
Cross section

端子压接高宽度尺寸，“W”:为压接宽度，“H”为压接高度（相应线径的压接高宽度尺寸及拉力标准参考手册后的附录）

Terminal crimping quality depends on 2 parameters: "W" crimping width and "H" crimping height.(please refer to the appendix at the end of this manual for details)

(1) 建议使用附录中的线材，如果要使用客户定制的线材，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) 客户需要重新确认压接区域横截面和拉力测试，这两项达到压接的质量标准

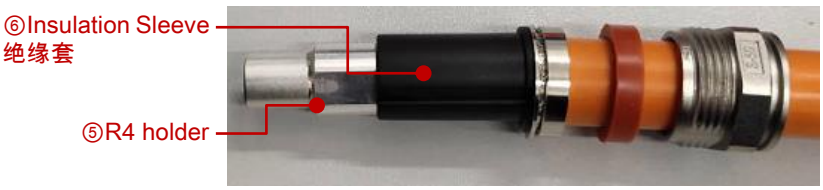
A good crimping process is determined by 3 factors: W、H and tensile test result, please confirm these 3 targets specified are met after crimping

(3) 横截面仅供参考（其他举例：等边六变形的横截形状），客户负责采购压接工具或刀模

Cross section shape is only for reference(other possibilities: hexagonal section), all crimping tools needed are supposed to be prepared by customers

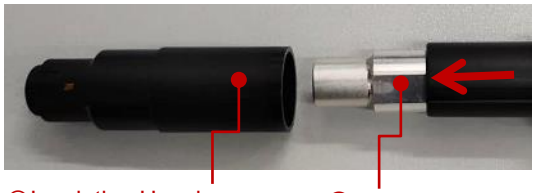
步骤6：组装⑥绝缘套到⑤R4 holder脖颈处的沟槽

Step6：Take 1 pair of ⑥insulation sleeve and buckle up together to the neck groove of ⑤R4 holder



步骤7：插入⑤R4 holder到⑦绝缘筒上，转动使其触底

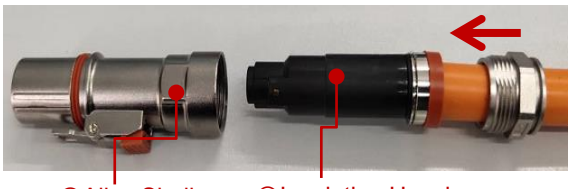
Step7：Bring ⑦insulation housing through ⑤R4 holder and rotate ⑦insulation housing until it arrives at a stop position





步骤8：将⑦绝缘罩插入⑧合金外壳,转动使其触底; 固定外壳与电缆,以10~12N•M拧紧①尾盖, 完成此端线束组装

Step8: Put ⑦insulation housing into ⑧alloy shell, rotate the cable to make ⑦insulation housing arrive at a stop position then screw up ①end cap with a torque of 10~12N.m to finish the assembly as the picture shown below





步骤9：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

Step9：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

9-1 绝缘电阻测试

9-1 Insulation Resistance Test

位置 Positions	测试电压（直流） Test Voltage(DC)	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 V	5S	> 500 MΩ
电缆芯线到高压互锁 Cable(power) to HVIL	1000 V	5S	> 500 MΩ
高压互锁到壳体 HVIL to shell	1000 V	1S	> 100 MΩ

9-2 耐压测试

9-2 Dielectric Withstand Voltage Test

位置 Positions	测试电压（直流） Test Voltage(DC)	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 V	10S	<5mA
电缆芯线到高压互锁 Cable(power) to HVIL	5000 V	10S	<5mA
HVIL to shell 高压互锁到壳体	500V	1S	<5mA

附录 APPENDIX

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

线缆类型 Cable Type	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.
屏蔽线 Shielding cable	25mm²	2183*0.12	6.7	13.50±0.20	7.8±0.2	9.0±0.2	2000N	L08060906D25
	35mm²	3071*0.12	8.1	14.50±0.3	9.5±0.2	11.0±0.2	2300N	L095109150D35
	50mm²	4403*0.12	9.5	17.00±0.3	11.5±0.2	13.3±0.2	2800N	L1145150150D50



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.

Asia Pacific
ChangZhou, China
Tel: +86 519-8981 9713
Add: No.11 Fengxiang Road, New District, Changzhou, Jiangsu
P.C: 213001

Asia Pacific
GuangZhou, China
Tel: +86 20-3210 6099
Add: 9th Floor, No. 10, the 4th Street, Kehui Jingu, Huangpu District, Guangzhou ,Guangdong
P.C: 510663

North America
Winnipeg, Canada
Tel: +1 204 697 2222
Add: 2110 Notre Dame Avenue

Europe
Milano, Italy
Tel: +39 02 932541
Add: Via Barbaiana 5, 20020 Lainate(MI)

Email: info@Amphenol-GEC.com