

PowerLok™ 4.0 两芯插座组装规范

PowerLok™ 4.0 2POS Receptacle Assembly Manual



Product Type 产品类型		Plug Type 插头类型		Key & Color ⁽¹⁾ 键位 & 颜色		Series 系列		Cable Size 线材尺寸	
PL	PowerLok™ 4.0	082	2POS Receptacle 两芯插座连接器	X	Key "X" Orange X 键位 橙色	60	60 Series without HVIL 60 系列 不带高压互锁	2.5	2.5mm ²
				Y	Key "Y" Black Y 键位 黑色			4	4mm ²
				U	Key "U" Yellow U 键位 黄色	61	61 Series With HVIL 带高压互锁 的61系列	6	6mm ²
								10	10mm ²

(1) 颜色是指插头上CPA的颜色。Color refers to the color of the CPA on the plug.

安装步骤 Assembly Instruction

步骤1：取出连接器，如图示零件

Step1: Unpack all components as shown below



①



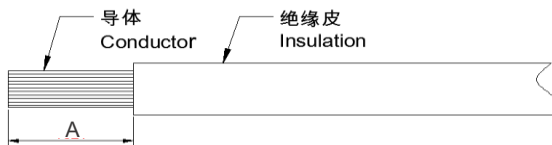
②

① 连接器组件 Connector Component ×1

② 端子 Terminal ×2

步骤2：选择符合如下尺寸要求的屏蔽线缆（参考手册最后的附录），按照下表剥线长度进行剥线皮

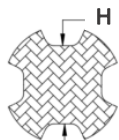
Step2: Select the right cable according to your connector and the cable specification below (refer to the appendix), then strip the jacket refer to the table below.



线缆规格 Cable Size	剥线长度A strip Length "A" (mm)
2.5mm ²	8.5±0.5
4mm ²	8.5±0.5
6mm ²	8.5±0.5
10mm ²	10.5±0.5

步骤3：套上端子然后压紧（压接参照IPC620规范），压紧后端子保持力不小于下表中数据

Step3: Insert the cable into the terminal, then crimp the terminal (refer to IPC620), the minimum retention force after crimping is in the table below.



压接形状
Crimp shape



线缆规格 Cable size	保持力 Min retention force	压接尺寸H Crimp dimension
2.5mm ²	220 N	2.0±0.1mm
4mm ²	300 N	2.7±0.1mm
6mm ²	350 N	3.1±0.1mm
10mm ²	400 N	3.4±0.1mm

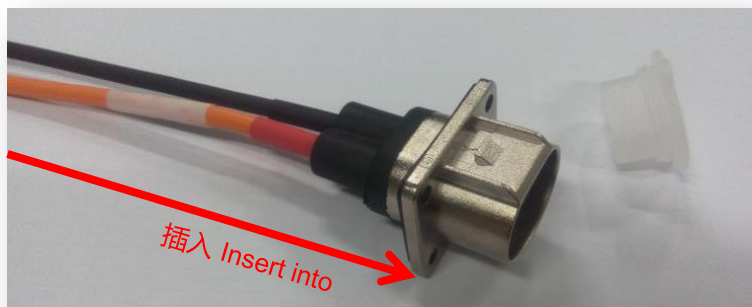
步骤4：裁25mm的热缩管，套到端子压接末端，加热包裹之

Step4 : Cut off 25mm thermal shrinkage tube , Insert thermal shrinkage tube to the terminal crimping end, heat up to wrap the terminal and cable jacket.



步骤5：将端子插入插座，听到‘啪’一声，表示端子插到位

Step5 : Insert the terminals into the receptacle, it's in place when it clicks.



步骤6：装上防尘盖，完成组装

Step6 : Put the cap on the receptacle to finish the assembly.



步骤7：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

Step7：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

7-1 绝缘电阻测试

7-1 Insulation Resistance Test

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

7-2 耐压测试

7-2 Dielectric Withstand Voltage Test

位置 Positions	测试电压/时间 Test Voltage/Time	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
高压互锁到壳体 HVIL to shell	500 VDC / 1S	<5mA

7-3 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。

7-3 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

线缆参考规范
Reference specification for cables

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) Cable OD
非屏蔽线 Un-shielding cable	2.5mm ²	217*0.12	2.10	3.30±0.2
	4.0mm ²	350*0.12	2.90	4.10±0.2
	6.0mm ²	525*0.12	3.60	4.80±0.2
	10.0mm ²	874*0.12	4.65	6.25±0.2



Amphenol Technical Products International provides the above product specifications for the standard PowerLok™4.0 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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