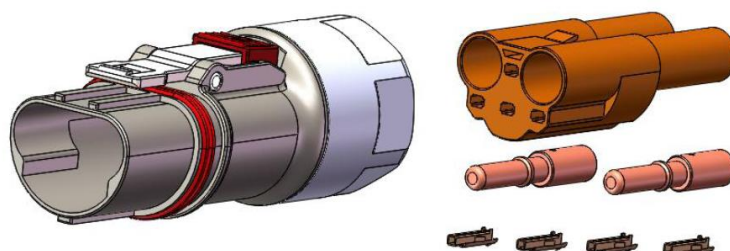


PL1824X-40-10-CA 4.0 2+4 插头组装规范

PL1824X-40-10-CA 4.0 2+4 Plug Assembly Manual



PL1824(X)-40-10-CA

键位	Key
X 键	X
Y 键	Y
U 键	U

线缆大小
Cable Size

2*10mm ² + 4*0.5mm ²

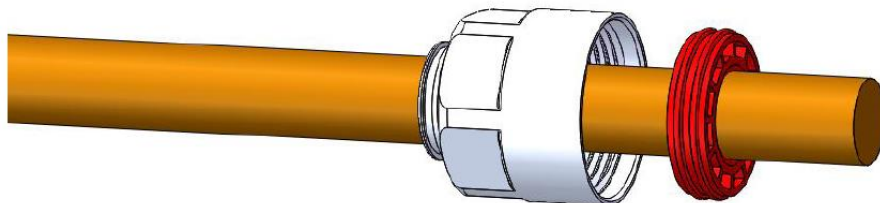
安装步骤 Assembly Instruction

步骤1：选取合适线缆(参考手册最后的附录)，按照要求的长度切线。

Step1：Select the right cable(refer to the appendix), Cut the cable to the required length.

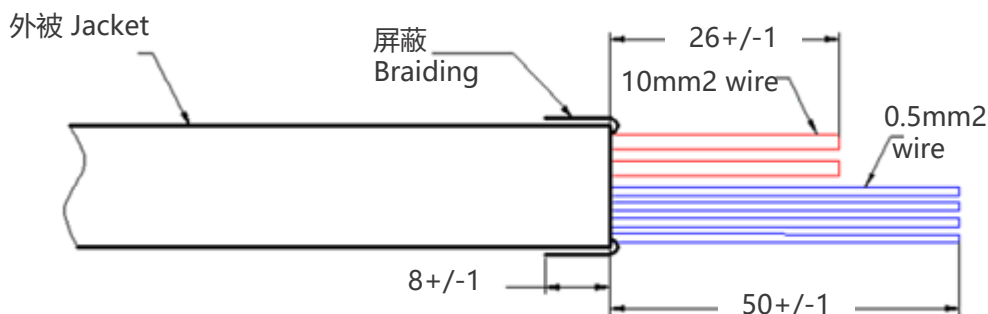
步骤2：先将接头尾部螺母及密封圈套上线缆。

Step2：Load the connector rear nut and rubber seal onto cable first.



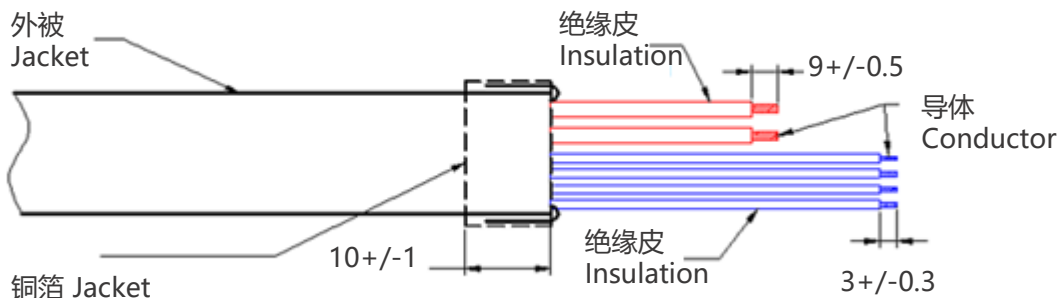
步骤3：按照图示长度剥外被，再将编织均匀打散，反折在外被上并剪留 8 ± 1 mm，铝箔及填充物齐外被口剪齐，再将两根粗线按图示长度修剪。

Step3：Strip the outer jacket according to the shown length, then evenly break the braid, fold it back on the outside and cut to 8 ± 1 mm, Cut the aluminum foil and filler to the end of the jacket, and then trim the two thick wires according to the shown length.



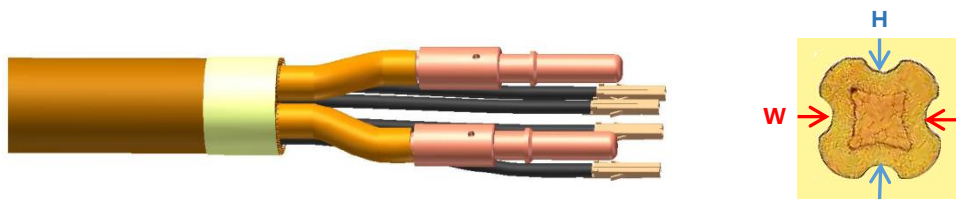
步骤4：用10mm宽的双面导电带胶铜箔如图示包两圈将编织固定在外被上，再按图示尺寸剥芯线。

Step4：Fix the braid on the outer jacket by wrapping two circles of 10mm wide double-sided conductive adhesive copper foil as shown in the figure, and then strip the core wire according to the size shown.



步骤5：套上端子然后压紧，压紧后端子抗拉拔力不小于下表中数据。

Step5：Put terminal onto wire and crimp, minimum retention force after crimping is as list showing below.



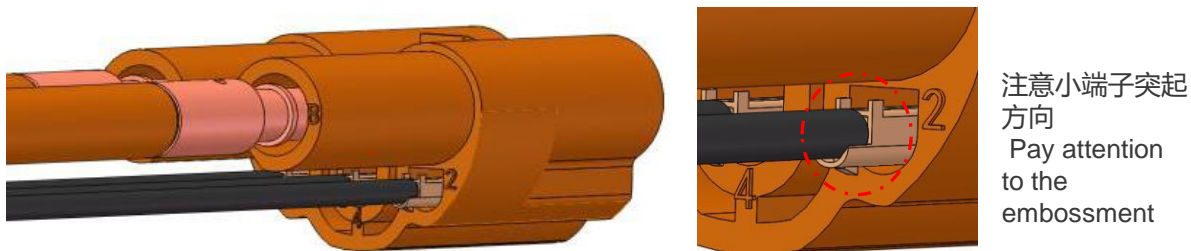
线缆规格 Cable Size	刀模型号 Tool Number	压接尺寸W Crimp dimension W	压接尺寸H Crimp dimension H	保持力 Min retention force
10mm ²	YM-041	3.35±0.1mm	3.25±0.1mm	500N
0.5mm ²	D-339	1.65+/-0.05mm	0.97+/-0.03mm	75N

说明：压接形状不作要求，客户负责采购压接工具或刀模，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%。

Note: Crimping shape is not required, customer will take liability for sourcing tools or dies, Customers need to check conduct pull-out force and Metallographic analysis of crimping section to confirm the quality of crimp process, Terminal crimping must meet the conductor compression ratio requirements: 80~90%

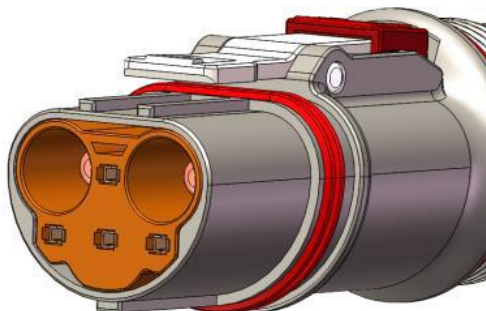
步骤6：拿出外壳组件，将端子插入胶壳(*注意：①先把两个电源端子放到胶芯里，但不要立刻安装；然后把4个信号端子安装好,最后再安装电源端子②注意小端子突起方向)。

Step6：Take out Shell assembly, assemble terminals.(*Notice: ①Put 2 power terminals in the plastic shell, but do not assemble it immediately; Then assemble 4 signal terminals, do assemble 2 power terminals at last. ②Pay attention to embossment of signal terminals).



步骤7：把端子推进胶壳穴位底部，直到听到‘啪’一声，表示已插到位。

Step7：Push terminals into the bottom of the plastic shell. It should click when its in place.



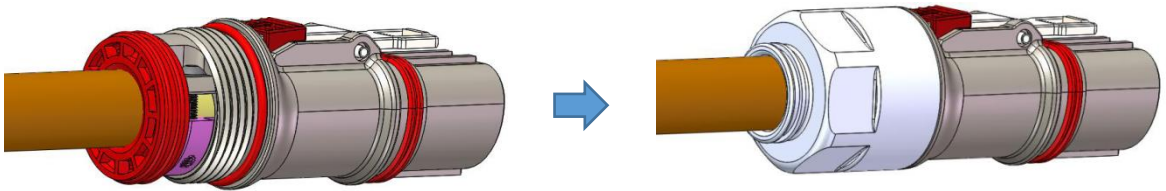
步骤8：装上半圆状金属零件及螺丝,然后以 $0.45\pm 20\%$ N·m将螺丝锁紧。电线上的铜箔及屏蔽线不能突出金属壳体。

Step8 : Load the semicircular metal part and screw, tighten the screw with $0.45\pm 20\%$ N·m torque, the copper foil and braiding wire on the cable should not exceed the metal shell.



步骤9：装上橡胶垫及尾部螺母，然后以 $10.0\pm 20\%$ N·m将螺母锁紧，完成安装。

Step9 : Load rubber seal and rear nut, tighten the rear nut with $10.0\pm 20\%$ N·m torque, cable assembly done.



步骤 10：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。

Step 10: Need to do the Insulation Resistance and DWV test after cable assembly. It is recommended that the customer refer to the following test parameters.

10-1 绝缘电阻测试

10-1 Insulation Resistance Test

位置 Positions	测试电压/时间 Test Voltage/Time	绝缘电阻 Insulation Resistance
电源端子到壳体 Power terminals to shell	1000 VDC / 5S	> 500 MΩ
电源端子到信号端子 Power terminals to Signal terminals	1000 VDC / 5S	> 500 MΩ
信号端子到壳体 Signal terminals to shell	1000 VDC / 1S	> 100 MΩ

10-2 耐压测试

10-2 Dielectric Withstand Voltage Test

位置 Positions	测试电压/时间 Test Voltage/Time	漏电流 Leakage Current
电源端子到壳体 Power terminals to shell	5000 VDC / 10S	<5mA
电源端子到信号端子 Power terminals to Signal terminals	5000 VDC / 10S	<5mA
信号端子到壳体 Signal terminals to shell	500 VDC / 1S	<5mA

10-3 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。

10-3 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 cable

线缆类型 Cable Type	芯线尺寸 wire Size	导体结构(mm) Conductor	线缆外径(mm) Cable OD
Habia 700063985 2x10.0+2x2x0.5 EV Cable	2*10.0 mm2	80*0.4	14.6+/-0.5
	2x2x0.5 mm2	19*0.18	

版本记录 Revision history

序号 Number	版本 Rev	变更内容 Content of change	日期 Date
1	01	新出 New issue	2024/02/01



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, Luogang 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