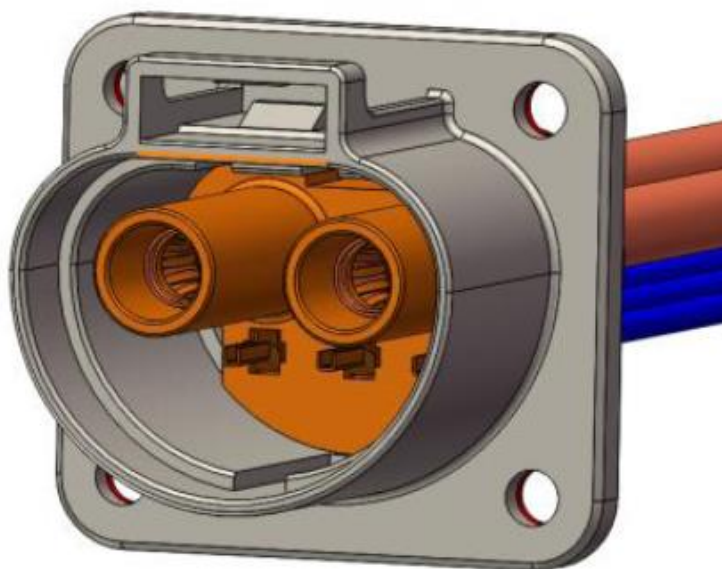


PL0824X-40-XX-CA 插座组装规范

PL0824X-40-XX-CA Receptacle Assembly Manual



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第一部分：产品介绍

Part 1：Introduction to products

1：料号信息 Part number information

PL0824X-40-XX-CA

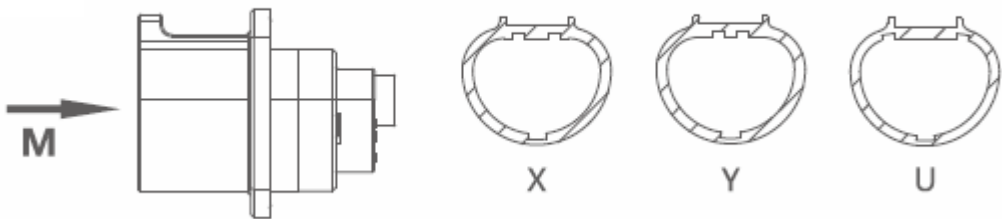
Key

X 键
Y 键
U 键

线缆大小

Cable Size
2.5mm2
10mm2

2：键位区分 Key differentiation



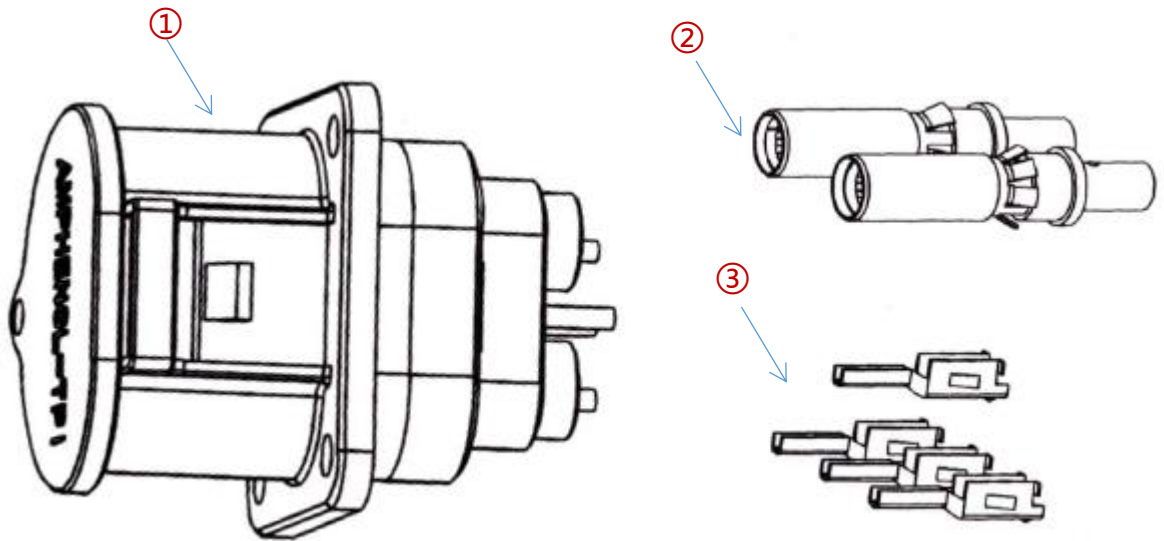
3：对配头型号 Mating Plug: PL1824(X)-40-XX-CA

4：主要参数 Major Spec

- 4.1 工作温度 Operating temperature: -40 °C ~+125°C
- 4.2 额定电压 Operating voltage: 400 VDC or 250 VAC (Power) 60VDC(Signal)
- 4.3 防护等级 Protection class: IP67(Mated), IPXXB(Unmated)
- 4.4 额定电流 Current rating:
2.5mm2-25A Max, 10mm2-50A Max , 0.5mm2-5A Max
- 4.5 详情请参照产品图 Please refer to the product drawing for details

第二部分：产品示意图

Part 2 : Exploded View



- ① 接头主体 Connector body ×1
- ② 电源端子 Power Socket ×2
- ③ 信号端子 Signal Pin ×4

第三部分：组装说明

Part 3：Assembly Instruction

- 步骤1：选取合适线缆，按照要求的长度切线与剥外被。
- Step1：Select the right cable, Cut and stripping the cable as required length.



表1：剥皮尺寸
Table 1: Strip length

线材尺寸 Cable Size	线材OD Cable OD	A (mm)	线材型号 Cable PN
2.5mm ²	3.30±0.2	7+/-0.5	AC-CP700020
10mm ²	6.25±0.20	7+/-0.5	AC-CP700100
0.5mm ²	1.6±0.1	3.2+/-0.2	AC-CP001019 BK AC-CP001020 RE

- 步骤2：调试好端子机，确认端子外观、拉力、金相符合要求后将信号端子压接在线材上。
- Step2：After debugging the crimp machine, confirm that the appearance, tension force, and metallographic of the terminal meet the requirements, crimp the signal terminal to the conductor.

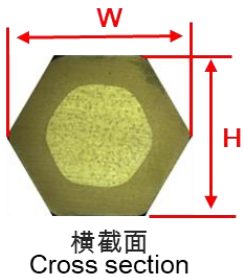
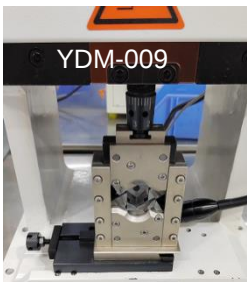


线材尺寸 Cable Size	压接高度H(mm) Crimping height	压接宽度W(mm) Crimping Width	参考保持力 Retention Force	刀模编号 Crimping Tool No.
0.5mm ²	0.98+/-0.03	1.65+/-0.05	75N	D-339

- 步骤3：调试好端子机，确认端子外观、拉力、金相符合要求后将电源端子压接在线材上。
- Step3：After debugging the crimp machine, confirm that the appearance, tension force, and metallographic of the terminal meet the requirements, crimp the power terminal to the conductor.

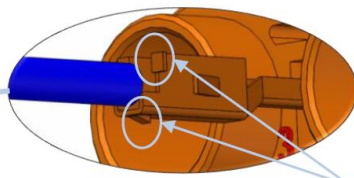
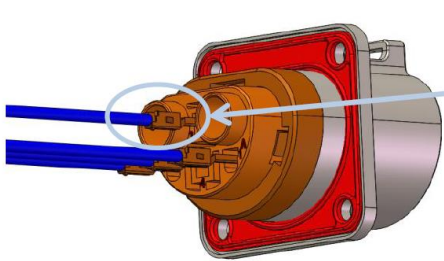
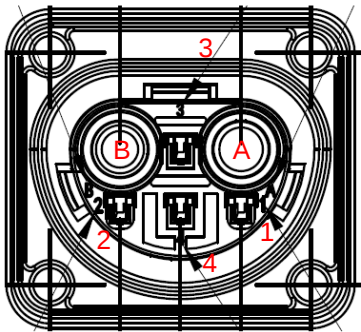
线材尺寸 Cable Size	压接高度H(mm) Crimping height	压接宽度W(mm) Crimping Width	参考保持力 Retention Force	刀模编号 Crimping Tool No.
2.5mm ²	2.85+/-0.05	3.3+/-0.05	200N	YDM-009
10mm ²	4.65+/-0.05	5.35+/-0.1	500N	YDM-009

机器压接保压时间推荐为 2.5S
The recommended crimping holding time for machine crimping is 2.5S



步骤4：将信号线端子逐一按图示方向与PIN位装进接头，直到听到“咔”声响，表示已装到位，此时顺势回拉应不松脱。

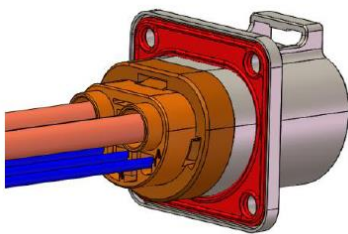
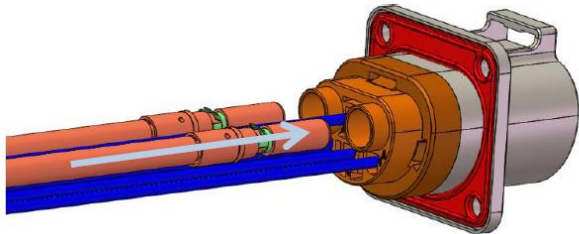
Step4 : Install the signal cable terminals into the connector one by one according to the direction shown in the figure and the PIN position, until you hear the "click" sound, indicating that it has been installed in place. At this time, the pull back should not be loose.



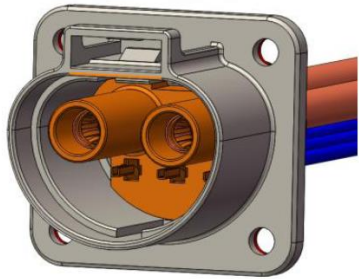
注意小端子突起方向
Pay attention to the embossment

步骤5：将电源端子逐一按图示方向与PIN位装进接头，直到听到“咔”声响，表示已装到位，此时顺势回拉应不松脱。

Step5 : Install the power cable terminals into the connector one by one according to the direction shown in the figure and the PIN position, until you hear the "click" sound, indicating that it has been installed in place. At this time, the pull back should not be loose.



步骤6：完成成品如图示。
Step6：The finished product is shown as figure.



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
电源端子到壳体 Power terminals to shell	500 VDC / 5S	> 100 MΩ
电源端子到信号端子 Power terminals to Signal terminals	500 VDC / 5S	> 100 MΩ
信号端子到壳体 Signal terminals to shell	500 VDC / 1S	> 100 MΩ
信号端子之间 Signal terminal to terminal	500 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
电源端子到壳体 Power terminals to shell	2000 VDC / 10S	<5mA
电源端子到信号端子 Power terminals to Signal terminals	2000 VDC / 10S	<5mA
信号端子到壳体 Signal terminals 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400VDC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 400VDC rating. Test parameters provided may exceed the limit of other components/materials used on the cable assembly or device.

接头装配说明 Connector Installation instructions

1：接头对插与拨出方法参照 8P1249：G1 PowerLok 单芯插头安装规范。

For details about how to insert and remove the connector, see the 8P1249：PowerLok G1 One POS Plug General Installation instructions.

参考文件 Reference Documents

1：IPC/WHMA-A-620D 线缆及线束组件的要求与验收。

IPC/WHMA-A-620D Requirements and Acceptance for cable and wire harness Assemblies.

2：端子拉力标准参照 IEC-60512-16-4。

Terminal tensile strength test refer to IEC-60512-16-4.

3：端子金相分析参照 SAE/USCAR-21 Rev 4。

The cross-section analysis is referred to SAE/USCAR-21 Rev 4.

版本记录 Revision history

序号 Number	变更内容 Content of change	日期 Date
00	新出试行版 New trial issue	2025/02/28
01	增加10mm ² 产品，修正相关参数 Add 10mm ² product and correct the relevant parameters	2025/06/05



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