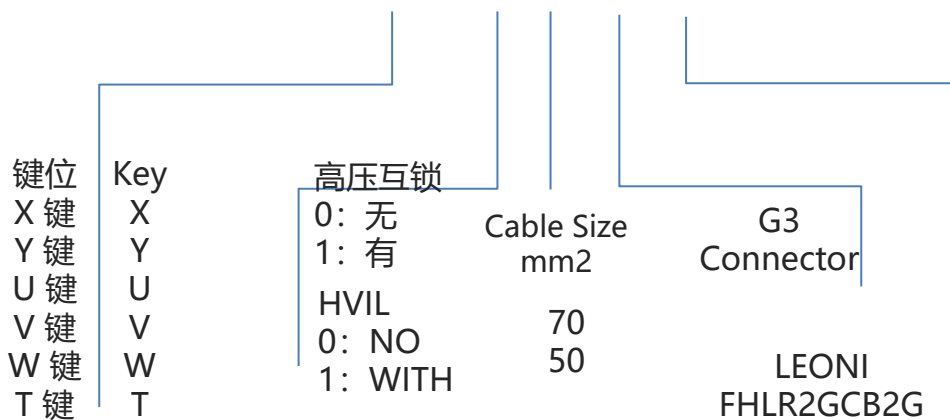


PL29X-301-XX-3-EV 10.0 单芯弯插头组装规范

PL29X-301-XX-3-EV 10.0 1POS Right Angle Plug Assembly Manual



PL29X-301-XX-3-EV



PL29X-301-XX-3-M-EV PL29X-301-XX-3-H-EV

也适用于该安装说明，仅仅是外壳镀层颜色不同

PL29X-301-XX-3-M-EV PL29X-301-XX-3-H-EV

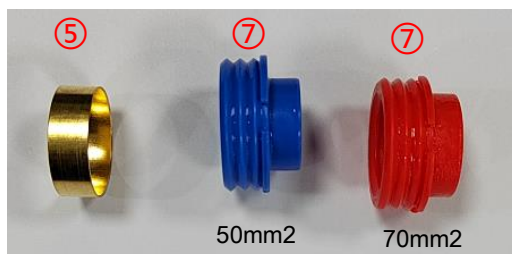
It also applies to this assembly manual, only the electroplate color of the shell is different

第一部分：包装清单

Part 1 : Package contents



- ① 端子组件 Terminal assembly ×1
- ② 塑料绝缘筒1 Plastic insulated set-1 ×1
- ③ 塑料绝缘筒2 Plastic insulated set-2 ×1
- ④ 屏蔽环 Shielding Ring ×1
- ⑤ 压接环 Crimping Sleeve ×1
- ⑥ 后壳 Back Shell ×1
- ⑦ 密封圈 Seal ×1
- ⑧ 线夹 Wire Clip ×1
- ⑨ 尾盖 Tail Cover ×1



本文件中图例仅供参考，具体颜色与大小以实物为准。

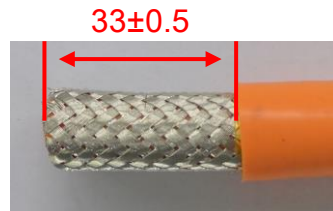
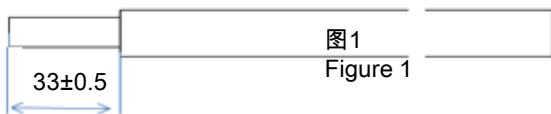
The figure in this document is for reference only. The specific color and size are subject to actual objects.

第二部分：插头组装

Part 2: Plug Assembly

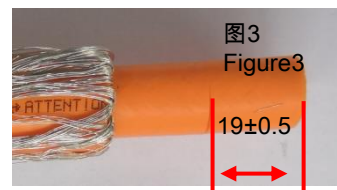
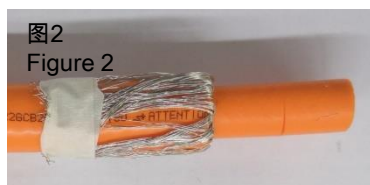
步骤1：选取合适线缆（参考手册最后的附录），按照要求的长度与数量切割线，剥线尺寸如图1。

Step1: Select the right cable(refer to the appendix), cut and strip cables according to actual requirements, Strip dimension is shown in Figure 1.



步骤2：将编织均匀打散如图2示反折固定在外被上。

Step2: Break the braiding evenly and fix the braid to the outer jacket as shown in Figure 2.



步骤3：按图3示尺寸剥芯线。

Step3: Strip the insulation as shown in Figure 3.

步骤4：将编织返回前端，用美纹纸固定如图4。

Step4: Return the braiding to the front end and secure it with the textured paper as shown in Figure 4.



步骤5：依次在线材上穿入配件如图5示。

Step5: Insert the accessories on the wire in turn as shown in the figure 5.



- ⑥ 后壳 Back Shell
- ⑤ 压接环 Crimping Sleeve
- ⑦ 密封圈 Seal
- ⑧ 线夹 Wire Clip
- ⑨ 尾盖 Tail Cover

注意配件方向

Note the direction of accessories

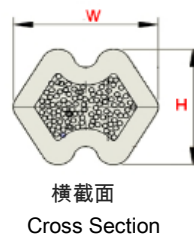
步骤6：将压接环推至齐外被口，编织均匀返折固定在其上，套上屏蔽环④如图6示。

Step6：Push the crimping ring to the end of jacket, Folded and fixed shielding on jacket evenly, then put on the shielding ring ④ as shown in Figure 6.



步骤7：将端子组件①穿入芯线上，调试好端子机，将端子紧靠外被压接好，压接刀模与压接高宽度、拉力等要求参照手册最后附表。

Step7：Insert the terminal assembly ① into the conductor, Adjust the terminal machine, and crimp the terminal close to the jacket. The crimp die and crimp height, width and tension requirements refer to the appendix.



(1) 建议使用安费诺指定线材（型号详见手册后附录），如果客户选用其它电缆，请联系安费诺业务，协商订制零配件

Recommend to use assigned cable. (See appendix for details.) If you need to use customized cable, Please contact local sales for product extensions

(2) 压接高度和拉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 compression ratio of conductor requirements: 80~90%.

(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 only reference tooling geometry (other ex. Hexagon dimensions),customer will take liability for sourcing tools or dies

步骤8：在端子上卡入塑料绝缘筒1，再卡入塑料绝缘筒2。

Step8：Clamp the plastic insulated set-1 on the terminal, then clamp the plastic insulated set-2.

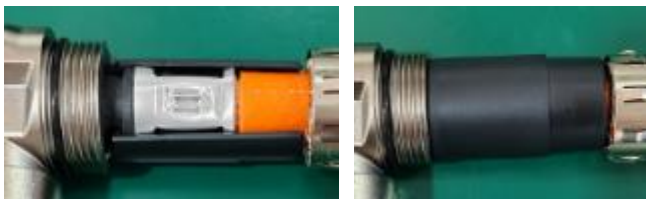


图8
Figure 8

步骤9：将压接环推到底并固定，再将屏蔽环推到底，散开编织，齐屏蔽环外沿将编织修剪整齐如图9示。
Step9： Push the crimping ring to the bottom and fix it, then push the shielding ring to the bottom, scatter the braid, and trim the braid to the outer edge of the shielding ring, as shown in Figure 9.



图9
Figure 9

步骤10：将压接环压紧在线材上，压接刀模与压接高度、拉力要求等参照表1，压接过程避免铜套移位。
Step10： Crimp the crimping sleeve on the cable, Crimp die and crimp height and pull force refer to Table 1. To avoid the shielding ring slide in the crimp process.

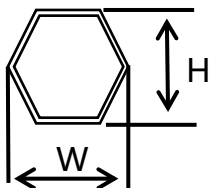


图10
Figure 10

表1：铜环压接规格&拉拔力要求

Table2：Copper Ring Crimping spec & retention force requirements

线材尺寸 Cable Size	压接模具 Crimp die	压接高度 Crimping height H(mm)	参考抗拉拔力 Retention Force
50mm ²	BZW-6C	16.50±0.15	150N
70mm ²	BZW-6C	18.90±0.15	150N

步骤11：将扭力设定为10~12N.m，将接头插入对配冶具固定，将扭力扳手箭头方向与拧紧方向一致，将接头后盖拧紧，拧紧时听到“咔”声响表示已拧到位。

Step11： Set the torque to 10~12N.m, insert the connector into the matching tool, and tighten the back shell of the connector in the same direction as the arrow of the torque wrench. When tightening, a click sound indicates that the connector is screwed into place.



图11
Figure 11

步骤12：将密封圈推到接头底部，再将线夹推至接头底部如图12示，也可以将线夹套在密封圈上用治具将其推到底。

Step12 : Push the seal to the bottom of the connector, and then push the wire clip to the bottom of the connector as shown in Figure 12, or you can put the wire clip on the seal and push it to the bottom of the connector with the fixture shown in Figure 12.



图12
Figure 12



步骤13：盖上尾盖如图13，完成组装，注意尾盖卡扣需完全装到位。

Step13 : Cover the tail cover as shown in Figure 13, complete the assembly, pay attention to the tail cover buckle should be fully installed in place.



图13
Figure 13



步骤14：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。

Step14：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.

14-1 绝缘电阻测试

14-1 Insulation Resistance Test

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

14-2 耐压测试

14-2 Dielectric Withstand Voltage Test

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

14-3 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。提供的参数是基于连接器峰值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。

14-3 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 connectors and their peak 1000VDC rating. Test parameters provided may exceed the limit of other components/materials used on the cable assembly or device.

线缆压接的参考规范

Reference specification for cable crimping

线缆料号 Cable PN	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.
76H00189B	50mm ²	1656*0.21 Max	10.5	15.5±0.3	12.7±0.3	17.05±0.3	2800N	TY-104
760000S0A	70mm ²	2272*0.21 Max	12.50	17.8±0.4	12.25±0.3	17.1±0.3	3400N	TY-105

版本记录 Revision history

序号 Number	变更内容 Content of change	日期 Date
01	新出 New Issue	2024/07/18



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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