



22P GenY Unsealed Connector

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1 GENERAL

1 综述

1.1 Purpose

1.1 目的

This application specification describes how to handle the 22P inline connector components.
本规范用于指导 22 位线对线连接器的组装，安装和返修。

1.2 Customer Drawing/ Documents

1.2 客户图纸/文档

This application specification is based on the latest customer drawings/Documents.
产品尺寸、材料和表面

C-2300962	22P CAP CONNECTOR, GENY, UNSEALED
C-2300979	22P PLUG CONNECTOR, GENY, UNSEALED
C-2317355	22P WIRE COVER 90 DEGREE FRONT (OPTIONAL)
C-2327044	22P WIRE COVER 90 DEGREE SIDE (OPTIONAL)
C-114-101100	22P INTERFACE DRAWING
108-101626	22P GenY Product Specification

The document is also a reference for the application

以下文档作为此应用规范的参考文件

114-13183	GenY Application Spec for Round Wire (GenY端子压接圆线规范)
114-101069	GenY Application Spec for FFC Crimp (GenY端子压FFC线材规范)

The release tool as below PN. However, it can be replaced by similar tool

以下是端子退出工具，类似结构的退出工具经验证也可作为替代工具

1452426-1	GenY Extraction Tool (GenY端子退出工具)
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2 Product Description

2 产品说明

The 22P inline connector system is designed for the voltage signal connection of battery and other like temperature sensor on electrical vehicle, it also can be used for other signal transmission at high voltage application.

22P 线对线连接器设计用于电动汽车的电压信号及温度信号的采集传输，同时也可用在汽车高压系统中其它信号的传输。


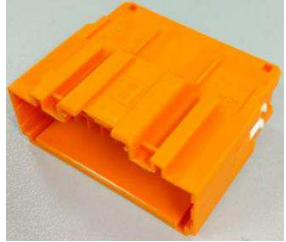
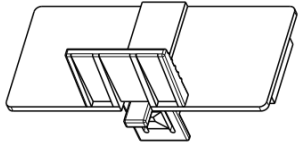
2.1 22 Pos Cap Connector

2.1 22 位公端连接器

22P CAP CONNECTOR contains below part.

22P 公端连接器组装件由以下部分组成。

1. HOUSING (Code A/B)
塑壳本体 (Code A/B)
2. TPA (端子二次锁)

22P Cap Connector	Color		Picture
	Cap Housing	Cap TPA	
2300962-1 Code A	Orange	Red	
2300962-2 Code B	Orange	White	
Protect Cover (Optional, NOT TOOLED)	White		

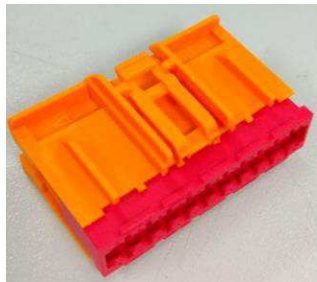
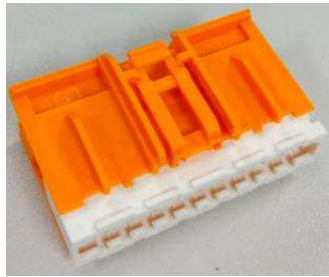
2.2 22Pos Plug Connector

2.2 22 位母端连接器

22P Plug Connector contains below part.

22P 母端连接器组装件由以下部分组成。

1. HOUSING (Code A/B)
塑壳本体 (Code A/B)
2. TPA(端子二次锁)

22P Plug Connector	Plug Housing Color	Plug TPA Color	Picture
2300979-1 Code A	Orange	Red	
2300979-2 Code B	Orange	White	

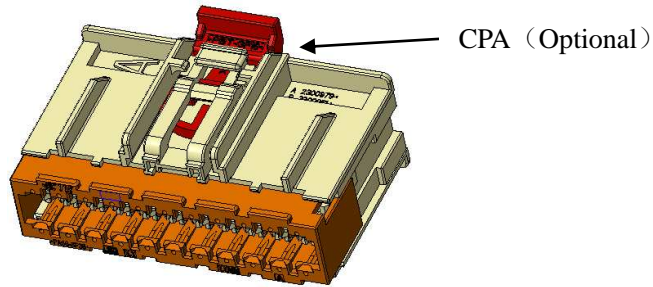
2.3 22Pos Plug Parts

2.3 22 位母端连接器

Below parts is optional for 22P connectors.

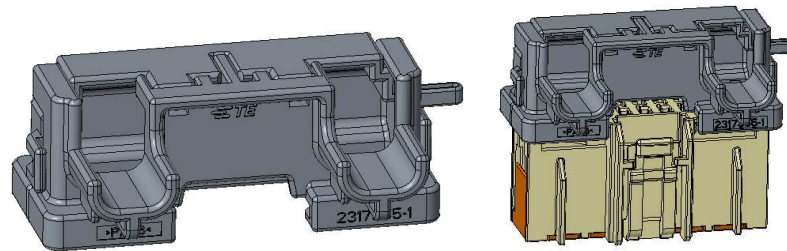
以下组件为可选件。

2.3.1 CPA



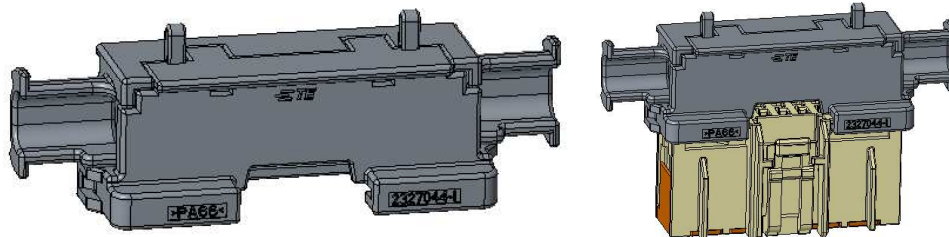
2.3.2 22P Wire Cover 90 Degree Front (optional), assembled view

2.3.2 22P 后盖 90 度前端出线 (可选), 组装示意图 (PN: 2317355-1)



2.3.3 22P Wire Cover 90 Degree Side (optional), assembled view

2.3.3 22P 后盖 90 度侧边出线 (可选), 组装示意图(PN: 2327044-1)

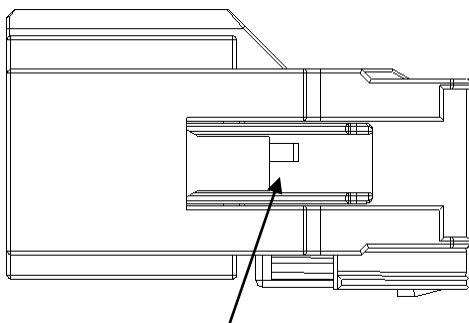


3 CAP HOUSING ASSEMBLY

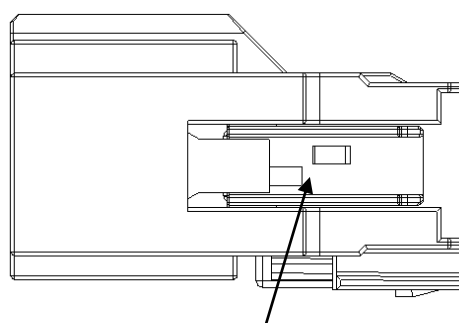
3 公端连接器的组装

Check the TPA is in pre-lock position before insert terminal.

插端子前请确认 TPA 在预装位置 (出货状态)



TPA in pre-lock

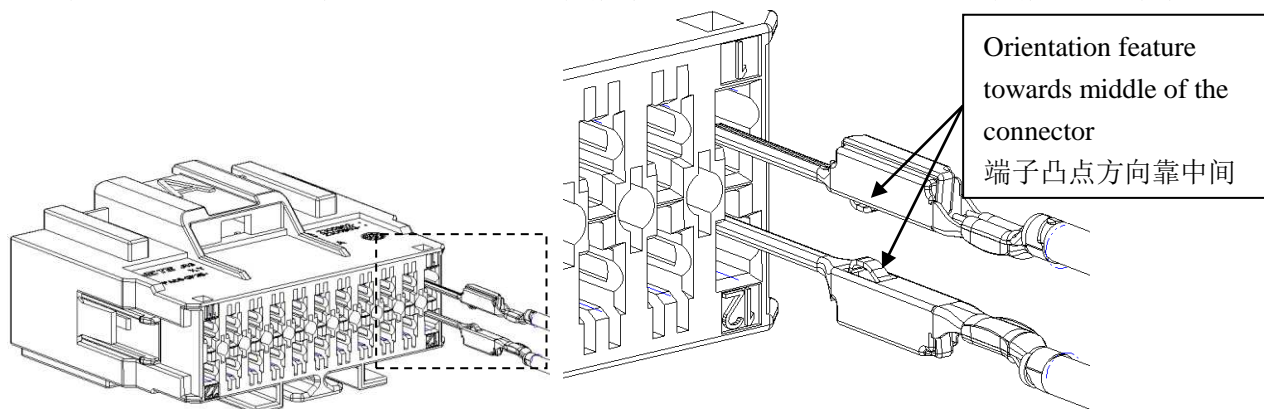


TPA in final lock

3.1 MALE TERMINAL INSERTION

3.1 公端子插入

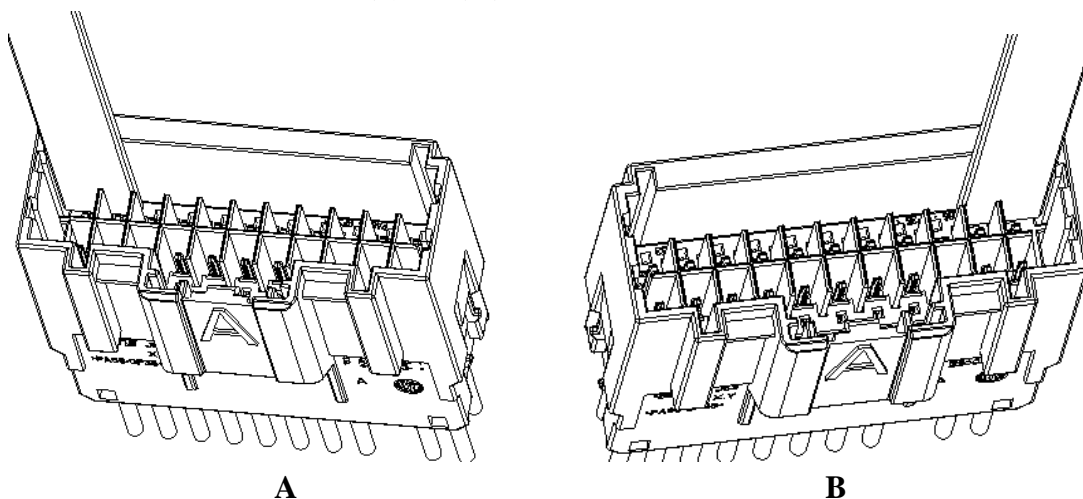
- A. Insert the terminal (as below direction) as far as the end of the spring engages and produces an audible click. Complete locking can be examined by gently pulling back the terminal.
- A. 按照如下方向插入端子，插入到位后有轻微咔嗒声。为确保插入到位，可轻微回拉线材检查。



3.2 CAP TPA INSERTION

3.2 公端 TPA 插入

- A. Use a tool to gently push the TPA surface at one side to over the pre-lock position.
- A. 用扁平工具沿 TPA 一侧表面轻轻压过预锁位置



- B. Move the tool to the opposite side and gently push the TPA to final position.
- B. 将工具移至 TPA 另一侧，轻压 TPA 至终锁位置



PLEASE DO NOT DAMAGE TAB TERMINALS DURING TPA INSERTION.
按压 TPA 时，需注意不能碰到公端端子。



Note 1: If the TPA does not fully close, MOVE it to the pre-lock position, ensure that all contacts are fully seated, then try again. **DO NOT force the TPA to close.**

如果 TPA 无法组装到位，请将 TPA 退到预锁位置，确认每个端子都插入到位后再次锁 TPA。
 切不可在端子未插入到位时强行锁上 TPA。

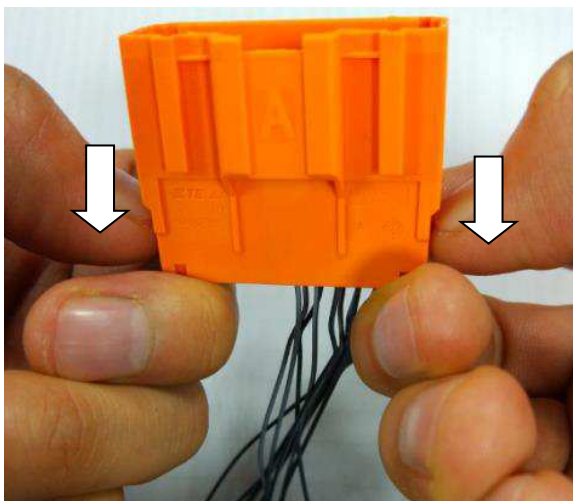


Note 2: TPA can also be pushed by two ribs of TPA outside of housing as below.

An audible click occurs when TPA reach final position.

Note 3: TPA 也可以同时按压 TPA 外侧的两个凸块来锁定。

锁到位时有“滴”声响应。

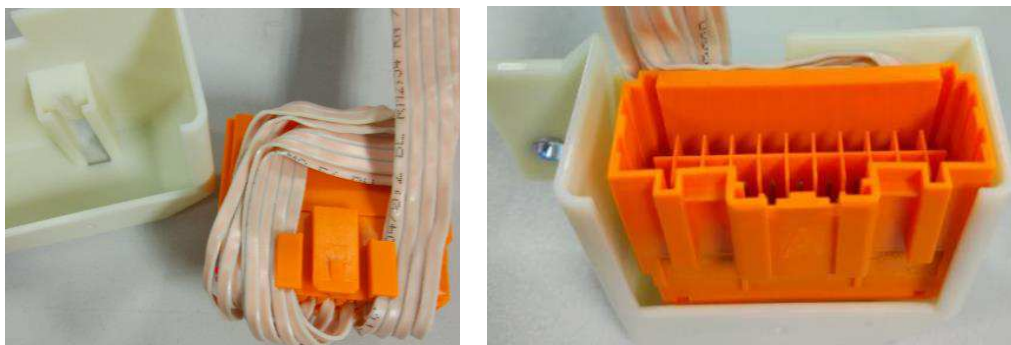


3.3 CLIP MOUNTAIN

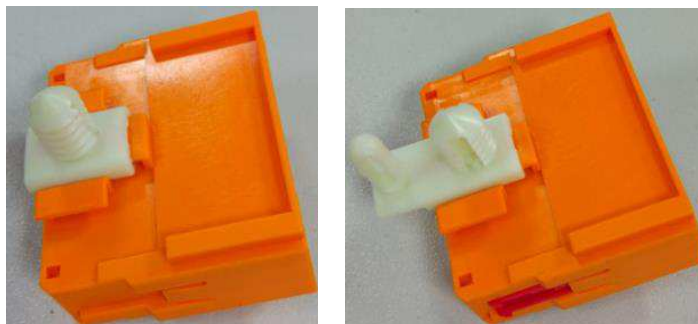
3.3 CLIP 组装

The clip structure is designed for special application in battery module, however is also can use existing clip, like 3639, 3640 from market.

卡板槽的设计应用在电池模组中，当然也可用于市面上如 3639，3640 等卡板头。



Assy mated with cover 2301204



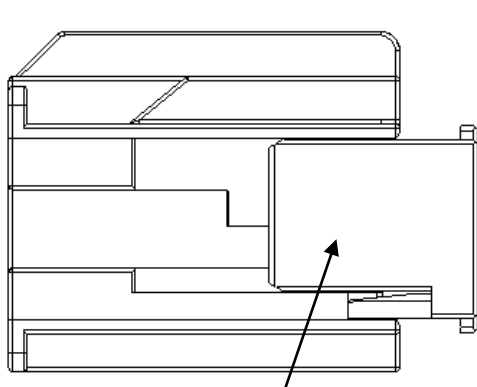
Assy mated with 3639,3640

4 PLUG HOUSING ASSEMBLY

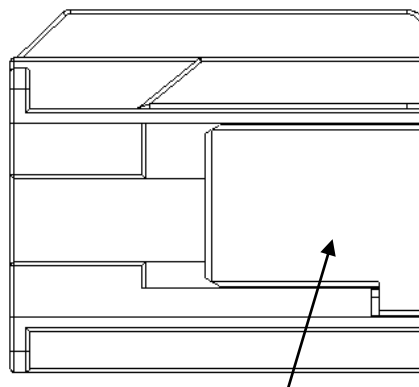
4 母端连接器的组装

Check the TPA is in pre-lock position before insert terminal.

插端子前请确认 TPA 在预装位置（出货状态）



TPA in pre-lock



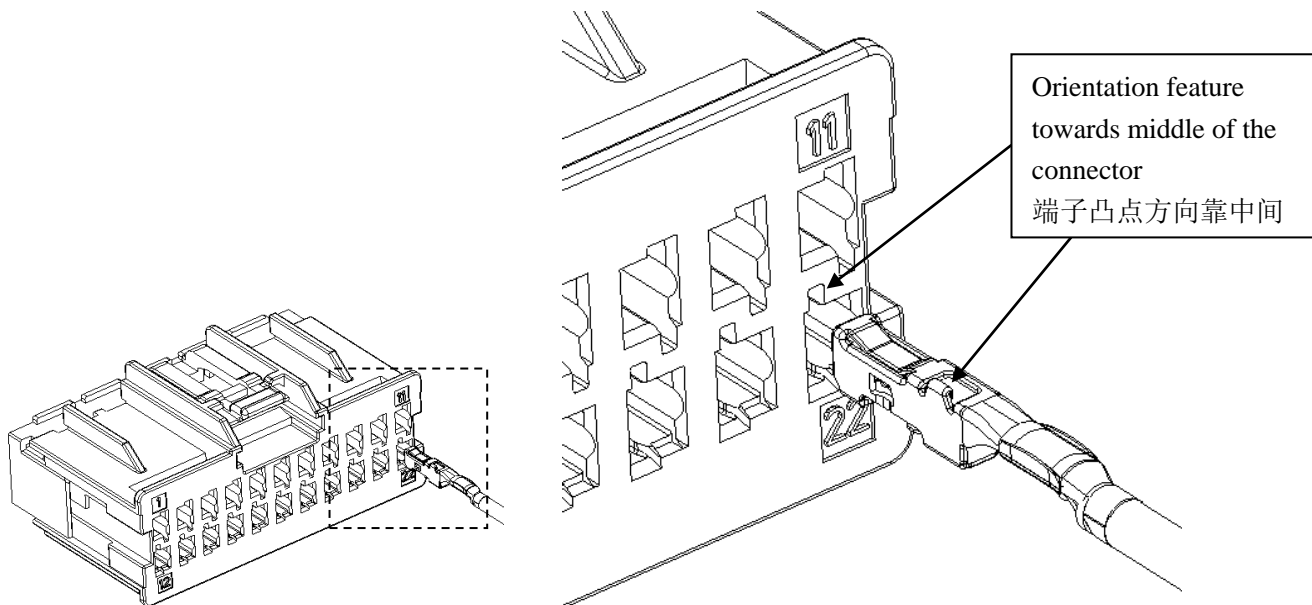
TPA in final lock

4.1 FEMALE TERMINAL INSERTION

4.1 母端子插入

A. Insert the terminal (as below direction) as far as the end of the spring engages and produces an audible click. Complete locking can be examined by gently pulling back the terminal.

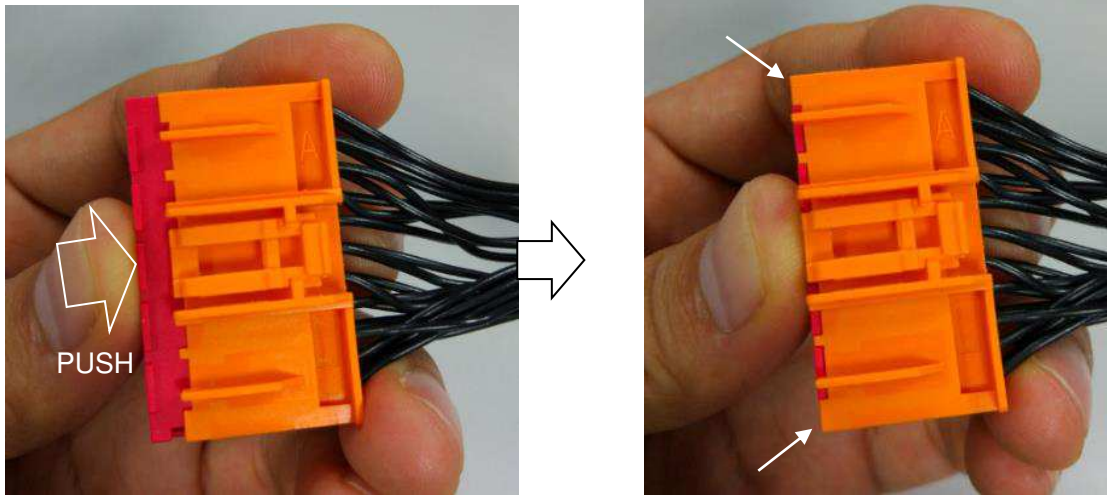
A. 按照如下方向插入端子，插入到位后有轻微咔嗒声。为确保插入到位，可轻微回拉线材检查。



4.2 PLUG TPA INSERTION

4.2 母端 TPA 插入

- A. After terminal mounted, push the TPA surface from pre-lock position to final position.
A. 端子组装后，用手指轻压 TPA，使其从预锁位置压入到终锁位置。



- B. At the end of the TPA, an audible click push the TPA surface from pre-lock position to final position.
A. 端子组装后，用手指轻压 TPA，使其从预锁位置压入到终锁位置。

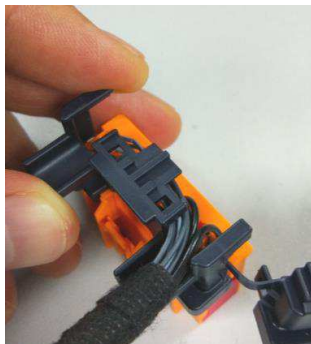
i Note 1: If the TPA does not fully close, MOVE it to the pre-lock position, ensure that all contacts are fully seated, then try again. **DO NOT force the TPA to close.**
如果 TPA 无法组装到位，请将 TPA 退到预锁位置，确认每个端子都插入到位后再次锁 TPA。切不可在端子未插入到位时强行锁上 TPA。

i Note 2: An audible click occurs when TPA reach in final lock position.
TPA 推到位时会有“滴”声响应。

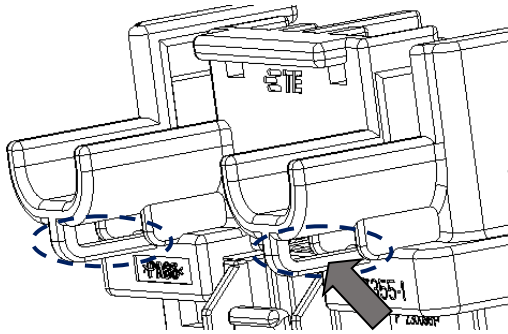
4.3 PLUG COVER ASSEMBLY

4.3 母端后盖的组装

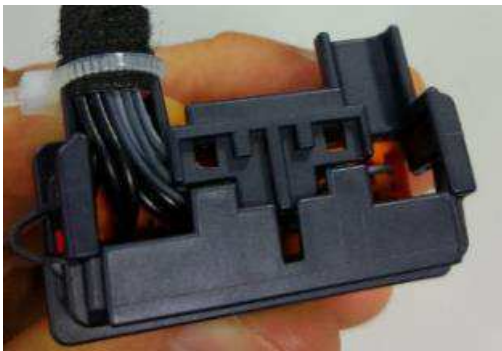
- A. Use fixture to set front half of wire cover against to housing assembly, manage the wire to one of exit and wire
A. 用治具将后盖的前部分压到塑壳前端，将线理顺至其中一个出线口。



- B. Pass through a tie over the cover's ring rib and tighten the tie with fixture and cut unnecessary tie.
B. 将扎带穿过出线孔下方的隔档圈，并用治具将扎带扎紧，剪掉多余部分扎带。

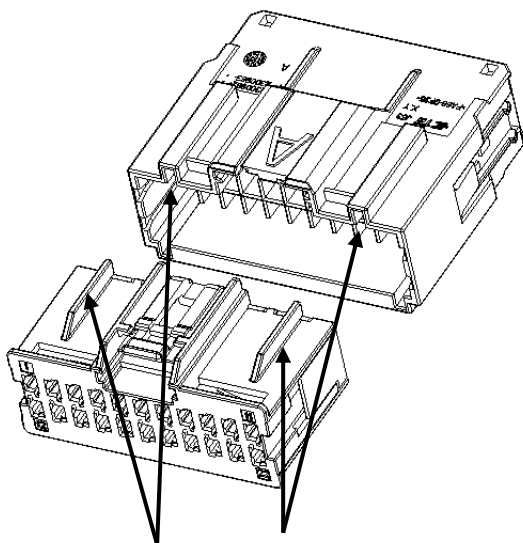


- C. Rotate the other half of cover and align to the front half, push it to the final assembly. Make sure all 4 locks are locked
C. 将另一半后盖绕连接带转动并与前半部分对齐，压入至最终组装品。确认 4 个卡扣完全卡住。

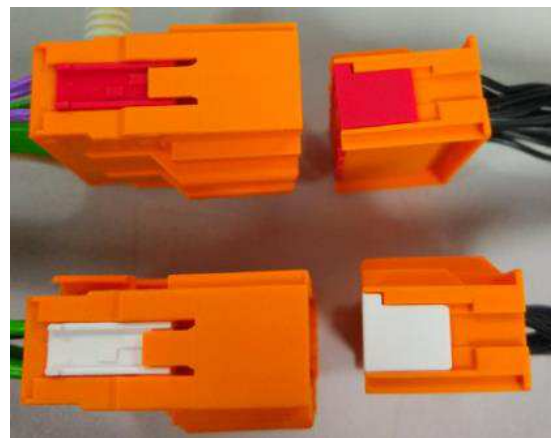


5 CONNECTOR MATING AND UNMATING

5 连接器的对配组装与分离



Polarization Feature (CODE)
产品不同筋位区分

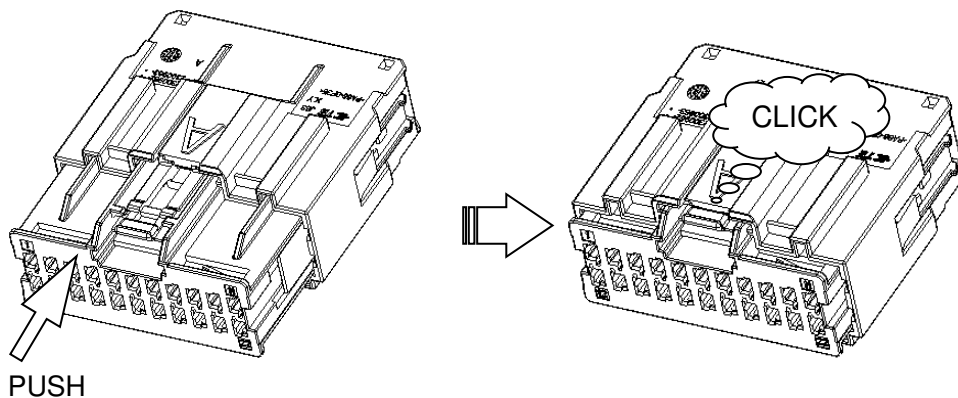


Code A with red TPA / Code B with white TPA
Code A 带红色 TPA，Code B 带白色 TPA

5.1 CONNECTOR MATING

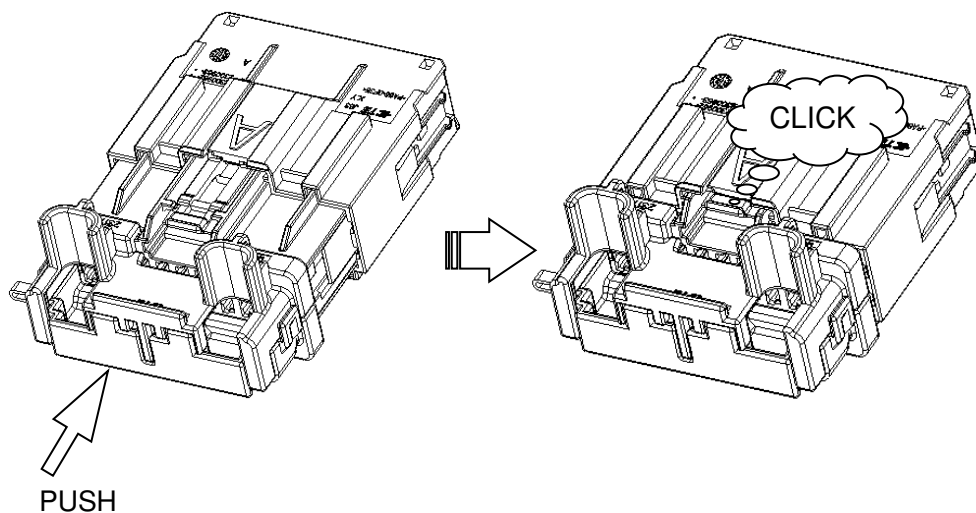
5.1 连接器对配

- A. Push plug with wire with proper code until it stops with a click occurs.
- A. 握住线材推动母端连接器直到听到对配咔嚓声。



Similar operation with wire cover

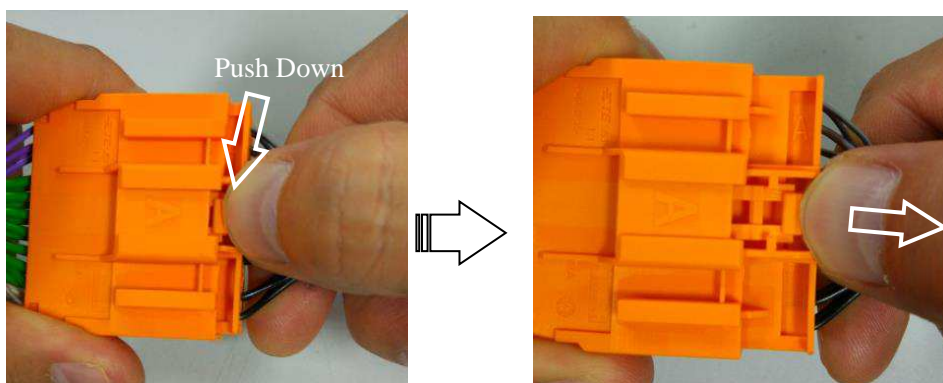
对于带后盖的产品，类似地按压后盖直到听到对配咔嚓声



5.2 CONNECTOR UNMATING

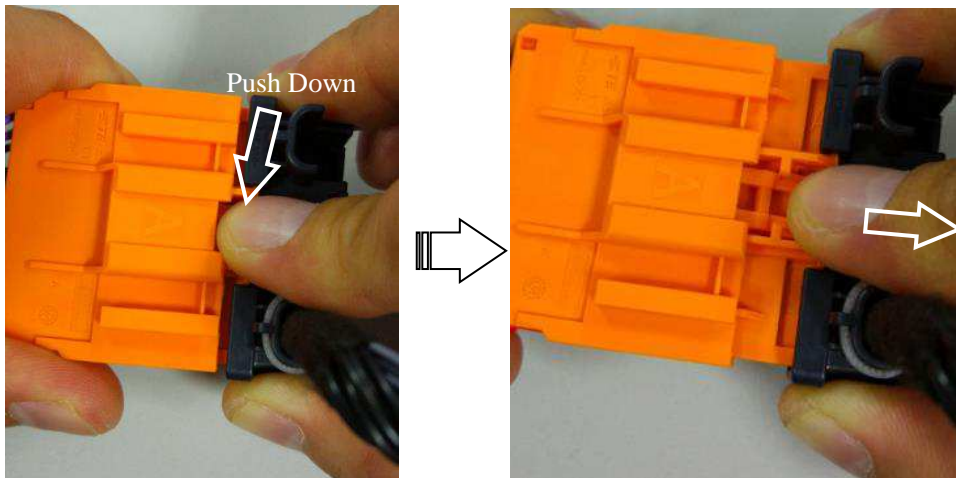
5.2 连接器分离

- A. Push plug latch down enough and pull the wire to separate plug from cap Assy.
- A. 按下母端的卡扣并握住线材向后拉出母端连接器。



Plug with cover can be unmated as below step.

母端带后盖时，也可以通过下图图示来分离连接器。



6 PLUG HOUSING DISASSEMBLY

6 母端连接器的拆除



DO NOT DISASSEMBLY PART UNDER LIVING VOLTAGE!

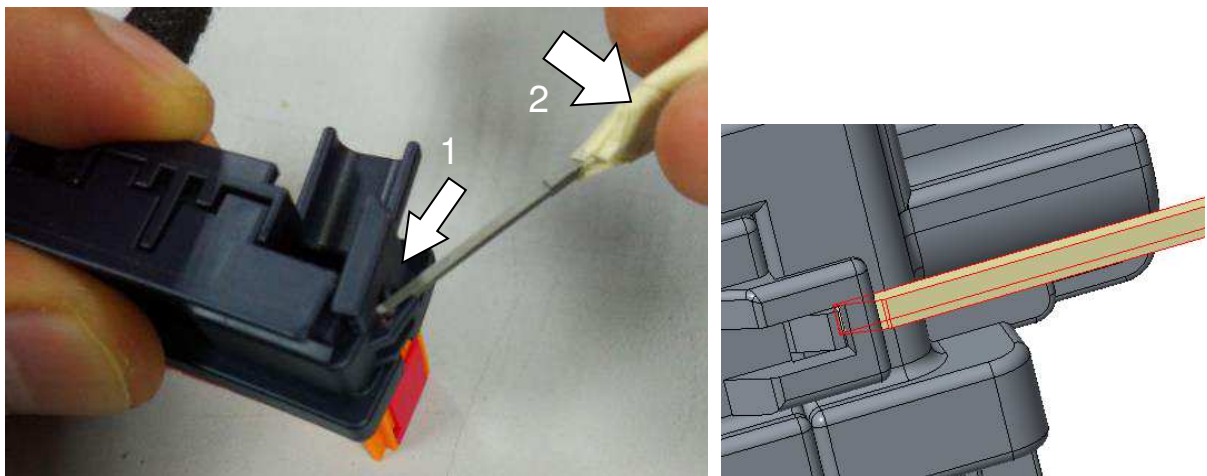
不得带电状态下作拆卸操作！

6.1 PLUG COVER DISASSEMBLY

6.1 母端后盖的拆解

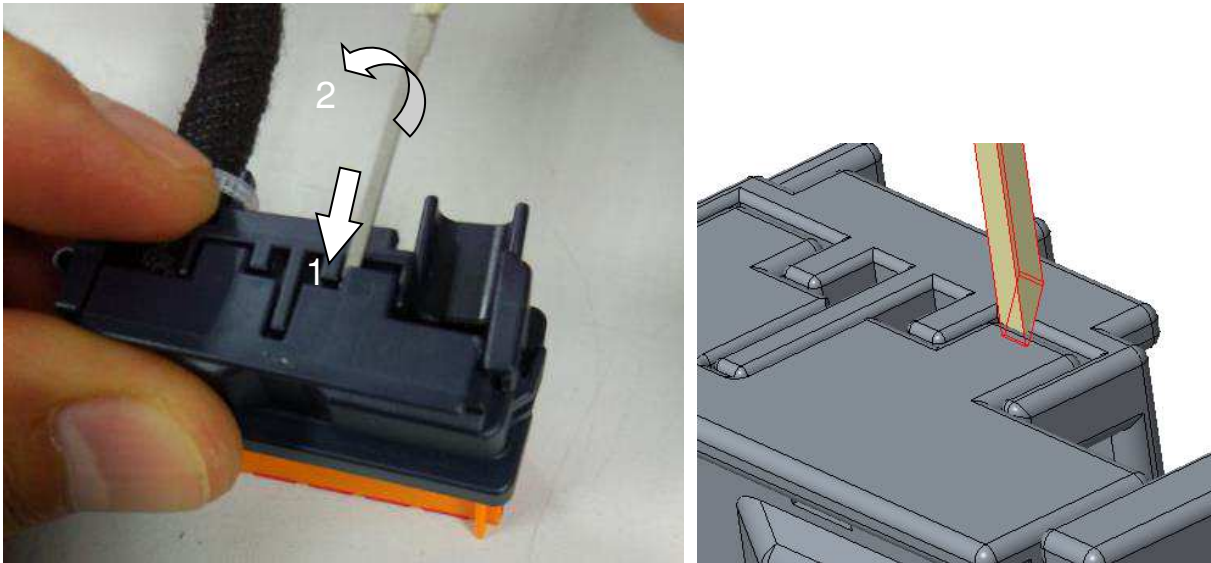
A. Insert tool under the latch at the opposite side of wire exit till the lock, and rotate tool to unlock latch.

A. 将治具伸到卡扣底部至凸点，转动治具使卡扣脱离卡点。

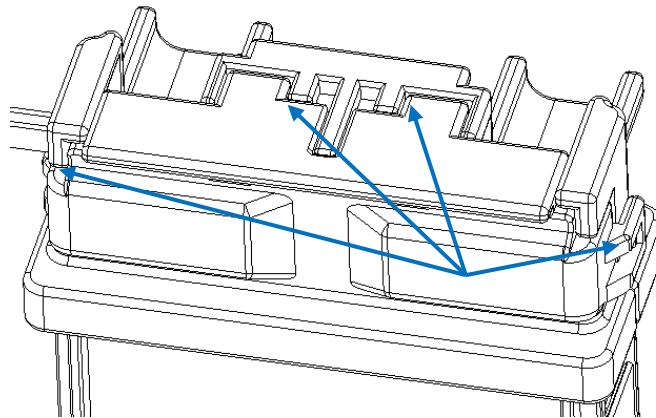


B. Insert tool to the next lock latch at top side and unlock the lock..

B. 将治具插入下一个卡扣，转动并脱离卡口。



- C. Release the other lock at top side and release the side lock use same method by order.
C. 依顺序将上面及侧边的卡扣同样方法解锁。



- D. Cut the tie and remove wire cover.
D. 将依顺序将上面及侧边的卡扣同样方法解锁。



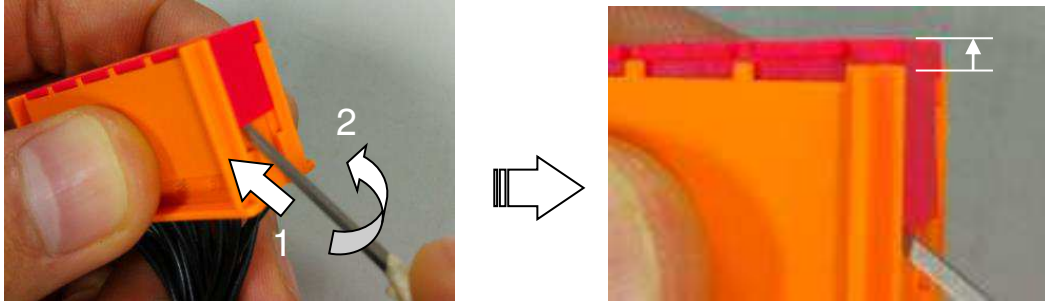
DO NOT DAMAGE WIRE WHEN CUT TIE!
WIRE COVER CANNOT REUSE AFTER DISASSEMBLED!
剪扎带时不能损伤线材!
拆下的后盖不得再次使用!

6.2 FEMALE TPA WITHDRAW

6.2 母端 TPA 退回预锁位

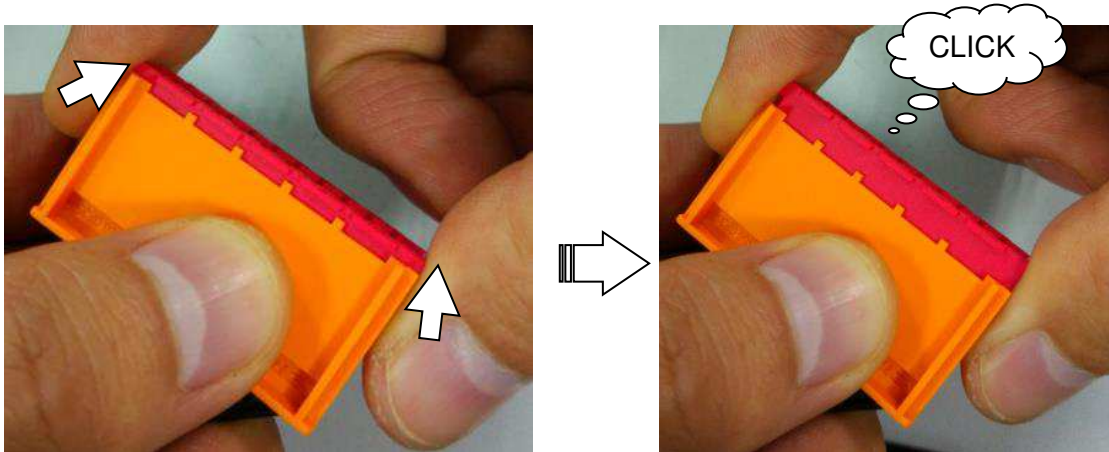
A. Insert tool and unlock one side of lock, then repeat on the other side.

A. 将治具插进 TPA 内侧，轻微转动治具使 TPA 移开终锁位置，另一侧同样操作。



B. press both sides of TPA, and pull apart till in TPA pre-lock position, a click occurs.

B. 轻压 TPA 两侧向分开方向拉至 TPA 预锁位置，此时会有“咔嗒”声响应。

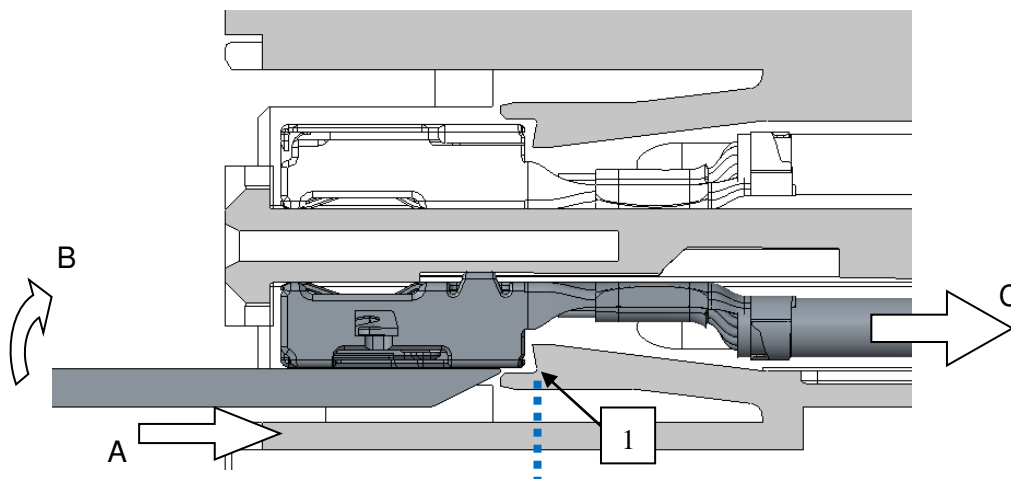


6.3 FEMALE TERMINAL REMOVAL

6.3 母端子退出

A. Insert tool along the terminal surface and till position 1.

A. 将治具沿端子表面伸至位置 1。



- B. Rotate tool toward to connector center to release locking finger and hold it.
- B. 将治具绕连接器中间转动使弹性臂脱离端子并保持。
- C. Pull out the terminal from cavity.
- C. 将端子从塑壳孔中拉出。

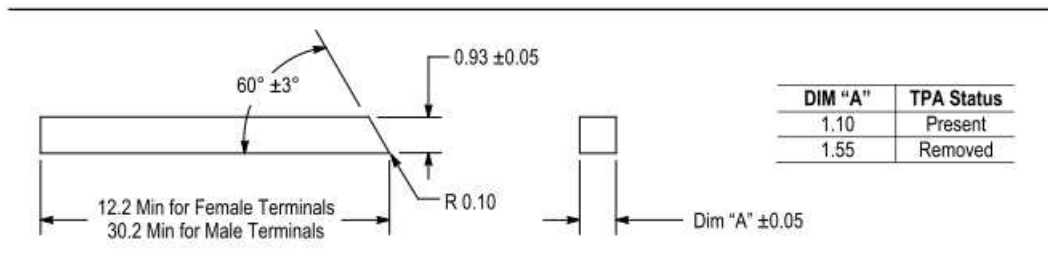


TPA MUST BE REMOVED BEFORE CONTACT REMOVAL.
在退端子前必须将 TPA 移除。



The smaller tool width, as defined by dimension letter “A”, can be used with the TPA removed. However, it will be difficult to find the plastic connector latch and this tool may slip off of the latch.

如下宽度小的工具同时可作为 TPA 的退回工具（角度可减小到 40°），需要注意小尺寸的工具可能在退端子过程中滑离。



7 CAP HOUSING DISASSEMBLY

7 公端连接器的拆装



DO NOT DISASSEMBLY PART UNDER LIVING VOLTAGE!

不得带电状态下作拆卸操作！

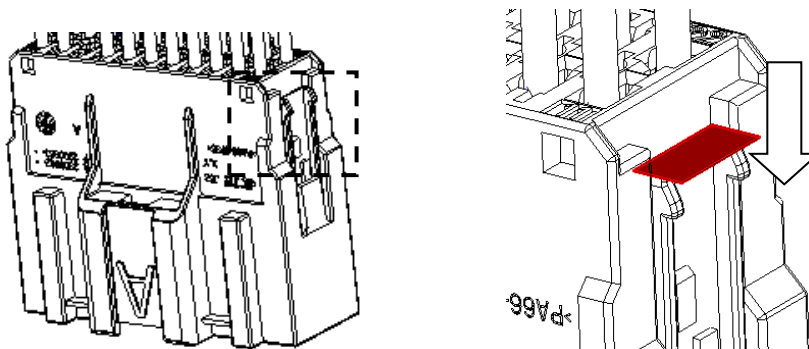


Clip structure is compression type, contact clip vendor for release process.
卡扣槽结构采用的是紧凑型卡扣结构，请联系卡扣供应商作拆离步骤说明。

7.1 MALE TPA WITHDRAW

7.1 公端 TPA 退回预锁位

- A. Use a tool to push the surface both side the TPA to TPA pre-lock position (as section 3).
- A. 用治具按压 TPA 两侧，使 TPA 向下（图示方向）移至预锁位置（如第 3 小节）。

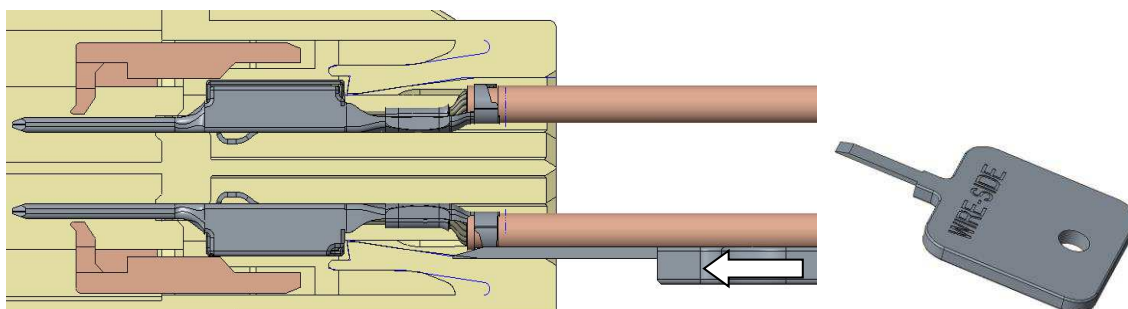


7.2 MALE TERMINAL REMOVAL

7.2 公端子退出

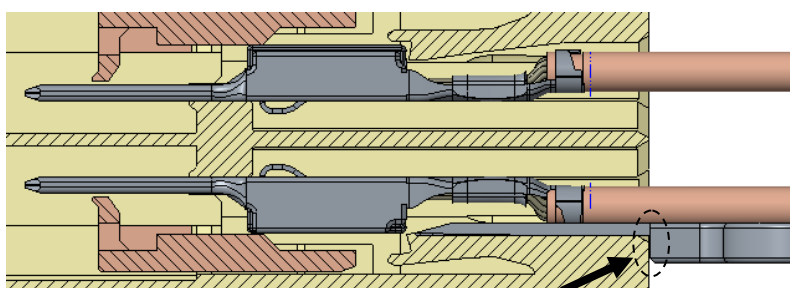
A. Select the wire/terminal to be removed. Place the tool with “WIRE-SIDE” against the wire.

A. 选择要拔出的线/端子，将治具有“WIRE-SIDE”一侧靠线材。



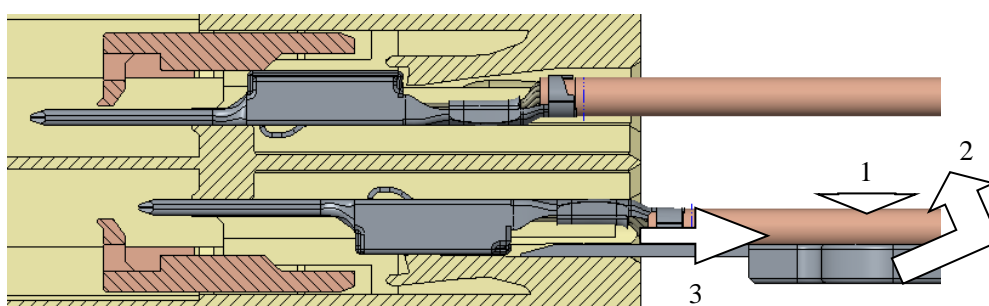
B. Pull the tool into the cavity until it stops to housing surface.

B. 将治具推至到靠紧塑壳的端面。



C. Pinch the wire against the tool and tilt the tool toward the center of the connector and then pull the tool and wire/terminal out of cavity.

C. 将线材压紧在治具上，抬起治具以使塑壳的弹性臂能脱离，然后连同治具，线材/端子一起拉出塑壳孔。



3 sizes of the tool are needed:

0.5mm blade thickness (0.75mm²)

0.7mm blade thickness (0.5mm² or FFC)

0.9mm blade thickness (0.13~0.35mm²)

Each is marked on top and bottom of tool:

WIRE-SIDE – is to be held against wire.

0.5 UP – this is the 0.5 blade, and would be always toward the outside of the connector.

此处有三种适配的退端子治具：

0.5mm 适用于 0.75mm² 线

0.7mm 适用于 0.5mm² 线或 FFC 线

0.9mm 适用于 0.13~0.35mm² 线

每个治具的上表面或下表面标示：

WIRE-SIDE : 靠线一侧

0.5 UP : 表示 0.5 厚治具，使用时靠外侧

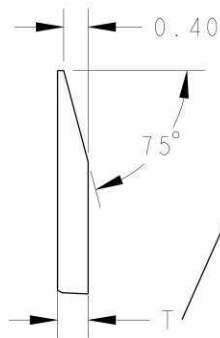


APPLICATION SPECIFICATION/应用规范
22P GENY UNSEALED CONNECTOR

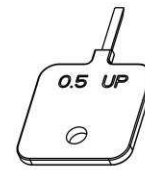
114-101081
 Rev. A

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REVISIONS					
P	LTR	DESCRIPTION	DATE	DWN	APVD
	1	INITIAL	30DEC2017	GZ	

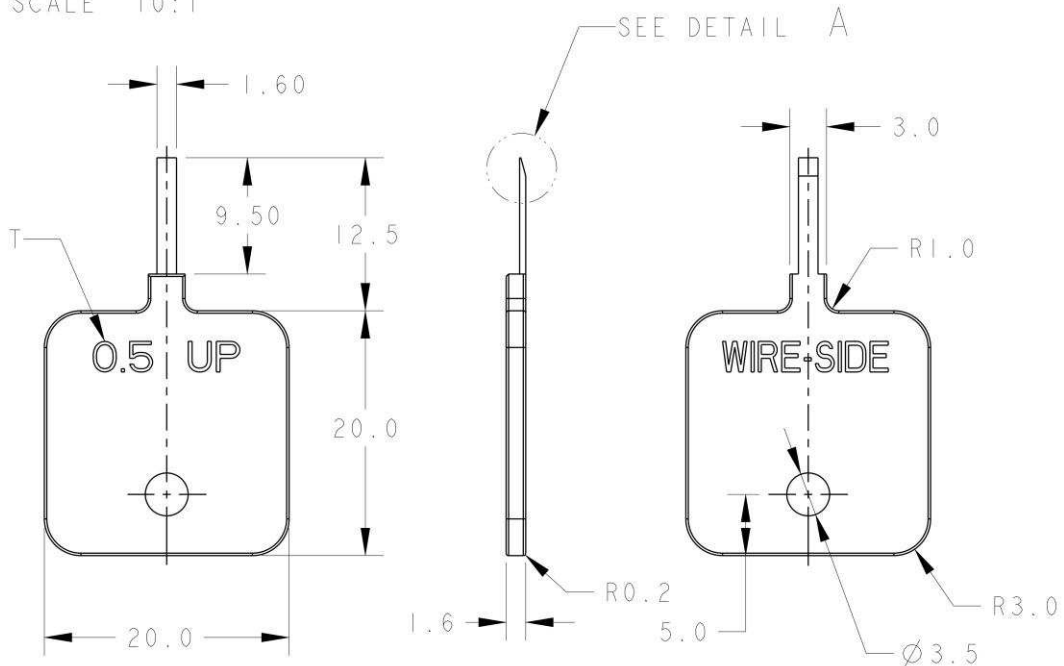


T	DESCRIPTION
0.5	0.75MM2
0.7	0.5MM2
0.9	0.13~0.35MM2



T=0.5 AS SHOWN

DETAIL A
 SCALE 10:1



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DIMENSIONS: mm	DWN GARY ZHU	30DEC2017	MATERIAL STEEL	FINISH -
	CHK -			
TOLERANCES UNLESS OTHERWISE SPECIFIED: 0 PLC ±0.1 1 PLC ±0.1 2 PLC ±0.02 3 PLC ± 4 PLC ± ANGLES ±°	APVD -			
	PRODUCT SPEC -		SIZE A4	CAGE CODE 00779
	APPLICATION SPEC -		RESTRICTED TO -	
	WEIGHT -		SCALE 2:1 SHEET OF REV	
CUSTOMER DRAWING				

1469-35 (3/13)