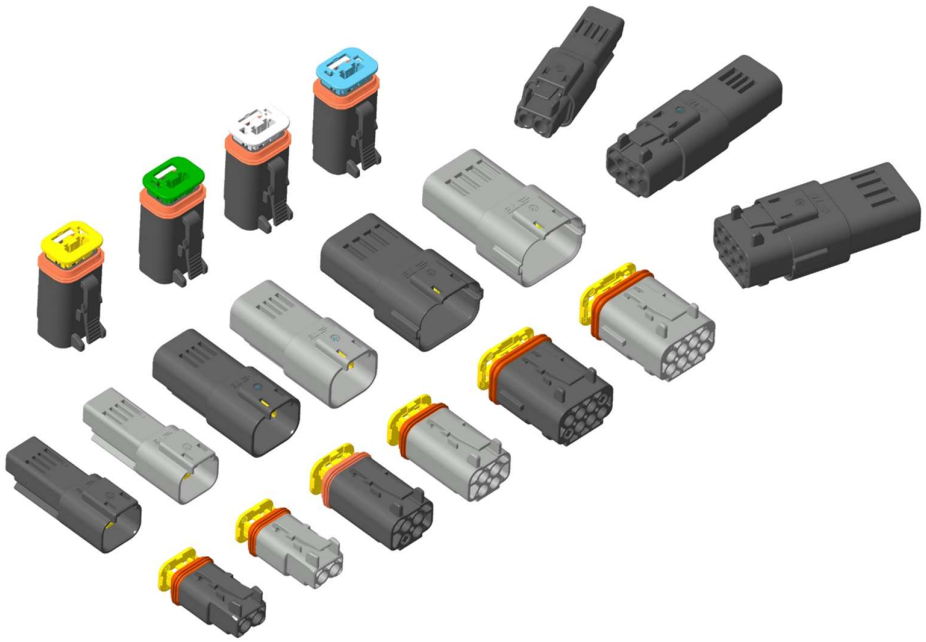
APPLICATION SPECIFICATION
应用规范

114-32258

22 Aug 2022 Rev. B1



Superseal Pro Connector series-Applications

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1. General

1. 综述

1.1 Purpose

1.1 目的

This specification includes the guidelines for application and mounting of subject connectors and their accessories.
本规范包括主体连接器及其配件的应用和安装。

1.2 Customer Drawing

1.2 客户图纸

For dimensions, materials and surface finishes etc. see the current customer drawings.
有关尺寸，材料和表面光洁度等，请参见当前的客户图纸。

1.3 Product Specification

1.3 产品规范

This application specification is valid for products specified in product specification 108-32189, which provides a description of the electrical and mechanical properties of multi-pos. connectors. Also see the current relevant contact systems product and application specifications.

该应用规范对产品规范 108-32189 中指定的产品有效，该规范提供了多位连接器的电气和机械性能的描述。另请参阅当前相关的端子系统产品和应用规范。

2. Product Description (This application specification takes 2Pos. connector as an example)

2. 产品描述(本说明以 2 位连接器为例)

2.1 Plug connector

2.1 母端连接器

As figure 2.1.1 shows, Superseal Pro plug connector contains 3 parts(1.housing, 2.front seal and3. TPA).
如图 2.1.1 所示，超级密封母端连接器包含 3 部分（1.塑壳，2.密封圈，3.TPA）

The housing is to protect the terminal, fix the terminal position and provide the fixed way.
塑壳可以保护端子，固定端子位置，提供固定方式。

The front seal is to provide seal protection after the assembly of PLUG and Rec.
密封圈可以提供 PLUG 与 Rec.装配后的密封保护。

TPA is to provide position assurance after the terminal is inserted into the plastic, and lock the circumferential seal ring, and provide Coding error proof and plug
TPA 用来提供端子插入塑胶后的位置保证，及锁紧周向密封圈，并提供 Coding 防错及接插。

Just as figure 2.1.2 shows, there are 3 kinds of CODING in A, B and C. There are differences in the colour and structure of TPA parts between various CODING. In case of mis-insertion, please assemble according to different coding. (The male CODING A must be assembled by female CODING A).
正如图 2.1.2 所示，此类产品有 A,B,C 3 种 CODING,各种 CODING 间的 TPA 零件的颜色及结构存在差异，以防误插，请根据不同的 coding 对应装配（即公端 CODING A 装配母端 CODING A ）,详见产品图

If the insertion force is very great, please confirm whether the wrong product is installed. Please avoid excessive force in the case of mis-insertion to cause damage to the product. If excessive force causes damage to the product, replace the damaged product for assembly.
如当插入力量过大时，请确认是否装错产品，请避免错插情形下过度用力导致产品损坏.若过度用力导致产品损坏需更换破损产品进行装配

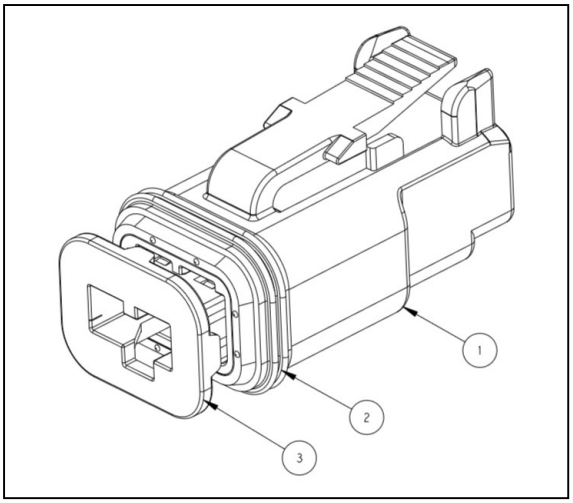


Figure 2.1.1 Superseal Pro 2pos. connector
图 2.1.1 超级密封 2 位母端连接器



Coding A
TPA Yellow
TPA 黄色



Coding B
TPA Green
TPA 绿色



Coding C
TPA Natural
TPA 自然色

Figure 2.1.2
图 2.1.2

2.2 Receptacle connector

2.2 公端连接器

As figure 2.2.1 shows, Superseal Pro Receptacle connector contains 2 parts(1.housing and 2. TPA).
如图 2.2.1 所示，超级密封公端连接器包含 2 部分（1.塑壳 2.TPA）。

The housing is to protect the terminal, fix the terminal position and provide the fixed way.
塑壳可以保护端子，固定端子位置，提供固定方式。

TPA is to provide position assurance after the terminal is inserted into the plastic, and lock the circumferential seal ring, and provide Coding error proof and plug.
TPA 用来提供端子插入塑胶后的位置保证，及锁紧周向密封圈，并提供 Coding 防错及接插。

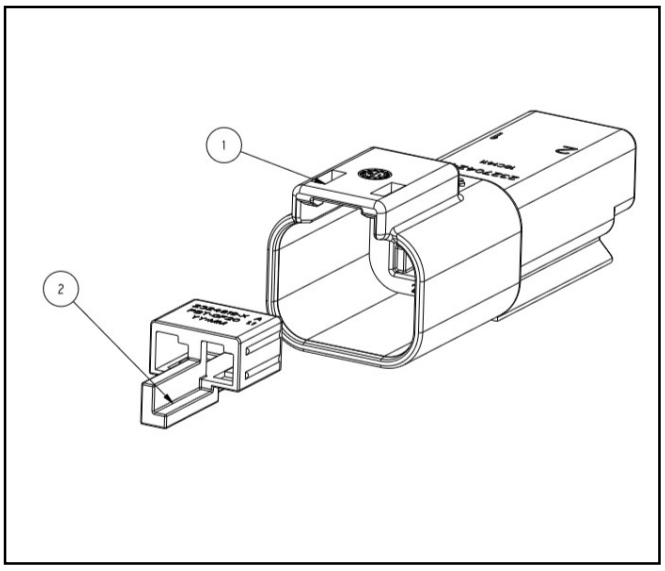


Figure 2.2.1 Superseal Pro 2pos. Receptacle connector
图 2.2.1 超级密封 2 位公端连接器

2.3 Accessories
2.3 附件

2.3.1 Backshells
2.3.1 尾夹

Figure 2.3.1.2 ， 2.3.1.3，2.3.1.4 shows male and female 180° &90° Backshells and which can provide protection against the rear of the connector to achieve IP69K.
图 2.3.1.2 和 2.3.1.3，2.3.1.4 是公母端 180° 和 90° 尾夹，提供接插件尾部的防护后防护可达到 IP69K 等级

As figure 2.3.1.1 shows, the following item numbers and types are available for selection.
如图 2.3.1.1 所示,以下料号和类型可供选择

P/N	Style	Tubing Size	Type	Applicable connector
2363714-1	180°	6,7.5,8.5 and 10	HB	2P Receptacle
2363714-2	180°	6,7.5,8.5 and 10	V0	2P Receptacle
2363791-1	180°	6,7.5,8.5 and 10	HB	2P Plug
2363791-2	180°	6,7.5,8.5 and 10	V0	2P Plug
2363796-1	90°	6,7.5,8.5 and 10	HB	2P,Plug&Receptacle,Use with 2P 180 °
2363796-2	90°	6,7.5,8.5 and 10	V0	2P,Plug&Receptacle,Use with 2P 180 °
2371721-1	180°	6,7.5,8.5 and 10	HB	4P Receptacle
2371721-2	180°	6,7.5,8.5 and 10	V0	4P Receptacle
2371723-1	180°	6,7.5,8.5 and 10	HB	4P Plug
2371723-2	180°	6,7.5,8.5 and 10	V0	4P Plug
2371725-1	90°	6,7.5,8.5 and 10	HB	4P Plug&Receptacle,Use with 4P 180 °
2371725-2	90°	6,7.5,8.5 and 10	V0	4P Plug&Receptacle,Use with 4P 180 °

Figure 2.3.1.1 Backshells
图 2.3.1.1 尾夹

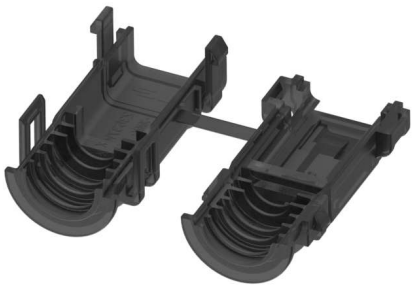


Figure 2.3.1.2 2P Male 180° backshells
图 2.3.1.2 2P 公端 180°尾夹



Figure 2.3.1.3 2P Female 180° backshells
图 2.3.1.3 2P 母端 180°尾夹



Figure 2.3.1.4 2P Male &Female 90° backshells
图 2.3.1.4 2P 公母端 90° 尾夹

The installation of 2P male and female backshells can be shown as below figure 2.3.1.5.
2P 尾夹安装效果示意图见图 2.3.1.5.。



Figure 2.3.1.5 2P backshells Installation figure
图 2.3.1.5 2P 尾夹安装效果示意图

2.3.2 Mounting clip

2.3.2 安装夹

Figure 2.3.2.1 show the installation of mounting clips
图 2.3.2.1 安装效果示意图。

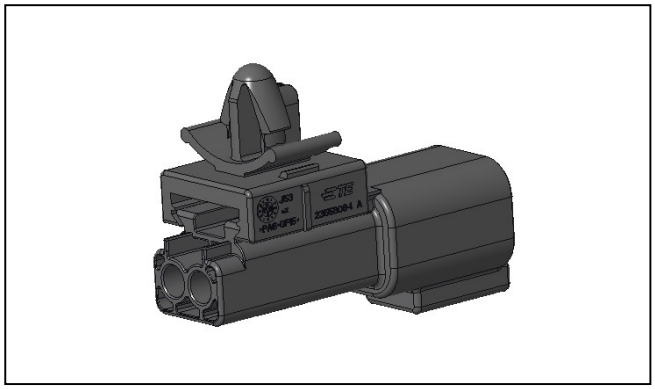


Figure 2.3.2.1
Installation of the mounting clip

As figure 2.3.2.2 shows, the following item numbers and types are available for selection.

如图 2.3.2.2 所示，以下料号和类型可供选择

Mounting Clip	Part Number	Mounting Direction	Color/Material	Mounting Hole O.D. inches(mm)
	1027-003-1200	Straight	Stainless steel	.433 (11.0)
	1027-005-1200	Straight	Stainless steel	.512 (13.0)
	1027-004-1200	Straight	Steel w/ zinc plating	.512 (13.0)
	1027-008-1200	Side	Steel w/ zinc plating	.433 (11.0)
	1027-017-1200	Side	Steel w/ zinc plating	.323 (8.2)
	1011-026-0205	Straight	Gray plastic	.200 (5.08)
	1011-030-0205	Straight	Black plastic	---
	1011-310-0205* *Connector removeable with 50N of force	Straight	Black plastic	---
	2355806-1	Straight	Black plastic	---
	2357922-1	Straight	Black plastic	---

2.3.3 SWS and Blind block

2.3.3 单线密封和盲堵

Figure 2.3.3.1 and 2.3.3.2 show SWS and Blind block
图 2.3.3.1 和图 2.3.3.2 是 SWS 和盲堵。



Figure 2.3.3.1 SWS
图 2.3.3.1 SWS



Figure 2.3.3.2 Blind block
图 2.3.3.2 盲堵

2.3.4 Applicable terminal and crimping specifications

2.3.4 适用端子及压接规范

Table 1 and 2 shows the PN and wire diameter that meet male and female adapter terminal.

表 1 和表 2 是公母端适配端子料号及线径。

TERMINAL PN	TERMINAL PLATING	APPLICATION	WIRE SIZE (MM2)	INSULATION WIRES(MM)	SWS P/N	BLIND PLUG P/N
2141114-1	TIN	GENERAL	0.35	Ø1.10~Ø1.40	963142-2	963143-1
2141114-3	SILVER	HIGH VIBRATION				
2141116-1	TIN	GENERAL	0.5~0.75	Ø1.40~Ø1.90	963142-1	963143-1
2141116-3	SILVER	HIGH VIBRATION				
2177610-1	TIN	GENERAL	1.0~1.5	Ø1.90~Ø2.40	963142-1	963143-1
2177610-3	SILVER	HIGH VIBRATION				

Table 1 male adapter terminal and wire diameter
表 1 公端适配端子料号及线径

1418844-1	TIN	GENERAL	0.35	Ø1.10~Ø1.40	963142-2	963143-1
1418844-3	SILVER	HIGH VIBRATION				
1670146-1	TIN	GENERAL	0.5~0.75	Ø1.40~Ø1.90	963142-1	963143-1
1670146-3	SILVER	HIGH VIBRATION				
1418850-1	TIN	GENERAL	1.0~1.5	Ø1.90~Ø2.40	963142-1	963143-1
1418850-3	SILVER	HIGH VIBRATION				
TERMINAL PN	TERMINAL PLATING	APPLICATION	WIRE SIZE (MM2)	INSULATION WIRES(MM)	SWS P/N	BLIND PLUG P/N

Table 2 female adapter terminal and wire diameter
表 2 母端适配端子料号及线径

For further information, 114-18464 can be seen. In case of conflict, this document shall prevail.
具体可参考 114-18464 压接规范,如有冲突处以此份文件为准。

3. Application Description

3. 应用规范

3.1 Loading connector with Contacts

3.1 组装端子和连接器

3.1.1 Loading Plug connector with Contacts

3.1.1 母端连接器组装端子

Contacts can only be inserted when the TPA is in the pre-locked position. If the TPA is in the final lock state, the TPA needs to be pulled to the pre-lock and then operates.
端子只有在 TPA 预锁状态下才能插入。若 TPA 在终锁状态需将 TPA 拉至预锁再进行操作

Please make sure that the terminal is inserted straightly and inserted into the right place as shown in figure3.1.1.1(When hearing the sound, pull the cable and it cannot be pulled).
请确保端子依图 3.1.1.1 朝向直着插入且插入到位 （听到卡搭声且往后轻拉线无法拉动）。

Correct orientation of the contacts as shown in Figure 3.1.1.1 must be ensured.
请确保插入方向正确，如图 3.1.1.1 所示。

Finally, press the TPA from the pre-lock to the final lock state as figure 3.1.1.2 shows. (When hearing the sound, pull the TPA lightly and it cannot be pulled).
最后将 TPA 从预锁按到终锁状态，如图 3.1.1.2 所示（听到卡搭声且往后轻拉 TPA 无法拉动）。

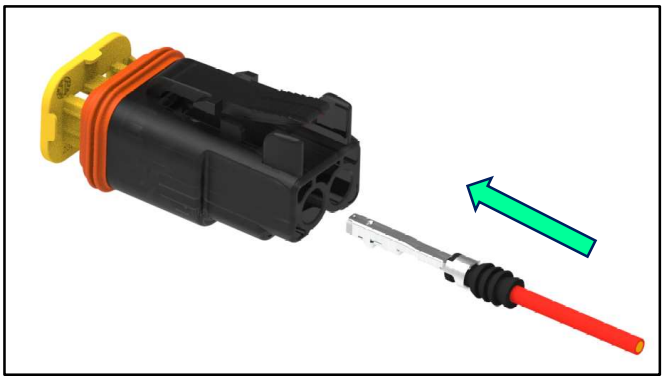


Figure 3.1.1.1 2P Contact loading into the housing.
图 3.1.1.1 2P 端子插入塑壳示意图

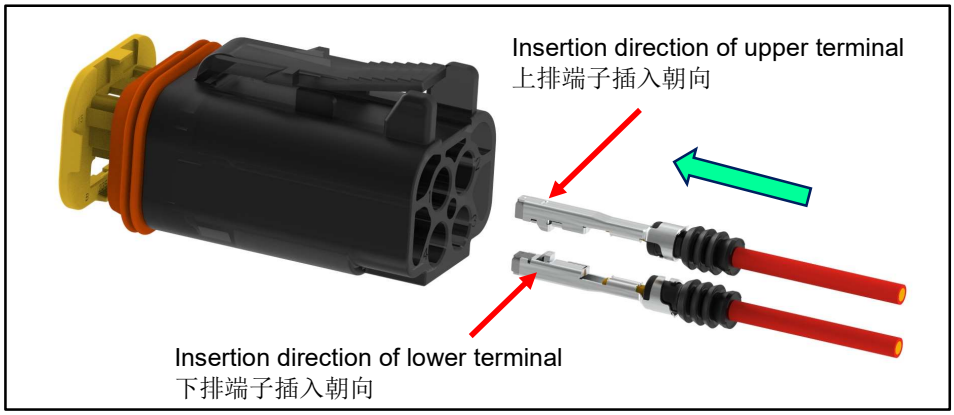


Figure 3.1.1.1 4P&8P Contact loading into the housing.

图 3.1.1.1 4P&8P 端子插入塑壳示意图

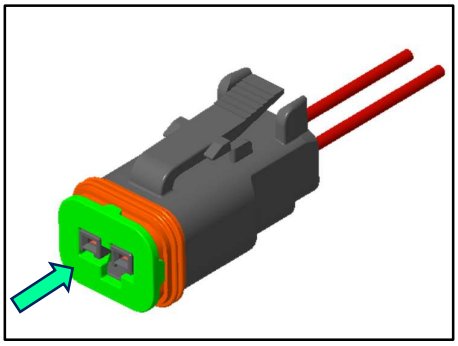


Figure 3.1.1.2 TPA into the socket housing

图 3.1.1.2 TPA 插入塑壳

Note: before the TPA is pressed from the pre lock to the final lock state, if the front seal slips out of the housing during transportation or handling, it is not deemed a fault. As long as the sealing ring is manually assembled to the correct position again, as shown in figure 3.1.1.3. Otherwise, the TPA may not be in place or the connector may be poorly sealed after mating

注意: 在 TPA 从预锁按到终锁状态前，如有运输或搬运期间导致的密封圈滑出塑胶状况，这不属于缺陷品，只要把密封圈再次手工组装到正确的位置，如图 3.1.1.3。否则 TPA 会有卡不到位或连接器配对后密封不良。

Front seal is in the correct position
密封圈组装到位



Front seal is not in the correct position
密封圈脱落，不在正确位置



Figure 3.1.1.3 The sealing ring is assembled in place

图 3.1.1.3 密封圈组装到位

3.1.2 Loading Receptacle connector with Contacts

3.1.2 公端连接器组装端子

Contacts can only be inserted if the secondary lock is in the pre-lock position.
端子只有在 TPA 预锁状态下才能插入.

The steps are the same as described in “Socket Housings” see chapter 3.1.1.
步骤和 3.1.1 的描述一样。

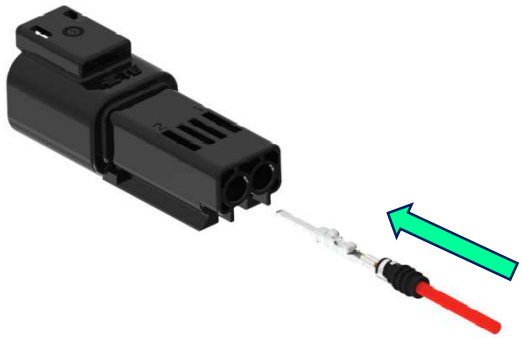


Figure 3.1.2.1 2P Contact loading into housing.

图 3.1.2.1 2P 端子插入塑壳

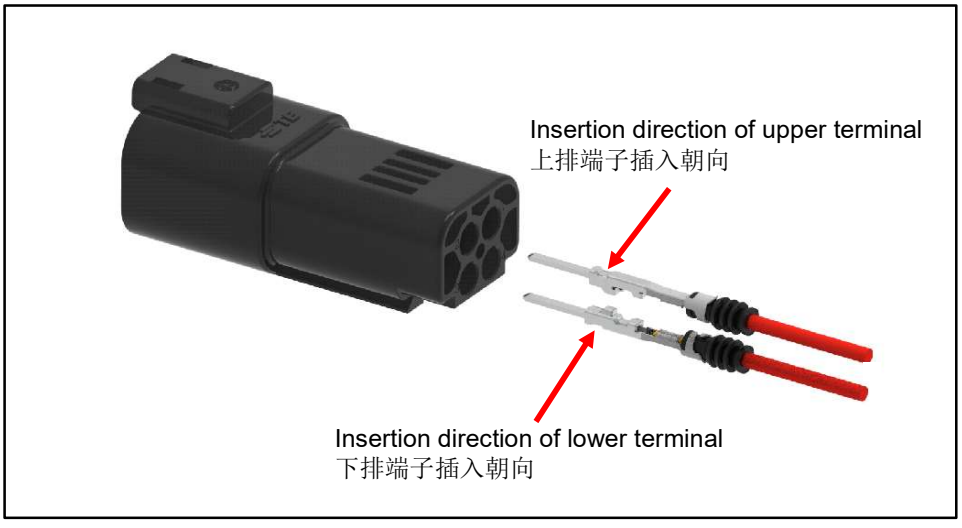


Figure 3.1.2.1 4P&8P Contact loading into housing.

图 3.1.2.1 4P&8P 端子插入塑壳

3.2 Mating Plug& Receptacle connector

3.2 公母端连接器装配

As figure 3.2.1 shows, ensure that the female connector is inserted straightly into male connector, and that angular skewing is not allowed.

如图 3.2.1 所示，确保母端直着插入公端，不允许有角度的歪斜对配。

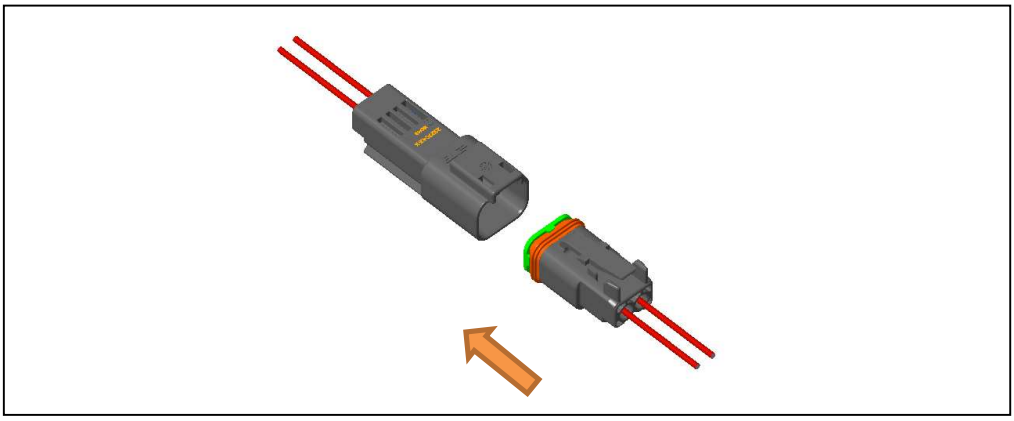


Figure 3.2.1

As figure 3.2.2 shows, when the cable is inserted into the assembly, it is possible to bend the male terminal or top the secondary lock. At the same time, the male and female terminals also have the risk of withdrawing the needle.

如图 3.2.2 所示，当斜插入装配后，有可能将公端子折弯或顶坏母端二次锁扣。同时公母端子也存在退针的风险。

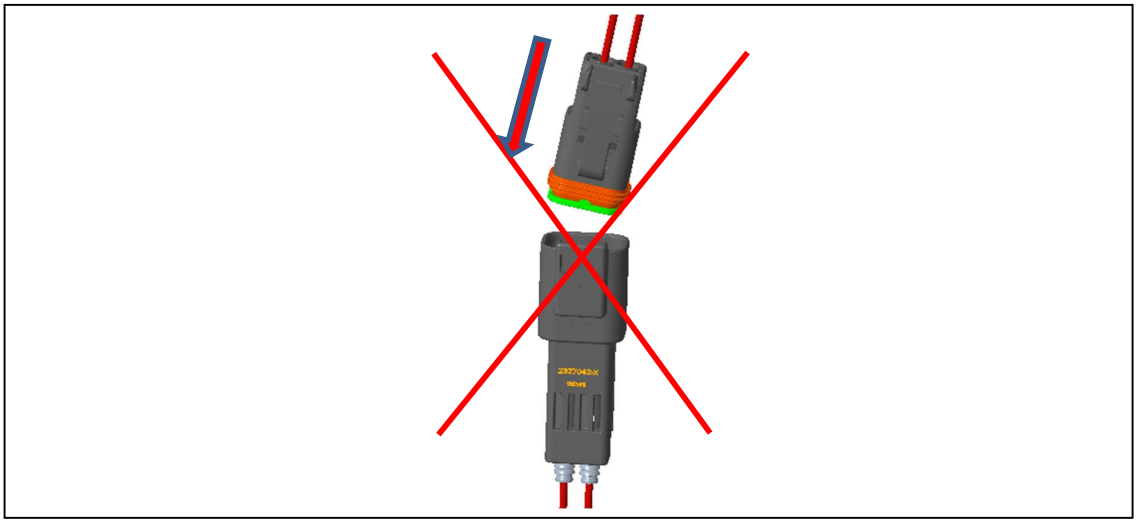


Figure 3.2.2

3.3 Extracting Contacts from the connector

3.3 从连接器中退端子

3.3.1 Extracting Contacts from the connector（Same method for male and female）

3.3.1 从连接器中退端子 （公母端方法一样）

The secondary locking device must be in the pre-locked position before extracting contacts.
把 TPA 拉到预锁状态情况下进行解锁/退针

Use the tool(figure 3.3.1.1) to lift the latching tab and gently pull the wire until the cable can be pulled out to stop lifting the latching tab.
使用工具（图 3.3.1.1）抬起卡锁弹片,同时轻拉导线,至能将线拉出时停止上抬卡锁弹片。

As figure 3.3.1.2, if the TPA is completely separated and the needle is retracted, the operation should be careful to avoid excessive lifting of the elastic piece, which causes the plastic locking piece to break. If the operation is not correct, the card lock needs to be replaced.
如图 3.3.1.2 所示，如果将 TPA 完全分离后退针,操作上要注意避免过度上抬弹片导致塑料锁片断裂,若操作不当至卡锁断裂需更换插件。

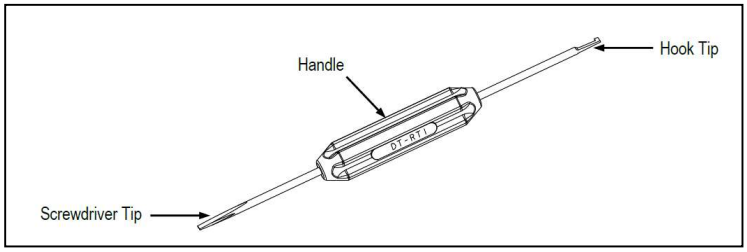


Figure 3.3.1.1 DT-RT1
图 3.3.1.1 DT 退针工具

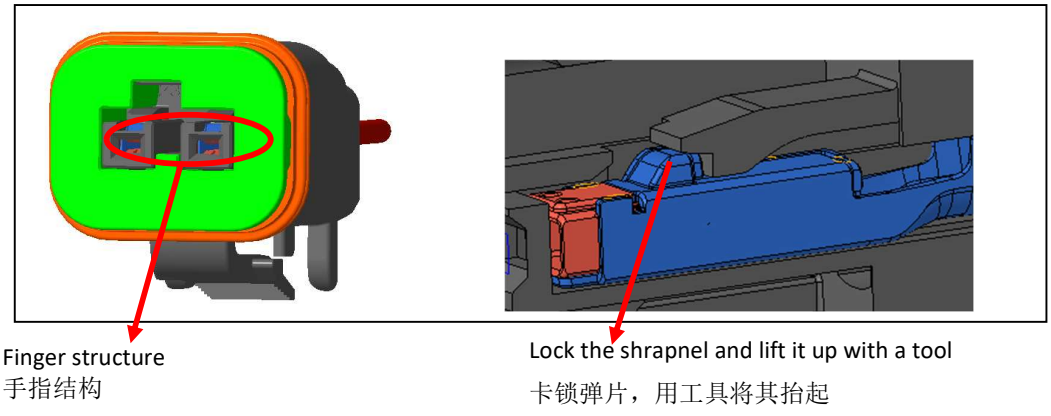


Figure 3.3.1.2
图 3.3.1.2

Unikeyic Electronics

Global Electronic Components Distributor

Click to view pricing, inventory, delivery, and lifecycle information:

TE Connectivity:

2310537-1 CPF0402B37K4E1 RH73H2A40MKTN 3631B101LL 650075-000 MPT100C18RF SBCHE64R7K SBCHE154R7K 1-794222-0 141991-2 2005330-1 2377783-2 917696-1 ROX05SJ18R 175977-2 CRGCQ2010J3K3 SMW73R0JT 1969656-1 3-1393225-0 U5254-000005-030PA 2-292161-3 3430B2F51RTDF TE50BR39J 2834055-1 936348-1 1743455-2 1903112-2 2380312-2 1-962915-1 1393431-1