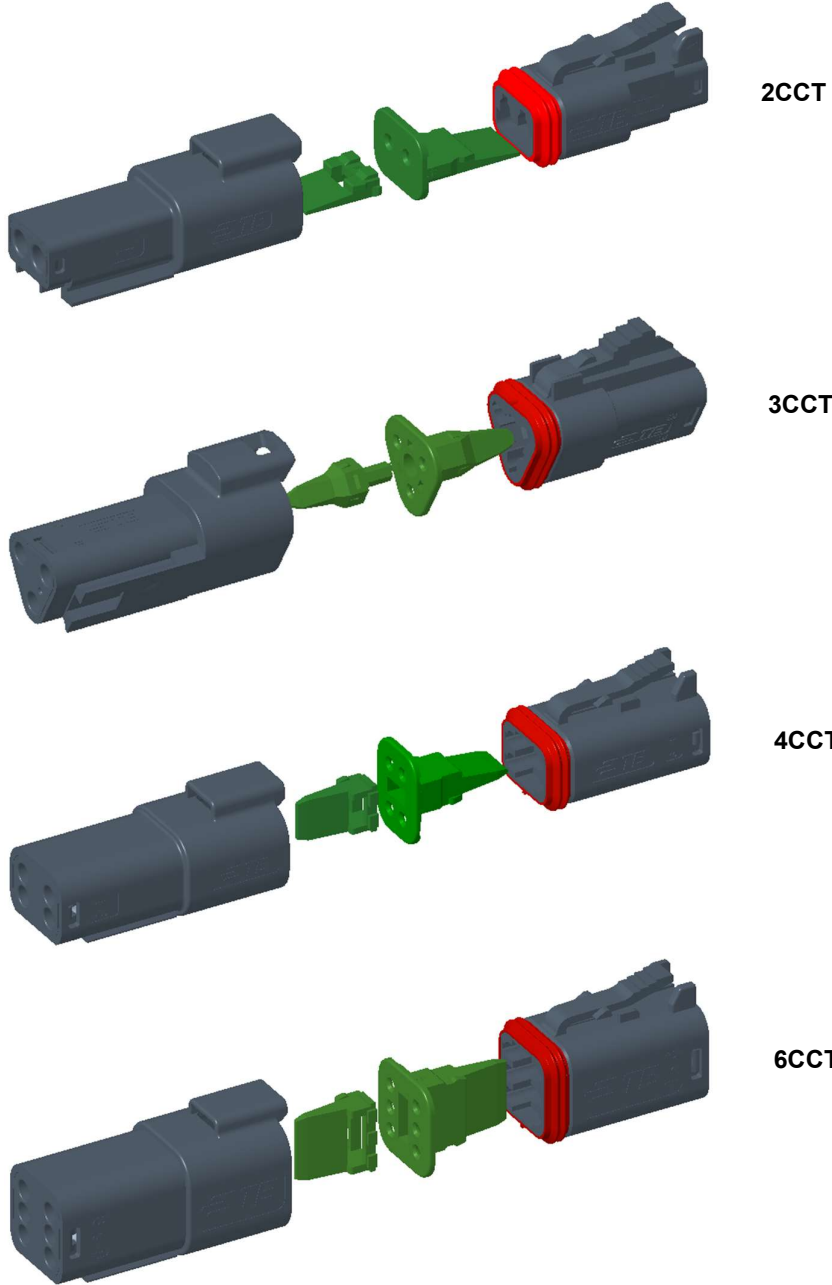
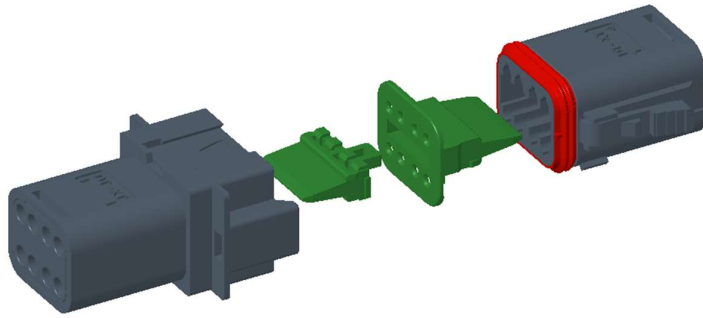
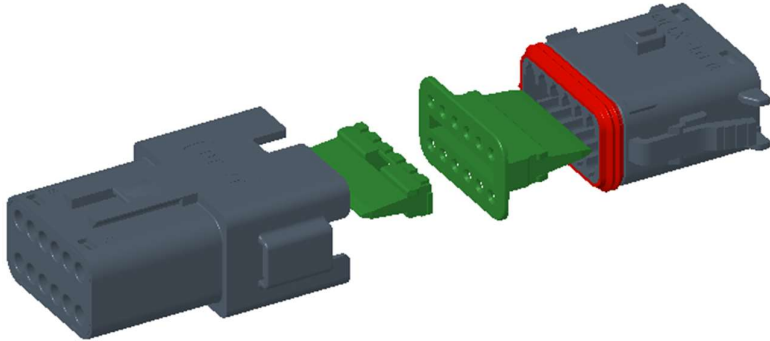


DT-XT Connector series Application

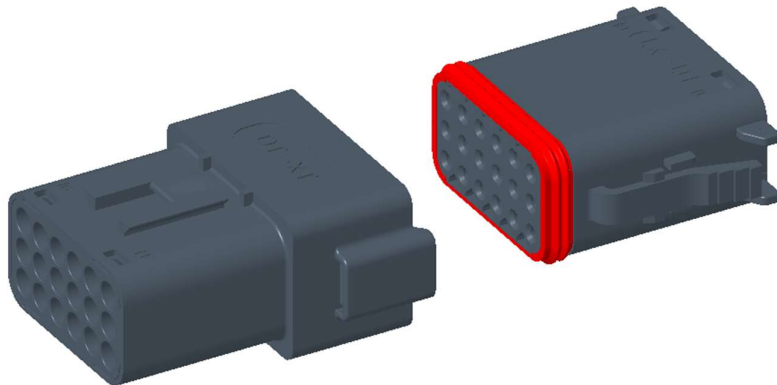




8CCT



12CCT



18CCT

				DRW: J. Gu DATE: 29Jun2020	TE Connectivity		
				CHK: C. Wan DATE: 29Jun2020			
				APVD: I. Yin DATE: 29Jun2020	NO 114-160017	REV B	LOC ES
B	Change description from ML-XT to DT-XT	I. Yin	23Jul2020				
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REV	REVISION RECORD	APVD	DATE	PAGE 1 OF 18	Title DT-XT Connector series Application		



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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 108-160026, 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 108-160026 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 2CCT 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, plug connector contains 4 parts: 1.Plug housing, 2.Back seal, 3. Back cover, 4.Heatshrink housing(optional).

如图 2.1.1 所示，母端连接器包含 4 部分：1.母端塑壳，2.密封垫，3.后盖，4.热缩外壳(可选项)

The plug housing is to protect the terminal, fix the terminal position, provide the fixed way and seal protection. 塑壳可以保护端子，固定端子位置，提供固定方式及防水密封。

The back seal is to provide seal protection for connector and wire. 密封垫可提供连接器和导线的密封保护。

The back cover is to fix and protect the back seal. 后盖用来固定和保护密封垫。

The heatshrink housing is for heatshrink tube. 热缩外壳用于安装热缩管。

Plug wedgelock(TPA) is to provide position assurance after the terminal is inserted into the plastic, and for different codings. After the terminals insertion in place, then fix the wedgelock(TPA).

TPA 用来提供端子插入塑胶后的位置保证，及不同的键位。客户端端子插到位后，再安装 TPA。

Note: if the insertion force is very big, 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.

注意：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。

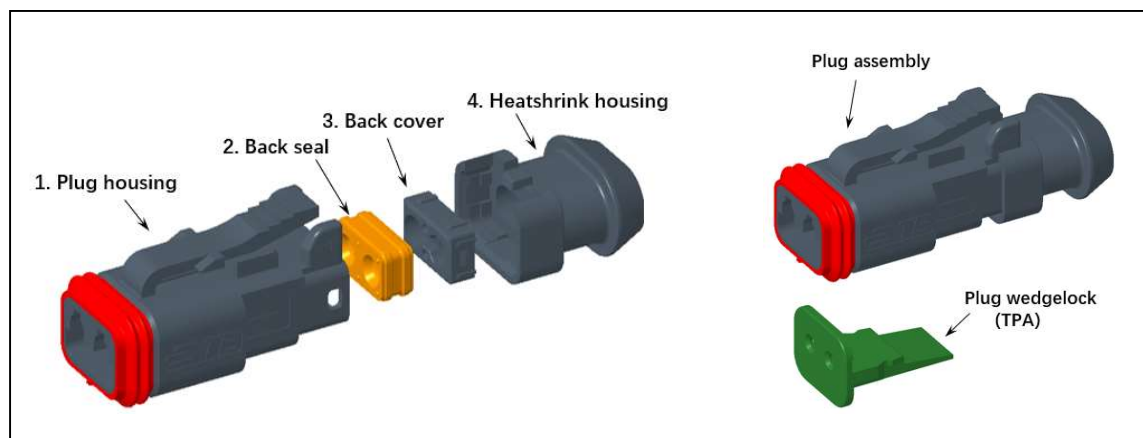


Figure 2.1.1 2CCT Plug Connector
图 2.1.1 2 位母端连接器

2.2 Receptacle connector

2.2 公端连接器

As figure 2.2.1 shows, receptacle connector contains 4 parts: 1.Receptacle housing, 2.Back seal, 3. Back cover, 4.Heatshrink housing(optional).

如图 2.2.1 所示，公端连接器包含 4 部分：1.公端塑壳，2.密封垫，3.后盖，4.热缩外壳(可选项)

The receptacle housing is to protect the terminal, fix the terminal position, provide the fixed way with plug housing.

塑壳可以保护端子，固定端子位置，提供和母端塑壳的安装方式。

The back seal is to provide seal protection for connector and wire.

密封垫可提供连接器和导线的密封保护。

The back cover is to fix and protect the back seal.

后盖用来固定和保护密封垫。

The heatshrink housing is for heatshrink tube.

热缩外壳用于安装热缩管。

Plug wedgelock(TPA) is to provide position assurance after the terminal is inserted into the plastic, and for different codings. After the terminals insertion in place, then fix the wedgelock(TPA).

TPA 用来提供端子插入塑胶后的位置保证，及不同的键位。客户端端子插到位后，再安装 TPA。

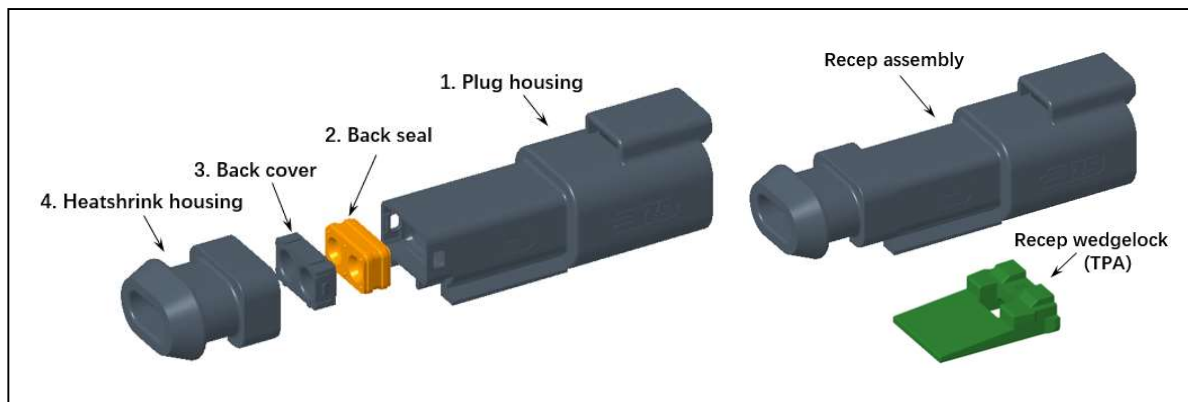


Figure 2.2.1 2CCT Receptacle Connector

图 2.2.1 2 位公端连接器

2.3 Pin/Socket Terminal

2.3 公母端子



Figure 2.3.1 Pin Terminal, Stamped & Formed



Figure 2.3.2 Pin Terminal, Solid

Terminal Features

Base Material - Copper Alloy

Plating Options - Nickel, Gold

Wire Sizes: 14, 16, 18, 20, 22 & 24 AWG
1.5, 1.0, 0.8, 0.75, 0.5, 0.35 &
0.22 mm²



Figure 2.3.3 Socket Terminal, Stamped & Formed



Figure 2.3.4 Socket Terminal, Solid

2.4 Terminal crimping(the same method for pin and socket terminal)

2.4 端子压接(公母端子的压接方式相同)

Crimping tools provide lower total installation and maintenance costs. However, controls are required to help ensure that the proper crimp tools designed for the type and size contact are used, the pin or socket is properly inserted into the tool, the wire insulation is stripped properly, and the wire fully inserts into the contact.

压接工具可降低总的安装和维护成本。但是，需要进行控制以确保使用针对类型和尺寸接触设计的适当压接工具，将公母端子正确放入工具中，正确剥去电线绝缘层以及将电线完全插入触点中。

When a crimp is completed, the crimp can be visually inspected. The inspector should check for:

- The removed insulation should expose a conductor length that is specified in the application tooling specification.
- Wire strands intact.
- All wire strands are in the conductor crimp barrel.
- Wire is inserted to the correct depth in the terminal.
- The Insulation crimp heights and width should be equal to or less than that of the cable it is crimped to (**Note: Poor Insulation crimps can lead to difficult terminal extraction**)

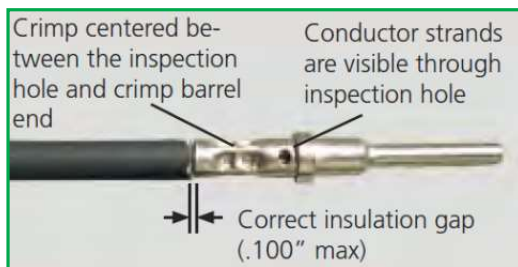
压接完成后，可以目视检查压接。检验员应检查：
去除的绝缘层应露出的导体长度要在应用规范中指定。
导线完好无损。

所有导线都在导体压接区域中。

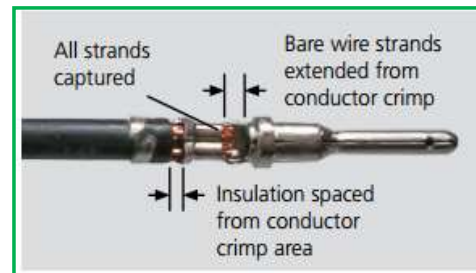
电线插入端子中的深度正确。

绝缘皮压接的高度和宽度应等于或小于压接的线缆的高度和宽度（**注意：绝缘压接不良会导致端子拔出困难**）

ACCEPTABLE CRIMPS 可接受的压接方式



Solid Contact (Cable Strip Length 6.35 to 7.92mm Reference)

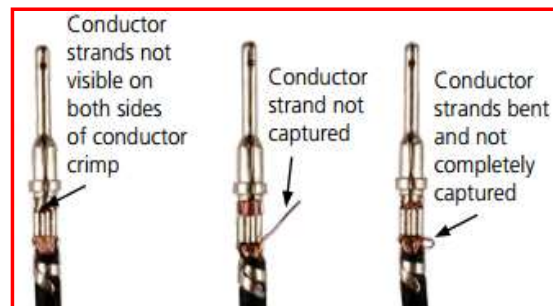


Stamped & Formed Contact

UNACCEPTABLE CRIMPS 不可接受的压接方式



Solid Contact



Stamped & Formed Contact

3. Application Description

3. 应用规范

3.1 Loading connector with terminals

3.1 组装端子和连接器

Grip the wire no less than 10mm for smaller diameter cable (1.2mm to 2.4mm) & no less than 20mm for larger diameter cable (2.4mm to 3.6mm) from the terminal insulation crimp, make sure that the terminal is inserted horizontally and inserted into the right position as shown in figure 3.1.1 (When hearing the click sound, pull the cable gently and it cannot be pulled). For insertion of flexible cables see section 3.3.

对于直径较小的线缆（1.2mm 至 2.4mm），从端子绝缘压接处夹住不小于 10mm，对于直径较大的线缆（2.4mm 至 3.6mm）不小于 20mm，确保端子依图 3.1.1 朝向水平插入且插入到位（听到卡搭声且往后轻拉，线缆无法拉动）。有关插入柔性电缆的信息，请参阅第 3.3 节。

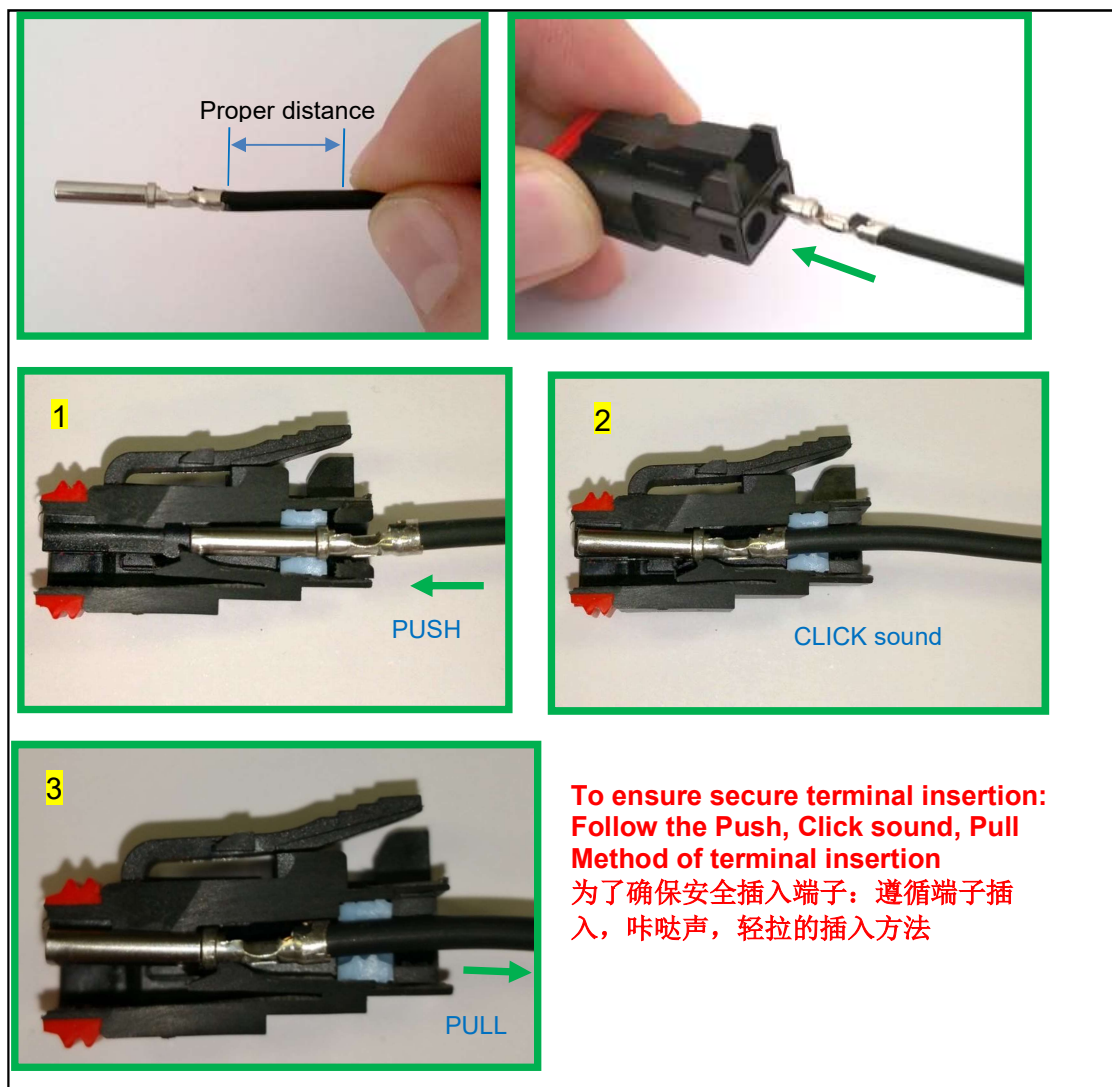


Figure 3.1.1 Contact loading into a tab housing

图 3.1.1 端子插入塑壳

Note: the following operation is not correct.

注意：以下操作是不正确的。

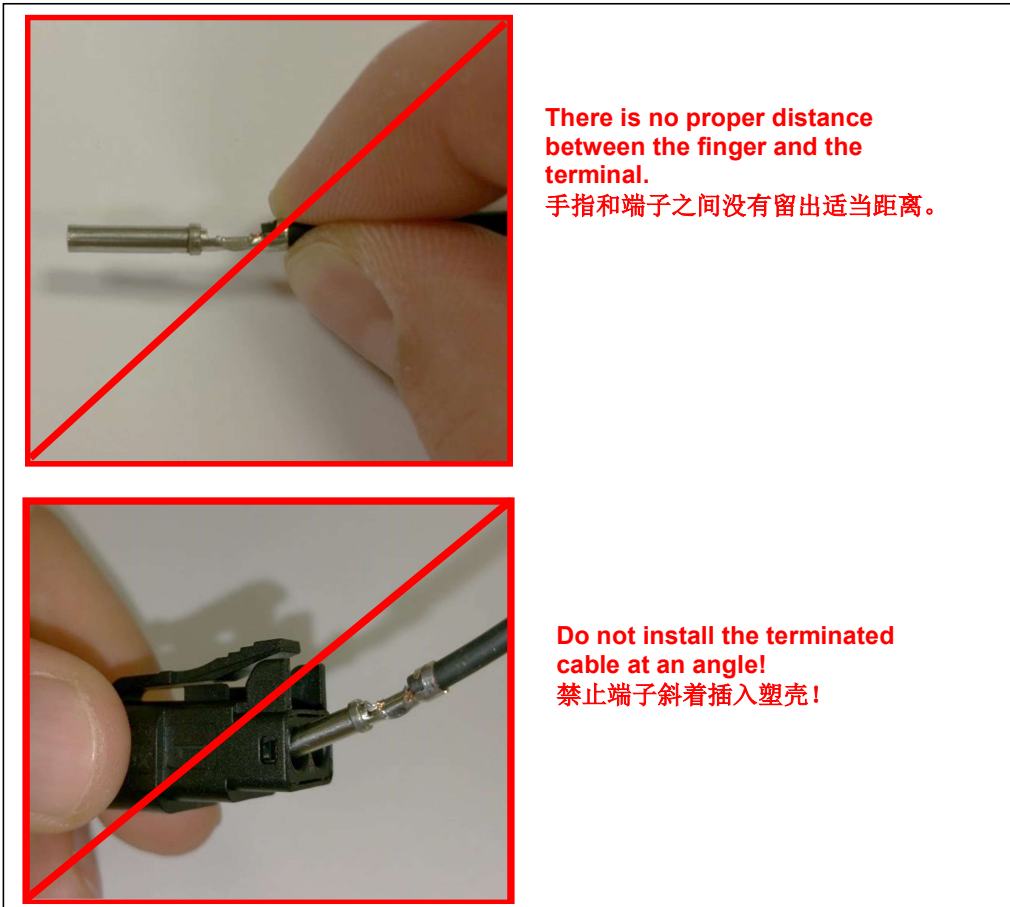


Figure 3.1.2 Wrong method for terminal insertion

图 3.1.2 端子错误的插入方式

3.2 Fixing wedgelock(TPA)

3.2 安装 TPA

Fix wedgelock(TPA), after all terminals are inserted into connector. It is installed in place, when hear a click sound.

所有端子插入到位后，安装 TPA. 当听到咔哒声，表示已安装到位。

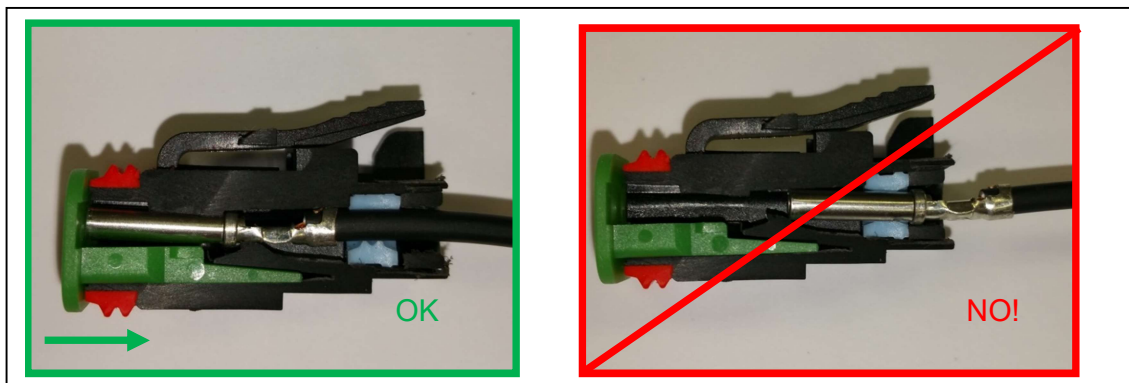


Figure 3.2.1 Fix wedgelock(TPA)

图 3.1.1 安装 TPA

Do not insert the terminal, when the wedgelock(TPA) is already in place. Or do not fix the wedgelock(TPA), when the terminal is not inserted in place.

已安装 TPA 后，无法插入端子。或端子未插到位，不可以安装 TPA。

3.3 Terminal insertion with flexible cable

3.3 安装柔性线缆

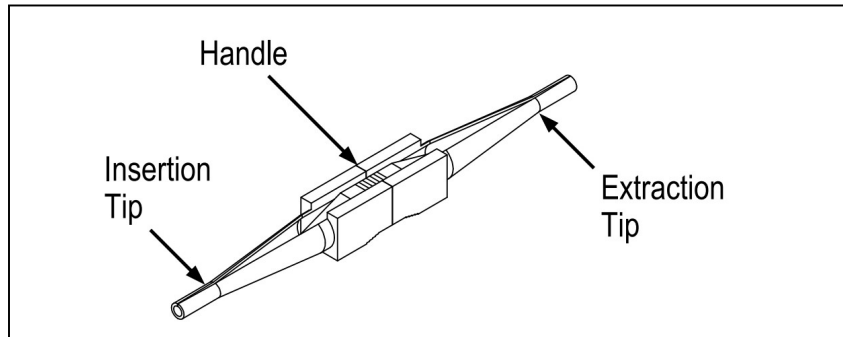


Figure 3.3.1 Insertion/Extraction Tool for size 16 contacts

图 3.3.1 尺寸 16 的端子安装工具

Some cables can be difficult to insert into the connector cavities as they tend to bend, to avoid seal damage it is recommended that, on flexible cables, the M81969/14-03 Insertion/Extraction Tool is used to aid the installation of the contact.

某些电缆可能会弯曲，因此可能难以插入连接器中，为避免密封损坏，建议在柔性电缆上使用工具来辅助端子的安装。

To avoid any damage and ensure correct installation follow the below steps:

为避免任何损坏并确保正确安装，请遵照以下步骤：

1. Place the wire over the slot in the tool tip. Apply light pressure on the wire until the tip spreads and allows the wire to enter the tip.

1. 将线缆放入工具槽的尖端。轻压线缆，直到尖端散开，允许线缆进入尖端。

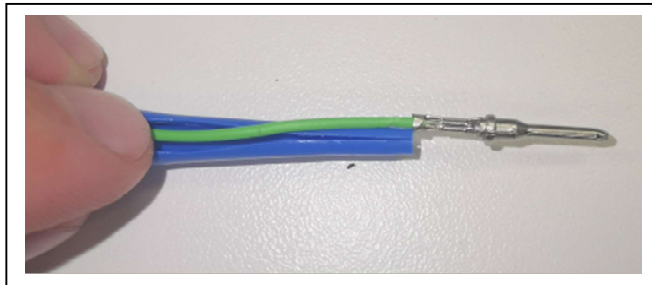


Figure 3.3.2

图 3.3.2

2. Slide the contact wire barrel into the insertion (blue) end of the tool tip until the tip butts against the shoulder of the contact.

2. 将端子的铆合部位滑入工具尖端的插入端（蓝色），直到工具尖端抵住端子的肩部。



Figure 3.3.3

图 3.3.3

3. Align the contact and tool tip with the desired connector contact cavity.
3. 将端子和工具尖端对准相应的连接器的孔。

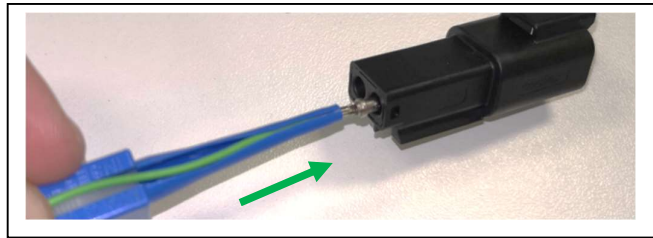


Figure 3.3.4
图 3.3.4

4. Hold the wire against the serrations in the tool handle and push the tool straight into the contact cavity until the contact bottoms.
4. 拿住线缆在工具的锯齿部位，将工具笔直的插入孔中，直到接触底部。

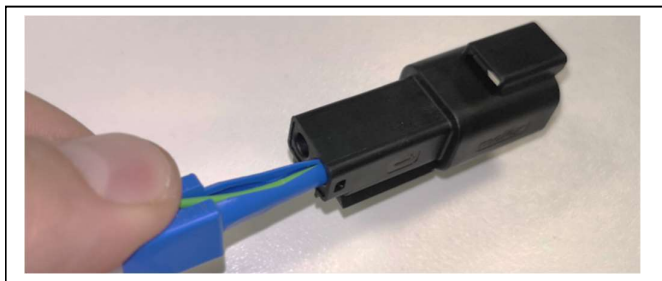


Figure 3.3.5
图 3.3.5

5. Remove the tool from the contact. Pull back lightly on the wire to ensure that the contact is secure in the cavity.
5. 从端子上退出工具。往后轻拉线缆，确保端子固定在孔中。

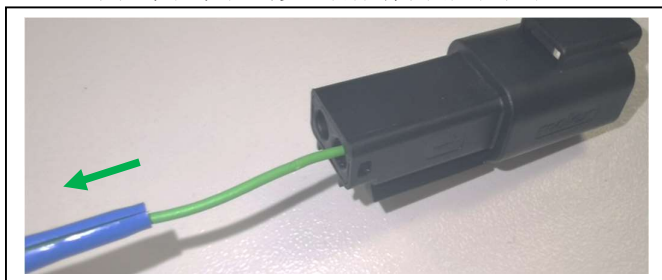


Figure 3.3.6
图 3.3.6

3.4 Extracting terminals from the connector

3.4 从连接器中退端子

3.4.1 For 2/3/4/6/8/12CCT connectors

3.4.1 针对 2/3/4/6/8/12 位的连接器

1. Lever the Wedglock(TPA) from the housing using the flat end of the removal tool – Take care not to damage the seal. For Receptacle wedglock use hooked end of tool. For 3cct Receptacle wedglock removal use needle nose pliers.

1. 使用拆卸工具的平头端从外壳上撬起 TPA-注意不要损坏密封件。对于公端 TPA，使用工具的钩形端。对于 3cct 公端的 TPA，请使用尖嘴钳移除。

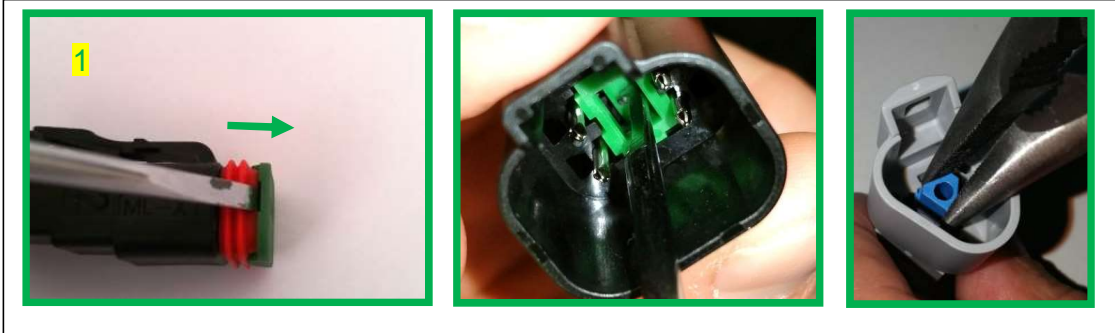


Figure 3.4.1.1
图 3.4.1.1

2. To remove the contacts, gently pull the cable backwards while at the same time releasing the locking finger by moving it away from the terminal/contact with the flat end of the removal tool.

2. 为了取下端子，往后轻拉线缆，同时用拆卸工具的平头端拨开卡端子的卡扣。

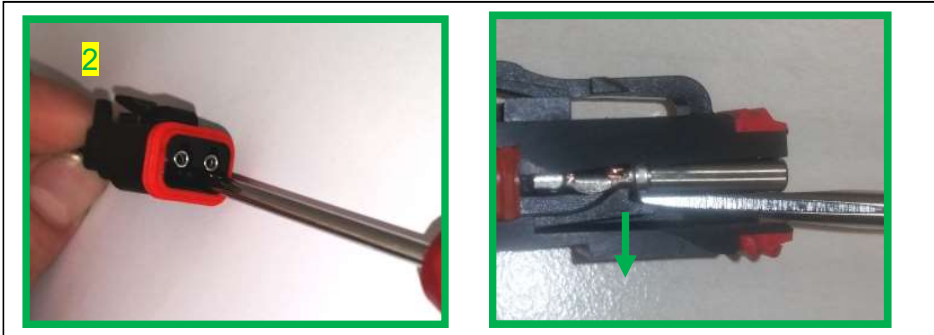


Figure 3.4.1.2
图 3.4.1.2

3. Pull out the terminated cable slowly and on centre.

3. 将线缆缓慢并居中拉出。

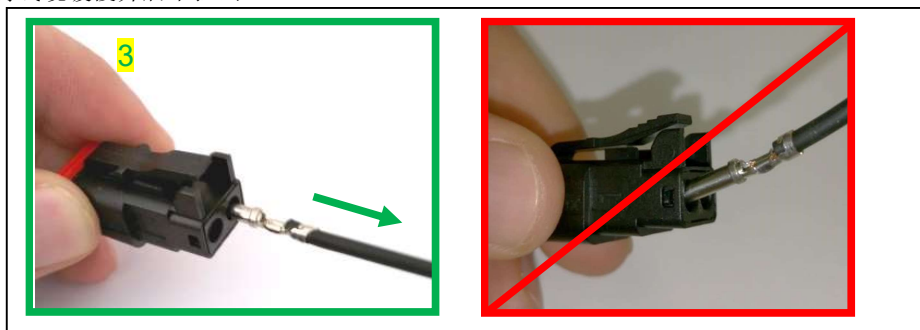


Figure 3.4.1.3
图 3.4.1.3

DO NOT PULL OUT CABLES AT AN ANGLE – ONLY EXTRACT ONE CABLE AT A TIME!

请勿倾斜地拉出线缆---一次只能取出一根线缆。

3.4.2 For 18CCT connector

3.4.2 针对 18 位的连接器

1. With rear of connector pointed towards you, snap the removal tool over the cable of the contact to be removed.

1. 将连接器的后面指向您，将拆卸工具卡在要拆卸的端子电缆上。

2. Slide tool along the wire and carefully insert the tool into the cavity until it engages contact and resistance is felt.

2. 沿着电线滑动工具，然后小心地将工具插入孔中，直到其接触端子并感觉到阻力为止。

3. Keeping the cable pressed against the removal tool gently pull out the cable.

3. 保持线缆压在拆卸工具上，轻轻地拉出线缆。

4. Pull contact wire assembly out of connector, taking care not to pull too quickly.

4. 将端子和线缆组件从连接器中拉出，注意不要拉得太快。

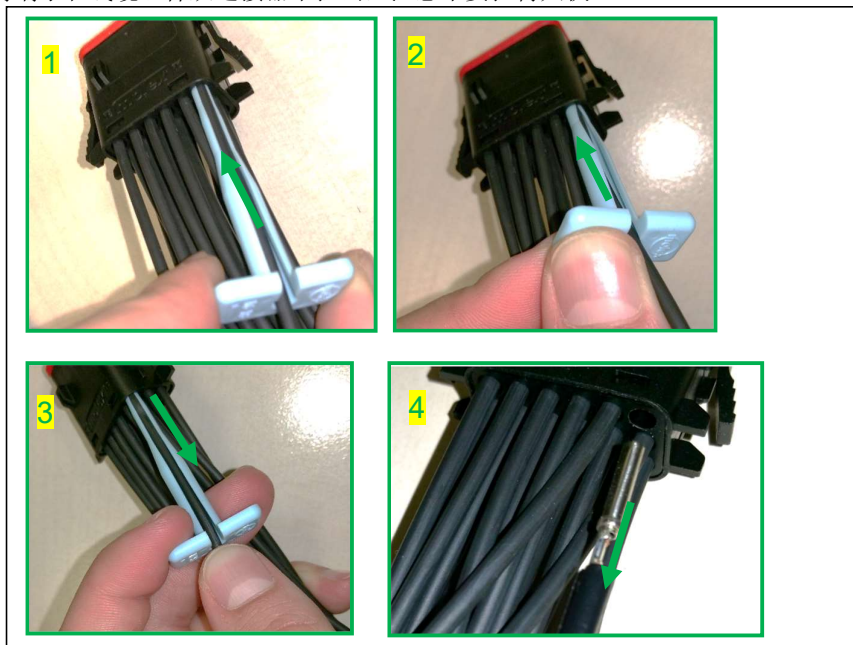


Figure 3.4.2

图 3.4.2

3.5 Mating Plug & Receptacle connector

3.5 公母端连接器装配

Note and align both plug and receptacle connectors and keying features (if present). Begin mating procedure by sliding the two connectors together, press firmly until you hear an audible click from the primary latch.

注意并配对母端和公端连接器以及键位特征（如果有）。通过将两个连接器一起滑动来开始配合，用力按直至听到卡锁的咔嚓声。

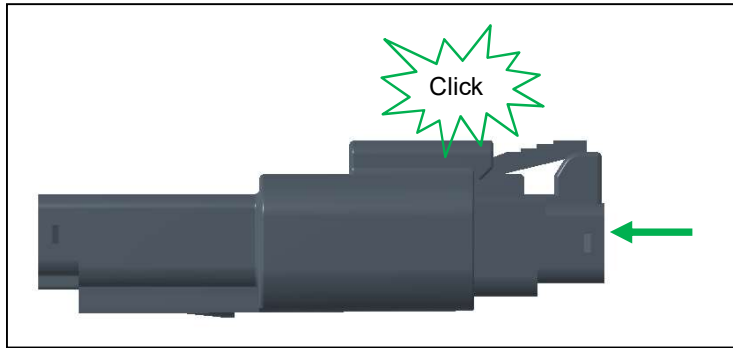


Figure 3.5.1
图 3.5.1

Note: As figure 3.5.2 shows, when the plug is inserted into the receptacle at an angle, it is possible to bend the male terminal. When mated in the wrong direction, the plug and receptacle housing may be damaged.

注意：如图 3.5.2 所示，当斜插入装配后，有可能将公端子折弯。当以错误的方向插入，有可能会顶坏塑壳。

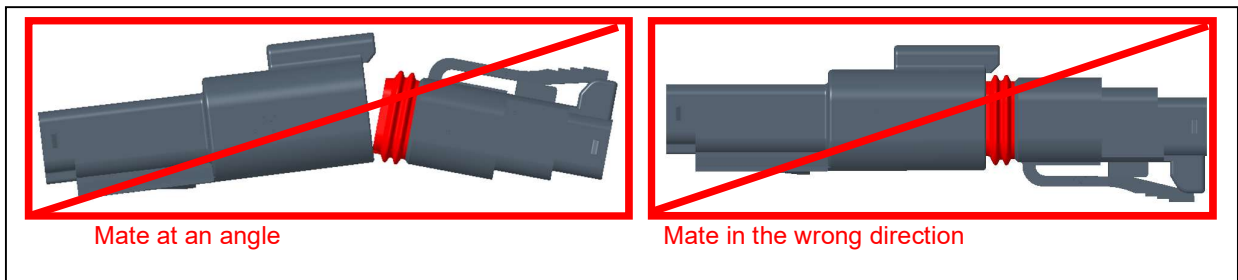


Figure 3.5.2
图 3.5.2

3.6 Unmating Plug& Receptacle connector

3.6 公母端连接器分离

As figure 3.6.1, press the primary latch on the plug connector to fully disengage locking mechanism. Then pull the plug connector out from the receptacle connector while keeping the primary latch depressed.

如图 3.6.1 按下母端的卡扣，将锁扣装置完全松开。然后保持按压母端卡扣，将母端连接器从公端中拔出。

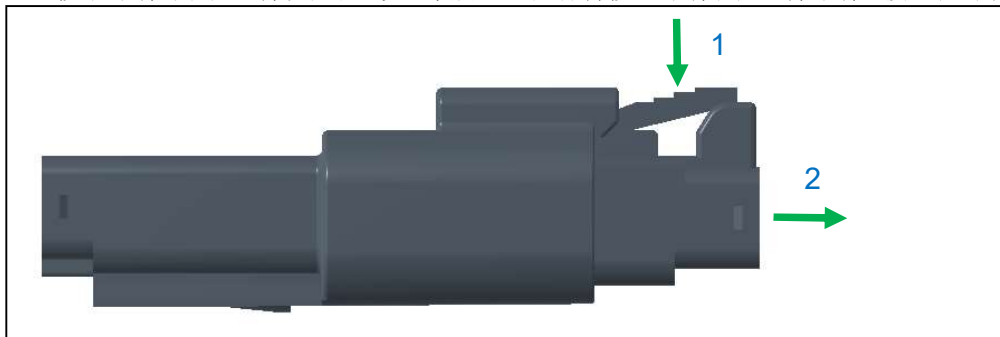


Figure 3.6.1
图 3.6.1

3.7 Harness routing

3.7 线缆布线

The cable shall exit 1.0mm beyond the connector housing, co-axial with the grommet sealing lips. Bending of the cable shall be performed beyond this point to the recommended cable manufacturer's bend radius.

线缆应从连接器外壳伸出 1.0 毫米，与密封垫的孔同轴。电缆的弯曲应超出此点，超出电缆制造商推荐的弯曲半径。

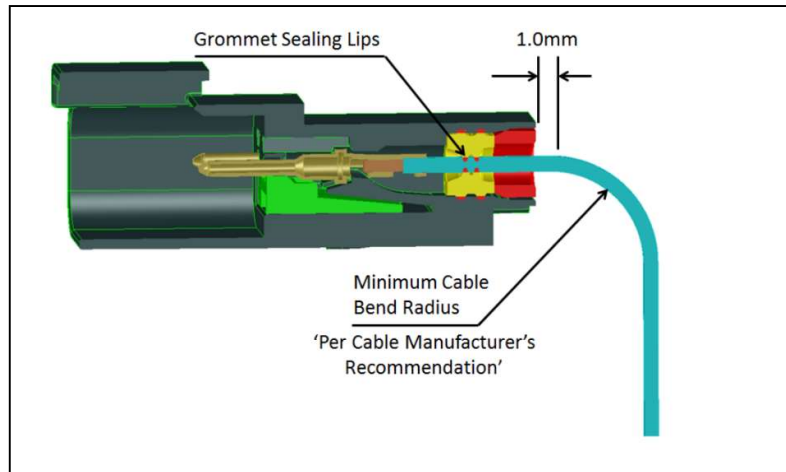


Figure 3.7.1
图 3.7.1

3.8 Sealing plug installation and removal

3.8 密封塞安装和取出

1. Holding the sealing plug with large diameter end away from the connector, gently apply downward pressure to force the sealing plug into the cavity.

1. 手持密封塞的大径端，并轻轻向下施加压力，以将密封塞推入孔中。

2. With perpendicular motion, apply downward pressure to the large diameter end of the sealing plug.

2. 垂直放置时，在密封塞的大径端施加向下的压力。

3. Apply pressure until sealing plug is forced to stop by contact with the back cover. Visually inspect the sealing plug large diameter end to confirm it is flush with cavity opening. If multiple sealing plugs are used close together, the large ends may not sit flush due to tight spacing. Maximum allowable distance from top of sealing plug to grommet surface is 5.00mm.

3. 施加力直至密封塞和后盖接触后停止。外观检查密封塞的大径端来确认其与孔的开口齐平。如果同时使用多个相邻的密封塞，大径端可能不会齐平放置，由于紧密的间距。从密封塞顶部到后盖表面的允许的最大距离是 5mm。

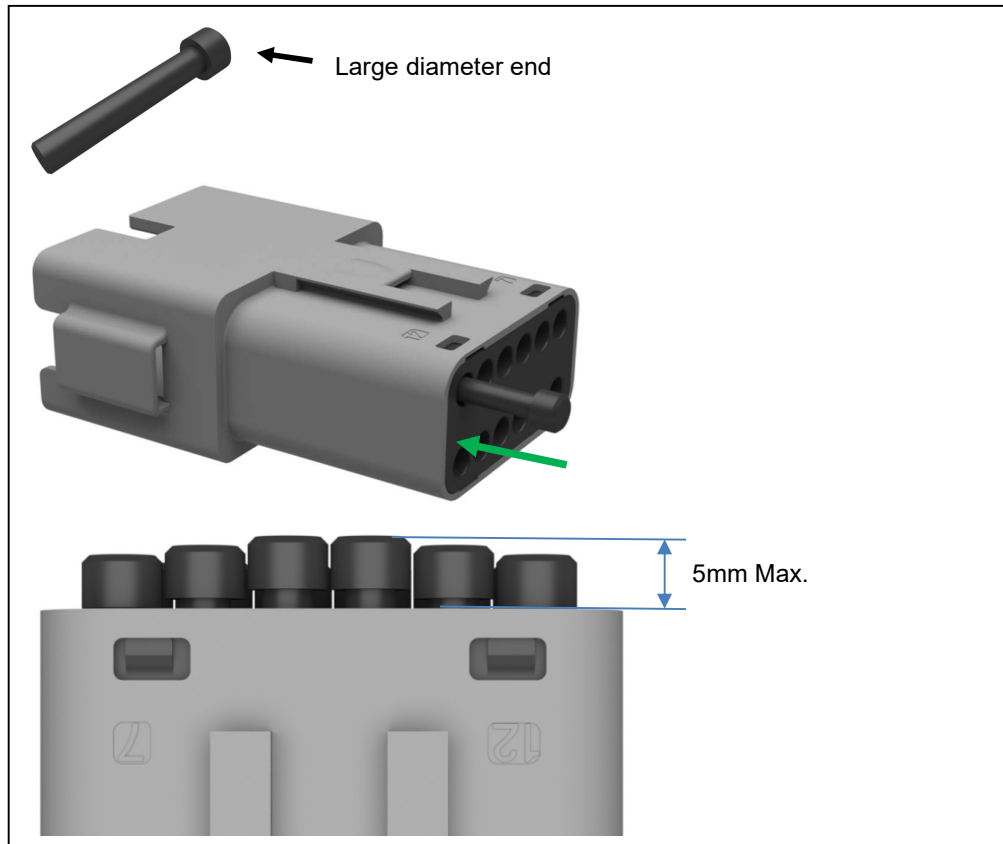


Figure 3.8.1
图 3.8.1

4. To remove sealing plug from connector, grasp the large diameter end with fingers or small long nose pliers and pull until sealing plug is removed.

4. 要从连接器中取出密封塞，用手指或小尖嘴钳抓住大径端，然后拉动直至密封塞被取出。

3.9 Heatshrink tubing application

3.9 热缩管应用

1. When using the heatshrink adaptor option of the DT-XT connector, heatshrink tubing may be used to add extra strain relief to the system. Firstly, ensure all crimped cables are latched in place as outlined in section 3.1.

1. 当使用 DT-XT 连接器的热缩件选项时，热缩管可以用来为系统增加额外的应力释放。首先，请确保所有压接的线缆都已按第 3.1 节中的说明卡入到位。

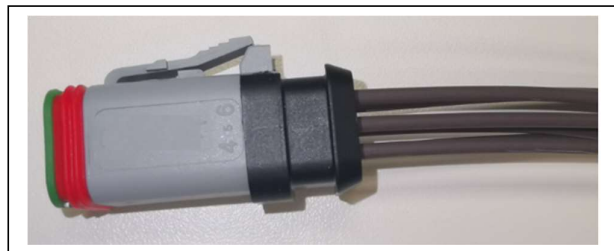


Figure 3.9.1
图 3.9.1

2. Slide the heatshrink tubing over the heatshrink housing adaptor as shown below.
2. 如下所示，将热缩管滑至热缩外壳上。

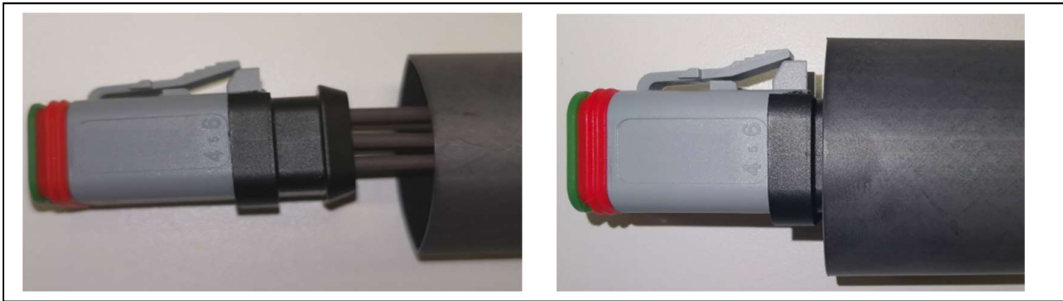


Figure 3.9.2
图 3.9.2

3. Apply heat and allow the heatshrink tubing to shrink around the housing and cables.
3. 加热并让热缩管在外壳和线缆周围收缩。



Figure 3.9.3
图 3.9.3