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**16 POS. GEN 0.50 CONNECTOR**

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**1. USED SPECIFICATIONS:**

<b>114-13287</b>	- GEN0.50 Receptacle Contact Application Specification
<b>2098583-1-0960</b>	- Packaging Instruction Sheet for GEN0.50 Receptacle Contact PN: 2098583-1
<b>2098583-2-0960</b>	- Packaging Instruction Sheet for GEN0.50 Receptacle Contact PN: 2098583-2
<b>2098583-4-0960</b>	- Packaging Instruction Sheet for GEN0.50 Receptacle Contact PN: 2098583-4
<b>107-1803</b>	- Packaging Specification for Contact Housing TE PN: 2293333
<b>050-U-016-2-Z01</b>	- EWCAP Interface

2. OVERVIEW

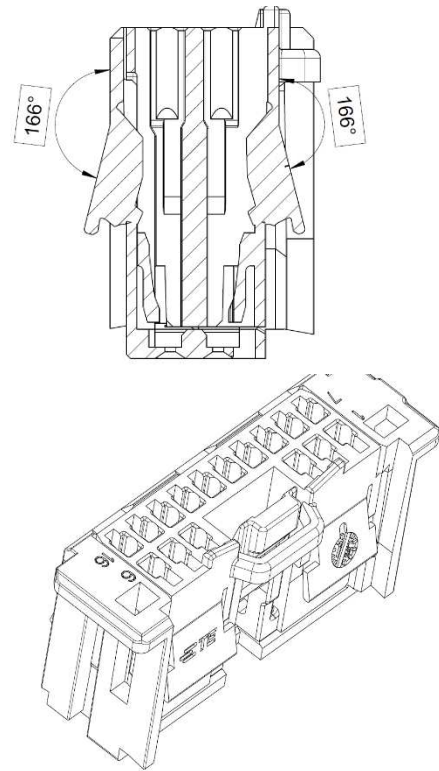
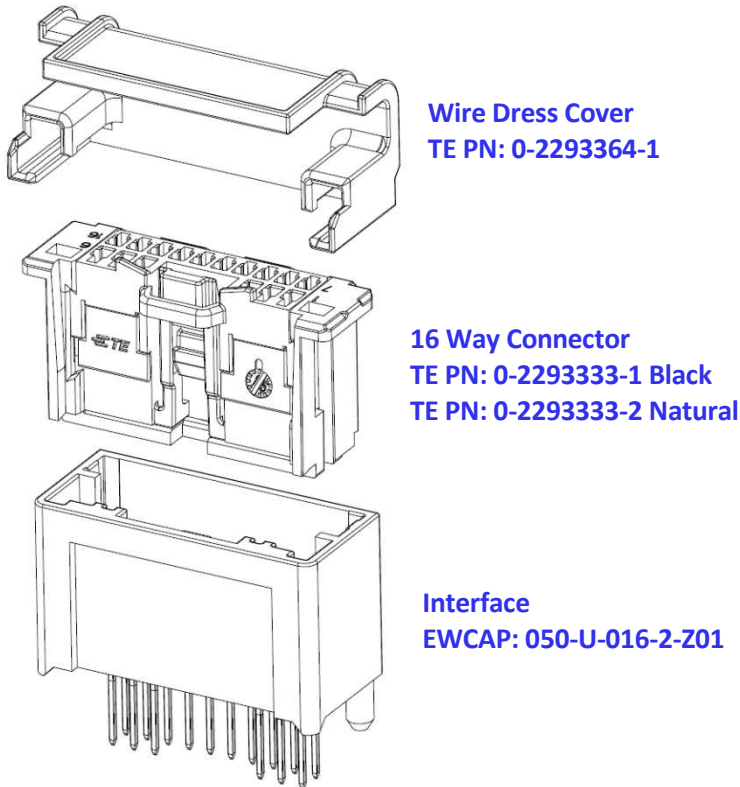


Figure 2: 16 Way Connector System Explosion View

Figure 3: Delivery Condition of 16 Way Contact Housing with TPA's in pre-lock position

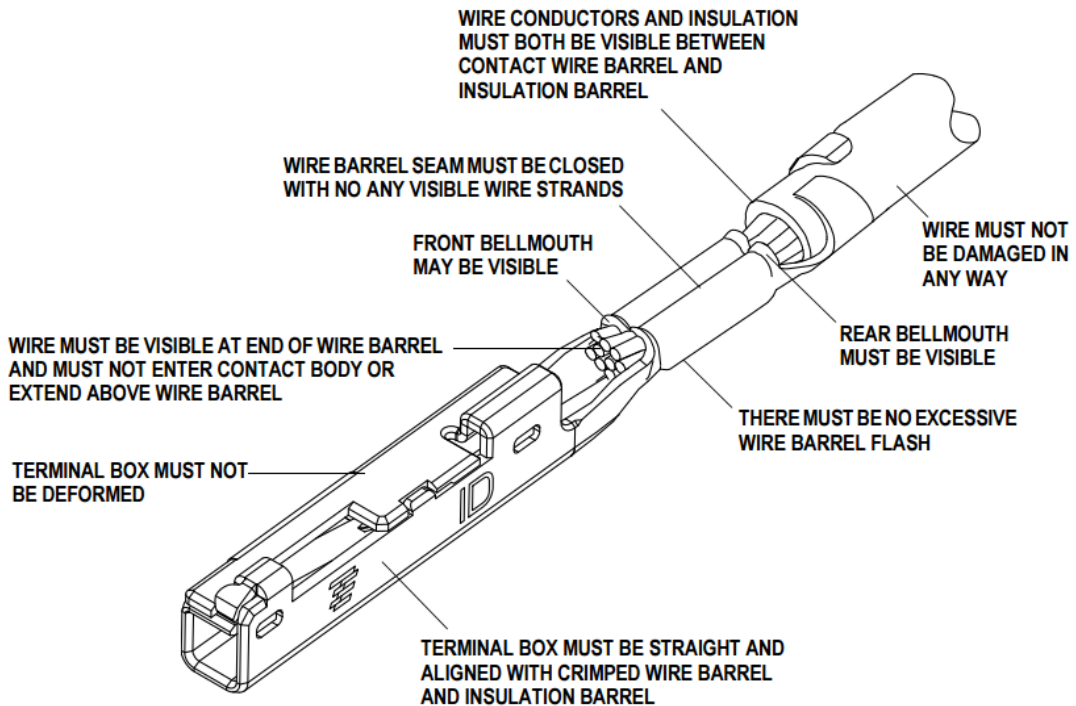


Figure 1: GEN 0.50 Terminal TE PN: 2098583

### 3. INTRODUCTION

This application specification is based on the TE customer drawings and provides information on the assembly procedures for the GEN 0.50 terminals (TE PN: 2098583) with the 16 way TE connector (TE PN: 2293333) and the appendant wire dress cover (TE PN: 2293364-1).

**NOTE**


All dimensions on this document are in metric units. Figures and illustrations are for reference only and are not drawn to scale.

Read these instructions carefully before attempting any assembly procedures. Also refer to Application Specifications **114-13287** (GEN 0.50 Contacts) for termination requirements.

Figure 1 provides the components required to make the assembly in this instruction sheet. Contact material is made from a copper alloy, pre-plated with tin or bright tin. The connector housings are made from glass filled thermoplastic materials.

### 4. DELIVERY CONDITION

#### 4.1.1 CONTACT HOUSING

The 16 way connector will delivered with all TPA's (secondary lock) in pre-lock position (see figure 1). For terminal mating and unmating it is essential that the TPA's are in pre-lock position.

**NOTE**


The connector housings are shipped with the TPA in an open position, however, during shipping, the TPA may become closed. Make sure the locks are in the OPEN position before any contacts can be inserted into those contact cavities. See Figure 2. Refer to chapter 5.1.3 for information on resetting the TPA.

#### 4.1.2 WIRE DRESS COVER

The wire dress cover (TE PN: 2293364-1) will be delivered separately from contact housing and will be mounted after all terminals are installed.

#### 4.1.3 TERMINAL's

All GEN 0.50 terminals (TE PN: 2098583) should fulfill TE 114-13287 application specification. If applied terminals are out of specification limit, please use another terminal for electrical contacting.

## 5. ASSEMBLY PROCEDURES

### 5.1 CONTACT ASSEMBY

#### 5.1.1 TERMINAL INSERTION

The following procedures provides the details of the contact (terminal) installation into the connector housing.

1. Use only contacts with the correct wire size according the information provided in the Table 1: Wire Size for GEN 0.50 Terminals.

Table 1: Wire Size for GEN 0.50 Terminals

GEN 0.50 TERMINAL PN:	WIRE SIZE:	PLATING:	WIRE BARREL FORM ID:
2098583-1	0,35 mm <sup>2</sup>	TIN	S
2098583-2	0,35 mm <sup>2</sup>	TIN	M
2098583-4	0,13 mm <sup>2</sup>	TIN	N

**CAUTION**


Only the recommended wire size in this table are allowed to use.

2. The terminated contact must be aligned with the contact cavity at the wire end of the connector and oriented as shown (see Figure 4). Terminals will only easily go into cavity in one orientation.

**NOTE**


Make sure the locks (TPA) are in the OPEN position before contacts will be inserted. See Figure 2 for reference.

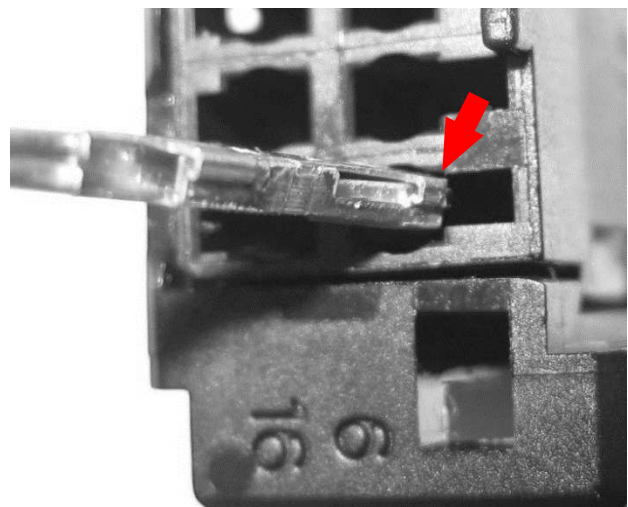


Figure 4. Terminal Insertion

3. Each contact must be inserted into contact cavity until the connector primary latch engages the contact. There should be an audible click or tactile feedback which indicates that the contact has been fully inserted. Pull back gently to ensure the contact has been locked in place. See Figure 5 A and B.

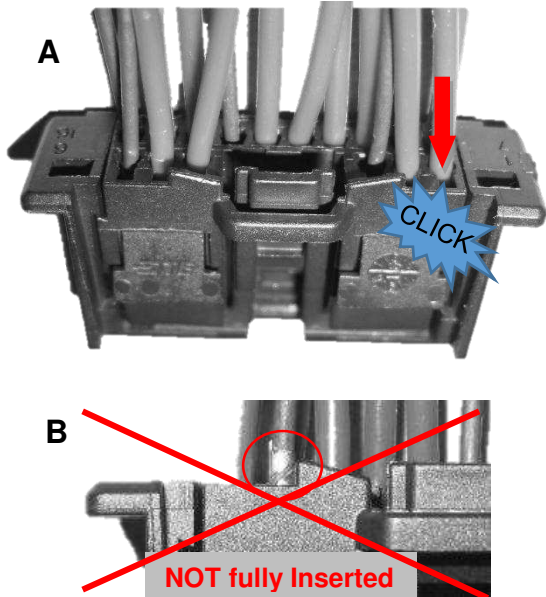


Figure 5: Terminal Insertion  
A - Fully Inserted,  
B - NOT Fully Inserted (and crimp visible)

### 5.1.2 CLOSE TPA

Simply press as shown in Figure 6 on the TPA (terminal position assurance), until an audible “CLICK” is heard or felt. Make sure the TPA is closed completely before starting the connector mating step. If TPA cannot be closed easily check that all terminals are fully engaged (see Figure 5).

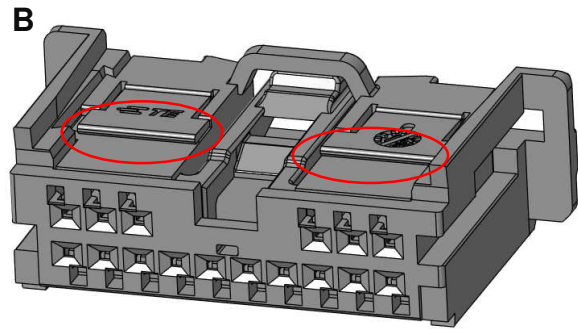
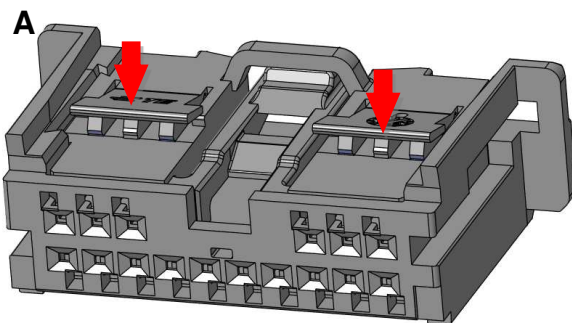


Figure 6: CLOSE TPA  
A – Press on TPA, B - Closed TPA

### 5.1.3 OPEN TPA

Open the TPA by gently inserting a small screwdriver (0.4mm x 2.5mm) between housing and TPA. Turn the screwdriver until the TPA will open. See Figure 7

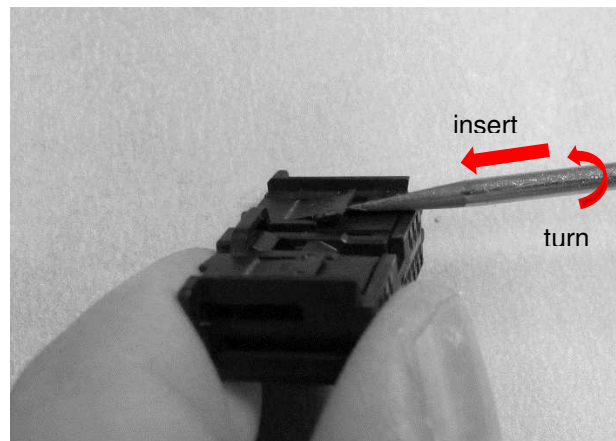


Figure 7: Open TPA by using a small screwdriver



**CAUTION** Open TPA in pre-lock position. Do not over bend the hinge (TPA). After opening, check if the hinge is not damaged during the opening process.

### 5.1.4 TERMINAL REMOVAL (FOR SERVICE)

The TPA (for the corresponding contact cavities) must be set to pre-lock position before any contacts can be removed from the contact cavities. The locking latches must be released from the locking tabs to open the TPA. Use the TE tool with the TE PN: 4-1579008-5 (see Figure 8 for details). The TPA must not be rotated beyond the pre-lock position (see Figure 3 as reference).

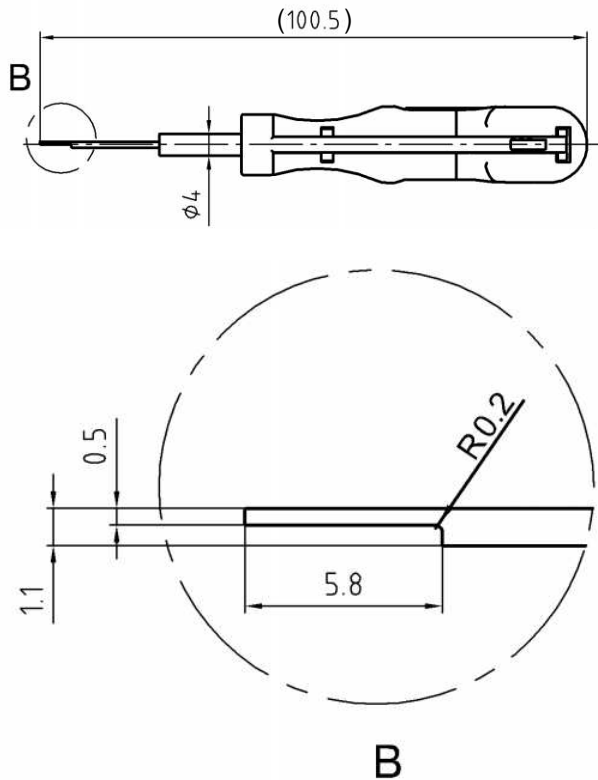


Figure 8: Extraction Tool

1. Insert contact removal tool as shown in Figure 9.
2. Grasp the wire of the contact to be removed and push the contact forward until it stops.
3. Using the contact removal tool, gently deflect the retention finger as shown in Figure 9.



Care must be taken not to damage the locking features with the tool.

4. Simultaneously pull the wire and contact from the contact housing.
5. Follow Steps 1 through 4 for remaining contacts.

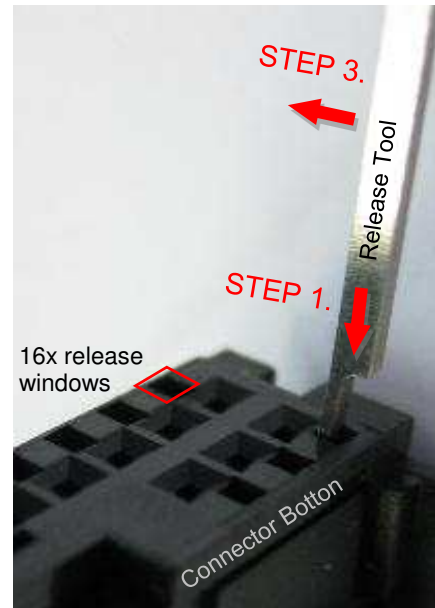


Figure 9: Release Tool in appropriate Window

## 5.2 CONNECTOR ASSEMBY

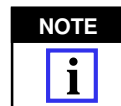
### 5.2.1 CONNECTOR MATING

1. Make sure you have the correct connector coding for your interface. There are two different coding available for 16 way connector see Table 2.

TE PN:	COLOR:	CODING:
0-2293333-1	Black	A
0-2293333-2	Natural	TIN

Table 2: Available Coding for 16 way Connector

2. The TPA must be in the locked position before connector can be inserted. See Figure 6.
3. To mate connector, push on housing base or sides only. Push the connector forward until primary connector latch “CLICKS” or felt and engages the interface latch tooth. See Figure 10.



This connector do not have a connector position assurance (CPA)

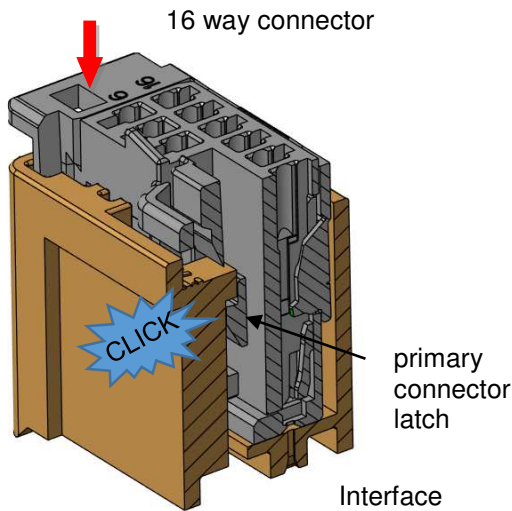


Figure 10: Connector Mating

### 5.2.2 CONNECTOR UNMATING

Unmat the 16 way connector by depress the primary connector latch, then simultaneously pull the connector / wires while gripping the housing with the thumb, index finger, and palm (wire bundle). See Figure 11.

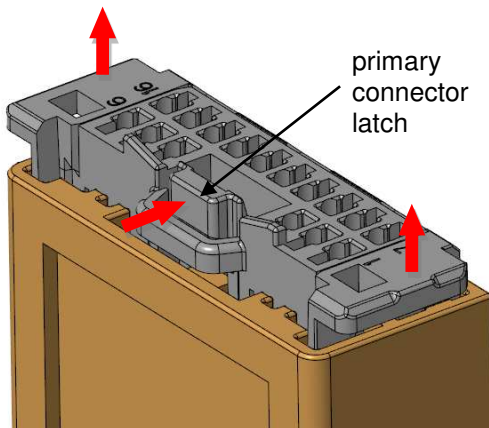


Figure 11: Connector Unmatng

## 5.3 WIRE DRESS COVER ASSEMBLY

### 5.3.1 WIRE DRESS COVER MATING

Slide the wire dress cover, oriented as shown in Figure 12, on the contact housing, until both locking features locked. The end-lock position can be felt or perceived with an audible CLICK. Assume that the locking features are locked as shown in Figure 13.

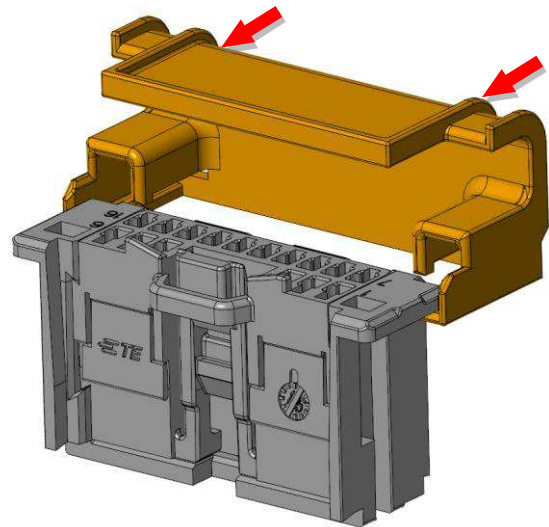


Figure 12: Mating Process of Cover to Contact Housing

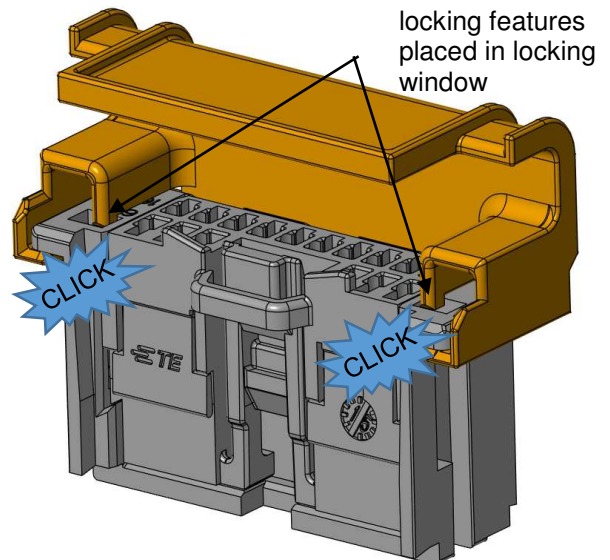


Figure 13: Wire Dress Cover in End-Lock Position

### 5.3.2 USAGE OF CABLE TIE FOR COVER

Use the cable on the right and left side of the wire dress cover (see Figure 14). Stick the cable tie through the hole shown in Figure 14. Make sure the cable tie opening is on the locking side of the connector as shown in Figure 15.

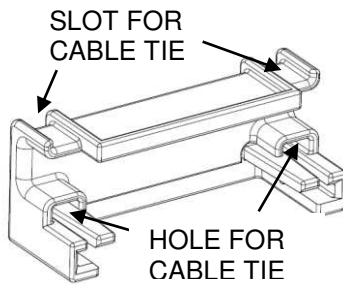


Figure 14: Wire Dress Cover

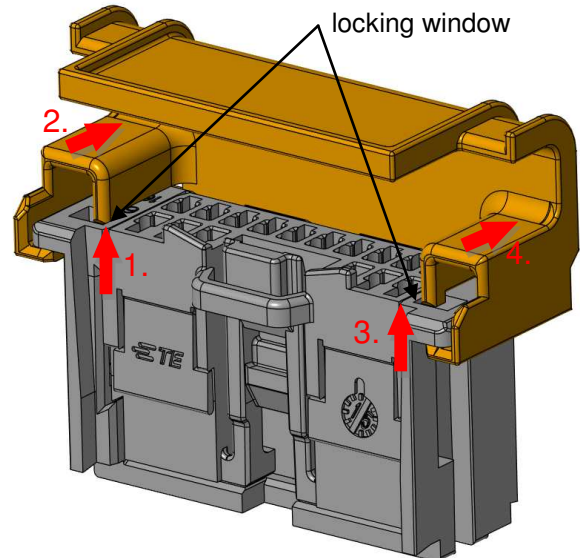


Figure 16: Unmating of Wire Dress Cover

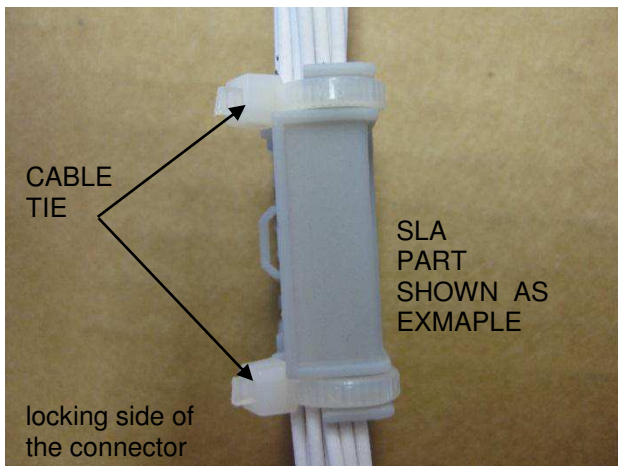


Figure 15: Assembled Cable Tie

### 5.3.3 WIRE DRESS COVER UNMATING

1. Remove the cable tie from wire dress cover.
2. Press one locking latch on one side with a small screwdriver away from the locking window (see 1. step in Figure 16).
3. Push simultaneous the cover gently in the direction 2. as shown in Figure 16, until the locking latch is released.
4. Repeat both steps on the other side and remove the cover from contact housing.

## 6. REVISION SUMMARY

Revision:	Comment:
A	Initial release of document