



**NOTE**

All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of  $\pm 0.13$  [ $\pm .005$ ] and angles have a tolerance of  $\pm 2^\circ$ . Figures and illustrations are for identification only and are not drawn to scale.

**1. INTRODUCTION**

This specification covers the requirements for application of DEUTSCH DTSK series connector system. The system consists of single-cavity plug and single-cavity receptacle, which accept 8-mm pin and socket contacts.

The plug and receptacle each consist of a housing, secondary lock, and protective cover. The secondary lock is used to ensure that the contact is fully seated and secure in the connector. The protective cover is used to ensure that the cable seal remains in place. The connector, secondary lock, and protective cover are shipped loose in a sealed plastic bag. These connectors feature integral keying and latch-style mating. The housings are color-coded to correspond with the keying letter, which is embossed on the cable end of the plug housing and on the side of the receptacle housing.

Basic terms and features of this product are provided in Figure 1.

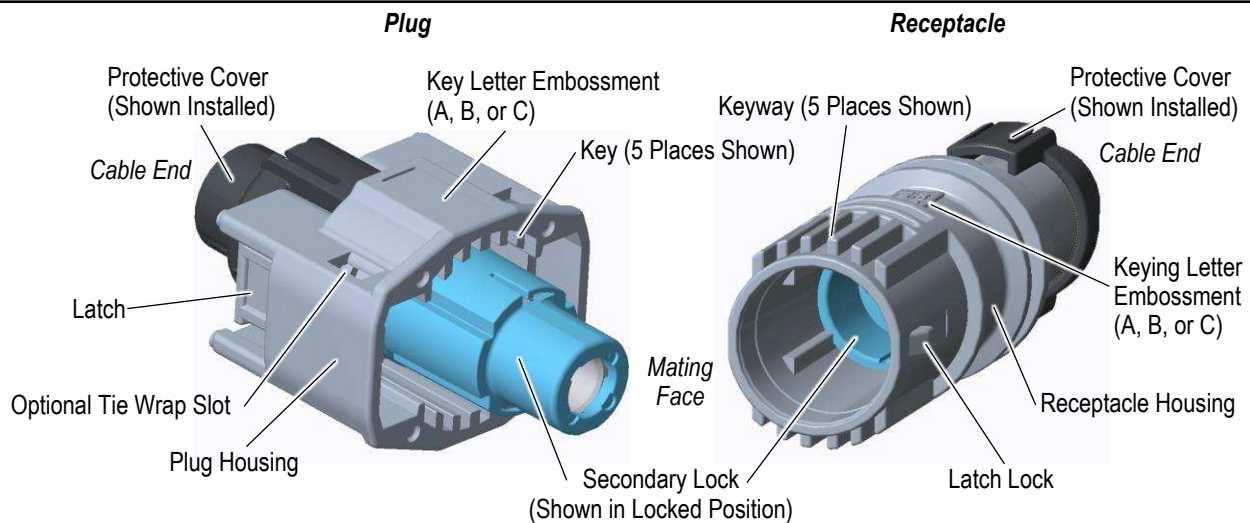


Figure 1

**2. REFERENCE MATERIAL**

**2.1. Revision Summary**

See Section 7.0

**2.2. Customer Assistance**

Product Base Part Numbers DTSK04-1-08P (receptacle) and DTSK06-1-08S (plug) and Product Code J841 are representative of DEUTSCH DTSK Series Connector System. Use of these numbers will identify the product line and help you to obtain product and tooling information. Such information can be obtained by visiting our website at [www.te.com](http://www.te.com) or calling the number at the bottom of this page.

**2.3. Drawings**

Customer drawings for product part numbers are available from [www.te.com](http://www.te.com). Information contained in the customer drawing takes priority.

## 2.4. Specifications

108-151027	DTSK Series Product Specification
114-151039	DEUTSCH size Ø8mm Solid Contacts Application Specification

## 2.5. Instructional Material

Instruction sheets (408-series) provide product assembly instructions or tooling setup, and operation procedures and customer manuals (409-series) provide machine setup and operating procedures. Instructional material that pertain to this product are:

408-151008	DEUTSCH Removal Tool DT-RT1 for Front-Release Connectors
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## 3. REQUIREMENTS

### 3.1. Safety

Do not stack product shipping containers so high that the containers buckle or deform.

### 3.2. Storage

#### A. Ultraviolet Light

Prolonged exposure to ultraviolet light may deteriorate the chemical composition used in the product material.

#### B. Shelf Life

The product should remain in the shipping containers until ready for use to prevent deformation to components. The product should be used on a first in, first out basis to avoid storage deterioration could adversely affect performance.

#### C. Chemical Exposure

Do not store product near any chemical listed below as they may cause stress corrosion cracking in the material.

Alkalis	Amines	Carbonates	Nitrites	Sulfur Nitrites	Tartrates
Acids	Ammonia	Citrates	Phosphates	Sulfur Compounds	



#### **NOTE**

*Resistance depends on chemical concentration, temperature, and exposure medium.*

### 3.3. Characteristics

#### A. Materials

Housings: PA46 10GF (A key=gray, B key= black, C key=brown)  
Secondary Lock: PA66 10GF (blue)  
Protective Cover: PA66 10GF (black)  
Mounting Flange: PA46 10GF (black)  
Interface Seal: VMQ (red-orange)  
Cable Seal: VMQ (blue/red/green depending on sealing range)  
Flange Seal: VMQ (green)  
Contacts: copper alloy (silver)

## B. Sealing

DTSK Connectors have three cable seal options for sealing to cables:

Part Number	Min Insulation OD mm [in]	Max Insulation OD mm [in]	Cable Seal Color
WS-25-001	8.17 [0.322]	9.66 [0.380]	Blue
WS-32-001	9.49 [0.374]	10.52 [0.414]	Red
WS-35-001	10.59 [0.417]	11.59 [0.456]	Green

## C. Protective Cover and Flange Accessories

The protective cover is a required accessory to the DTSK connector. It provides protection and retention to the cable seal and supports the cable exiting the connector.

The flange is an optional accessory. It could be used to mount the DTSK connector to a vertical or a horizontal panel. The receptacle DTSK connector installs into the flange by ¼ turn. See 3.6 for more details.



### CAUTION

*The protective cover must not be removed or altered in any way.*

## 3.4. Contact Insertion

1. The contact must meet the requirements given in 114-151039.
2. Contact cable subassembly. Assemble in the following order – feed cable into the protective cover then install the cable seal as shown in Figure 2.

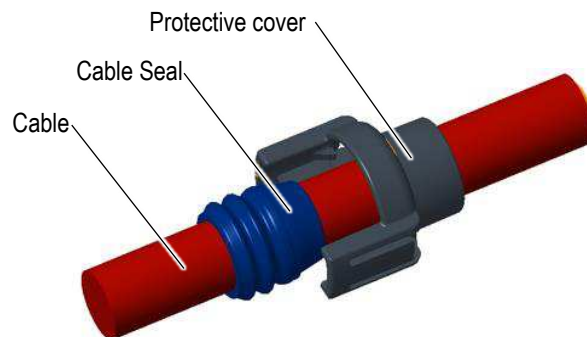


Figure 2

3. Contact to be crimped per specification 114-151039. Strip insulation off the cable according to this spec. Figure 3 shows the complete cable subassembly.

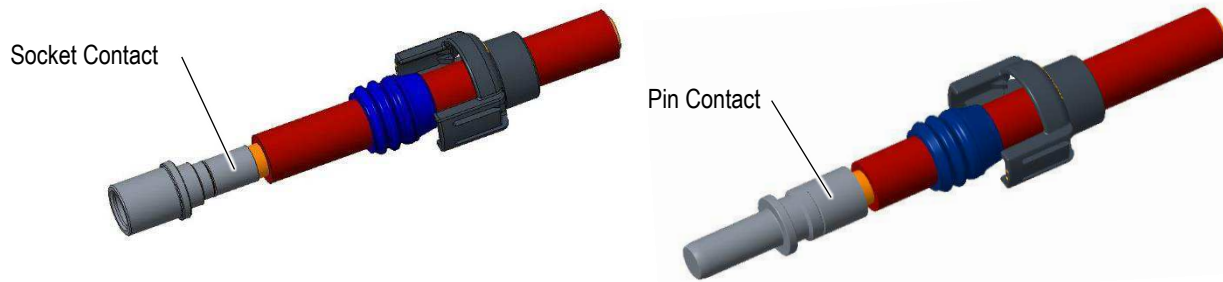


Figure 3

4. Slide down the cable seal and align it to the end of the stripped cable, see Figure 4

5. Feed the contact cable subassembly into the connector housing. The cable seal must be held in place, while pushing the contact straight into the cable end of the connector until there is an audible and tactile click.

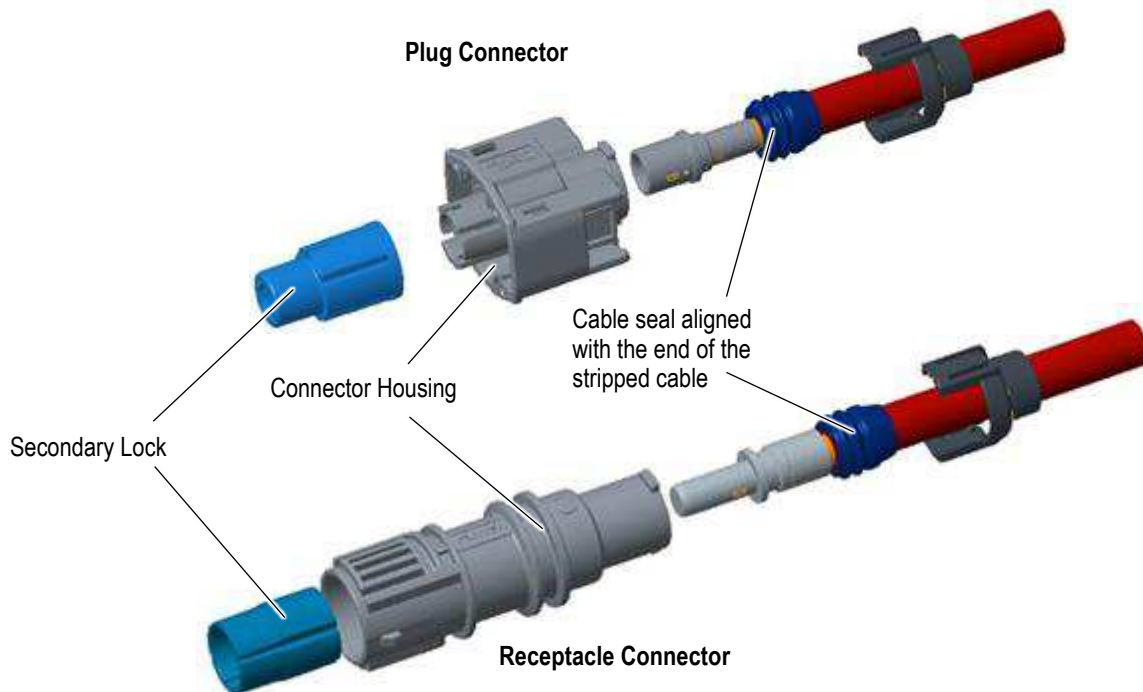


Figure 4

6. The secondary lock must be inserted and pushed into the connector housing. If the secondary lock does not move into the connector housing, the contact must be removed and re-inserted.

7. Snap in the protective cover. The fully assembled DTSK plug and receptacle connectors are shown in Figure 5.



Figure 5

### 3.5. Contact Removal



**NOTE**

All contacts must be terminated according to the information provided in crimp specification 114-151039.



**CAUTION**

The DT-RT1 removal tool has sharp ends that can cause bodily harm. Be sure to wear proper eye protection when using the tool and avoid pulling the tool toward yourself and others.

#### A. Removing Socket Contacts

1. Remove the protective cover by pulling it away from the connector housing while using the screwdriver tip of the removal tool to release the locking tabs of the protective cover from the connector housing.

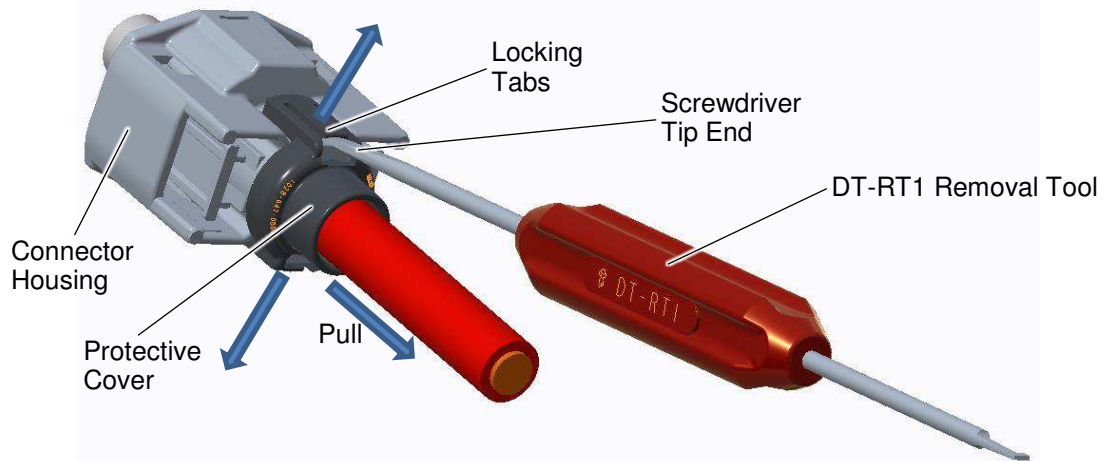


Figure 6

2. Insert the hook tip of the removal tool into the secondary lock and pull it out of the connector housing.  
Note: Pull the tool away from yourself to avoid injury.

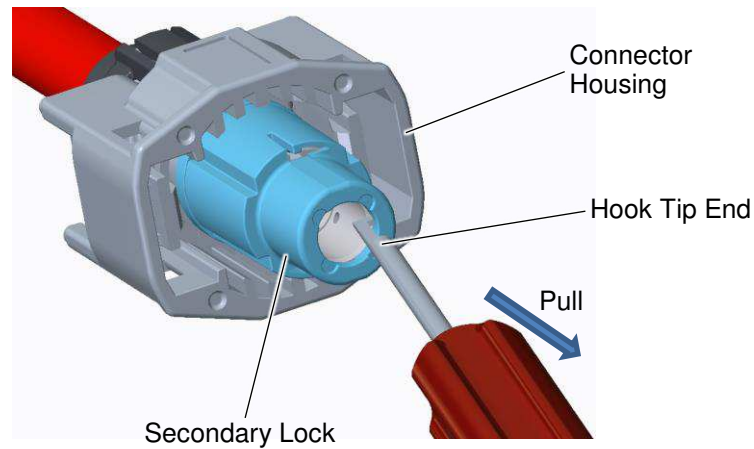


Figure 7

3. With the secondary lock removed, remove the cable by pulling it out of the connector housing while using the screwdriver tip of the removal tool to release the locking fingers of the housing from the contact.

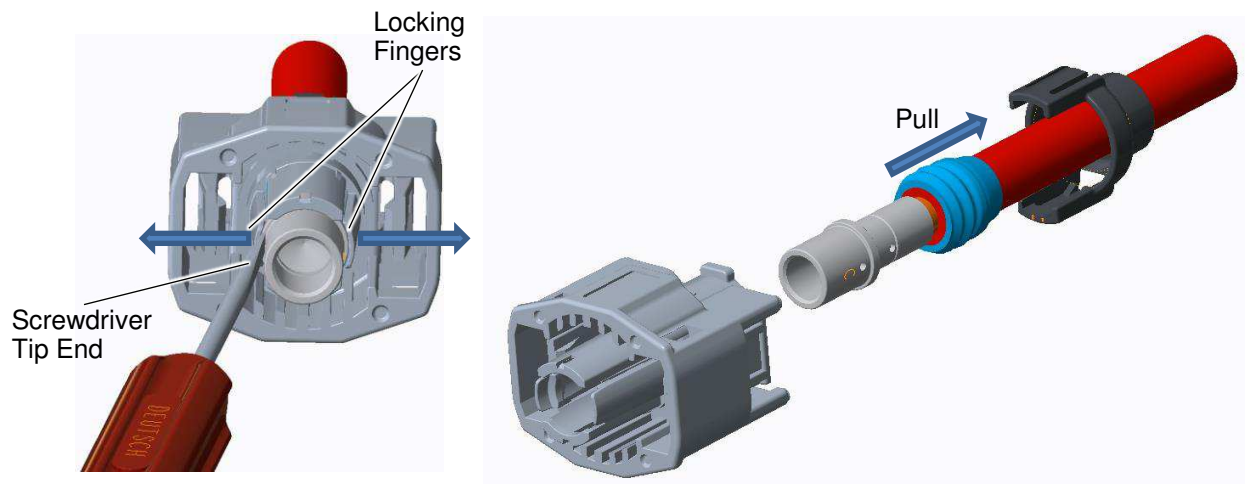


Figure 8

## B. Removing Pin Contact

1. Remove the protective cover by pulling it away from the connector housing while using the screwdriver tip of the removal tool to release the locking tabs of the protective cover from the housing.

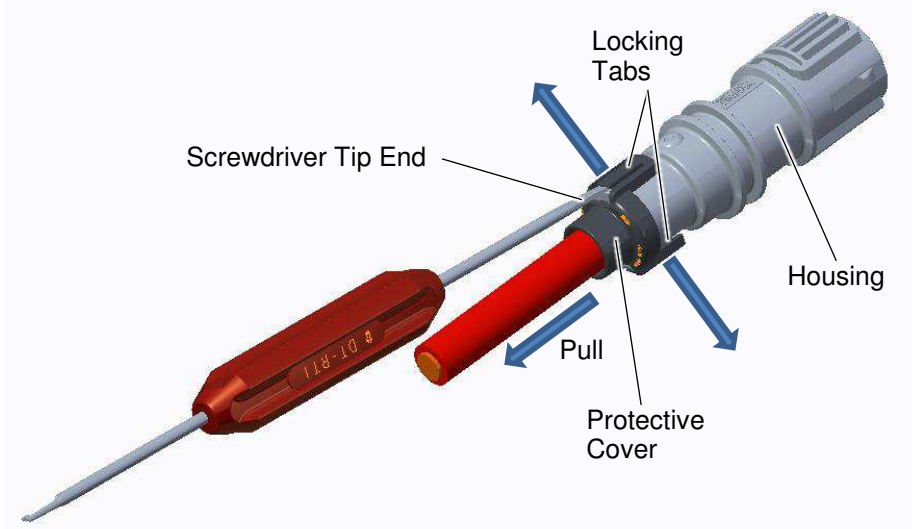


Figure 9

2. Insert the hook tip of the removal tool into the secondary lock and pull it out of the connector housing.



### **CAUTION**

*The DT-RT1 removal tool has sharp ends that can cause bodily harm. Be sure to wear proper eye protection when using the tool and avoid pulling the tool toward yourself and others.*

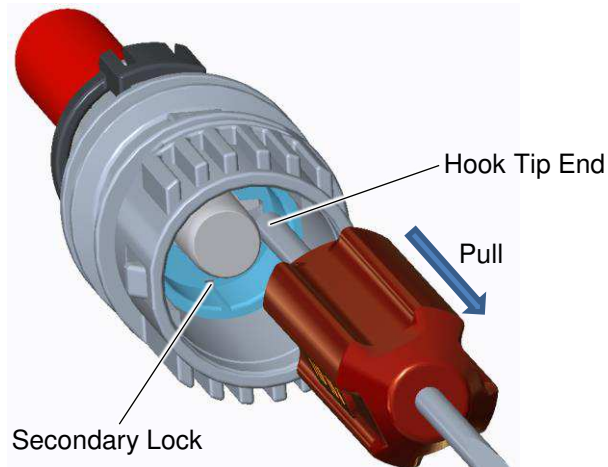


Figure 10

- With the secondary lock removed, remove the cable by pulling it directly out of the connector housing (no removal tool needed).

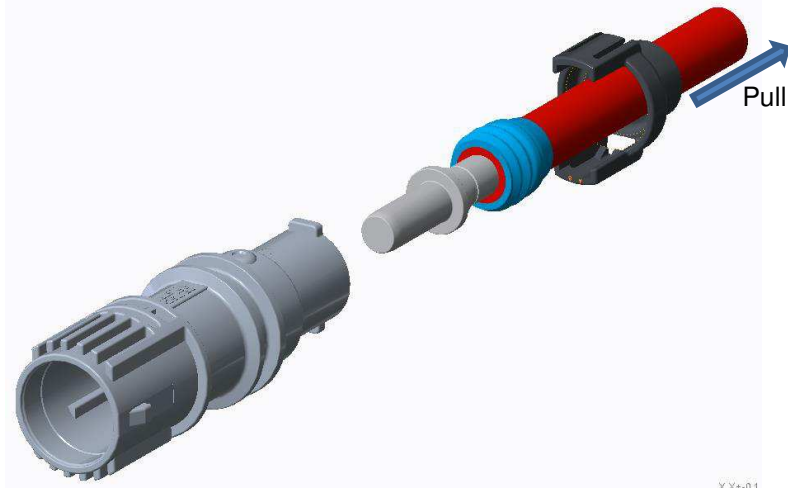
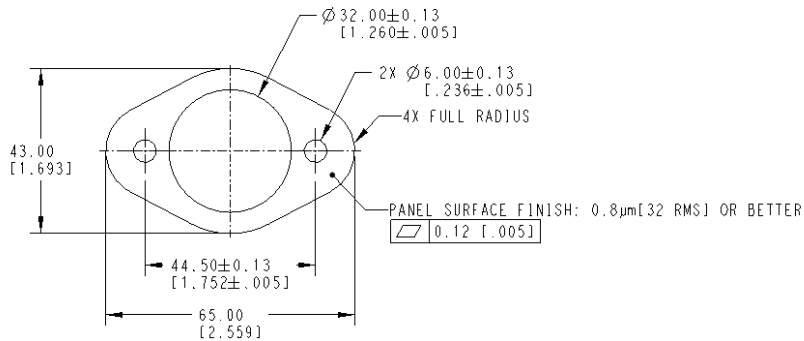


Figure 11

### 3.6. Optional Mounting Flange Installation

The optional DTSK flange can be installed to a plate using the dimensions shown in Figure 12.



#### RECOMMENDED PANEL CUTOUT

Figure 12

- The flange to be mounted to a panel is shown in Figure 13.

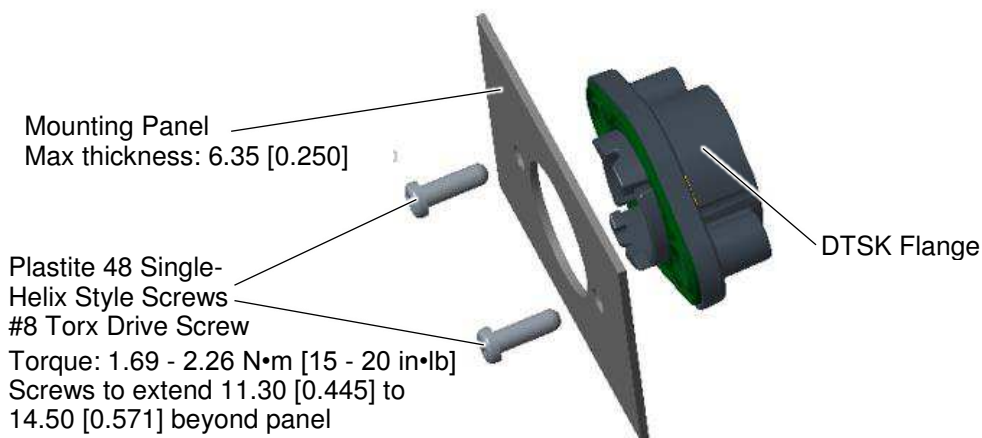


Figure 13



2. Install an external O-ring to the receptacle connector. An AS568-212 silicone O-ring is required to seal the receptacle connector into the flange.

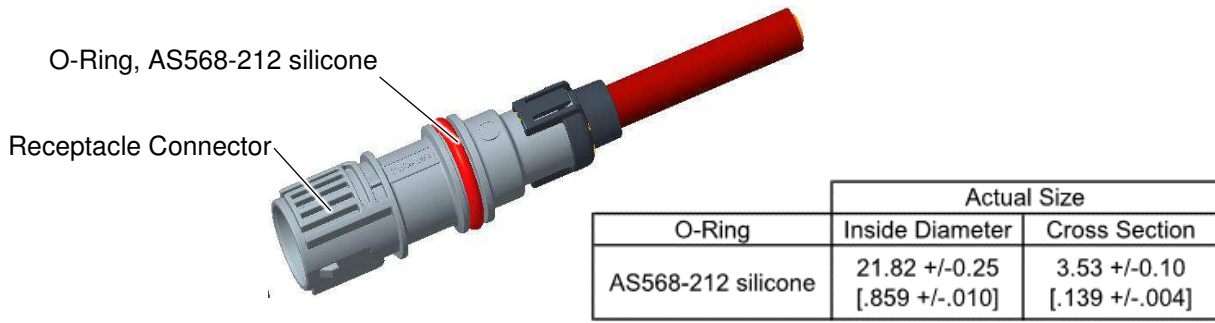


Figure 14

3. Feed the receptacle connector with the installed O-ring through the flange hole. Turn the flange until there is an audible and tactile click to lock it into the receptacle connector.

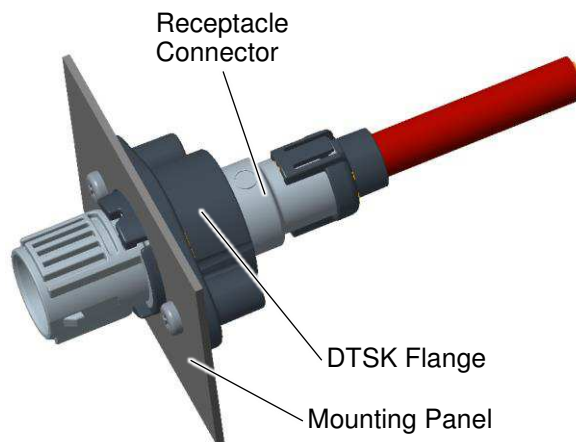


Figure 15



**NOTE**

The DTSK flange is a permanent fixture so once it is installed, it cannot be removed from the connector housing without being damaged.

**3.7. DTSK Plug Connector Mating**

The mating faces of the plug and receptacle must be aligned, then pushed together until there is an audible and tactile click.

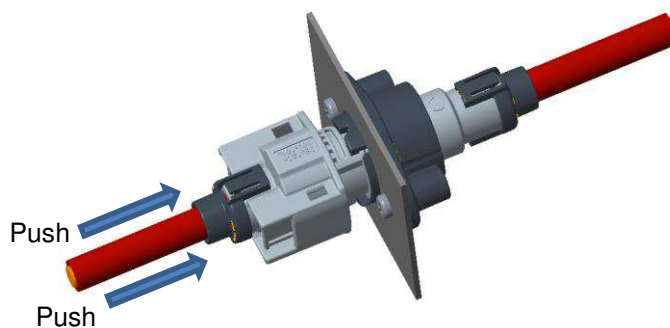


Figure 16

### 3.8. DTSK Plug Connector Unmating

To unmate the plug connector push on both plug latches simultaneously until you feel a hard stop. Pull the plug connector until it is fully unmated.

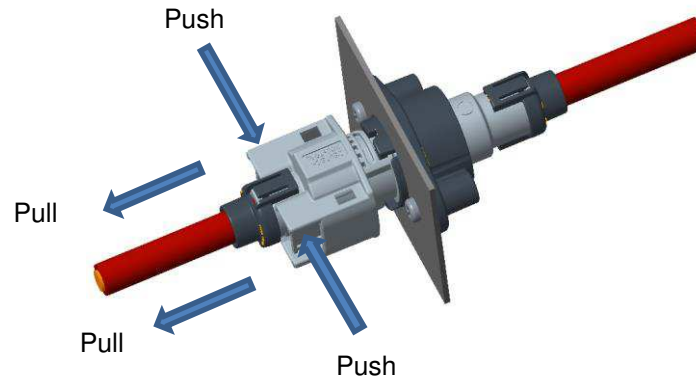


Figure 17

### 3.9. Replacement and Repair

Damaged or defective connectors must not be used. These connectors cannot be repaired.

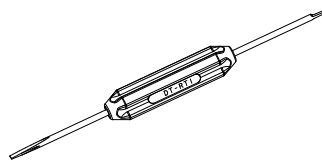
## 4. QUALIFICATION

Agency evaluation for DEUTSCH DTSK series connectors was not defined at the time of publication of this application specification.

## 5. TOOLING

Tooling part number and instructional material are shown in Figure 18.

The removal tool is designed to be used to remove the pin and socket contacts. The tool can also be used to remove the secondary lock from the connector.



DEUTSCH Removal Tool DT-RT1 for  
Front-Release Connectors (408-151008)

Figure 18

## 6. VISUAL AID

The illustration below shows a typical application of DEUTSCH DTSK series connector system. This illustration should be used by production personnel to ensure a correctly applied product. Applications which DO NOT appear correct should be inspected using the information in the preceding pages of this specification and in the instructional material shipped with the product or tooling.

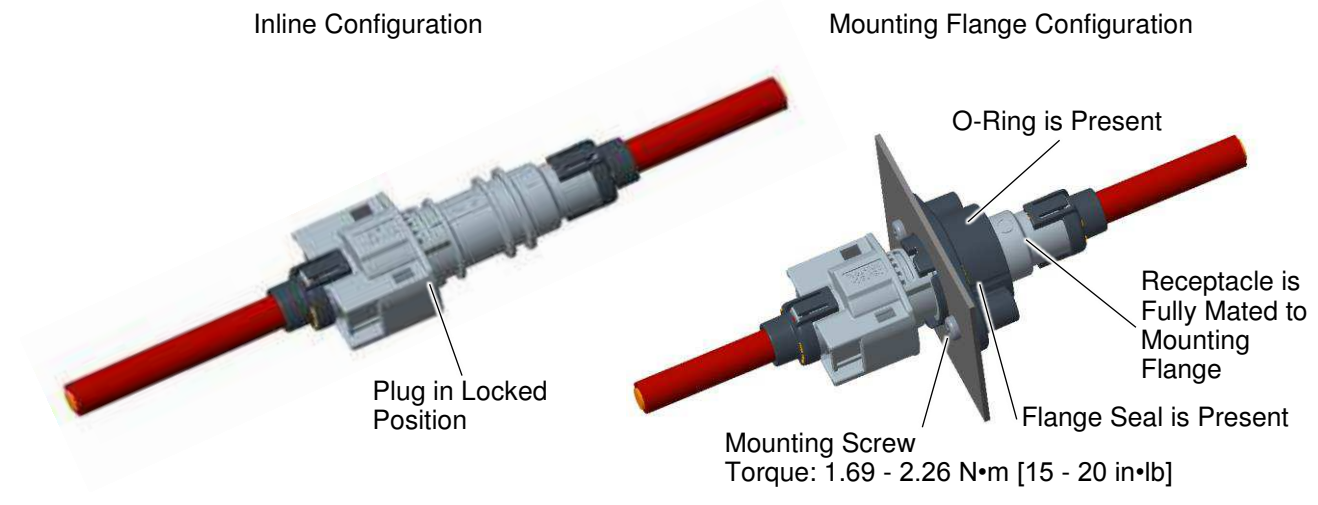
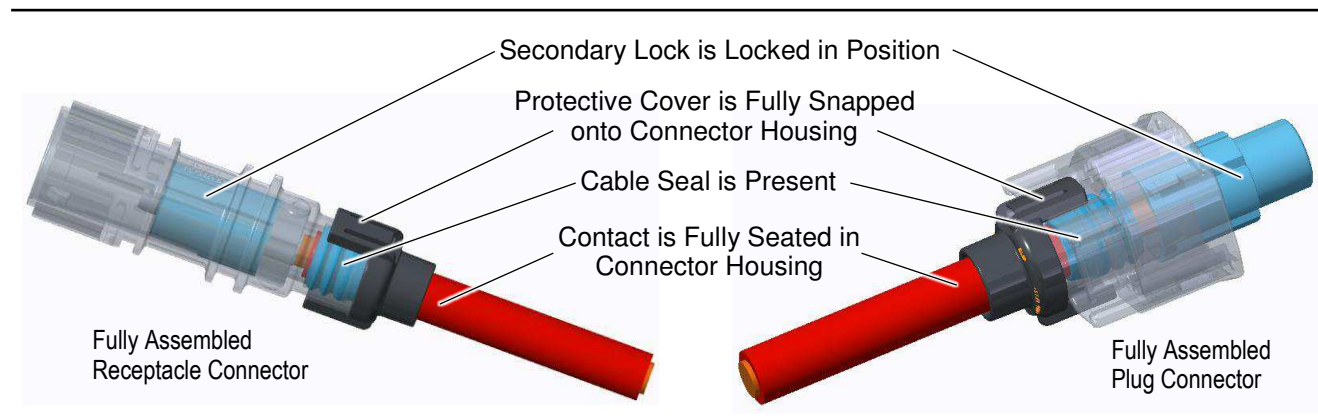


Figure 19



**NOTE**

Contacts must be terminated according to the information provided in crimp specification 114-151039

## 7. REVISION HISTORY

Rev Ltr	Brief Description of Change	Date	Dwn	Apvd
A	Initial Release	26-Oct-16	DD	DM
A1	1. Page 2 section 2.4: Changed Hyperlink 8925-003-0000 to 114-151039. 2. Page 3 section B: Changed cable seal table. Removed Cable Range Column and added Part Column. 3. Page 3 section 3.4.1: Changed Spec 8925-003-0000 to 114-151039. 4. Page 4 section 3.4.3: Changed Spec 8925-003-0000 to 114-151039. 5. Page 5 section 3.5: Changed Spec 8925-003-0000 to 114-151039. 6. Page 12 section 7: Added Revision Table.	20-Jul-18	DD	DM