THIS DRAWING IS UNPUBLISHED. RELEASED FOR PUBLICATION - 2021
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MATED WITH PASSEND ZU 11

DEUTSCH REFERENCE DRAWING NO. : 1011-231+259-0305 REV. D (ENVELOPE DRAWING)

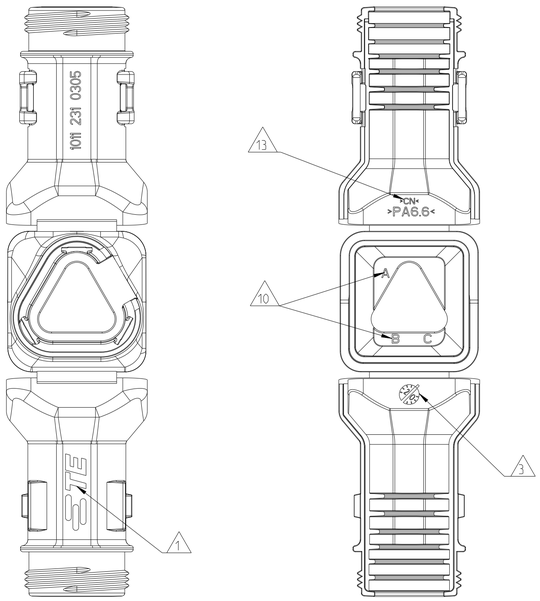
LOC A1 DIST -

PROJEKT NR. DEUTSCH 61051

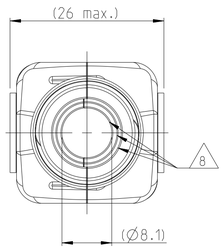
REVISIONS ÄNDERUNGEN

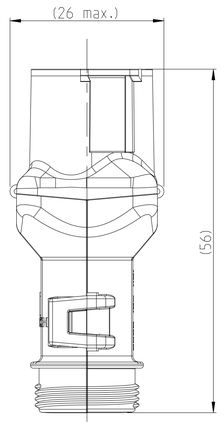
| P | LTR | DESCRIPTION BESCHREIBUNG | DATE | DWN | APVD |
|---|---|---|---|---|---|
| | A3 | REVISED PER ECR-22-130157 | 10FEB2022 | NS | GCR |
| | A4 | REVISED PER PCN-23-162642 | 04JAN2023 | MK | GCR |
| | A5 | REVISED PER PCN-23-186475 | 12SEP2023 | SN | GCR |
| | A6 | REVISED PER PCN-23-190178 | 19OCT2023 | GB | GCR |

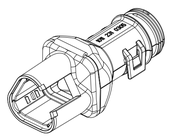
## PART FROM MOLD TOOL IN CHINA
Teil von Werkzeug in China




## CLOSED (MOUNTED) CONDITION AS SHOWN
Geschlossener (montierter) Zustand wie gezeigt

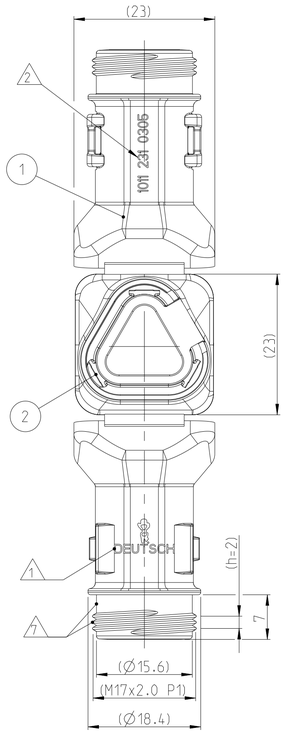


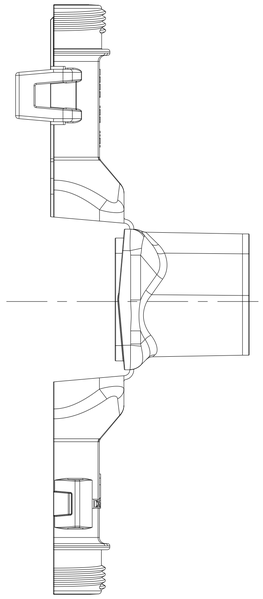



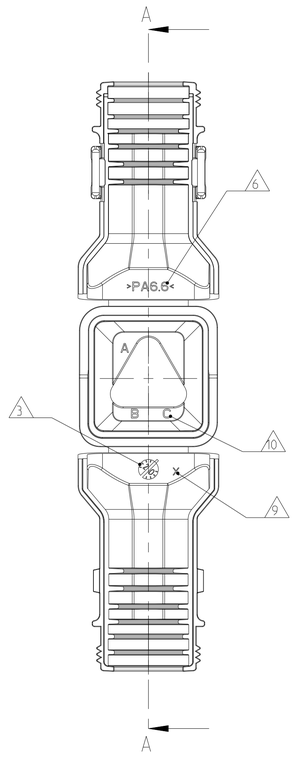



SCALE 1:1
Maßstab

12 DELIVERY CONDITION AS SHOWN
Lieferzustand wie gezeigt






## NOTES
Bemerkungen

1 DEUTSCH LOGO/TE LOGO
DEUTSCH Logo/TE Logo

2 DEUTSCH PART-NO
DEUTSCH Teil-Nr.

3 PRODUCTION DATE
Produktionsdatum

4 BULK PACKAGING IN CORRUGATED BOX
Schuettgut im Karton

5 MALFUNCTION CAUSED BY LAQUER IS NOT COVERED BY TE WARRANTY
Funktionsbeeintraechtigung durch Lackieren liegt nicht im Einfluss und Gewaehrleistungsumfang von TE

6 MATERIAL MARKING ACCORDING TO VDA 260
Werkstoffkennzeichnung nach VDA 260

7 FOR HEAT-SHRINK TUBING AND TUBE WITH TIE WRAP
Fuer Schrumpfschlauch und Schlauch mit Kabelschelle

8 FOR CORRUGATED TUBES: NW 6/7.5/8.5/10
Fuer Wellrohre: NW 6/7.5/8.5/10

9 MOULD CAVITY MARKING (IF NECESSARY)
Nestmarkierung (falls notwendig)

10 CAVITY MARKING
Kammerbezeichnung

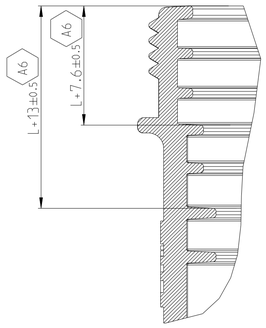
11 MATED WITH ALL MODIFICATION OF DT06-3S (WITHOUT ANY WELDED / MOUNTED PARTS)
Passend zu allen Varianten von DT06-3S (ohne verschweißte / montierte Teile)

12 BASED ON THE HINGE MECHANISM OF THE CAP, THE DELIVERY CONDITION CAN BE DIFFERENT TO THE SHOWN STATUS.
Basierend auf dem Klappmechanismus der Kappe, kann der Lieferzustand von der dargestellten Ansicht abweichen.

13 >CN< MARKING FOR CHINA TOOL DUPLICATION PARTS
>CN< Markierung für China Tool Duplizierung Teile

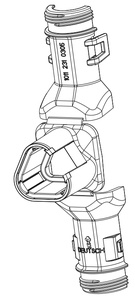
## PART FROM MOLD TOOL IN EUROPE
Teil von Werkzeug in Europa

SECTION A-A
Schnitt
SCALE 5:1
Maßstab




L+ = ADD LENGTH FOR CORRUGATED TUBE
zus. Länge des Wellrohres

勝特力電材超市-龍山店 886-3-5773766
勝特力電材超市-光復店 886-3-5729570
胜特力电子(上海) 86-21-34970699
胜特力电子(深圳) 86-755-83298787
http://www.100y.com.tw



SCALE 1:1
Maßstab

| ORDER-NO. Bestell-Nr. | REV. | WEIGHT (g) | POS. | QTY Stück | MATERIAL | COLOUR Farbe | DESCRIPTION Beschreibung | ITEM |
|---|---|---|---|---|---|---|---|---|
| 1011-231-0305 | A | 7.22 | 2 | 1 | STAINLESS SPRING STEEL Federblech rostfrei | PLAIN blank | LOCKING SHEET Rastblech | 1 |
| | | | 1 | 1 | NYLON 6/6 | BLACK schwarz | COVER WITHOUT STRAIN RELIEF Kappe ohne Zugentlastung | |

TOLERANCES UNLESS OTHERWISE SPECIFIED ACC. TO DIN 16901-140 CENTRIC TO NOMINAL DIMENSION. EDITION 1982-11 SHALL APPLY.
Freimasstoleranzen nach DIN 16901-140. Es gilt die Ausgabe 1982-11.

DIESE ZEICHNUNG IST EIN KONTROLLIERTES DOKUMENT.
BEMASSUNGEN UND TOLERANZEN GEMAESS GPS (ISO STANDARDS).

THIS DRAWING IS A CONTROLLED DOCUMENT.
DIMENSIONING AND TOLERANCING PER GPS (ISO STANDARDS).

DIMENSIONS: MASSEINHEITEN: mm
TOLERANCES UNLESS OTHERWISE SPECIFIED: ALLGEMEINTOLERANZEN ACC. TO ISO 8015
0 PLC ±
1 PLC ±
2 PLC ±
3 PLC ±
4 PLC ±
ANGLES/WINKEL ±

MATERIAL SEE TABLE siehe tabelle
FINISH/OBERFLAECHE/FARBE SEE TABLE siehe tabelle

DWN KASHYAP 01AUG2013
CHK C.FINZER 03AUG2013
APVD C.EBERWEIN 03AUG2013

TE Connectivity

NAME COVER, DT06-3S-BS180, ASSY
Kappe, DT06-3S-BS180, Assy
BACKSHELL STRAIGHT(180 DEGREE)

PRODUCT SPEC PRODUKTSPEZ. -
APPLICATION SPEC VERARBEITUNGSSPEZ. -
WEIGHT GEWICHT SEE TABLE

SIZE A1 | CAGE CODE 00779 | DRAWING NO ZEICHNUNGS-NR. C-1011-231-0305 | RESTRICTED TO NUR FUER -

Customer Drawing /KUNDENZEICHNUNG | SCALE MASSSTAB 2:1 | SHEET BLATT 1 OF VON 1 | REV A6

# DEUTSCH * DT Series Connector System

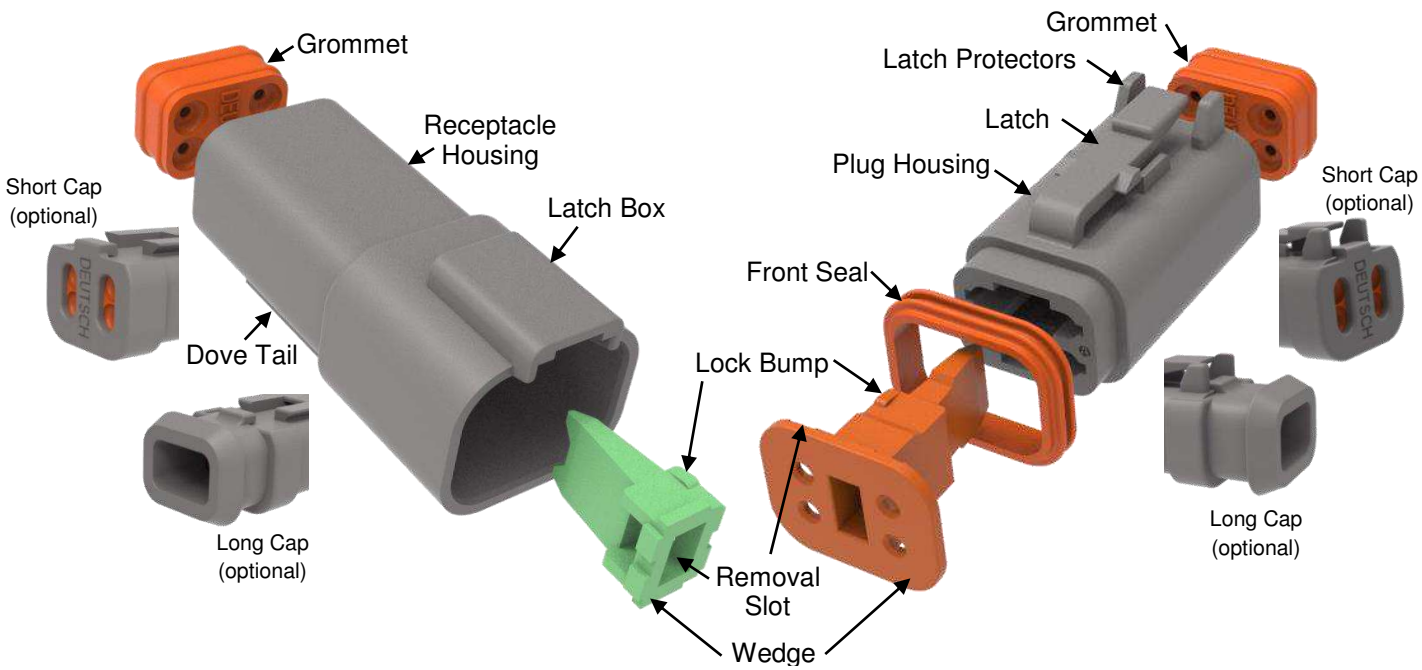
***NOTE***
*All numerical values are in metric units [with U.S. customary units in brackets]. Dimensions are in millimeters [and inches]. Unless otherwise specified, dimensions have a tolerance of ±0.13 [±.005] and angles have a tolerance of ±2°. Figures and illustrations are for identification only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

## 1. INTRODUCTION

This specification covers the requirements for application of DEUTSCH DT series connector system. The system features a plug and receptacle that offers 2, 3, 4, 6, 8, and 12-pin arrangements which accept DEUTSCH size 16 solid (machined) or stamped & formed contacts.

The plug and receptacle each consist of a housing and secondary wedge lock. The secondary wedge lock is used to ensure that the contact is fully seated and secure in the connector. The connector and the secondary wedge lock are shipped separately. These connectors feature integral latch-style mating. The 8 & 12 pin arrangements feature integral keying and are color-coded.

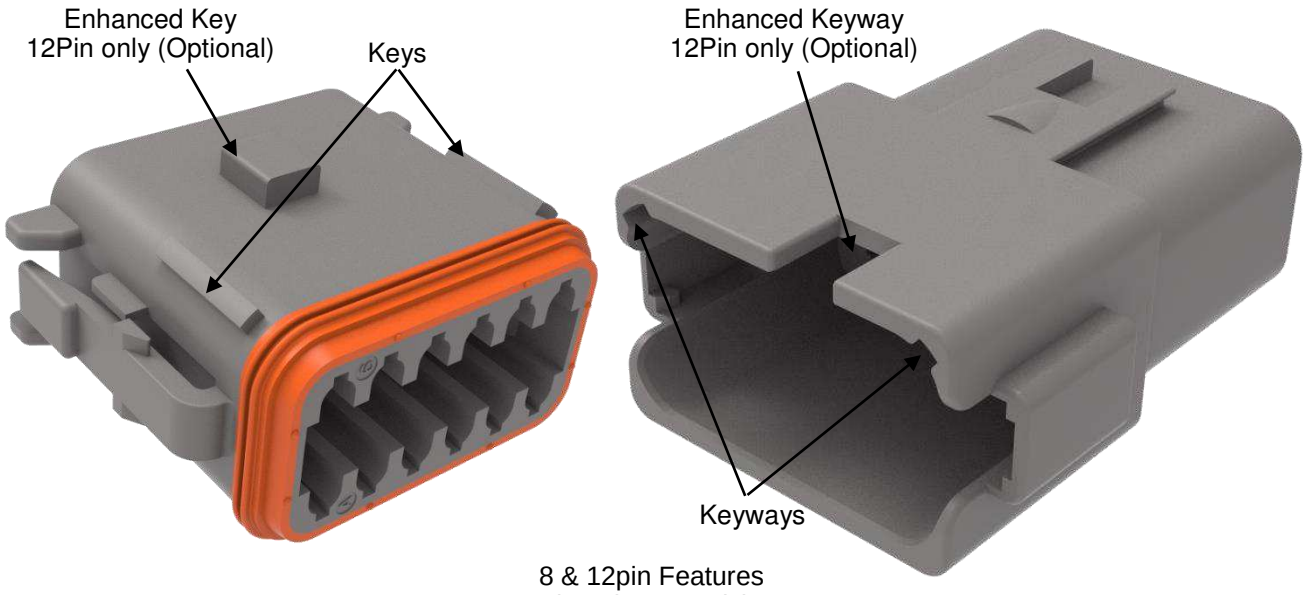
Basic terms and features of this product are provided below. Pages 2 through 5 provide examples of additional features and modifications. 4 & 12 pin shown as example.




Standard Features All Arrangements
(4-pin example)

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8 & 12pin Features
(12-pin example)



## 1.1. Receptacle

***2 to 6-pin***



***8 and 12-pin***
***A key***

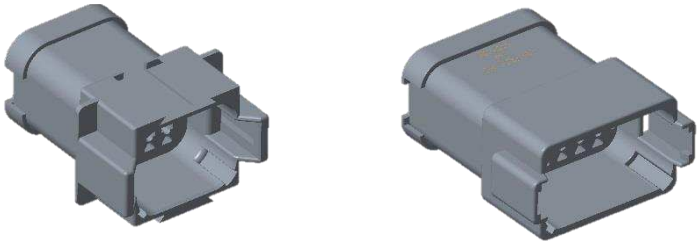


Receptacles, No Cap
Gray and Black

***2 to 6-pin***



***8 and 12-pin***
***A key***



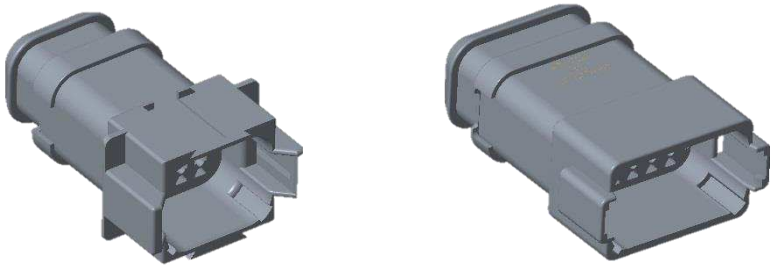
Receptacles, Short Cap
Gray and Black

## 1.1 Receptacle (Cont.)

***2 to 6-pin***

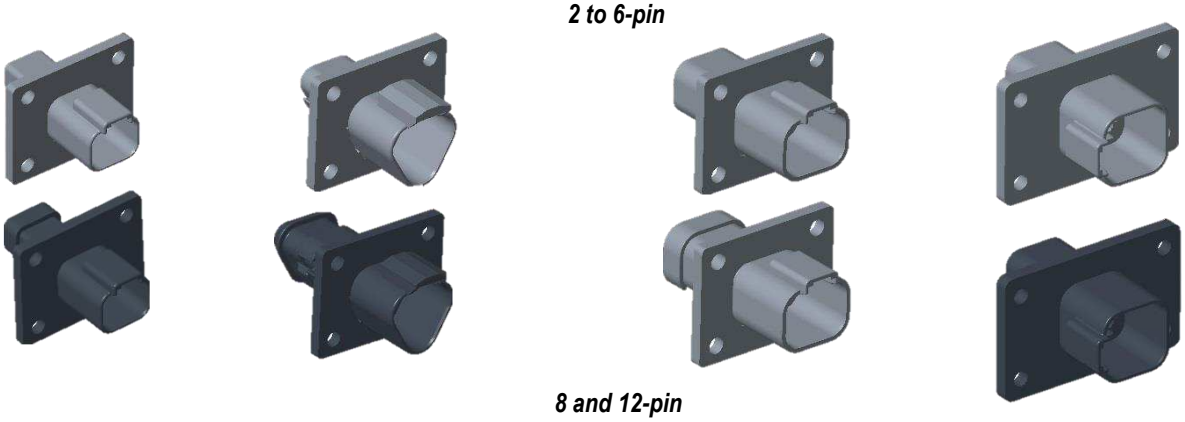


***8 and 12-pin***
***A key***

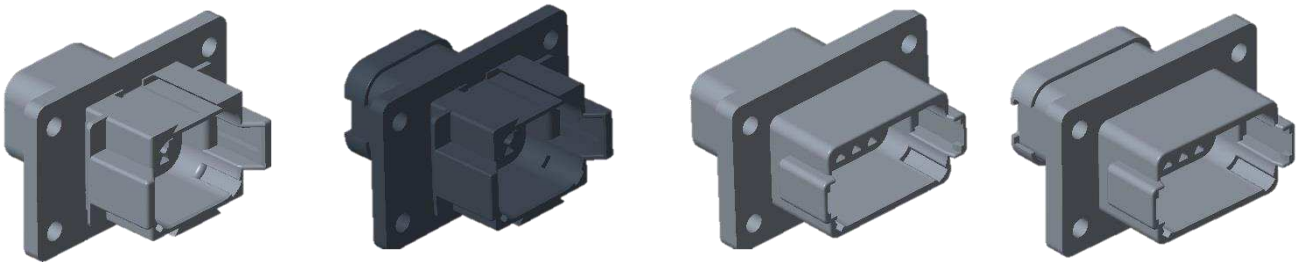


Receptacles, Long Cap
Gray and Black

***2 to 6-pin***



***8 and 12-pin***
***A key***



Receptacles, Flange, No Cap, Standard Cap,
Gray and Black

## 1.2. Plug

***2 to 6-pin***



***8 and 12-pin***
***A key***



Plug, Standard Seal, No Cap, Gray
Seal Retention, No Cap, Black

***2 to 6-pin***



***8 and 12-pin***
***A key***



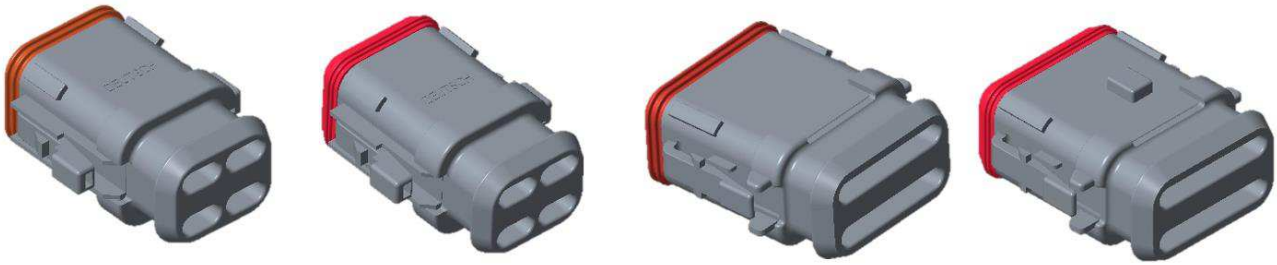
Plug, Standard Seal, Short Cap, Gray
Seal Retention, Short Cap, Black

## 1.2. Plug (Cont.)

*2 to 6-pin*

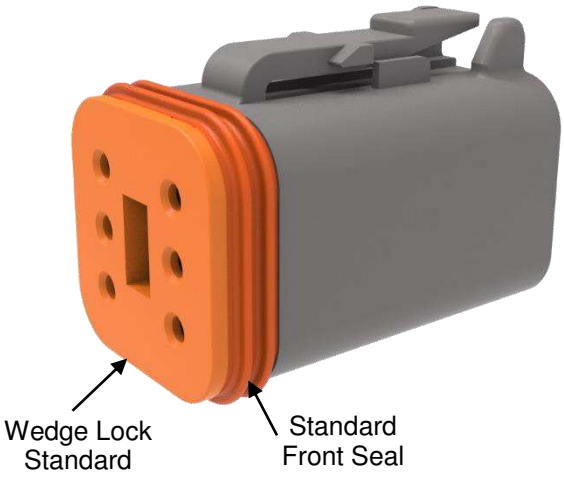


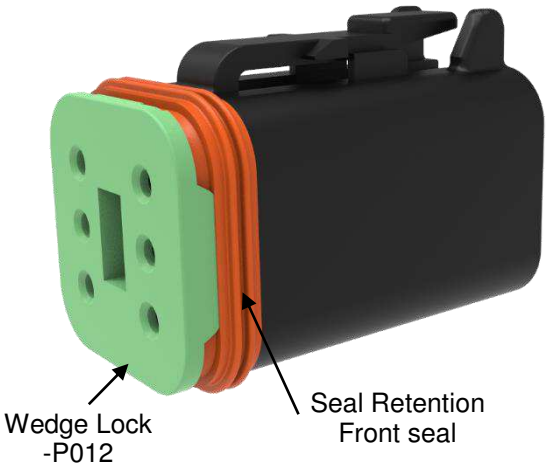
*8 and 12-pin*
*A key*



Plug, Standard Seal, Long Cap, Gray
Seal Retention, Long Cap, Black

## 1.3. Plug & Wedge Lock Comparison (Standard Vs Seal Retention)



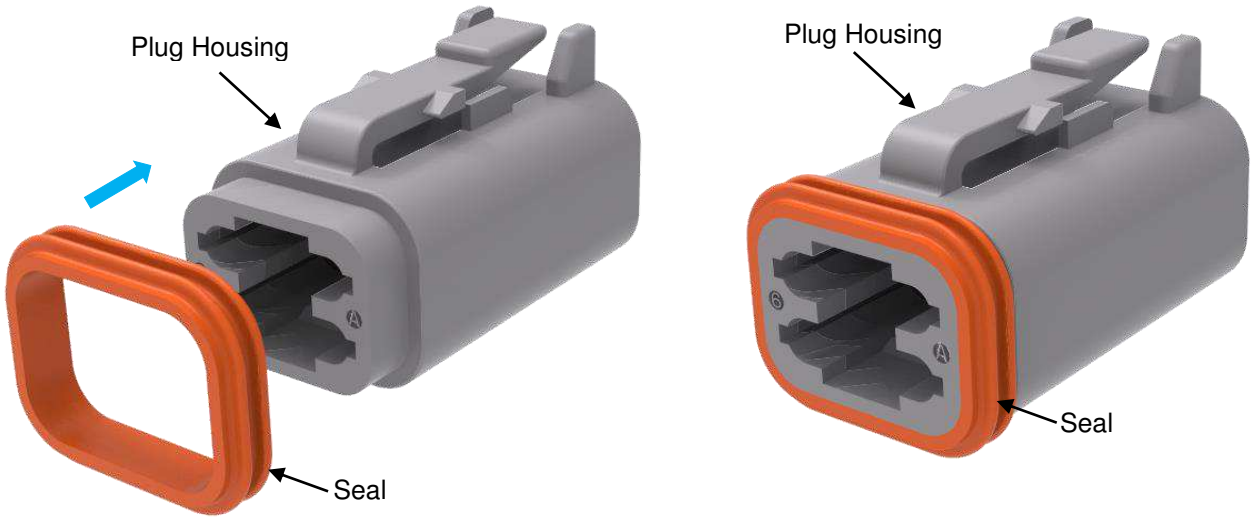




*NOTE*
*Do not use -P012 wedgelock with standard front seal.*



## 1.4. Plug Front Seal Replacement

The front seal must be present and properly seated prior to use. If the front seal has fallen off during transportation, locate it in the box and re-install the seal, as shown below. If the seal cannot be located, please contact TE for replacement seals.




## 1.5. Product Dimensions

See connector and wedge product drawing for product dimensions. See section 2.3.

## 2. REFERENCE MATERIAL

### 2.1. Revision Summary

See section 8.

### 2.2. Customer Assistance

Reference Product Base Part Numbers DT04-2P, DT04-3P, DT04-4P, DT04-6P, DT04-08PX, DT04-12PX (receptacles), and DT06-2S, DT06-3S, DT06-4S, DT06-6S, DT06-08SX, DT06-12SX (plugs) (X = A to D keys) and Product Code EQ59 are representative of DEUTSCH DT series connector system. Use of these numbers will identify the product line and help you to obtain product and tooling information when visiting www.te.com or calling the number at the bottom of page 1.

### 2.3. Drawings

Customer drawings for product part numbers are available from www.te.com. Information contained in the customer drawing takes priority. X refers to A, B, C, D keys; XXXX refers to product modification.

CONNECTORS

| Product Drawing | Description |
|---|---|
| DT04-2P-XXXX | 2 Pin Receptacle |
| DT04-3P-XXXX | 3 Pin Receptacle |
| DT04-4P-XXXX | 4 Pin Receptacle |
| DT04-6P-XXXX | 6 Pin Receptacle |
| DT04-08PX-XXXX | 8 Pin Receptacle |
| DT04-12PX-XXXX | 12 Pin Receptacle |

| Product Drawing | Description |
|---|---|
| DT06-2S-XXXX | 2 Pin Plug |
| DT06-3S-XXXX | 3 Pin Plug |
| DT06-4S-XXXX | 4 Pin Plug |
| DT06-6S-XXXX | 6 Pin Plug |
| DT06-08SX-XXXX | 8 Pin Plug |
| DT06-12SX-XXXX | 12 Pin Plug |

WEDGE LOCKS

| Product Drawing | Description |
|---|---|
| W2PX-XXXX | 2 pin Rcpt Wedge Lock |
| W3P-XXXX | 3 pin Rcpt Wedge Lock |
| W4PX-XXXX | 4 pin Rcpt Wedge Lock |
| W6PX-XXXX | 6 pin Rcpt Wedge Lock |
| W8P-XXXX | 8 pin Rcpt Wedge Lock |
| W12P-XXXX | 12 pin Rcpt Wedge Lock |

| Product Drawing | Description |
|---|---|
| W2SX-XXXX | 2 pin Plug Wedge Lock |
| W3S-XXXX | 3 pin Plug Wedge Lock |
| W4SX-XXXX | 4 pin Plug Wedge Lock |
| W6SX-XXXX | 6 pin Plug Wedge Lock |
| W8S-XXXX | 8 pin Plug Wedge Lock |
| W12S-XXXX | 12 pin Plug Wedge Lock |

*Note:*
*X = A, B, C, D Key*
*XXXX = Modification. See section 3.3H*

### 2.4. Specifications

108-151009 DT Series Product Specification

114-151000 Application Specification for DEUTSCH Size 16 S&F Pin & Socket

114-151001 Application Specification for DEUTSCH Size 16 S&F Pin & Socket

114-151004 Application Specification for DEUTSCH Size 4-20 Solid Pin & Socket

408-151008 Removal Tool DT-RT1 for Front-Release Connectors

108-151000 DEUTSCH S&F Contacts

108-151004 DEUTSCH Solid Contacts

### 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 pertains to this product are:

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

## 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 which could adversely affect performance.

#### C. Chemical Exposure

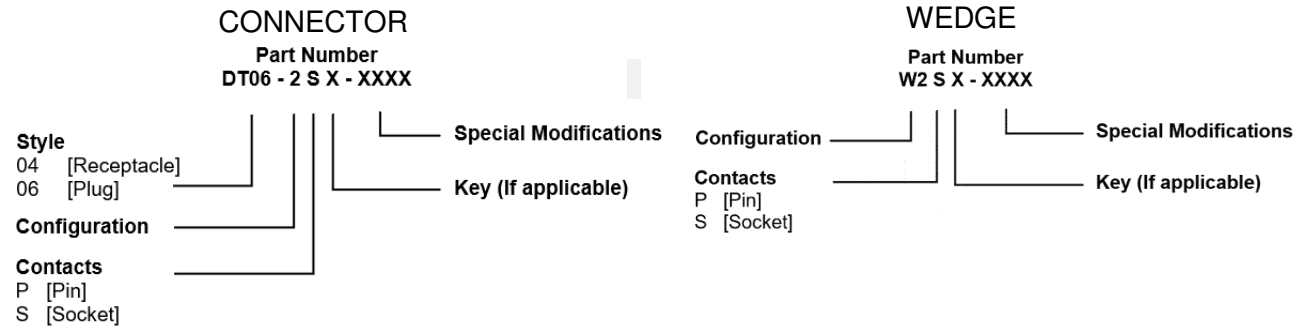
Do not store product near any chemical listed below as they may cause stress corrosion cracking in the material.

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

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

## 3.3. Characteristics

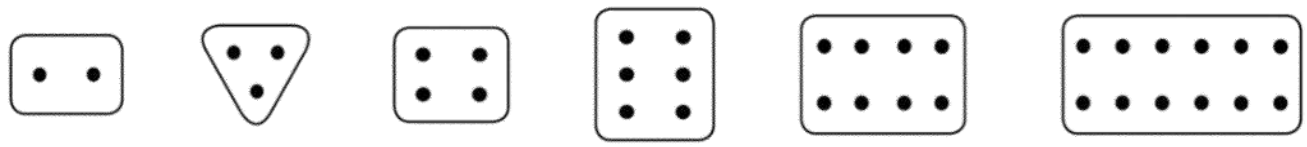
### A. Part Numbering System




*Note:*
*Pins are used in receptacles; Sockets are used in plugs.*

### B. Pin Arrangement

See product drawing for contact cavity marking.



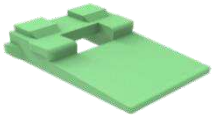
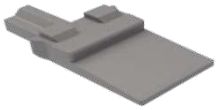
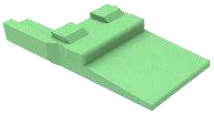
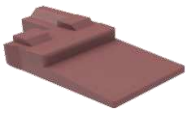
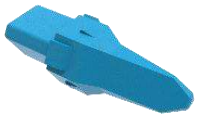
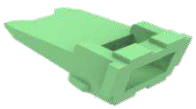
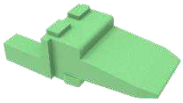
2Pin 3Pin 4Pin 6Pin 8Pin 12Pin

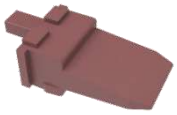
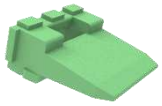
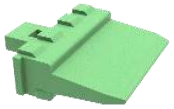
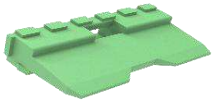
### C. Materials

Receptacle and Plug Housings: PA66 GF15 (gray, black, green, or brown)
Caps: PA66 GF15 (gray, black, green, or brown)
Flanges: PA66 GF15 (gray or black)
Wedge Locks: PBT GF30 (orange, green, blue, gray, black, brown)
Front Seal: VMQ (red-orange), FVMQ (Blue)
Grommets: VMQ (standard seal red-orange, E-seal burnt red)
Threaded Inserts: Stainless Steel

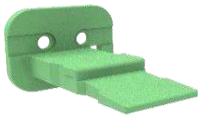
## D. Wedge Locks

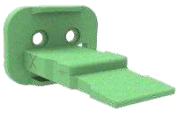
**Receptacle Wedge Locks**

| PN | Description | Shape and Color | |
|---|---|---|---|
| W2P | Wedgelock for 2 pin receptacles |  | Green |
| W2PA | Wedgelock for 2 pin receptacle "A" key |  | Gray |
| W2PB | Wedgelock for 2 pin receptacle "B" key |  | Black |
| W2PC | Wedgelock for 2 pin receptacle "C" key |  | Green |
| W2PD | Wedgelock for 2 pin receptacle "D" key |  | Brown |
| W3P | Wedgelock for 3 pin receptacles |  | Green |
| W3P-1939 | Wedgelock for 3 pin receptacle "J1939" key |  | Blue |
| W4P | Wedgelock for 4 pin receptacles |  | Green |
| W4PA | Wedgelock for 4 pin receptacle " A " key |  | Gray |
| W4PB | Wedgelock for 4 pin receptacle " B " key |  | Black |
| W4PC | Wedgelock for 4 pin receptacle " C " key |  | Green |

| PN | Description | Shape and Color | |
|---|---|---|---|
| W4PD | Wedgelock for 4 pin receptacles " D " key |  | Brown |
| W6P | Wedgelock for 6 pin receptacles |  | Green |
| W8P | Wedgelock for 8 pin receptacles |  | Green |
| W12P | Wedgelock for 12 pin receptacles |  | Green |

**Plug Wedge Locks**

| PN | Description | Color and Shape | |
|---|---|---|---|
| W2S | Wedgelock for 2 pin plugs |  | Orange |
| W2SA | Wedgelock for 2 pin plugs "A" key |  | Gray |
| W2SB | Wedgelock for 2 pin plugs "B" key |  | Black |
| W2SC | Wedgelock for 2 pin plugs "C" key |  | Green |
| W2SD | Wedgelock for 2 pin plugs "D" key |  | Brown |
| W2S-P012 | Wedgelock for 2 pin plugs |  | Green |
| W2SA-P012 | Wedgelock for 2 pin plugs "A" key |  | Gray |

| PN | Description | Color and Shape | |
|---|---|---|---|
| W2SB-P012 | Wedgelock for 2 pin plugs "B" key |  | Black |
| W2SC-P012 | Wedgelock for 2 pin plugs "C" key |  | Green |
| W2SD-P012 | Wedgelock for 2 pin plugs "D" key |  | Brown |
| W3S | Wedgelock for 3 pin plugs |  | Orange |
| W3S-1939 | Wedgelock for 3 pin plugs "J1939" key |  | Blue |
| W3S-P012 | Wedgelock for 3 pin plugs "P012" |  | Green |
| W3S-1939-P012 | Wedgelock for 3 pin plugs "1939-P012" key |  | Blue |
| W4S | Wedgelock for 4 pin plugs |  | Orange |
| W4SA | Wedgelock for 4 pin plugs "A" key |  | Gray |
| W4SB | Wedgelock for 4 pin plugs "B" key |  | Black |
| W4SC | Wedgelock for 4 pin plugs "C" key |  | Green |
| W4SD | Wedgelock for 4 pin plugs "D" key |  | Brown |

| PN | Description | Color and Shape | |
|---|---|---|---|
| W4S-P012 | Wedgelock for 4 pin plugs "P012" |  | Green |
| W4SA-P012 | Wedgelock for 4 pin plugs "A" key |  | Gray |
| W4SB-P012 | Wedgelock for 4 pin plugs "B" key |  | Black |
| W4SC-P012 | Wedgelock for 4 pin plugs "C" key |  | Green |
| W4SD-P012 | Wedgelock for 4 pin plugs "D" key |  | Brown |
| W6S | Wedgelock for 6 pin plugs |  | Orange |
| W6S-P012 | Wedgelock for 6 pin plugs "P012" |  | Green |
| W8S | Wedgelock for 8 pin plugs |  | Orange |
| W8S-P012 | Wedgelock for 8 pin plugs "P012" |  | Green |
| W12S | Wedgelock for 12 pin plugs |  | Orange |
| W12S-P012 | Wedgelock for 12 pin plugs "P012" |  | Green |

## E. Sealing Range

| Conductor Range | Insulation OD Sealing Range in [mm] | Seal Type |
|---|---|---|
| 14-20 AWG [2.5-0.5mm²] | .088-.145 [2.23-3.68] | N-Seal |
| | .053-.120 [1.35-3.05] | E-Seal |

## F. Sealing Plugs

Open cavities provide pathways for contaminates to enter the connectors. To maintain seal integrity, any unused cavity must be filled with the appropriate size sealing plug.

| Part Number | Material | Color | Description | Sealing Plug |
|---|---|---|---|---|
| 114017 | PBT | White | N-Seal<br>E-Seal |  |
| 0413-217-1605 | PBT | White | Locking<br>N-Seal<br>E-Seal |  |
| 0413-204-2005 | PBT | Red | E-Seal only |  |
| 776363-1 | PBT | Yellow | N-Seal |  |
| 776364-1 | PBT | White | E-Seal |  |

## G. Keying Pins

Keying pins are solid plastic rods used to prevent mis-mating of like connectors in close proximity. Keying pins are inserted into the retention fingers of an empty socket cavity (in plug connectors only.) Once installed, the keying pin blocks a mating contact pin from being inserted. The contact pin will be blocked before the latch device mates the connectors, helping to prevent the mis-mating of like connectors. Proper usage requires that the corresponding mating pin be omitted, and a sealing plug be inserted in the rear cavity of the mating connector. Individual applications will vary, and testing should be done to determine the best arrangement to help prevent improper connector mating.

| Part Number | Material | Color | Description | Sealing Plug |
|---|---|---|---|---|
| 0413-215-1605 | PBT | White | Locking N-Seal E-Seal |  |

*Note:*
*Multiple keying pins may be required to help prevent unintentional forced mating.*

## H. Modification

Note:
*Modifications include, but are not limited to, the following list.*
*The modifications listed are for reference only and may not be available for every arrangement.*

| Mod | Description |
|---|---|
| B016 | Receptacle has extended shell and enhanced keys, plug has enhanced keys and seal retention (P012), 12-Pin |
| B031 | Blind Blocked Plug |
| BE02 | Receptacle with extended shell and enhanced keys (B016), Short Cap |
| BE03 | Receptacle with extended shell and enhanced keys (B016), Short Cap, black |
| BE04 | Receptacle with extended shell and enhanced keys (B016), Short Cap, E- seal, black |
| BE05 | Receptacle with extended shell and enhanced keys (B016), Short Cap, sealed flange, E-seal, Threaded Inserts |
| BL04 | Receptacle with extended shell and enhanced keys (B016), Flange |
| BL08 | Receptacle with extended shell and enhanced keys (B016), Flange, black |
| BL10 | Receptacle with extended shell and enhanced keys (B016), sealed flange, E-seal, Long Cap, Threaded Inserts |
| BL11 | Receptacle with extended shell and enhanced keys (B016), sealed flange, E-seal, Short Cap, Threaded Inserts |
| C015 | E-seal |
| C017 | Solid rear grommet, Short Cap |
| CE01 | E-seal, Short Cap |
| CE02 | E-seal, black |
| CE03 | E-seal, Short Cap, black |

| Mod | Description |
|---|---|
| CE04 | E-seal, Long Cap |
| CE05 | Plug with E-seal, Seal Retention (P012), Short Cap |
| CE06 | Plug with E-seal, Seal Retention (P012) |
| CE07 | Receptacle with extended shell and enhanced keys (B016), Short Cap, E-seal |
| CE08 | Receptacle with extended shell and enhanced keys (B016), E-seal |
| CE09 | E seal, Long Cap, black |
| CE10 | Plug with E-seal, Seal Retention (P012), black |
| CE11 | Plug with E-seal, Seal Retention (P012), Short Cap, black |
| CE12 | Plug with E-seal, Seal Retention (P012), Long Cap, black |
| CE13 | Plug with E-seal, Seal Retention (P012), Long Cap |
| CE14 | Plug with E-seal, Seal Retention (P012), latch guard cap, black |
| CL03 | E-seal, Flange |
| CL07 | E-seal, sealed flange, Long Cap |
| CL08 | E-seal, Flange, Short Cap, disabled latch |
| CL09 | E-seal, sealed flange, Short Cap, black |
| CL15 | E-seal, Flange, black |
| CP01 | Solid rear grommet, Seal Retention (P012), Short Cap |
| E003 | Short Cap |
| E004 | Black housing |
| E005 | Black, Short Cap |
| E008 | Long Cap |
| EE01 | Long Cap, black |
| EF01 | Fluorosilicone front seals, Short Cap |
| EF02 | Fluorosilicone front seals, Latch Guard Cap |
| EP04 | Short Cap (same as E003) |
| EP05 | Latch Guard Cap |
| EP06 | Plug with Seal Retention (P012), Short Cap |
| EP07 | Plug with Seal Retention (P012), black |
| EP08 | Plug with Seal Retention (P012), Short Cap, black |
| EP09 | Plug with Seal Retention (P012), Latch Guard Cap, black |
| EP11 | Plug with Seal Retention (P012), Long Cap, black |
| EP20 | Plug with seal retention (P012), Long Cap |
| L012 | Flange |
| L019 | Backshell Adapter for DIN convolute interface |
| LE01 | Sealed flange, inside mount, gasket, short cap |
| LE03 | Sealed flange, outside mount, Short Cap (12-Pin), Long Cap (8-Pin) |
| LE05 | Sealed flange, inside mount, gasket, Short Cap |
| LE06 | Sealed flange, inside mount, gasket, Short Cap, E-seal |
| LE07 | Flange, Short Cap |
| LE08 | Flange, Long Cap, gray |
| LE09 | Sealed flange, Short Cap, black |
| LE10 | Sealed flange, inside mount, gasket, Short Cap, black |

| Mod | Description |
|---|---|
| LE11 | Flange, Short Cap, black |
| LE12 | Flange, Long Cap, black |
| LE13 | Special adapter, round housing, Short Cap, black |
| LE14 | Flange, black |
| LE17 | Receptacle with extended shell and enhanced keys (B016), sealed flange, Short Cap, black |
| LE21 | Receptacle with extended shell and enhanced keys (B016), sealed flange, Short Cap, E-seal, Threaded Inserts. |
| P004 | Same as standard part without modification |
| P007 | DT 3P “Y Splitter” |
| P012 | Plug and Wedge Lock Seal Retention. 2,3,4,6 pin plugs are black |
| P032 | Integrated Long Cap (J1939), 3-way, black |
| TE03 | E-Seal, Green |
| TE07 | E-Seal, Blue |
| TE09 | E-Seal, Brown |
| TN03 | N-Seal, Green |
| TN07 | N-Seal, Blue |
| TN09 | N-Seal, Brown |

**Common Modifications**

| Modification | Description | Plug | Receptacle |
|---|---|---|---|
| B016 | Helps prevent mis-mating. Available for the DT 12-way connectors. In addition to the four keying positions (A, B, C, or D) and color coding, the B016 enhancement gives the user both visual and tactile proof of correct mating, thus helping eliminate mis-mating opportunities during assembly. Please note the P012 plug is the required mate for the B016 receptacle to make the enhancement effective. |  |  |
| C015 | Has a reduced diameter (E-seal) rear grommet to provide proper sealing with smaller wire insulation |  |  |
| E003 | Includes a protective end cap attached to the rear of the connector. There are holes or slots in the cap to allow the contacts to be inserted. Color: grey |  |  |
| E004 | Changes the connector body color to black |  |  |

| Modification | Description | Plug | Receptacle |
|---|---|---|---|
| E005 | Includes a protective end cap attached to the rear of the connector. There are holes or slots in the cap to allow the contacts to be inserted. Color: black |  |  |
| E008 | Includes an extended cap to attach shrink tubing where application requirements need extra wire protection. Color: grey |  |  |
| L012 | Includes a simple welded-on or integrated flange onto receptacle to simplify wire routing and assembly.<br>Other mods:<br>• Flange, no cap: BL04, BL08, CL03, LE14<br>• Flange, short cap: LE07, LE11<br>• Flange, long cap: LE08, LE12 | |  |
| LE10 | LE10 Includes either a welded-on or integrated flange with seal onto receptacle<br>Other mods:<br>• Sealed flange, short cap CL09, LE01, LE05, LE06, LE09, LE17, LE21<br>• Sealed flange, long cap: BL10, CL07 | |  |
| P012 | Has an enhanced front seal retention resulting in an ultra-tight environmental seal. The enhanced seal retention keeps the seal in place during mating and unmating. Requires an enhanced P012 wedge lock. Available in all pin arrangements. Connector housing is black except for the 8 and 12 pin arrangements, where the color is based on the key. | <br> | |
| TN03 | Changes the connector body color to green |  |  |
| TE03 | Has a reduced diameter (E-Seal) rear grommet to provide proper sealing with smaller wire insulation, changes the connector body color to green |  |  |

| Modification | Description | Plug | Receptacle |
|---|---|---|---|
| TN07 | Changes the connector body to blue |  |  |
| TE07 | Has a reduced diameter (E-Seal) rear grommet to provide proper sealing with smaller wire insulation, changes the connector body color to blue |  |  |
| TN09 | Changes the connector body color to brown |  |  |
| TE09 | Has a reduced diameter (E-Seal) rear grommet to provide proper sealing with smaller wire insulation, changes the connector body color to brown |  |  |

## I. Accessories

Several accessory items can be used to complement the connectors such as PVC boots, plastic backshells, neoprene closed cell gaskets, protective dust caps and mounting clips. Accessories are designed to complete the application and meet a wide array of design requirements such as solutions for mounting, providing additional protection, and offering increased aesthetics.

### BOOTS

Slip-on boots are not only aesthetically appealing, but also provide increased protection from dirt, paint overspray and pressure washing.







| Part Number Receptacle | Description |
|---|---|
| DT2P-BT | 2pin, Gray |
| DT2P-BT-BK | 2pin, Black |
| DT2P-BT-YW | 2pin, Yellow |
| DT3P-BT | 3pin, Gray |
| DT3P-BT-BK | 3pin, Black |
| DT3P-BT-YW | 3pin, Yellow |
| DT4P-BT | 4pin, Gray |
| DT4P-BT-BK | 4pin, Black |
| DT4P-BT-YW | 4pin, Yellow |
| DT6P-BT | 6pin, Gray |
| DT6P-BT-BK | 6pin, Black |
| DT6P-BT-YW | 6pin, Yellow |
| DT8P-BT | 8pin, Gray |
| DT8P-BT-BK | 8pin, Black |
| DT12P-BT | 12pin, Gray |
| DT12P-BT-BK | 12pin, Black |
| DT12P-BT-EN | 12pin, Gray, Long |
| DT12P-BT-YW | 12pin, Yellow |

| Part Number Plug | Description |
|---|---|
| DT2S-BT | 2pin, Gray |
| DT2S-BT-BK | 2pin, Black |
| DT2S-BT-YW | 2pin, Yellow |
| DT3S-BT | 3pin, Gray |
| DT3S-BT-BK | 3pin, Black |
| DT3S-BT-YW | 3pin, Yellow |
| DT4S-BT | 4pin, Gray |
| DT4S-BT-BK | 4pin, Black |
| DT4S-BT-EXT | 4pin, Gray, Long |
| DT4S-BT-YW | 4pin, Yellow |
| DT6S-BT | 6pin, Gray |
| DT6S-BT-BK | 6pin, Black |
| DT6S-BT-RED | 6pin, Red |
| DT6S-BT-YW | 6pin, Yellow |
| DT8S-BT | 8pin, Gray |
| DT8S-BT-BK | 8pin, Black |
| DT12S-BT | 12pin, Gray |
| DT12S-BT-BK | 12pin, Black |
| DT12S-BT-EN | 12pin, Gray, Long |
| DT12S-BT-YW | 12pin, Yellow |
| DT48S-BT | 48pin, Gray |

Material: PVC

Operating temperature is -29ºC to +100ºC [-20º to +212ºF].

*Note:*
*Boots are received with the end closed. Cut end of boot off to desired length.*

## PROTECTIVE DUST CAPS

Two versions are available. Slip-on PVC caps and thermoplastic caps provide protection from dirt, paint overspray and pressure washing. The thermoplastic version has a hole for either optional rubber or steel lanyard or mounting screw.



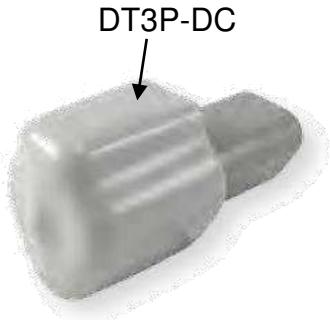


| Part Number PVC Dust Cap | Description | Connector Part Number |
|---|---|---|
| DT3P-DC | 3pin, Gray, Rcpt | DT04-3P |
| DT4P-DC | 4pin, Gray, Rcpt | DT04-4P |
| DT6P-DC | 6pin, Gray, Rcpt | DT04-6P |
| DT12P-DC | 12pin, Gray, Rcpt | DT04-12P* |
| DT12P-DC-BK | 12pin, Black, Rcpt | DT04-12P* |
| DT12S-DC | 12pin, Gray, Plug | DT06-12S* |

Material: PVC
Operating temperature is -29ºC to +100ºC [-20º to +212ºF]

| Part Number Thermoplastic Dust Cap | Description | Connector Part Number |
|---|---|---|
| 1011-344-0205 | 2pin, Plug | DT06-2S |
| 1011-345-0305 | 3pin, Plug | DT06-3S |
| 1011-346-0405 | 4pin, Plug | DT06-4S |
| 1011-347-0605 | 6pin, Plug | DT06-6S |
| 1011-348-0805 | 8pin, Plug | DT06-08S* |
| 1011-349-1205 | 12pin, Plug | DT06-12S* |

Material: PA66 Black
Operating temperature is -55ºC to +125ºC [-67º to +257ºF]






## BACKSHELLS

Designed to snap onto and mate with all standard plugs and receptacles without modifications that affect the rear of the connector. The rigid, durable backshells offer a high level of protection and allow convoluted tubing to nest within the rear of the backshell. Straight (180°) versions and right angle (90°) versions and backshells with strain relief for jacketed cable are also available. The backshells are designed to work with the standard connectors (without caps or flanges[1].)

Receptacle Backshells

| Part Number | Style | Strain Relief | Tubing Size mm | Connector Part Number |
|---|---|---|---|---|
| 1011-229-0205 | 180° | | 6, 7.5, 8.5, 10 | DT04-2P |
| 1011-257-0205 | | X | | |
| 1011-230-0205 | 90° | | | |
| 1011-258-0205 | | X | | |
| 1011-233-0305 | 180° | | | DT04-3P |
| 1011-261-0305 | | X | | |
| 1011-234-0305 | 90° | | | |
| 1011-262-0305 | | X | | |
| 1011-237-0405 | 180° | | | DT04-4P |
| 1011-265-0405 | | X | | |
| 1011-238-0405 | 90° | | | |
| 1011-266-0405 | | X | | |
| 1011-241-0605 | 180° | | 8.5, 10, 13 | DT04-6P |
| 1011-269-0605 | | X | | |
| 1011-270-0605 | 90° | X | | |
| 1011-245-0805 | 180° | | 8.5, 10, 13 | DT04-08PX |
| 1011-246-0805 | 90° | | | |
| 1011-249-1205 | 180° | | 10, 13, 17 | DT04-12PX |
| 1011-250-1205 | 90° | | | |
| SMBR-01-U | 90° | X | 8.5, 10 | DT04-6P-L019 DT04-6P-LC01 |
| SMBR-02-U | | | | |
| SMBR-10-U | 90° | X | 8.5 | |
| SMBR-85-U | | | 10 | |

X=A, B, C, D key
Material: PA66
Operating temperature is -55ºC to +125ºC [-67º to +257ºF]

1011-237-0405



1011-238-0405



SMBR-01/02-U



SMBR-10/85-U



*Note:*
*1. The receptacle backshells do not lock on flanged connectors where the dovetail feature is obscured. Customers may need to conduct additional tests to determine if it meets their requirements in their application.*

Plug Backshells

| Part Number | Style | Strain Relief | Tubing Size mm | Connector Part Number |
|---|---|---|---|---|
| 1011-227-0205 | 180° | | 6, 7.5, 8.5, 10 | DT06-2S |
| 1011-255-0205 | | X | | |
| 1011-228-0205 | 90° | | | |
| 1011-256-0205 | | X | | |
| 1011-231-0305 | 180° | | | DT06-3S |
| 1011-259-0305 | | X | | |
| 1011-232-0305 | 90° | | | |
| 1011-260-0305 | | X | | |
| 1011-235-0405 | 180° | | | DT06-4S |
| 1011-263-0405 | | X | | |
| 1011-236-0405 | 90° | | | |
| 1011-264-0405 | | X | | |
| 1011-239-0605 | 180° | | 8.5, 10, 13 | DT06-6S |
| 1011-267-0605 | | X | | |
| 1011-240-0605 | 90° | | | |
| 1011-268-0605 | | X | | |
| 1011-243-0805 | 180° | | 8.5, 10, 13 | DT06-08SX |
| 1011-244-0805 | 90° | | | |
| (1) 1011-247-1205 | 180° | | 10, 13, 17 | DT06-12SX |
| (1) 1011-248-1205 | 90° | | | |
| (2) 1028-043-1205 | 180° | | 13, 17 | DT06-12SX-XXXX |
| SMBR-01-U | 180° | X | 8.5, 10 | DT06-6S-L019<br>DT06-6S-LC01 |
| SMBR-02-U | | | | |
| SMBR-10-U | 90° | X | 8.5 | |
| SMBR-85-U | | | 10 | |

1011-235-0405



1011-236-0405



X=A, B, C, D key
Material: PA66
Operating temperature is -55ºC to +125ºC [-67º to +257ºF]

*Note:*
*1. 1011-247-1205 and 1011-248-1205 cannot be used with DT06-12SX-XXXX with Enhanced Key (i.e. B016)*
*2. 1028-043-1205 may be used with or without enhanced key feature.*

## GASKETS

These rugged high-quality gaskets can help to keep destructive elements like dirt, salt, sand, and road debris out of electrical panels. The gaskets have a thickness of 3.175 mm [0.125 in].

DT12-L012-GKT



| Part Number | Connector Part Number |
|---|---|
| DT3P-L012-GKT | DT04-3P-L012 |
| DT4P-L012-GKT | DT04-4P-L012 |
| DT8P-L012-GKT | DT04-08PX-L012 |
| DT12-L012-GKT | DT04-12PX-L012 |

Material: Closed Cell Sponge
Operating temperature is -57ºC to +107ºC [-70º to +225ºF]
Gaskets are not IP rated.

## MOUNTING CLIPS

Mounting clips are installed on the receptacle to mount the connector. To meet design needs, the clips are available for several configurations and in plastic, stainless steel, or steel with zinc plating.

| Part Number | Mounting Direction | Material | Plating[1] Color | Mounting Hole mm [in] | Cavity Arrangement |
|---|---|---|---|---|---|
| 1027-003-1200 | Straight | Stainless Steel | None | 11 [.433] | DT 2, 3, 4, 6, 12 DTM, DTP |
| 1027-005-1200 | | | | 13 [.512] | |
| 1027-004-1200 | | Steel | Zinc/Yellow | | |
| 1011-026-0205 | | PA66 | Gray | 5.08 [.200] | |
| 1011-030-0205 | | | Black | T-Stud Mount | |
| 1011-310-0205[2] | | | | Fir-Tree Mount | |
| 1924487-2 | | | | | |
| 1027-008-1200 | Side | Steel | Zinc/Yellow | 11 [.433] | |
| 1027-017-1200 | | | | 8.2 [.323] | |

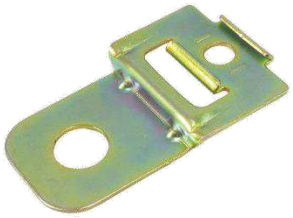
| Part Number[4] | Mounting Direction | Material | Plating[1] Color | Mounting Hole mm [in] | Cavity Arrangement |
|---|---|---|---|---|---|
| 1027-001-0800 | Straight | Stainless Steel | None | 11 [.433] | DT 8 Pin Only |
| 1027-006-0800 | | | | 13 [.512] | |
| 1027-002-0800 | | Steel | Zinc/Yellow | | |
| 1027-014-0800 | | | | 8.2 [.323] | |
| 1011-027-0805 | | PA66 | Gray | 5.08 [.200] | |

*Note:*
*1. Zinc is RoHS compliant*
*2. 1011-310-0205 has 50N [11.2lbf] connector retention*
*3. The DT04-3P-P007 will require a mounting clip to be added to each of its mating dovetails to prevent side loading.*
*4. Only DT 8 Pin are compatible with these mounting clips.*



Straight Hole Mount





Side Hole Mount



Straight Hole Mount



T-Stud Mount



Fir-Tree Mount



AS16 Fir-Tree Mount

### 3.4. Contact Insertion

1. The crimped contact must meet these specifications:

114-151000 DEUTSCH size 16 S&F contacts

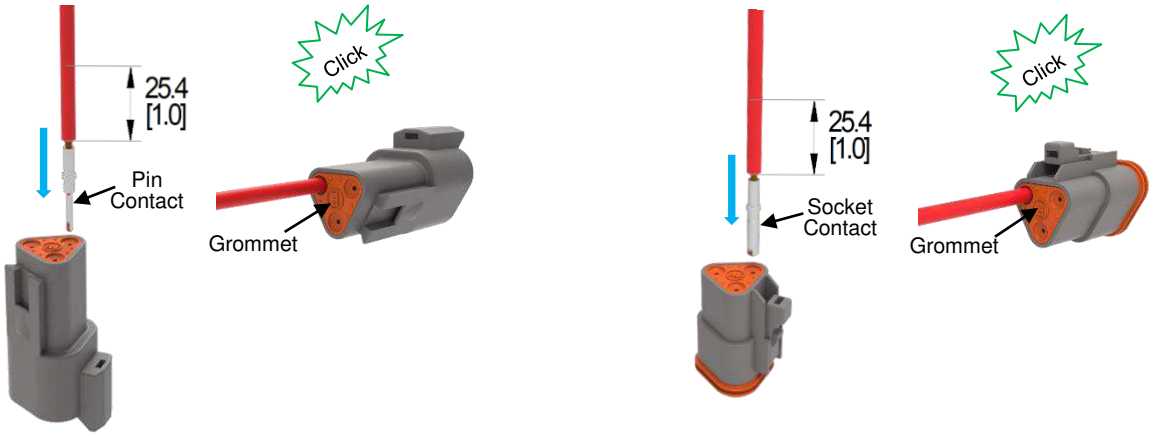
114-151001 DEUTSCH size 16 S&F contacts

114-151004 DEUTSCH solid contacts

2. Grasp crimped contact approximately 25.4 [1.0] behind the contact crimp barrel and hold the connector with grommet facing you.

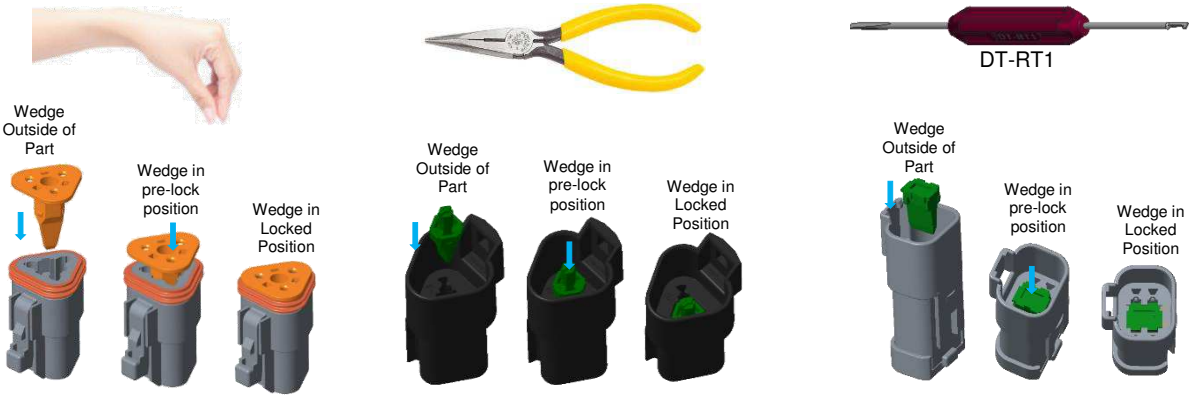
3. Push contact straight into grommet until positive stop is felt. The contact will lock into place. A slight tug on wire will confirm that is properly locked in place.

RECEPTACLE PLUG




*Note:*
*1. Pins are used in receptacles; Sockets are used in plugs.*
*2. Wire insulation outside diameter must meet connector wire sealing range per section 3.3.E.]*
*3. Insertion tool, M15570-16 (size 16) may be needed for ≤20 AWG wire.*
*4. Front seal must be present and properly seated prior to contact insertion.*

4. Once all the contacts are in place, insert the wedge lock until it snaps into place. For the receptacle, the DT-RT1 or small long nose pliers may be used to assist in locking into place. For the plug, wedge lock may be locked in place by hand.



### 3.5. Contact Insertion Tool

Insertion tools are used to help insert small gage wire contacts into connectors that utilize a round shoulder contact retention system. Insertion tools are compact, easy-to-use and made with durable plastic to insert wire contact without damage to wire, insulation, rear grommet seal or connector housing.

**USING THE TOOL**

1. Insert the wire contact into the colored end wire entry slot and gently pull back until the contact locking shoulder is against tool.
2. Push the tool/wire contact assembly into the connector rear until the contact is felt snap into position within the retainer.
3. While holding the wire forward, gently pull the tool out.
4. A slight tug on wire will confirm the contact is properly locked in place.

| Contact Size | Part Number | Mil-Spec | Color Insertion | Insertion Tool |
|---|---|---|---|---|
| 16 | M15570-16 | M81969/14-03 | Blue |  |

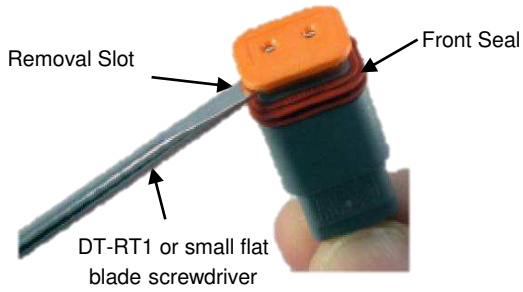
*Caution:*
*Do not twist or insert the insertion tool at angle; otherwise, damage to the cavity retention finger(s) will result.*

### 3.6. Contact Removal

DEUTSCH DT-RT1 multi-use tool has a small hook on one end for wedge lock removal and a small screwdriver on the other end to push back the locking fingers and release the contact. The tool is designed to extract individual DEUTSCH solid and stamp and formed (S&F) pin and socket contacts from front-release connectors. See 408-151008 for more information.

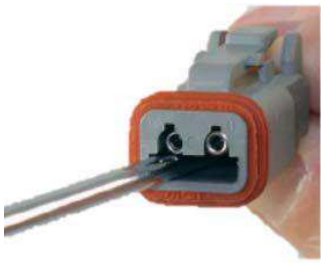
#### A. Removing Socket Contact

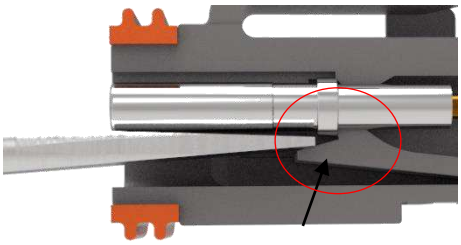
1. Slide the screwdriver tip of removal tool under the wedge lock, and by evenly lifting it, remove wedge from the connector.



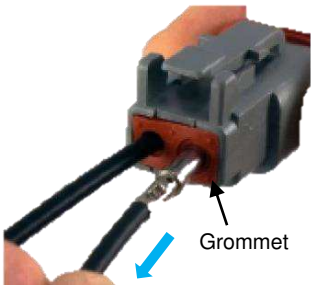

*Caution:*
*Be careful not to damage the front seal of the plug connector. Replace if necessary.*

2. Insert the screwdriver tip of the removal tool into the contact cavity of the contact to be removed to release the locking finger.






3. Pull the wire until the contact is removed. If there is no end cap on the connector, it may be necessary to hold the rear grommet in place with fingers while removing the contact.

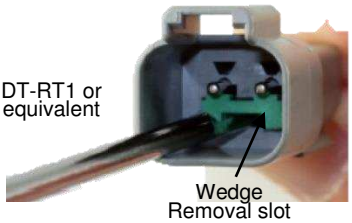



*Note:*
*If rear grommet comes out, inspect it for cuts, cracks, or other damage. Replace if necessary. Reinstall*

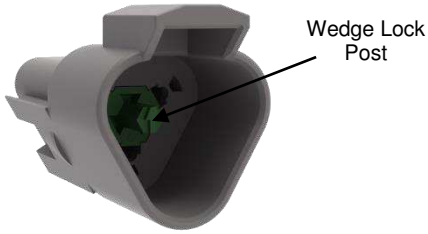
**B. Removing Pin Contact**

1. For 2, 4, 6, and 12 pin, insert the hook tip of the DT-RT1 or equivalent in the wedge removal slot, grasp the wedge lock, then pull wedge straight out of the connector. For 3 and 8 pin, as well as 2 and 4 pin keyed wedge locks, use small, long nose pliers to grasp the wedge lock post, then pull wedge straight out of the connector.

2 ,4, 6, 12–Pin
(2–Pin example)

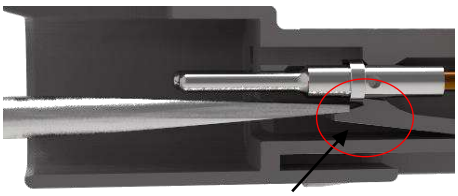



3, 8–Pin
(3–Pin example)

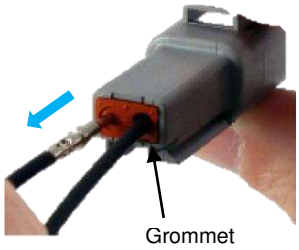



2. Insert the screwdriver tip of the DT-RT1 or equivalent into the contact cavity of the contact to be removed to release the locking finger.





3. Pull the wire until the contact is removed. If there is no end cap on the connector, it may be necessary to hold the rear grommet in place with fingers while removing the contact.




*Note:*
*If rear grommet comes out, inspect it for cuts, cracks, or other damage. Replace if necessary. Reinstall*

### 3.7. Sealing Plug, Locking Sealing Plug and Keying Pin Installation and Removal.

114017, 776363-1 Sealing Plug (N-Seal or E-Seal) For Plug and Receptacle Connectors

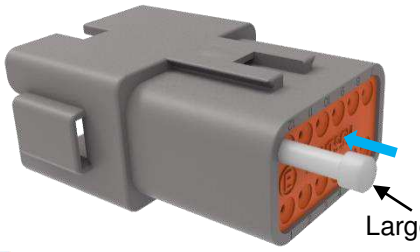
Step 1:

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




Step 2:

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





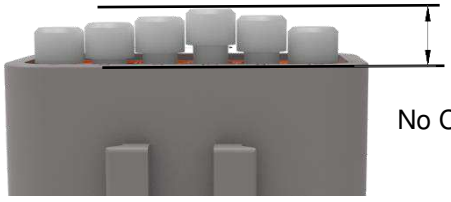


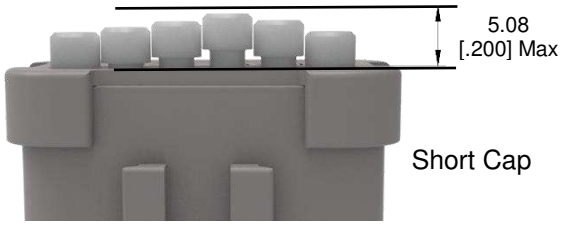
*Note:*
*The large diameter end must be flush with cavity opening. Do not push all the way through.*

Step 3:

Apply pressure until the sealing plug is forced to stop by contact with rear grommet or cap. Visually inspect the sealing plug large diameter end to confirm it is flush with cavity opening. Do not push all the way through. If multiple sealing plugs are used close together, the large ends may not sit flush due to tight spacing. The maximum allowable distance from top of sealing plug to grommet surface is 6.35 [.250], maximum allowable distance from top of sealing plug to short cap surface is 5.08 [.200].



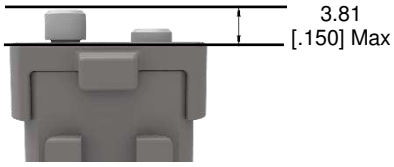



*Note:*
*Sealing plug may be used with long caps but may be difficult to remove.*



*Note:*
*For 2 and 3 pin, the head of the sealing plug can fit into the opening of the short cap, but may protrude past the top of the cap a maximum of 3.81 [.150].*



Step 4:

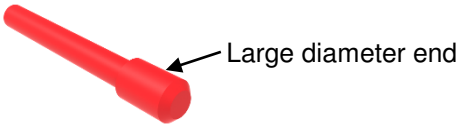
To remove the sealing plug from connector, grasp the large diameter end with fingers or small long nose pliers and pull until sealing plug is removed. If there is no end cap on the connector, it may be necessary to hold the rear grommet in place with fingers while removing the sealing plug.

*Note:*
*If rear grommet comes out, inspect it for cuts, cracks, or other damage. Replace if necessary. Reinstall*

0413-204-2005, 776364-1 Sealing Plug (E-Seal only) For Plug and Receptacle Connectors

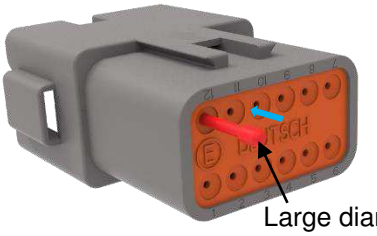
Step 1:

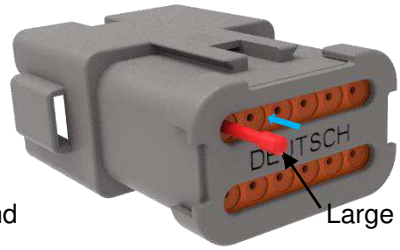
Holding the sealing plug with large diameter end away from the connector, gently apply downward pressure to force the sealing plug into the cavity.




Step 2:

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



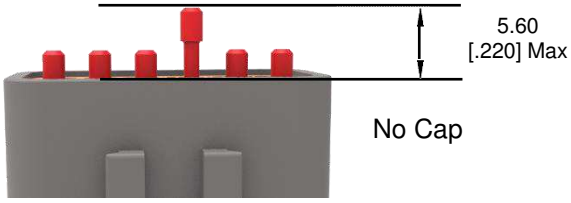




*Note:*
*The large diameter end must be flush with cavity opening. Do not push all the way through.*

Step 3:

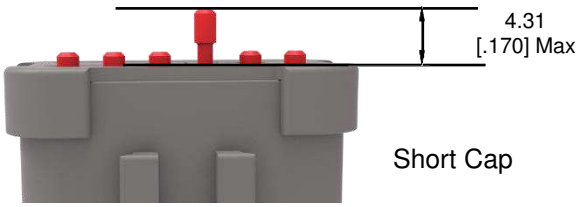
Apply pressure until sealing plug is forced to stop by contact with rear grommet. Visually inspect the sealing plug large diameter end to confirm it is flush with cavity opening. Do not push all the way through. The maximum allowable distance from top of sealing plug to grommet surface is 5.60 [.220], maximum allowable distance from top of sealing plug to short cap surface is 4.31 [.170].



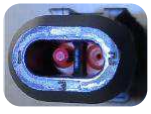









*Note:*
*Sealing plug may be used with long caps but may be difficult to remove.*



Step 4:

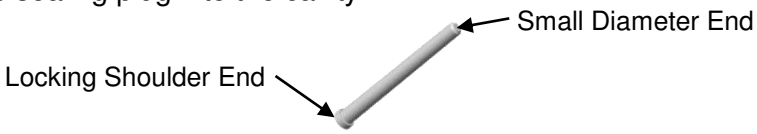
To remove the sealing plug from connector, grasp the large diameter end with fingers or small long nose pliers and pull until sealing plug is removed. If there is no end cap on the connector, it may be necessary to hold the rear grommet in place with fingers while removing the sealing plug.

*Note:*
*If rear grommet comes out, inspect it for cuts, cracks, or other damage. Replace if necessary. Reinstall*

0413-217-1605 Locking Sealing Plug (N-Seal or E-Seal) For Plug and Receptacle Connectors

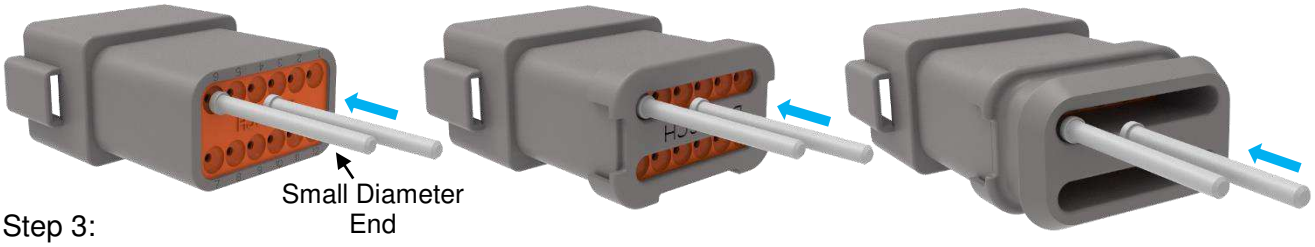
Step 1:

Holding the sealing plug with locking shoulder end towards the connector, gently apply downward pressure to force the sealing plug into the cavity.




Step 2:

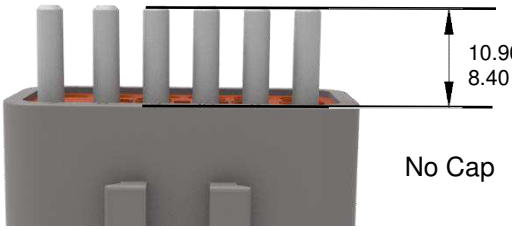
With perpendicular motion, apply downward pressure to the small diameter end of the sealing plug.




Step 3:

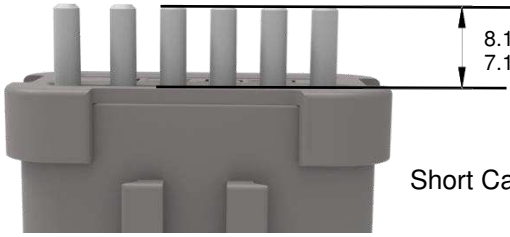
Apply pressure until sealing plug locks into place. A slight tug on the sealing plug will confirm it is locked into place. Allowable distance from top of sealing plug to connector surface is shown below.



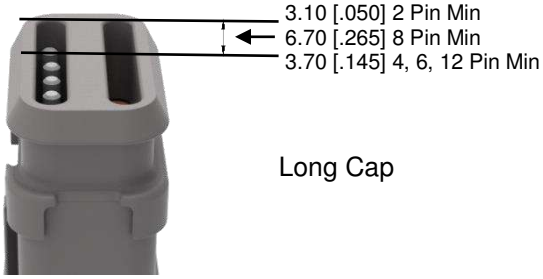











Step 4:

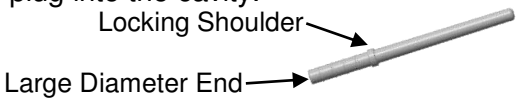
To remove locking sealing plug (keying pin) from connector, first release the locking finger similar to step 2 of contact removal. Then, grasp the end of the locking sealing plug (keying pin) with fingers or small, long nose pliers and pull until it is removed. If there is no end cap on the connector, it may be necessary to hold the rear seal grommet in place with fingers during removal.

*Note:*
*If rear grommet comes out, inspect it for cuts, cracks, or other damage. Replace if necessary. Reinstall*

0413-215-1605 Keying Pin (N-Seal or E-Seal) For Plug Connectors ONLY

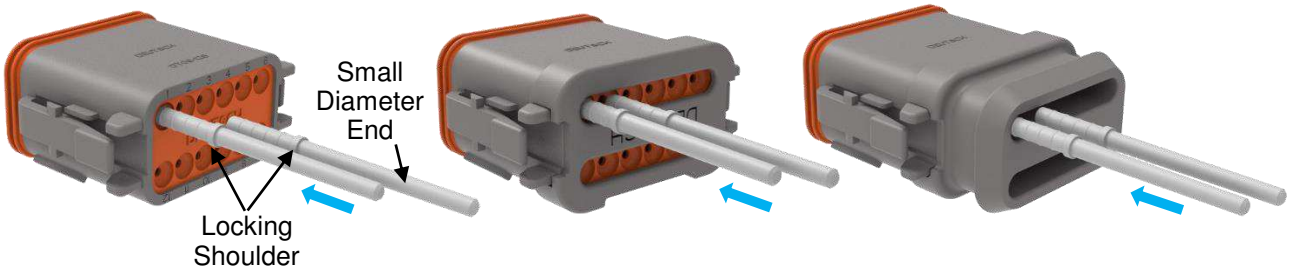
Step 1:

Holding the keying pin with large diameter end towards the connector, gently apply downward pressure to force the sealing plug into the cavity.




Step 2:

With perpendicular motion, apply downward pressure to the small diameter end of the keying pin.




Step 3:

Apply pressure until keying pin locks into place. A slight tug on the keying pin will confirm it is locked into place. The allowable distance from top of keying pin to connector surface is shown below.



Step 4:

To remove the keying pin from connector, first release the locking finger similar to step 2 of contact removal. Then, grasp the end of the keying pin with fingers or small, long nose pliers and pull until it is removed. If there is no end cap on the connector, it may be necessary to hold the rear seal grommet in place with fingers during removal.

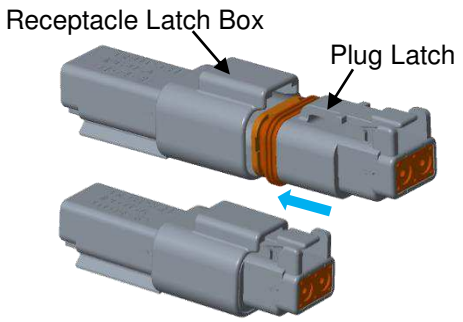
*Note:*
*If rear grommet comes out, inspect it for cuts, cracks, or other damage. Replace if necessary. Reinstall*

### 3.8. Connector Mating

2,3,4,6-pin: To mate the plug and receptacle align the plug latch with the receptacle latch box. Then push plug into the receptacle until there is an audible and tactile click. Verify plug latch is in full latched position.

8 and 12-pin: To mate the plug and receptacle, first make sure both plug and receptacle are same key (i.e. A, B, C,D) next align the plug keys with the receptacle keyways. Then push plug into the receptacle until there is an audible and tactile click. Verify both plug latches are in full latched position.

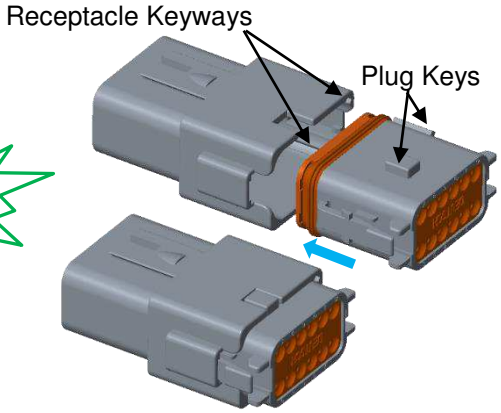
**2, 3, 4, 6-Pin**







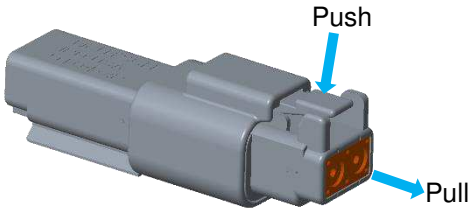
**8,12-Pin**



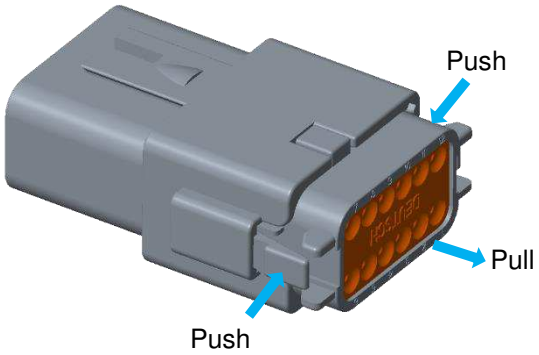

### 3.9. Connector Unmating

To unmate the plug from the receptacle, push the plug latch(es) until a hard stop is felt. Pull the plug from the receptacle until they are fully separated.

**2, 3, 4, 6-Pin**




**8, 12-Pin**



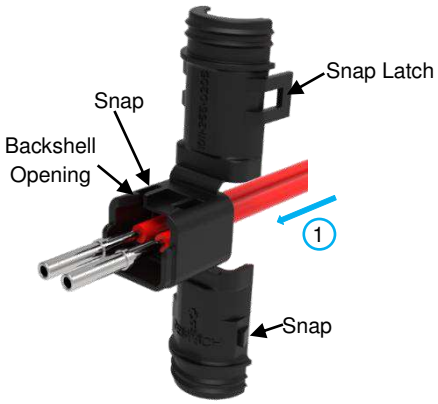

*Caution:*
*Be careful not to damage the front seal of the plug connector. Replace if necessary.*

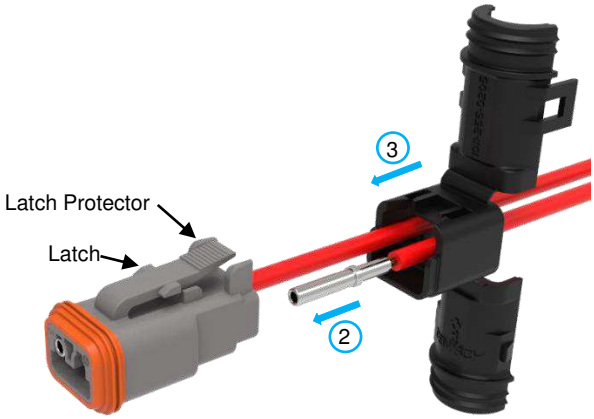
### 3.10. Backshell, Boot, Gasket, Protective Dust Cap, Mounting Clip Installation and Removal

See section H for part numbers.

BACKSHELL - PLUG

1. First, slide the backshell over the wires. Then, insert the wires into the connector. Next, align the opening on the backshell with the plug latch and push the backshell straight onto the back of the connector until a positive stop and a snap is felt. Verify backshell plug snap is fully engaged on plug latch protectors.

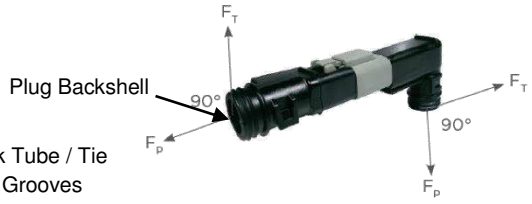



2. To close the backshell, rotate backshell halves together lining up the two snap and snap latches. Before snapping shut, make sure convoluted tubing (if used) is captured within the inner grooves. If no convoluted tubing is used, make sure no wires are pinched in the backshell. If needed, install shrink tubing and/or tie wrap. Cut off excess.





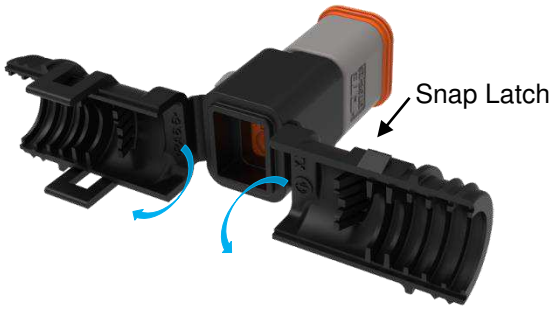




**Backshell Minimum Retention**

| Connector | Fp N [Lbf] | Ft N [Lbf] |
|---|---|---|
| DT06-2S | 50[11.2] | 10 [2.2] |
| DT06-3S | | 50 [11.2] |
| DT06-4S | | 25 [5.6] |
| DT06-6S | | 30 [6.7] |
| DT06-08SX | | 35 [7.9] |
| DT06-12SX | | 40 [9.0] |

3. To open the plug backshell, disengage the two snap latches by wedging a DT-RT1 tool or small flat head screwdriver under the snap latch, lift until disengaged then pry the backshell open.




*Caution:*
*Be careful not to break the snap latch.*

4. To remove the backshell from plug housing, grasp the backshell and pull hard to rear. It may be necessary to pry the snaps on the backshell outward from plug latch protectors.

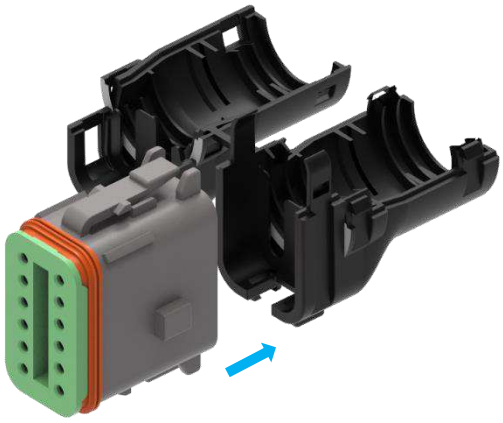





1028-043-1205 Enhanced Key Backshell.

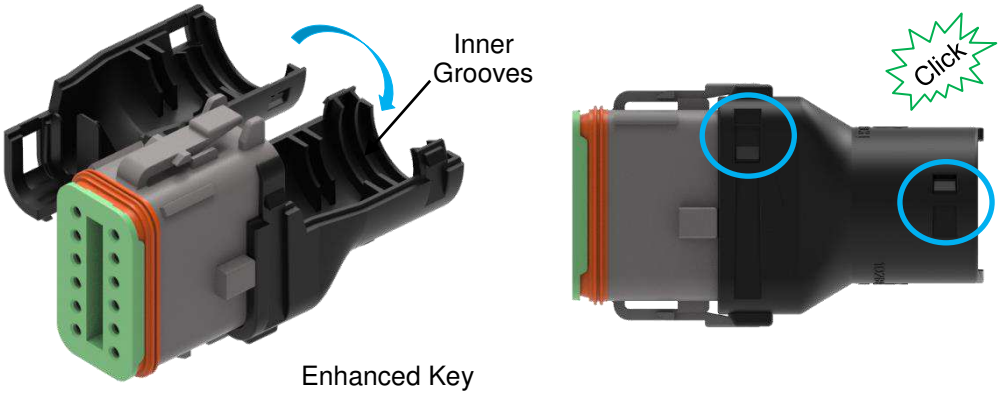
Fits onto any 12-Pin plug with or without enhanced key modification, such as B016.

1. To install the backshell, it must first be in the open position as shown. Slide the half of the backshell with the tall snaps onto the back of the plug.

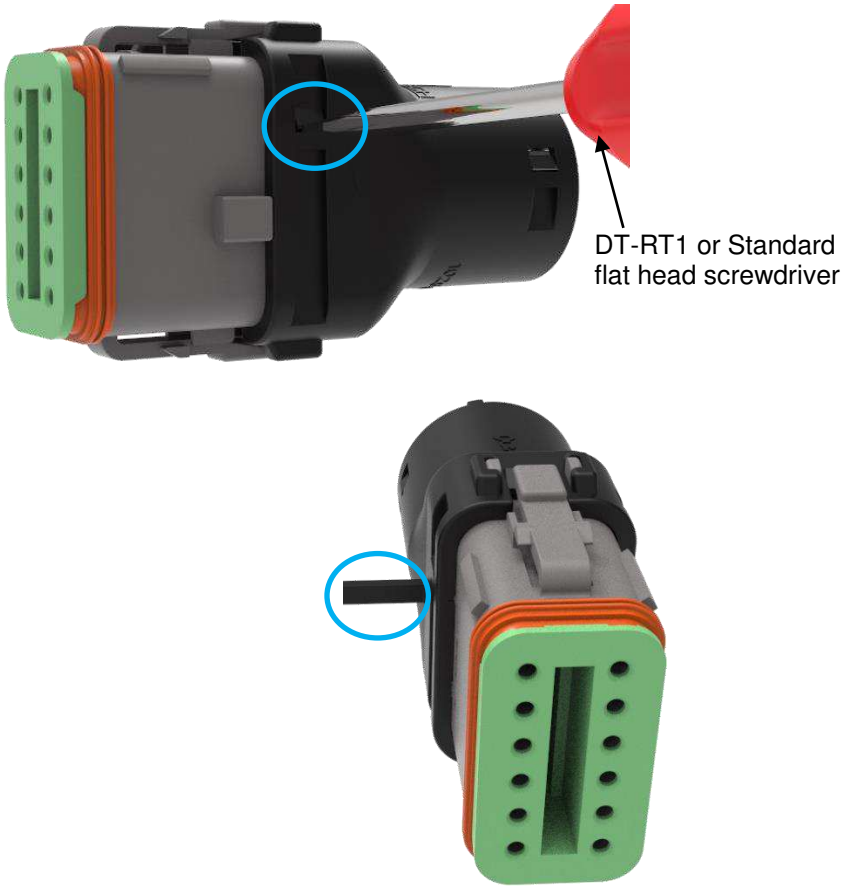




2. To close the backshell, rotate the other half onto the back of the plug while bringing the two halves together. Before snapping shut, make sure convoluted tubing (if used) is captured within the inner grooves. If no convoluted tubing is used, make sure no wires are pinched in the backshell. There are four snaps that need to engage in order to properly snap shut the backshell.



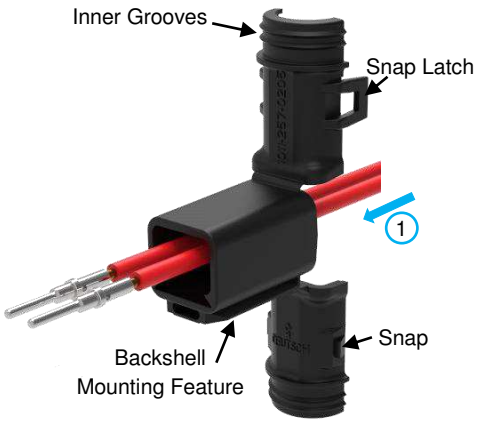

3. To open the backshell, disengage all snaps by wedging a DT-RT1 tool or standard flat head screwdriver under the snap latch, lift until disengaged, then pry the backshell open.
Backshell can then be slid off of the plug.

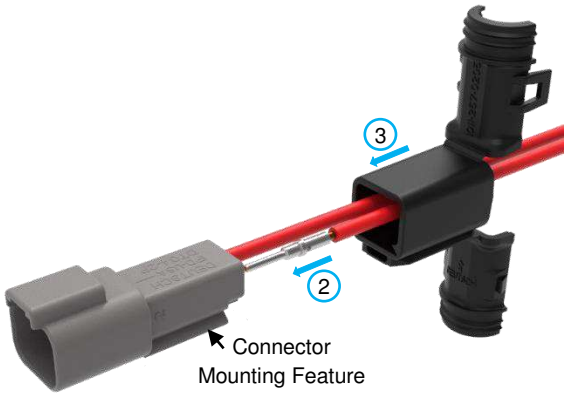



*Note:*
*1028-043-1205 backshell is equipped with a break-away hinge. After backshell is closed onto the plug, the hinge may be broken off and discarded.*

BACKSHELL - RECEPTACLE

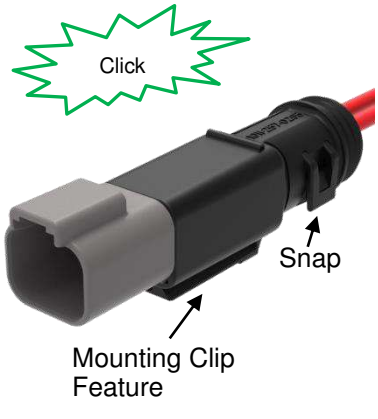
1. First, slide the backshell over the wires. Then, insert the wires into the connector. Next, align the mounting feature of the backshell with the mounting feature of the connector and push backshell straight onto the back of the connector until a positive stop and a snap is felt. A slight tug will confirm that the backshell is properly locked in place.

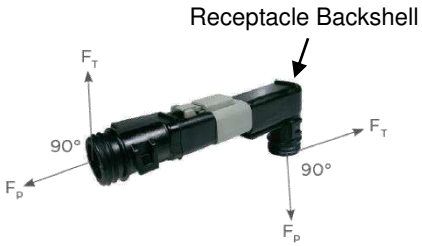



2. To close the backshell, rotate backshell halves together lining up the two snap and snap latches. Before snapping shut, make sure convoluted tubing (if used) is captured within the inner grooves. If no convoluted tubing is used, make sure no wires are pinched in the backshell. If needed, install shrink tubing or tie wrap and cut off excess.



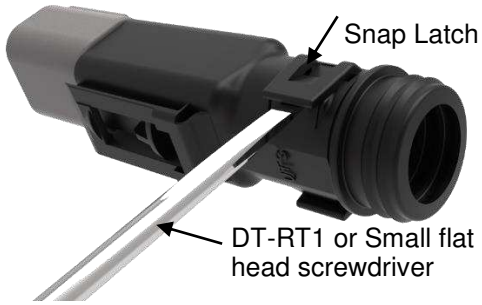



**Backshell Minimum Retention Force**

| Connector | Fp N[Lbf] | Ft N[Lbf] |
|---|---|---|
| DT04-2P | 50[11.2] | 10[2.2] |
| DT04-3P | | 50[11.2] |
| DT04-4P | | 25[5.6] |
| DT04-6P | | 30[6.7] |
| DT04-08P* | | 35[7.9] |
| DT04-12P* | | 40[9.0] |

3. To open the receptacle backshell, disengage the two snap latches by wedging a DT-RT1 tool or small flat head screwdriver under the snap latch, lift until disengaged then pry the backshell open.

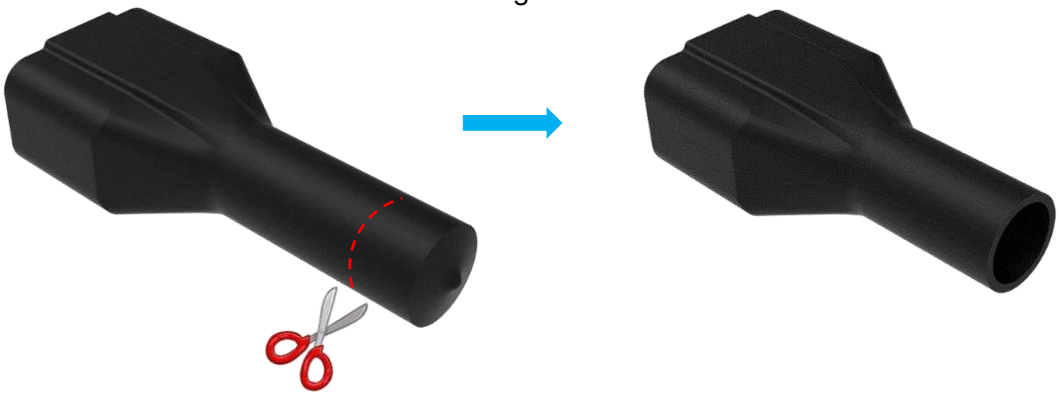




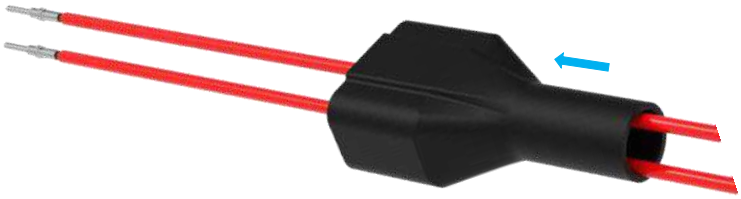

*Note:*
*Receptacle backshell is not removable.*

BOOT

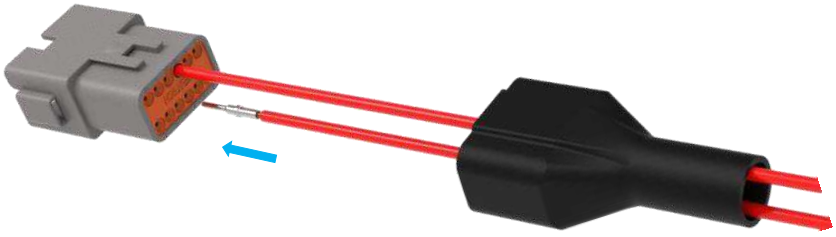
Step 1. Cutoff the end of the boot to desired length.



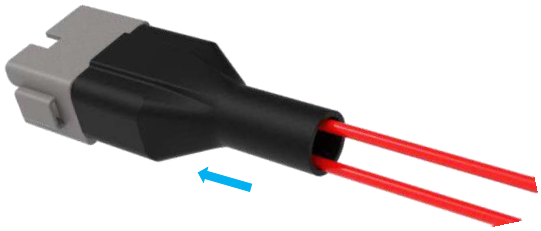
Step 2. Slide the boot over the wires.



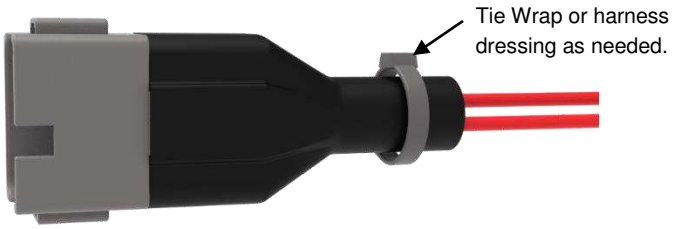
Step 3. Insert the wires into the connector.



Step 4. Slide boot down the wires and onto the connector.



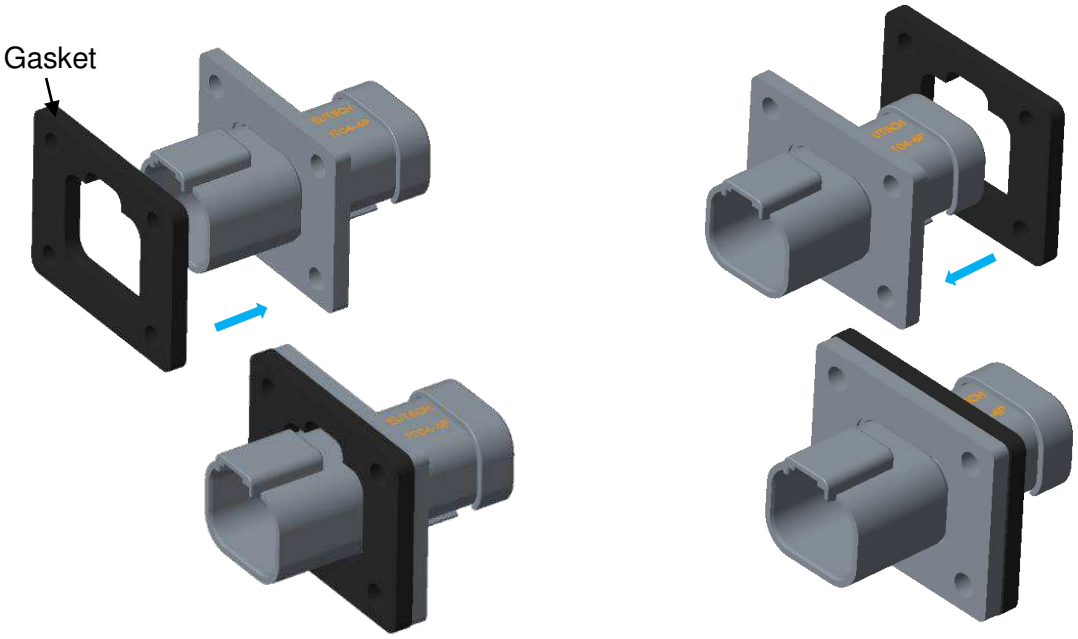
Step 5. If needed, attach a tie wrap on the end of the connector and boot. Trim tie wrap as needed.




*Note:*
*Do not put excessive stress on the boot to prevent boot from coming off connector.*

GASKET

Install the gasket onto the connector on the desired side of the flange. Install it on the front side for rear mount, on the back side for front mount. Next install it into panel mounting hole. See section 3.11 for panel installation.

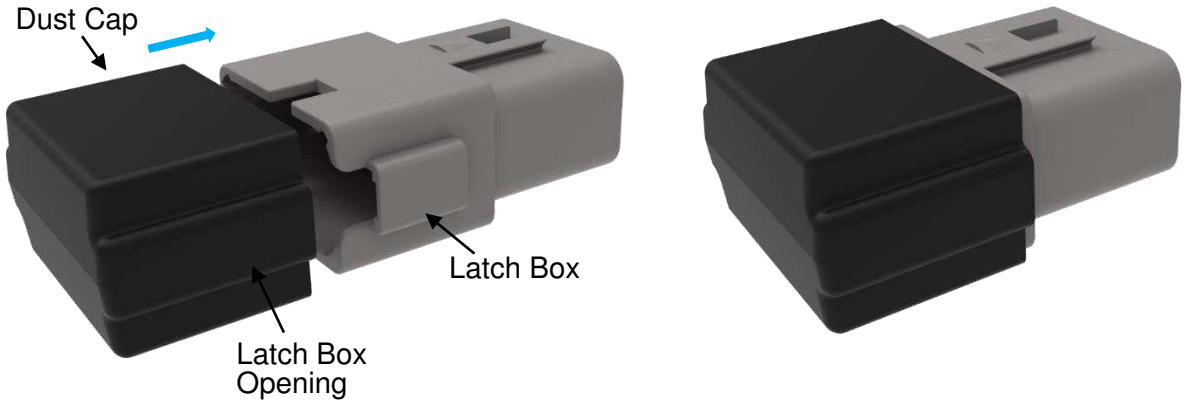



Rear Mount

Front Mount

PROTECTIVE DUST CAP- RECEPTACLE

Install the protective dust cap onto the front of the receptacle by aligning the latch box of the connector with the latch box openings on the dust cap and slide onto the connector until a stop is felt. Remove the dust cap by sliding it off the connector.



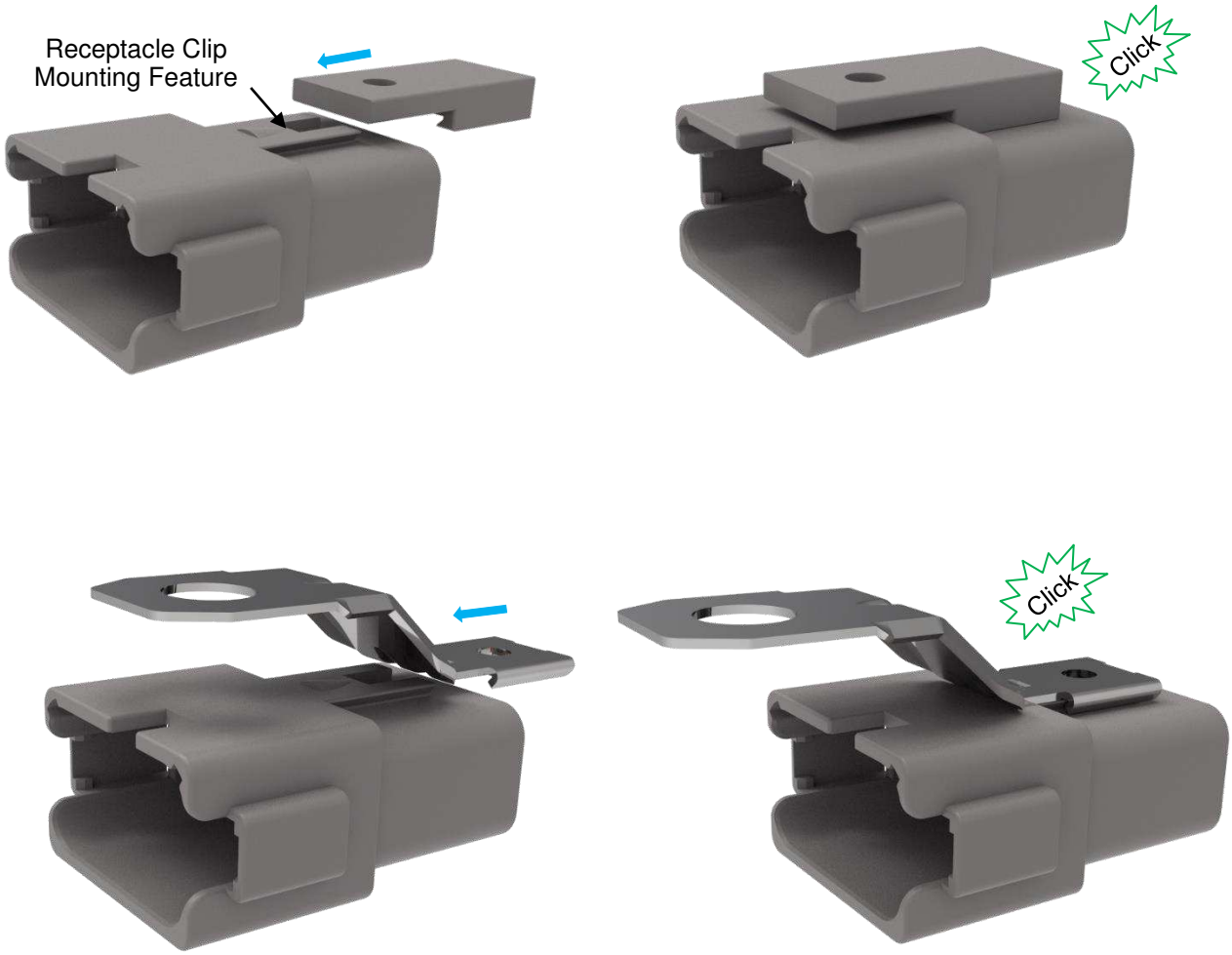

PROTECTIVE DUST CAP- PLUG

The thermoplastic dust cap is mated and un-mated to the plug in the same manner as mating and un-mating the plug to a receptacle. See sections 3.8 and 3.9 for mating and un-mating instructions. Recommended maximum mounting screw torque is 2.82 Nm [25 in-lb].



MOUNTING CLIP - RECEPTACLE

In order to install a clip onto a receptacle, first align the clip mounting features of the housing with the clip. Then push the clip straight onto the back of the connector until a positive stop and a snap is felt. Clip retention force is 89N [20Lbf] minimum, except 1011-310-0205 is 50N [11.2 Lbf] minimum.




*Note:*
*Mounting clip is removable. Damage to receptacle retention feature may occur.*

### 3.11. Panel Installation

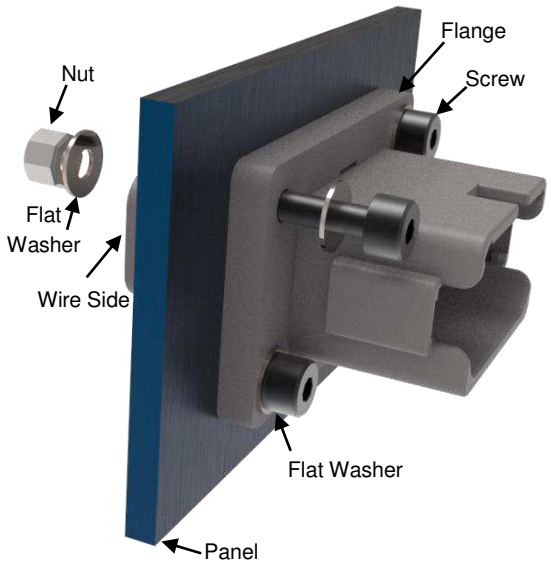
Receptacles with flanges may be mounted to a panel as shown. Refer to product drawings for panel cutout information. Recommended panel surface roughness is RMS 0.8µm [32µin] or better.

**Common Flange Modifications**

| Modification | Description | Receptacle |
|---|---|---|
| L012 | Includes a simple welded-on or integrated flange onto receptacle to simplify wire routing and assembly.<br>Other mods:<br>• Flange, no cap: BL04, BL08, CL03, LE14<br>• Flange, short cap: LE07, LE11<br>• Flange, long cap: LE08, LE12 |  |
| LE10 | LE10 Includes either a welded-on or integrated flange with seal onto receptacle<br>Other mods:<br>• Sealed flange, short cap CL09, LE01, LE05, LE06, LE09, LE17, LE21<br>• Sealed flange, long cap: BL10, CL07 |  |

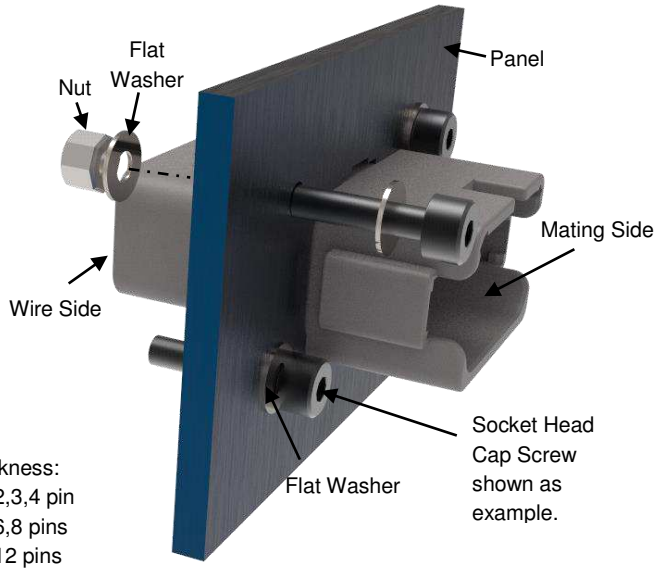
**FLANGE – L012 TYPE**

Insert wire side of receptacle through the panel cutout for front mount or insert mating side of receptacle through the panel cutout for rear mount. If a gasket is used, ensure the gasket is installed onto the desired side of the flange before inserting connector through the panel cutout. Recommended screw size is M4 [6-32]. Screw length dependent on application. Recommended screw torque is 2.26-2.82 Nm [20-25 in-lb]. Recommended mounting hardware (i.e. flat washers, nuts, screws) are customer supplied. Maximum recommended panel thickness is 16.50 [.650].




FRONT MOUNT

Flange Thickness:
3.20 [.125] 2,3,4 pin
3.70 [.146] 6,8 pins
5.10 [.200] 12 pins

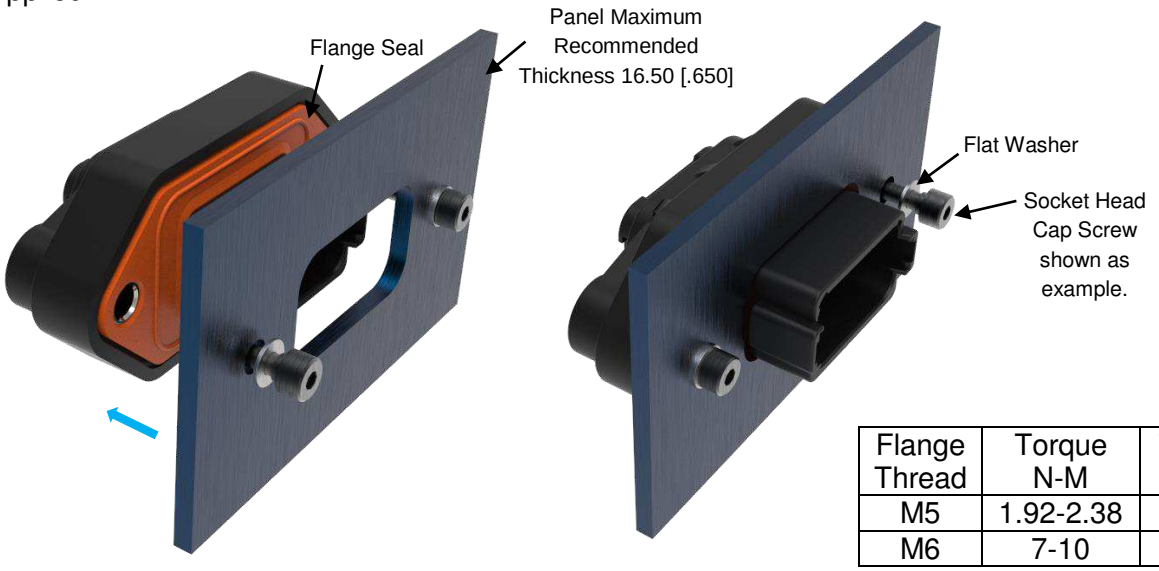



REAR MOUNT

*Note:*
*1. It is recommended to add flat washer under the head of the fastener and nut to prevent damage to flange.*
*2. Do not over tighten fastener. This will prevent damaged or broken receptacle and/or flange.*
*3. Do not side load the receptacle. This will prevent damage or broken receptacle and/or flange.*
*4. Gasket forms a splash proof seal only, see section I for more information.*

### FLANGE – LE10 TYPE

Insert mating side of receptacle through the panel cutout. Included flange seal is intended for non-pressurized fluid splash only. See table below for recommended screw size and torque. Screw length dependent on application. Recommended mounting hardware (i.e. flat washers, screws) are customer supplied.




| Flange Thread | Torque N-M | Torque In-lb |
|---|---|---|
| M5 | 1.92-2.38 | 17-21 |
| M6 | 7-10 | 62-88 |

Note:
*1. It is recommended to add flat washer under the head of the fastener to prevent damage to flange.*
*2. Do not over tighten fastener. This will prevent damaged or broken receptacle and/or flange.*
*3. Do not side load the receptacle. This will prevent damage or broken receptacle and/or flange.*

### 3.12. Replacement and Repair

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

## 4. QUALIFICATION

Refer to product specification 108-151009 for qualification and approved agency.

## 5. TOOLING

Refer to the following application specifications for reference on all pin and socket contact termination tooling.

114-151000, DEUTSCH Size 16 S&F

114-151001, DEUTSCH Size 16 S&F

114-151004, DEUTSCH Size 4-20 Solid

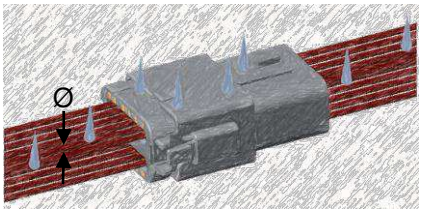
The DT-RT1 removal tool is designed to remove secondary wedge locks and contacts from the connectors.



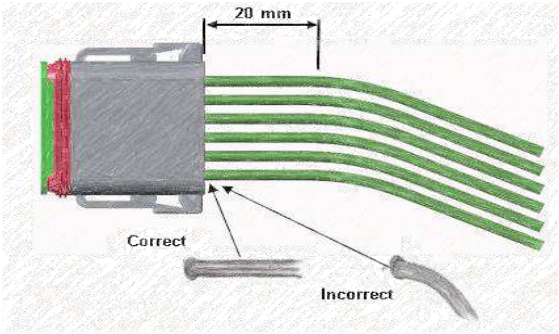

DEUTSCH Removal Tool DT-RT1 for Front-Release Connectors (408-151008)

## 6. HELPFUL HINTS

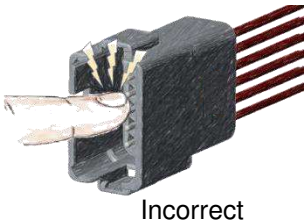
**Helpful hint**
Proper wire outside diameters help provide watertight seals. See Section 3.3.E for sealing ranges.

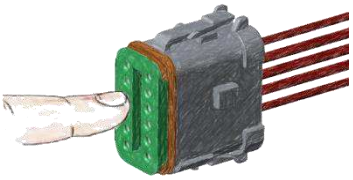



**Helpful hint**
Proper wire routing assures watertight seal performance. Keep wire straight for 20 mm minimum recommended unless a plastic backshell is used.




**Helpful hint**
Making the socket contact side the “hot side” can reduce the danger of electric shock.

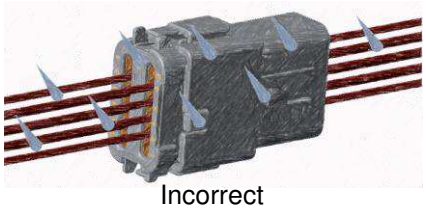

Incorrect

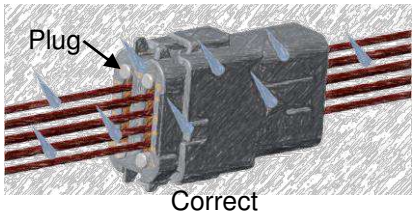

Correct

**Helpful hint**
Pulling lightly on the wire after it snapped in place will assure the contact is locked.



**Helpful hint**
Sealing plugs are used to seal the connector when all the cavities are not used by wires.

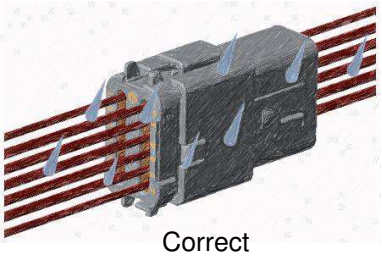

Incorrect



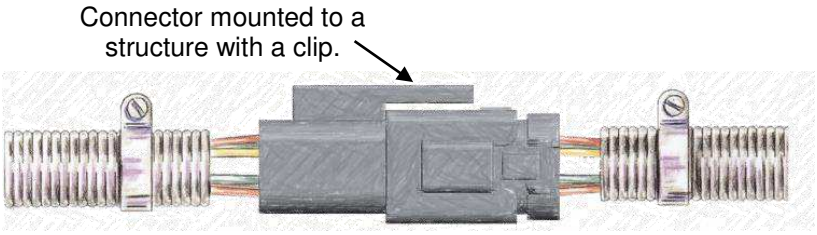
Correct

**Helpful hint**
Mounting connectors Horizontally allows proper water drainage.

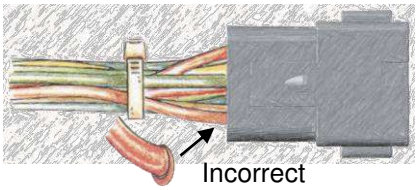

Incorrect

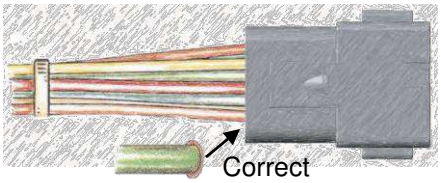

Correct

**Helpful hint**
Attaching the connector to a structure eliminates straining the electrical system in service.

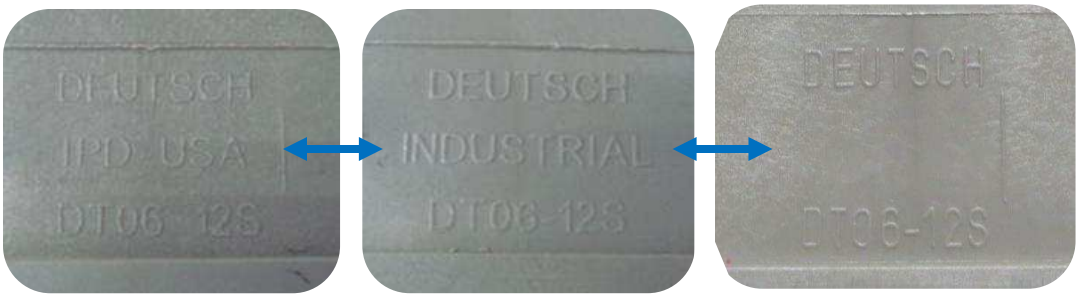



**Helpful hint**
Tie wraps and tape away from the rear of the connector will allow the wire to be sealed properly.

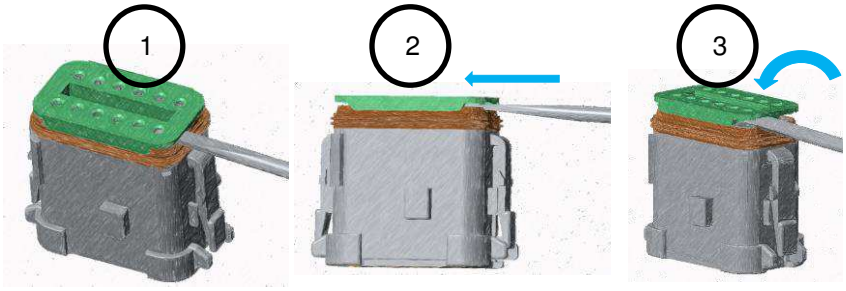

Incorrect


Correct

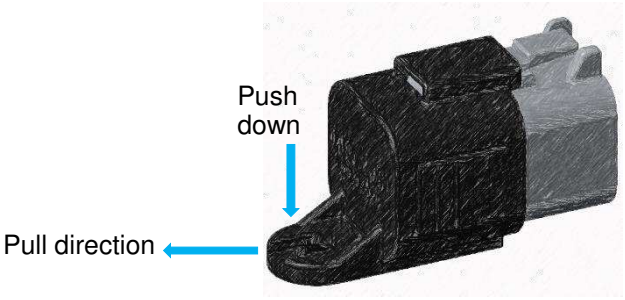
**Helpful hint**
The middle line of text on the housings can be either “USA”, “IPD-USA”, “INDUSTRIAL”, or blank.



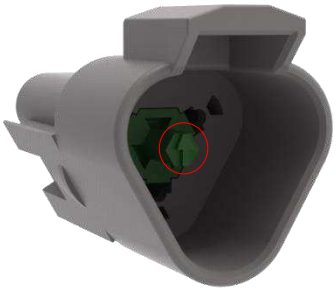
**Helpful hint**
For plugs, use DT-RT1 or small flat screwdriver to gently remove the wedge. (1) Insert screwdriver between wedge and housing, (2) continue to push screwdriver until wedge comes loose, (3) twist screwdriver if necessary to loosen wedge. Take care not to damage the seal.




**Helpful hint**
For plugs, when removing the plastic dust caps, push down on the flange while pulling the cap off to help with un-mating.

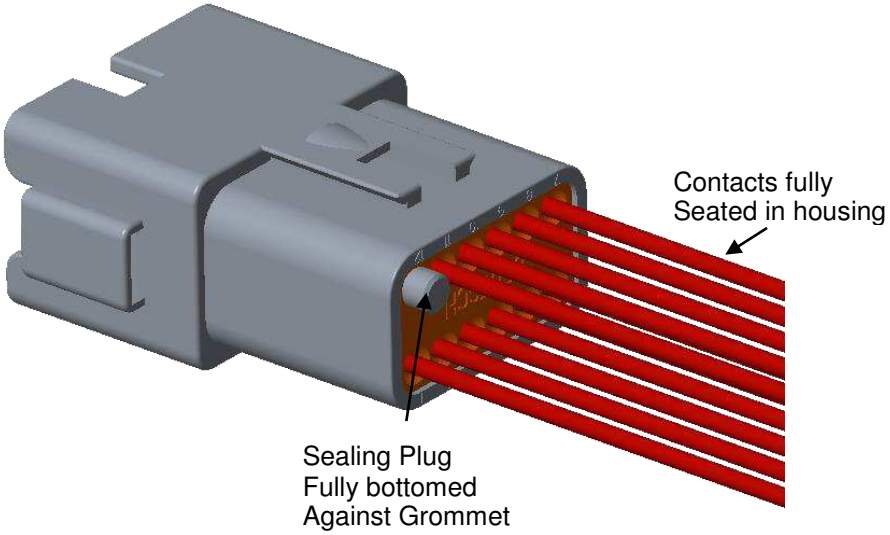


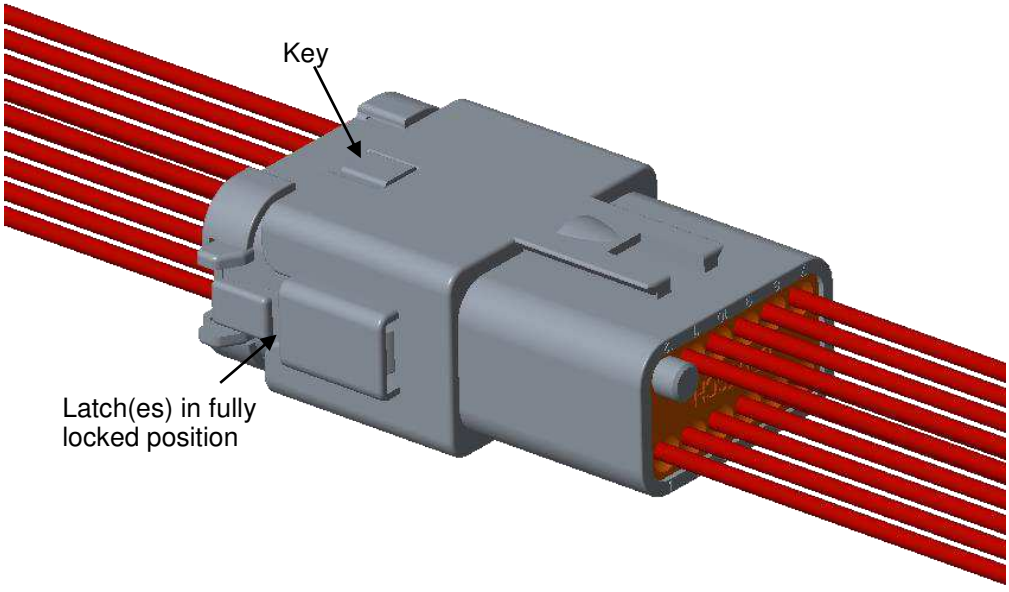

**Helpful hint**
When installing the W3P wedge lock into the 3-pin receptacle, use the arrow on the wedge to orient it in the housing, the arrow should point up towards the latch box.



## 7. VISUAL AID

Below shows a typical application of the DT Series Connector. 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 instruction material shipped with the product or tooling.



## 8. REVISION HISTORY

| Rev Ltr | Brief Description of Change | Date | Dwn | Apvd |
|---|---|---|---|---|
| A | Initial Release | 11/19/2018 | RM | DM |
| A1 | Revised page 15 of 47 Modification, add -B031 Blind Blocked Plug | 11/30/2018 | JA | DM |
| A2 | Update the page 2 of 47, update the pictures with the correct keys. | 01/22/2019 | JA | DM |
| A3 | Page 6 - moved topic 1.4. Plug Front Seal Replacement to Page 7. Page 7 - added topic 1.4. Plug Front Seal Replacement. Page 10 - updated the color of grommet. Page 25 - note 4 added (Front seal must be present and properly seated prior to contact insertion). Page 38 - eliminated first comment in topic Boots. Page 39 - fixed typo error. Page 44 - fixed typo error. | 04/12/2019 | JA | DM |
| B | Page 41: Corrected the note at bottom of page to read "*Mounting clip is removable. Damage to receptacle retention feature may occur.*" | 01/17/2020 | DM | DM |
| C | Page 8. Aligned Specification List<br>Page 10. Centered Connector and Wedge. Added Front Seal Material.<br>Page 16. Update Keying Pins Description. Update B016 Mod Description.<br>Page 18. Add L019, SMBR-02-U, P007 to Modification Table<br>Page 19. Update L012 Modification Description.<br>Page 22. Update Backshells Description. Add SMBR-01-U, SMBR-02-U, SMBR-10-U, SMBR-85-U to Receptacle Backshell Table.<br>Page 23. Add SMBR-01-U, SMBR-02-U, SMBR-10-U, SMBR-85-U to Plug Backshell Table.<br>Page 24. Update Gaskets Description. Update Gasket PN. Update Mounting Clips Table. Update Mounting Clips Notes.<br>Page 29. Update Sealing Plugs Description Assembly Steps<br>Page 30. Update Sealing Plugs Description Assembly Steps<br>Page 31. Update Sealing Plugs Description Assembly Steps<br>Page 32. Update Sealing Plugs Description Assembly Steps<br>Page 42. Update Panel Installation L012 Modification Description | 26MAY2023 | AP | IG |
| C1 | Page 18. Added Modifications to Mod table.<br>Page 20. Added Modifications to Modification Description Table. | 03OCT2023 | AP | DM |
| C2 | Page 18. Added Modifications to Mod table<br>Page 20. Added Modifications to Modification Description Table.<br>Page 23. Added Modifications to Receptacle Backshell Table, Added Images of SMBR-01/02-U, SMBR-10/85-U, Update Warning to Note.<br>Page 44. Added Screw Size and Torque Table. | 12DEC2023 | PS | CB |