

# DEUTSCH
# 983 SERIES CONNECTORS
## EN2997, ESC10, BACC63 SPECIFICATIONS

Extreme Reliability in Harsh Aerospace & Military Applications

## CONTENTS


**SECTION 1 : Sealed Connectors** 9
section 1-1 : sealed connectors standard 10
section 1-2 : sealed connectors with integral accessory 12
section 1-3 : arrangements 14
section 1-4 : PART-NUMBERING 17
STANDARD
ASD-STAN

**SECTION 2 : Hermetic Receptacles** 21
section 2-1 : hermetic receptacles stainless steel 22
section 2-2 : arrangements 24
section 2-3 : PART-NUMBERING 27
STANDARD
ASD-STAN

**SECTION 3 : Backshells** 29
section 3-1 : open backshells 30
section 3-2 : open backshells for K6 and Quadrax arrangements 32
section 3-3 : closed backshells for K6 and Quadrax arrangements 32

**SECTION 4 : Protective Covers** 33

**SECTION 5 : Dummy Receptacles** 35

**SECTION 6 : Panel Seals** 37

**SECTION 7 : Mated & Unmated Dimensions** 39
section 7-1 : for sealed connectors 40
section 7-2 : for sealed connectors with integral accessory 41
section 7-3 : for hermetic receptacles 42

**SECTION 8 : Contacts & Tooling** 43



**TE Components . . . TE Technology . . . TE Know-how . . .**

AMP | AGASTAT | CII | HARTMAN | KILOVAC | MICRODOT | NANONICS | POLAMCO | Raychem | Rochester | DEUTSCH
SEACON Phoenix | LL Rowe | Phoenix Optix | AFP | SEACON

Get your product to market faster with a smarter, better solution.

# DEUTSCH 983 SERIES CONNECTORS
## INTRODUCTION

### HIGH RELIABILITY
- Self-locking system

### HARSH ENVIRONMENT RESISTANCE
- High temperature operating (260°C)
- Fireproof inserts (thermoset and fluorinated silicon)
- Fluid resistant inserts

### APPLICATION-MATCHED VERSIONS
- Sealed stainless steel
- Sealed aluminum
- Hermetic stainless steel
- Hermetic aluminum

### HERMETIC ALUMINUM IMPROVED PERFORMANCES
- Aluminum shell (weight saving)
- Nickel plated shells (better continuity)
- Copper alloy contacts (higher intensity)
- Glass-to-metal sealing

### LARGE ACCESSORIES RANGE
- Backnut
- Straight cable clamp
- 90° cable clamp
- Custom design

TE Connectivity's (TE) DEUTSCH 983 series connector was created in the 90's. This connector has been especially designed for harsh environment aircraft zone applications such as engines and boosters.

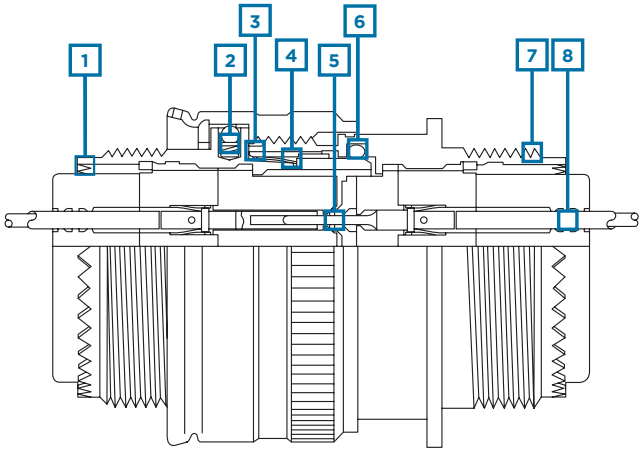
Available in two versions, TE's DEUTSCH 983 series connector is used in its stainless steel version on harsh constraint-facing areas such as engines, landing gears, APU (Auxiliary Power Unit), wings, pylons, leading edges whereas the aluminum version is used in cargo compartments.

Qualified to EN2997 specification for its stainless steel and aluminum version, TE's DEUTSCH 983 series is also qualified to ADS (Aerospace Defense and Security) ESC10, Boeing BACC63 and Airbus ABS specifications. In addition, TE's DEUTSCH 983 series is fully intermateable with MIL-DTL-83723 Series III connectors.
TE's DEUTSCH 983 series connector uses contacts qualified to the EN3155 and ADS ESC30 specifications.

**TE's DEUTSCH 983 Series connectors are distinguishable from MIL-DTL-83723 connectors by following improvements :**
- Shell-to-shell metal bottoming (plug and receptacle mated)
- Anti-rotation system on 360° by tightening
- Self-locking system all plug
- Reduced elastomer barriers to use new and old generations of wires

All TE's DEUTSCH 983 electrical connectors series are intermateable and interchangeable with connectors in accordance with MIL-DTL-83723 series III.

**A large accessories range completes TE's DEUTSCH 983 connector series :**
- Backnut
- Straight cable clamp
- 90° cable clamp




1 Connector's rear part fitted with a teeth anti-rotation system (360°) assuming an effective tightening and clamping of accessories / EMI shielding improvement

2 Self locking control

3 Shell to shell metal bottoming

4 RFI grounding fingers for electrical continuity between plug and receptacle

5 Individual contact sealing at coupling stage by compression of elastomer conical risers on hard insert

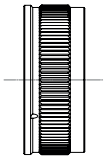
6 Interface sealing assumed by High Frequency (H.F.) gasket

7 Shell/insert assumed by potting

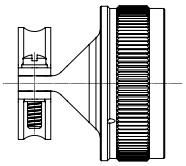
8 Sealing on each wire thanks to several sealing barriers

## SYNOPTIC FOR SEALED RECEPTACLES

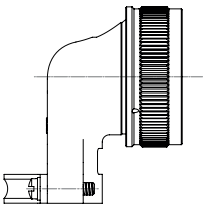
ACCESSORIES



Nut



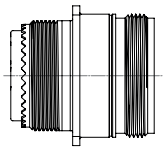
Straight Cable Clamp



Elbowed Cable Clamp

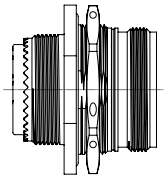
RECEPTACLES

TYPE 0



Sealed Square Flange Receptacle

TYPE 7

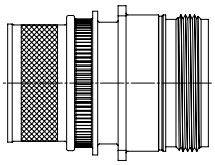


Sealed Jam-Nut Mounting Receptacle

## SYNOPTIC FOR SEALED RECEPTACLES WITH INTEGRAL ACCESSORY

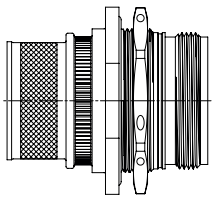
RECEPTACLES

TYPE 2



Square Flange Receptacle with Integral Accessory

TYPE 3

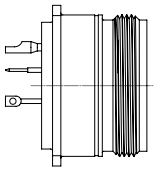


Jam-Nut Receptacle with Integral Accessory

## SYNOPTIC FOR HERMETIC RECEPTACLES

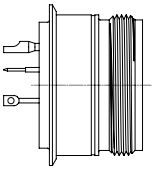
HERMETIC RECEPTACLES

TYPE 0



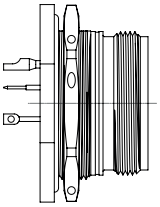
Hermetic Square Flange Receptacle

TYPE 1



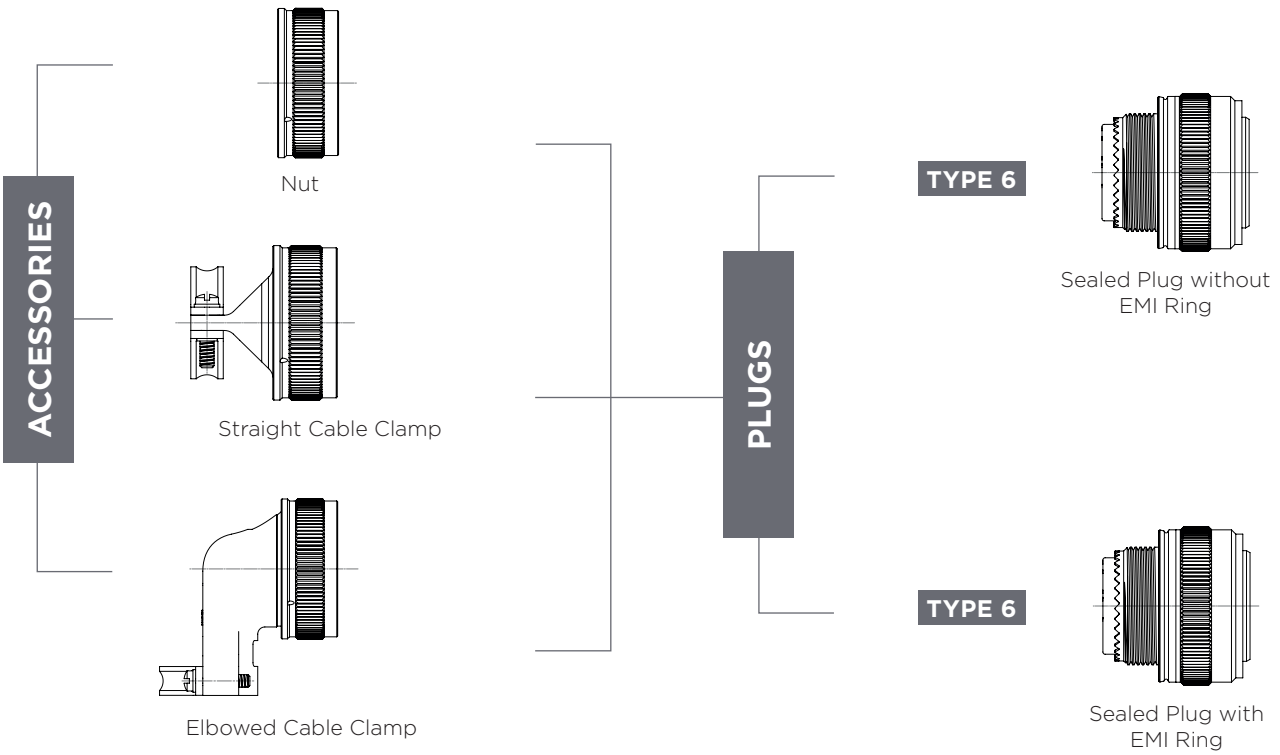
Hermetic Solder Receptacle

TYPE 7

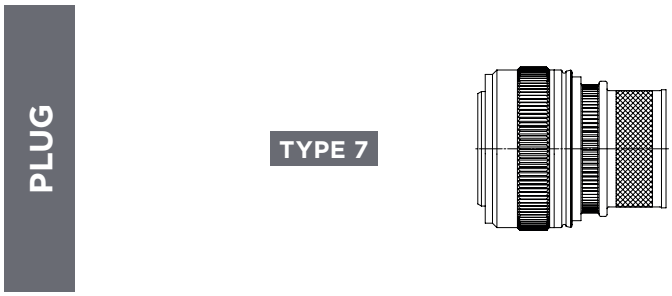


Hermetic Jam-Nut Mounting Receptacle

## SYNOPTIC FOR SEALED PLUG




## SYNOPTIC FOR SEALED PLUG WITH INTEGRAL ACCESSORY



## TECHNICAL CHARACTERISTICS

### Mechanical

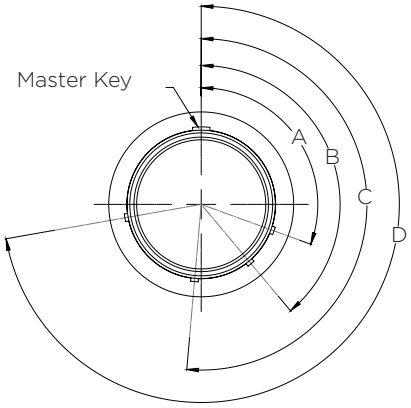
| | | | Models of connectors | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | A | W | WS | R | RS | K | S | Y | KE | SE | YE | KV | SV | KF | SF |
| Shell | Material | Stainless steel | | | | | | • | • | • | • | • | • | • | • | • | • |
| | | Aluminum nickel | | | | • | • | | | | | | | | | | |
| | | Aluminum olive drab cadmium | | • | • | | | | | | | | | | | | |
| | | Aluminum black anodized | • | | | | | | | | | | | | | | |
| Insert | Material | Thermo-setting | • | • | • | • | • | • | • | | • | • | | • | • | • | • |
| | | Silicone | • | • | • | • | • | • | • | | • | • | | • | • | • | • |
| | | Sintered glass | | | | | | | | • | | | • | | | | |
| Contacts | Type | Crimp type, removable, gold plating | • | • | • | • | • | • | • | | • | • | | • | • | • | • |
| | | Solder type, non removable, gold plating | | | | | | | | • | | | • | | | | |
| Version | | Sealed | • | • | • | • | • | • | • | | • | • | | • | • | • | • |
| | | Hermetic | | | | | | | | • | | | • | | | | |
| Temperature ranges | | -65°C to 175°C | | • | • | | | | | | | | | | | | |
| | | -65°C to 200°C | • | | | • | • | • | • | • | | | | | | | |
| | | -65°C to 260°C cyclique | | | | | | | | | • | • | • | • | • | • | • |
| Fire resistance as per EN2591-318 | | | | | | | | • | • | | • | • | | • | • | • | • |
| Fire test as per EN2591-326 | | | | | | | | | | | | | | | | • | • |
| Connector with self-locking control | | | • | • | • | • | • | • | • | | • | • | | • | • | • | • |
| Mechanical endurance | | 250 operations | • | • | • | • | • | | | | | | | | | | |
| | | 500 operations | | | | | | • | • | • | • | • | • | • | • | • | • |
| Shielding | | RFI on plug | | | • | | • | | • | | | • | | | • | | • |
| Corrosion (salt spray) as per EN 2591-307 | | 48 hours | • | | | • | • | | | | | | | | | | |
| | | 500 hours | | • | • | | | • | • | • | • | • | • | • | • | • | • |
| Vibrations as per EN 2591 -403, method B (10 to 2000 Hz along 2 axes) | | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Vibrations as per EN2591-403, method C | | | | | | | | | | | | | | • | • | • | • |
| Shocks as per EN2591-402 | | 300 g/3ms | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Sealed | | 16.10-6 m3/h / 100 kPa | • | • | • | • | • | • | • | | • | • | | • | • | • | • |

### Electrical

| | | |
|---|---|---|
| Insulation resistance | At 25°C and 65% R.H | > 5000 MΩ |
| | At 260°C and 65% R.H | > 1000 MΩ |
| Dielectric withstanding voltage | At sea level | 1500 Vrms 50 Hz mated connectors |
| | At 15 000 meters altitude | 1000 Vrms 50 Hz mated connectors |
| | At 30 000 meters altitude | 200 Vrms 50 Hz unmated connectors |
| Shielding efficiency as per EN 2591-213 | | 100 MHz to 1 GHz models RS - WS - S - SE - SV - SF |

## KEY ORIENTATION

**Plug Front View**




| Keying Position | Key/Keyway locations in degrees | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Size 8 | | | | Size 10 | | | | Size 12 to 28 | | | |
| | A° | B° | C° | D° | A° | B° | C° | D° | A° | B° | C° | D° |
| N-Normal | 105 | 140 | 215 | 265 | 105 | 140 | 215 | 265 | 105 | 140 | 215 | 265 |
| 6 | 102 | 132 | 248 | 320 | 102 | 132 | 248 | 320 | 18 | 149 | 192 | 259 |
| 7 | 80 | 118 | 230 | 312 | 80 | 118 | 230 | 312 | 92 | 152 | 222 | 342 |
| 8 | 35 | 140 | 205 | 275 | 35 | 140 | 205 | 275 | 84 | 152 | 204 | 334 |
| 9 | 64 | 155 | 234 | 304 | 64 | 155 | 234 | 304 | 24 | 135 | 199 | 240 |
| Y | - | - | - | - | 25 | 115 | 220 | 270 | 98 | 152 | 268 | 338 |

| Keying Position | Key/Keyway locations in degrees for T and V polarisations (230V only) | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | Size 12 and 14 | | | | Size 20 | | | |
| | A° | B° | C° | D° | A° | B° | C° | D° |
| T | 55 | 145 | 228 | 280 | 45 | 160 | 210 | 300 |
| V | 50 | 156 | 218 | 290 | 60 | 165 | 235 | 285 |

Note : Keying positions T and V do not apply to shell sizes 08, 10, 16, 18, 22, 24 and 28.

# SECTION 1

## Sealed Connectors



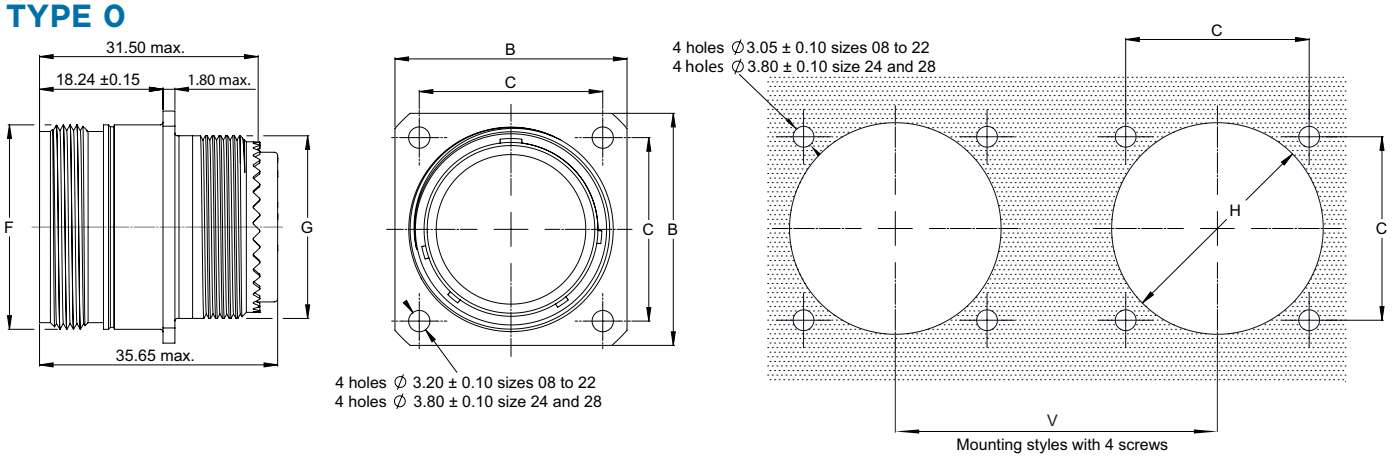
# SECTION 1.1

## Sealed Connectors Standard

### RECEPTACLE

#### Square Flange

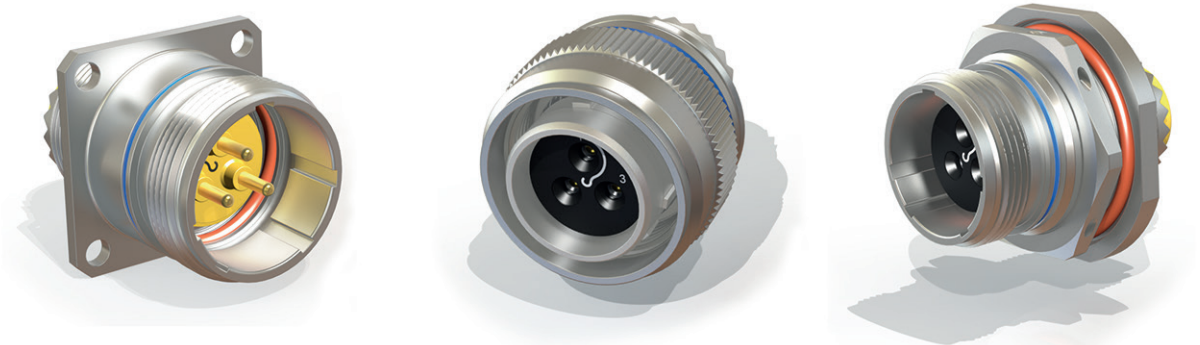
### TYPE 0




| Size | B Max. | C ±0.05 | F Max. | G Max | H Min. | V Min. | Max. Weight (g)* | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | | Stainless steel | Aluminum |
| 08 | 20.75 | 15.09 | 14.27 | 12.70 | 15.80 | 31.70 | 19 | 11 |
| 10 | 23.93 | 18.26 | 17.67 | 15.88 | 18.70 | 34.90 | 28 | 16 |
| 12 | 26.32 | 20.62 | 22.22 | 19.05 | 23.40 | 39.60 | 39 | 27 |
| 14 | 28.71 | 23.01 | 23.77 | 22.23 | 24.90 | 41.25 | 51 | 30 |
| 16 | 31.88 | 24.61 | 26.97 | 25.40 | 28.30 | 44.45 | 62 | 34 |
| 18 | 34.24 | 26.97 | 30.15 | 26.97 | 31.10 | 47.35 | 73 | 36 |
| 20 | 36.63 | 29.36 | 33.32 | 30.18 | 34.50 | 51.90 | 82 | 40 |
| 22 | 39.80 | 31.75 | 36.49 | 33.32 | 37.50 | 54.10 | 90 | 51 |
| 24 | 43.39 | 34.92 | 39.67 | 36.53 | 40.60 | 57.25 | 105 | 58 |
| 28 | 50.93 | 39.67 | 46.02 | 44.45 | 48.00 | 65.25 | 126 | 88 |

*Without contact

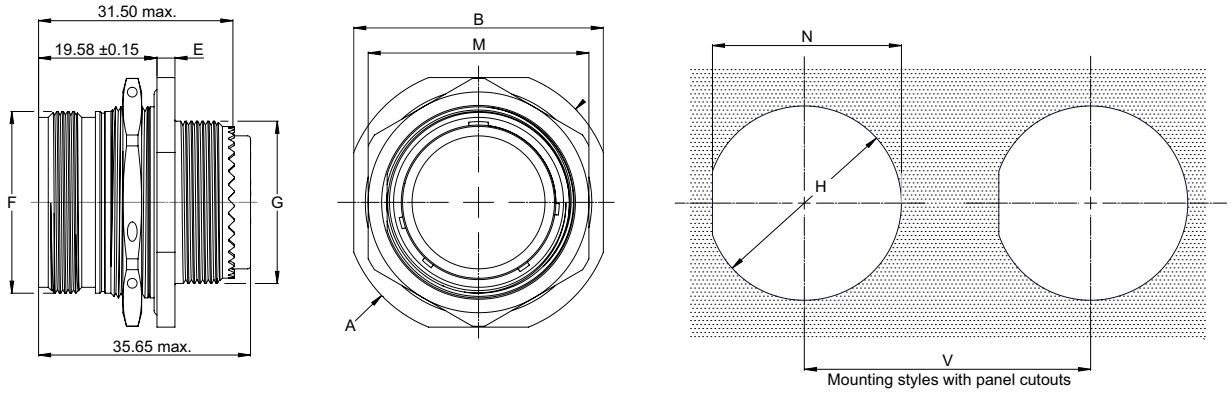
Dimensions in mm



Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

## Jam-Nut Mounting

# TYPE 7




| Size | A Max. | B Max. | E Max. | F Max. | G Max. | H ⁰ -0.26 | M Max. | N ⁰ -0.26 | V Min. | Weight Max. (g)* Stainless steel | Weight Max. (g)* Aluminum | Tightening torque of panel nut |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08 | 27.38 | 24.89 | 3.48 | 14.27 | 12.70 | 16.26 | 21.06 | 15.50 | 31.70 | 32 | 15 | 7 m.N max. |
| 10 | 30.28 | 28.04 | 3.48 | 17.47 | 15.88 | 19.43 | 24.23 | 18.67 | 34.90 | 41 | 21 | 10 m.N max. |
| 12 | 35.05 | 32.79 | 3.48 | 22.22 | 19.05 | 24.18 | 29.01 | 23.42 | 39.60 | 58 | 30 | 12 m.N max. |
| 14 | 38.51 | 35.33 | 3.48 | 23.82 | 22.23 | 25.78 | 30.61 | 25.02 | 41.25 | 68 | 35 | 15 m.N max. |
| 16 | 41.68 | 38.51 | 3.48 | 26.97 | 25.40 | 28.96 | 33.76 | 28.20 | 44.45 | 82 | 46 | 18 m.N max. |
| 18 | 44.86 | 41.68 | 3.48 | 30.18 | 26.97 | 32.13 | 36.96 | 31.25 | 47.35 | 88 | 51 | 22 m.N max. |
| 20 | 49.63 | 44.86 | 3.48 | 33.32 | 30.18 | 35.31 | 40.11 | 34.42 | 51.90 | 100 | 56 | 25 m.N max. |
| 22 | 52.78 | 49.63 | 3.76 | 36.53 | 33.32 | 38.48 | 43.31 | 37.59 | 54.10 | 123 | 69 | 27 m.N max. |
| 24 | 55.42 | 52.81 | 3.76 | 39.67 | 36.53 | 41.66 | 46.46 | 40.77 | 57.25 | 137 | 82 | 29 m.N max. |
| 28 | 61.82 | 59.21 | 3.76 | 46.02 | 44.45 | 48.01 | 54.41 | 47.14 | 65.25 | 191 | 120 | 30 m.N max. |

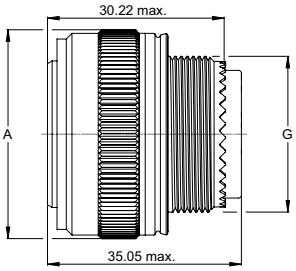
*Without contact

Dimensions in mm

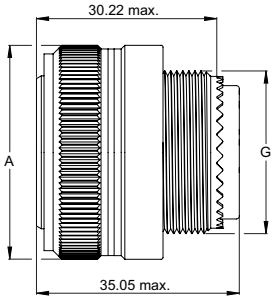
## PLUGS

# TYPE 6

**Stainless Steel**




**Aluminum**




| Size | A Max. | G Max. | Weight Max. (g)* Stainless steel | Weight Max. (g)* Aluminum |
|---|---|---|---|---|
| 08 | 21.30 | 12.70 | 31 | 14 |
| 10 | 24.90 | 15.88 | 44 | 21 |
| 12 | 29.60 | 19.05 | 57 | 26 |
| 14 | 31.24 | 22.23 | 72 | 38 |
| 16 | 34.42 | 25.40 | 82 | 39 |
| 18 | 37.34 | 26.97 | 95 | 43 |
| 20 | 41.91 | 30.18 | 108 | 48 |
| 22 | 44.07 | 33.32 | 121 | 65 |
| 24 | 47.24 | 36.53 | 134 | 67 |
| 28 | 55.24 | 44.45 | 160 | 103 |

*Without contact

Dimensions in mm

Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

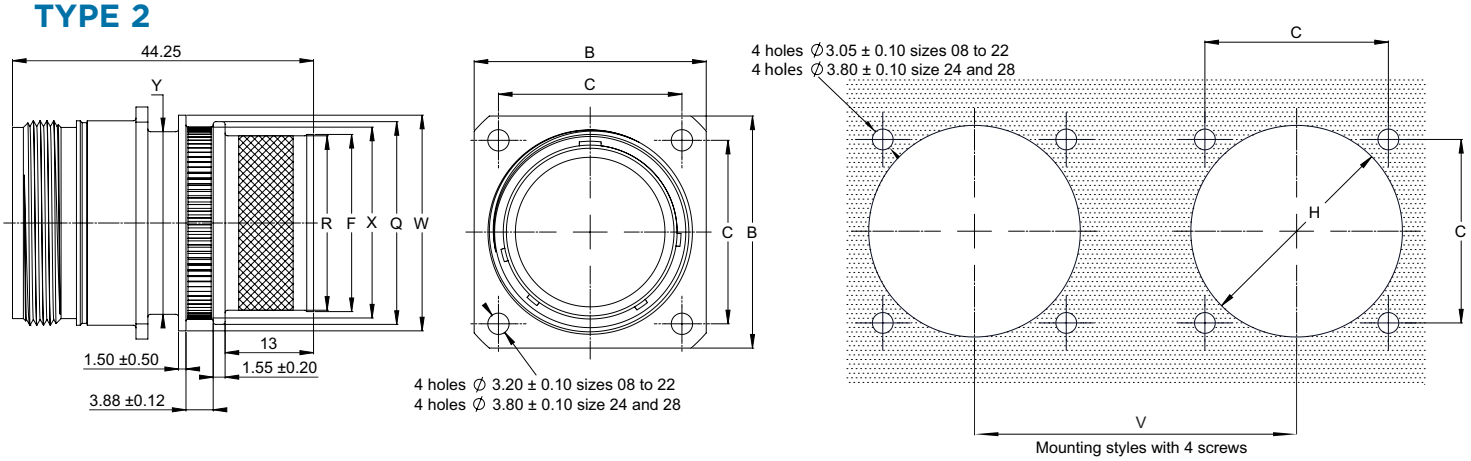
# SECTION 1.2

## Sealed Connectors with Integral Accessory

### RECEPTACLE

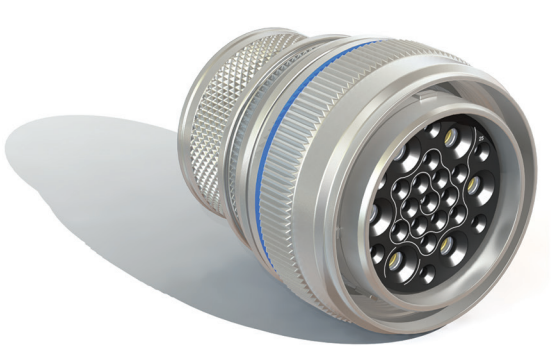
#### Square Flange

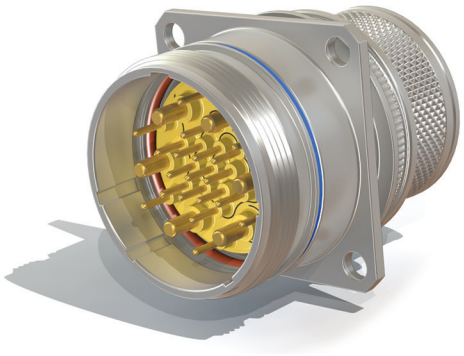
### TYPE 2




| Size | B Max. | C ±0.05 | R ±0.10 | F ±0.10 | Y Max. | X ±0.10 | Q ±0.10 | W ±0.25 | H Min. | V Min. |
|---|---|---|---|---|---|---|---|---|---|---|
| 08 | 20.75 | 15.09 | 11.70 | 12.10 | 14.27 | 17.10 | 18.70 | 19.50 | 15.80 | 31.70 |
| 10 | 23.93 | 18.26 | 14.92 | 15.32 | 17.68 | 18.00 | 19.60 | 21.50 | 18.70 | 34.90 |
| 12 | 26.32 | 20.62 | 17.87 | 18.27 | 22.22 | 20.40 | 22.00 | 23.50 | 23.40 | 39.60 |
| 14 | 28.71 | 23.01 | 21.05 | 21.45 | 23.78 | 24.50 | 26.10 | 28.00 | 24.90 | 41.25 |
| 16 | 31.88 | 24.61 | 24.22 | 24.62 | 26.97 | 27.00 | 28.60 | 30.50 | 28.30 | 44.45 |
| 18 | 34.24 | 26.97 | 25.64 | 26.04 | 30.15 | 28.20 | 29.80 | 31.70 | 31.10 | 47.35 |
| 20 | 36.63 | 29.36 | 28.82 | 29.22 | 33.32 | 32.00 | 33.60 | 35.50 | 34.50 | 51.90 |
| 22 | 39.80 | 31.75 | 32.00 | 32.40 | 36.50 | 35.10 | 36.70 | 38.60 | 37.50 | 54.10 |
| 24 | 43.39 | 34.92 | 35.17 | 35.57 | 39.67 | 40.50 | 42.10 | 42.00 | 40.60 | 57.25 |
| 28 | 50.93 | 39.67 | 41.52 | 41.92 | 46.02 | 45.00 | 46.60 | 48.50 | 48.00 | 65.25 |

Dimensions in mm

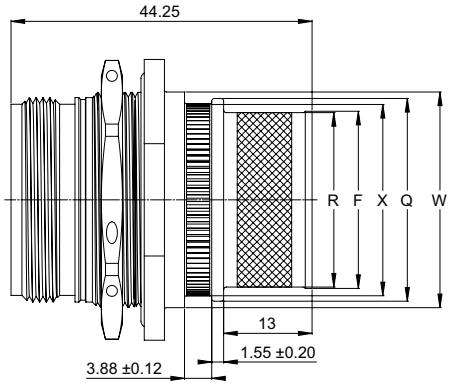


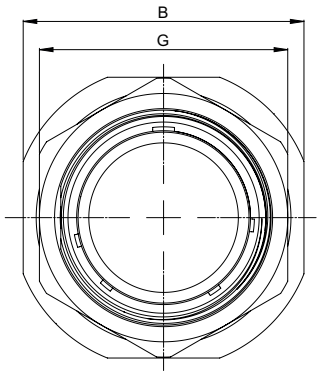


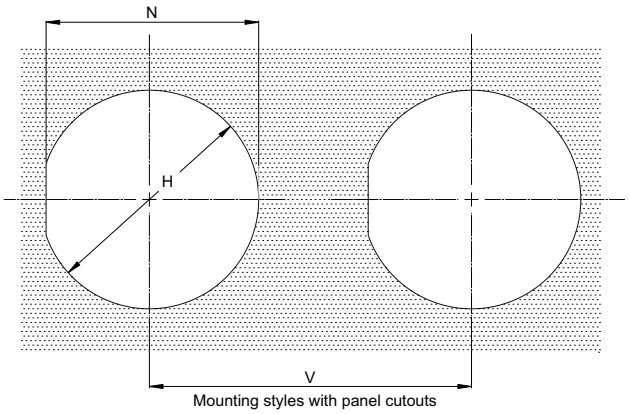
Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

## Jam-Nut Mounting

# TYPE 3



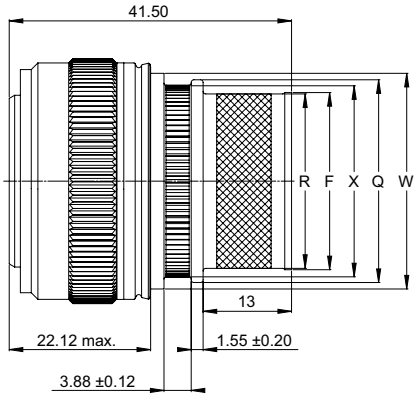

Mounting styles with panel cutouts

| Size | B Max. | G Max. | R ±0.10 | F ±0.10 | X ±0.10 | Q ±0.10 | W ±0.25 | N 0 -0.26 | H 0 -0.26 | V Min. | Tightening torque of panel nut |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 08 | 24.89 | 12.70 | 11.70 | 12.10 | 17.10 | 18.70 | 19.50 | 15.50 | 16.26 | 31.70 | 7 m.N max. |
| 10 | 28.04 | 15.88 | 14.92 | 15.32 | 18.00 | 19.60 | 21.50 | 18.67 | 19.43 | 34.90 | 10 m.N max. |
| 12 | 32.79 | 19.05 | 17.87 | 18.27 | 20.40 | 22.00 | 23.50 | 23.42 | 24.18 | 39.60 | 12 m.N max. |
| 14 | 35.33 | 22.23 | 21.05 | 21.45 | 24.50 | 26.10 | 28.00 | 25.02 | 25.78 | 41.25 | 15 m.N max. |
| 16 | 38.51 | 25.40 | 24.22 | 24.62 | 27.00 | 28.60 | 30.50 | 28.20 | 28.96 | 44.45 | 18 m.N max. |
| 18 | 41.68 | 26.97 | 25.64 | 26.04 | 28.20 | 29.80 | 31.70 | 31.25 | 32.13 | 47.35 | 22 m.N max. |
| 20 | 44.86 | 30.18 | 28.82 | 29.22 | 32.00 | 33.60 | 35.50 | 34.42 | 35.31 | 51.90 | 25 m.N max. |
| 22 | 49.63 | 33.32 | 32.00 | 32.40 | 35.10 | 36.70 | 38.60 | 37.59 | 38.48 | 54.10 | 27 m.N max. |
| 24 | 52.81 | 36.53 | 35.17 | 35.57 | 40.50 | 42.10 | 42.00 | 40.77 | 41.66 | 57.25 | 29 m.N max. |
| 28 | 59.21 | 44.45 | 41.52 | 41.92 | 45.00 | 46.60 | 48.50 | 47.14 | 48.01 | 65.25 | 30 m.N max. |

Dimensions in mm

## PLUGS

# TYPE 7




| Size | R ±0.10 | F ±0.10 | X ±0.10 | Q ±0.10 | W ±0.25 |
|---|---|---|---|---|---|
| 08 | 11.70 | 12.10 | 17.10 | 18.70 | 19.50 |
| 10 | 14.92 | 15.32 | 18.00 | 19.60 | 21.50 |
| 12 | 17.87 | 18.27 | 20.40 | 22.00 | 23.50 |
| 14 | 21.05 | 21.45 | 24.50 | 26.10 | 28.00 |
| 16 | 24.22 | 24.62 | 27.00 | 28.60 | 30.50 |
| 18 | 25.64 | 26.04 | 28.20 | 29.80 | 31.70 |
| 20 | 28.82 | 29.22 | 32.00 | 33.60 | 35.50 |
| 22 | 32.00 | 32.40 | 35.10 | 36.70 | 38.60 |
| 24 | 35.17 | 35.57 | 40.50 | 42.10 | 42.00 |
| 28 | 41.52 | 41.92 | 45.00 | 46.60 | 48.50 |

Dimensions in mm

Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

# SECTION 1.3

## Arrangements



**Male Insert. Front Face View**

**08-03** 3 contacts **size 20**



**08-06** 6 contacts **size 22** *



**08-98** 3 contacts **size 20**



**10-05** 5 contacts **size 20**



**10-06** 6 contacts **size 20** *



**10-12** 12 contacts **size 22** *



**12-03** 3 contacts **size 16**



**12-12** 12 contacts **size 20**



**12-21** 21 contacts **size 22** *



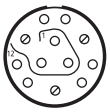
**14-04** 4 contacts **size 12**



**14-07** 7 contacts **size 16**



**14-12** 9 contacts **size 20**
3 contacts **size 16** *



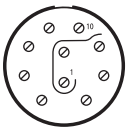
▲ Consult TE Technical Support  * not ESC10  ○ not EN2997

## Male Insert. Front Face View

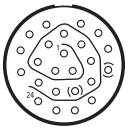
**14-15** 15 contacts **size 20**



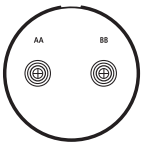
**16-10** 10 contacts **size 16**



**16-24** 24 contacts **size 20**

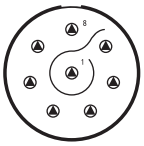


**18-02** 2 contacts **Quadrax** or 2 **K6** contacts

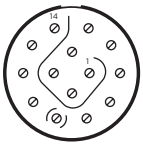



*
○

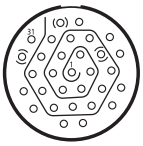
**18-08** 8 contacts **size 12**



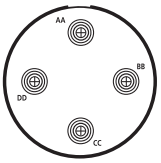
**18-14** 14 contacts **size 16**



**18-31** 31 contacts **size 20**



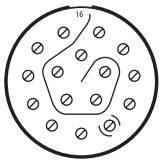
**20-04** 4 contacts **Quadrax** or 4 **K6** contacts




*
○

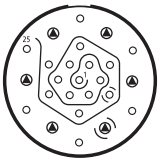
**20-16** 16 contacts **size 16**

*



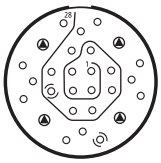
**20-25** 19 contacts **size 20**
6 contacts **size 12**

▲
*

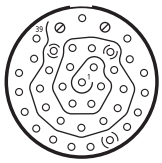


**20-28** 24 contacts **size 20**
4 contacts **size 12**

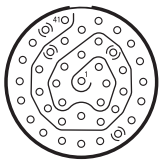
*



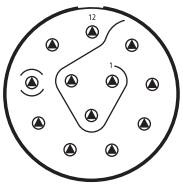
**20-39** 37 contacts **size 20**
2 contacts **size 16**



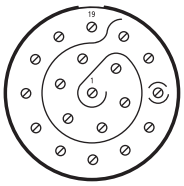
**20-41** 41 contacts **size 20**



**22-12** 12 contacts **size 12**

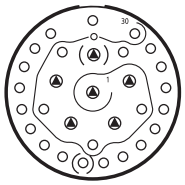


**22-19** 19 contacts **size 16**



**22-30** 24 contacts **size 20**
6 contacts **size 12**

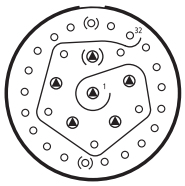
*



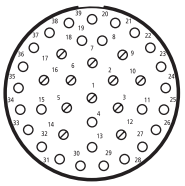
▲ Consult TE Technical Support  * not ESC10  ○ not EN2997

## Male Insert. Front Face View

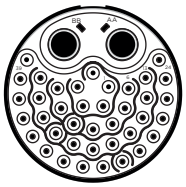
**22-32** 26 contacts **size 20**
6 contacts **size 12**



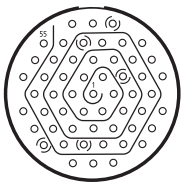
**22-39** 27 contacts **size 20**
12 contacts **size 16**



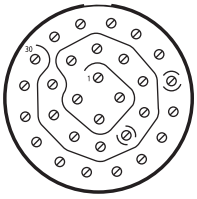
**22-41** 2 contacts **Quadrax**
39 contacts **size 20**



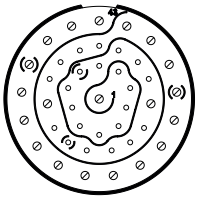
**22-55** 55 contacts **size 20**



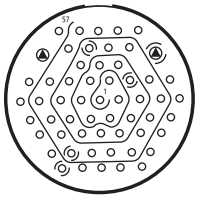
**24-30** 30 contacts **size 16**



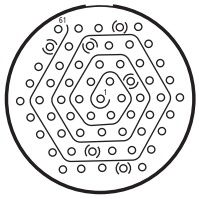
**24-43** 23 contacts **size 20**
20 contacts **size 16**



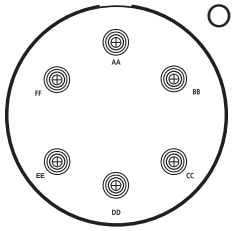
**24-57** 55 contacts **size 20**
2 contacts **size 12**



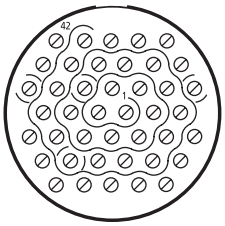
**24-61** 61 contacts **size 20**



**28-06** 6 contacts **Quadrax**
or 6 **K6** contacts




**28-42** 42 contacts **size 16**



▲ Consult TE Technical Support ✱ not ESC10 ○ not EN2997

| Sizes and number of contacts | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Arrangements | 22 | 20 | 16 | 12 | Quadrax or K6 | Arrangements | 22 | 20 | 16 | 12 | Quadrax or K6 | Arrangements | 22 | 20 | 16 | 12 | Quadrax 8 | Quadrax or K6 |
| 08-03 | - | 3 | - | - | - | 16-24 | - | 24 | - | - | - | 22-32 | - | 26 | - | 6 | - | - |
| 08-06 | 6 | - | - | - | - | 18-02 | - | - | - | - | 2 | 22-39 | - | 27 | 12 | - | - | - |
| 08-98 | - | 3 | - | - | - | 18-08 | - | - | - | 8 | - | 22-41 | - | 39 | - | - | 2 | - |
| 10-05 | - | 5 | - | - | - | 18-14 | - | - | 14 | - | - | 22-55 | - | 55 | - | - | - | - |
| 10-06 | - | 6 | - | - | - | 18-31 | - | 31 | - | - | - | 24-30 | - | - | 30 | - | - | - |
| 10-12 | 12 | - | - | - | - | 20-04 | - | - | - | - | 4 | 24-43 | - | 23 | 20 | - | - | - |
| 12-03 | - | - | 3 | - | - | 20-16 | - | - | 16 | - | - | 24-57 | - | 55 | - | 2 | - | - |
| 12-12 | - | 12 | - | - | - | 20-25 | - | 19 | - | 6 | - | 24-61 | - | 61 | - | - | - | - |
| 12-21 | 21 | - | - | - | - | 20-28 | - | 24 | - | 4 | - | 28-06 | - | - | - | - | - | 6 |
| 14-04 | - | - | - | 4 | - | 20-39 | - | 37 | 2 | - | - | 28-42 | - | - | 42 | - | - | - |
| 14-07 | - | - | 7 | - | - | 20-41 | - | 41 | - | - | - | - | - | - | - | - | - | - |
| 14-12 | - | 9 | 3 | - | - | 22-12 | - | - | - | 12 | - | - | - | - | - | - | - | - |
| 14-15 | - | 15 | - | - | - | 22-19 | - | - | 19 | - | - | - | - | - | - | - | - | - |
| 16-10 | - | - | 10 | - | - | 22-30 | - | 24 | - | 6 | - | - | - | - | - | - | - | - |

# SECTION 1.4

## Part-Numbering

### DEUTSCH PART NUMBERING SYSTEM

**Example of order:** 983-6SE 12-03 SN-L

**983 - 6 SE 12- 03 S N- L ***

**Connector type**

**Shell type**
**0** Sealed square flange receptacle
**6** Plug
**7** Sealed round flange receptacle

**Connector model**
**A-W-WS-R-RS-K-S-KE-SE-KV-SV-KF-SF**
(**W-R-K-KE** : plug only)

**Shell size**
**08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 28**

**Arrangements see section 1.3**

**Contact type**
**P** Male contact
**S** Female contact

**Key orientation**
**N - 6 - 7 - 8 - 9 - Y**
**T - V** 230V only

**Index for contact**
**L** Connector without contact
**Without index** Connector with contacts

*****
special modifications : Consult TE Technical Support

## DEUTSCH PART NUMBERING SYSTEM FOR CONNECTORS WITH INTEGRAL ACCESSORY

**Example of order:** 983-15 KV 7-12-03 SN-L

**983-15** **KV** **7-** **12-** **03** **S** **N-** **L** *

**Connector type**

**Connector model**
**A-W-WS-R-RS-K-S-KE-SE-KV-SV-KF-SF**
(**W-R-K-KE** : plug only)

**Shell type**
**2** square flange receptacle with integral accessory
**3** jam-nut receptacle with integral accessory
**7** plug with integral accessory

**Shell size**
**08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 28**

**Arrangements see section 1.3**

**Contact type**
**P** Male contact
**S** Female contact

**Key orientation**
**N - 6 - 7 - 8 - 9 - Y**

**Index for contact**
**L** Connector without contact
**Without index** Connector with contacts

*****
special modifications :
A1499 for KE and SE only
For other modifications, Consult TE Technical Support

## ASD-STAN PART NUMBERING SYSTEM

**Example of order:** EN2997SE61203FN

| EN2997 | SE | 6 | 12 | 03 | F | N |
|---|---|---|---|---|---|---|

**Connector type**

**Connector model**
**W-WS-R-RS-K-S-KE-SE-KF-SF-KV-SV**
(**W-R-K-KE** : plug only)

**Shell type**
**0** Sealed square flange receptacle
**6** Plug
**7** Sealed jam-nut mounting receptacle
**A** Square flange receptacle with integral accessory
**B** Jam-nut mounting receptacle with integral accessory
**C** Plug with integral accessory

**Shell size**
**08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 28**

**Arrangements** see section 1.3

**Contact type**
**M** Male standard contact
**F** Female standard contact
**A** Delivered without Male contact
**B** Delivered without Female contact
**C** Special male contact size 20, with barrel size 18
**D** Special female contact size 20, with barrel size 18

**Key orientation**
**N - 6 - 7 - 8 - 9 - Y**

## ESC10 PART NUMBERING SYSTEM

**Example of order:** ESC10SE61203SNO

| ESC10 | SE | 6 | 12 | 03 | S | N | O |
|---|---|---|---|---|---|---|---|

**Connector type**

**Connector model**
**KE-SE**

**Shell type**
**0** Sealed square flange receptacle
**6** Plug

**Shell size**
**08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 28**

**Arrangements** see section 1.3

**Contact type**
**P** Male contact
**S** Female contact

**Key orientation**
**N - 6 - 7 - 8 - 9**

**Variant identifier (alphabetic)**
**O** No minor variation

# SECTION 2

## Hermetic Receptacles

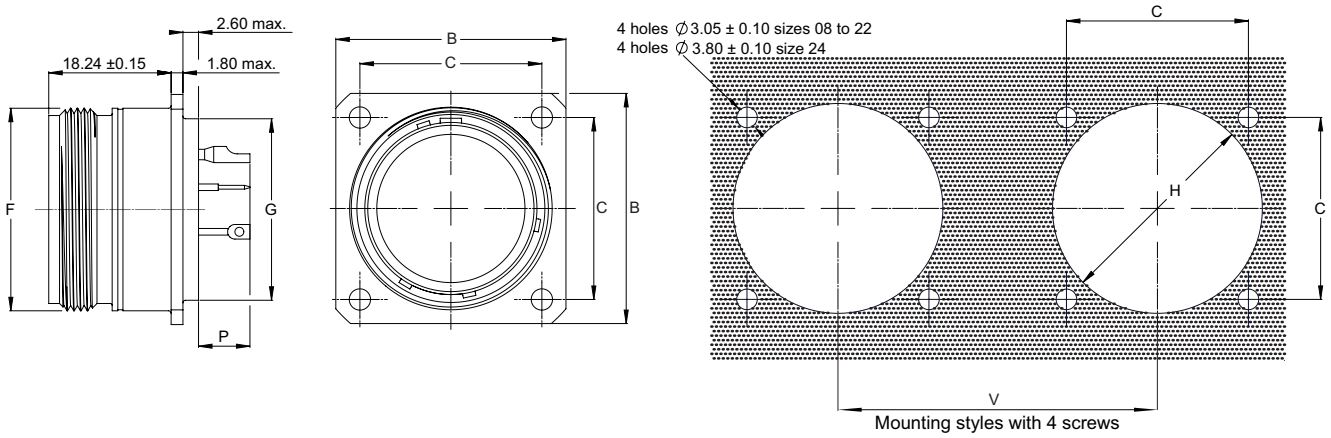


# SECTION 2.1

## Hermetic Receptacles Stainless Steel

### Receptacle Square Flange

### TYPE 0




| Size | B | C | F | G | H | P max Size | | V | Weight Max. (g) |
|---|---|---|---|---|---|---|---|---|---|
| | Max. | ±0.05 | Max. | Max. | Min. | 20 | 16-12 | Min. | stainless steel |
| 08 | 20.75 | 15.09 | 14.27 | 12.70 | 15.80 | 4.93 | 5.69 | 31.70 | 18 |
| 10 | 23.93 | 18.26 | 17.67 | 14.27 | 18.70 | 4.93 | 5.69 | 34.90 | 24 |
| 12 | 26.32 | 20.62 | 22.22 | 19.05 | 23.40 | 4.93 | 5.69 | 39.60 | 31 |
| 14 | 28.71 | 23.01 | 23.77 | 20.62 | 24.90 | 4.93 | 5.69 | 41.25 | 40 |
| 16 | 31.88 | 24.61 | 26.97 | 23.80 | 28.30 | 4.93 | 5.69 | 44.45 | 49 |
| 18 | 34.24 | 26.97 | 30.15 | 26.97 | 31.10 | 4.93 | 5.69 | 47.35 | 54 |
| 20 | 36.63 | 29.36 | 33.32 | 30.18 | 34.50 | 4.93 | 5.69 | 51.90 | 62 |
| 22 | 39.80 | 31.75 | 36.49 | 33.32 | 37.50 | 4.93 | 5.69 | 54.10 | 77 |
| 24 | 43.39 | 34.92 | 39.67 | 36.53 | 40.60 | 4.93 | 5.69 | 57.25 | 88 |

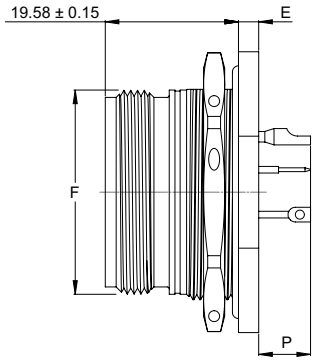
Dimensions in mm

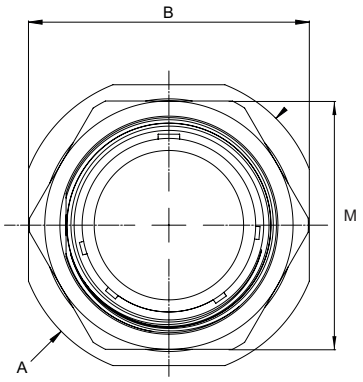


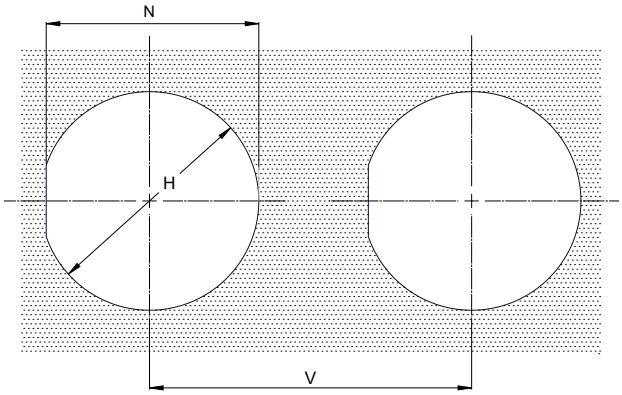
Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

## Receptacle Jam-Nut Mounting

# TYPE 7



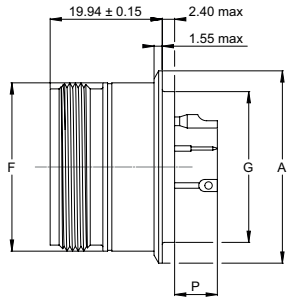

Mounting styles with panel cutouts

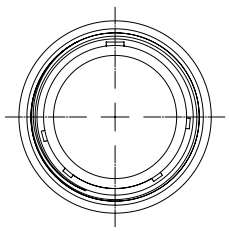
| Size | A Max. | B Max. | E Max. | F Max. | H Min. | M Max. | N 0 -0.26 | P Max. Size 20 | P Max. Size 16-12 | V Min. | Weight Max. (g) Stainless steel | Tightening torque of panel nut |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 08 | 27.38 | 24.89 | 3.48 | 14.27 | 16.26 | 21.06 | 15.50 | 4.57 | 5.33 | 31.70 | 29 | 7 m.N max. |
| 10 | 30.28 | 28.04 | 3.48 | 17.67 | 19.43 | 24.23 | 18.67 | 4.57 | 5.33 | 34.90 | 37 | 10 m.N max. |
| 12 | 35.05 | 32.79 | 3.48 | 22.22 | 24.18 | 29.01 | 23.42 | 4.57 | 5.33 | 39.60 | 50 | 12 m.N max. |
| 14 | 38.51 | 35.33 | 3.48 | 23.77 | 25.78 | 30.61 | 25.02 | 4.57 | 5.33 | 41.25 | 58 | 15 mN. max. |
| 16 | 41.68 | 38.51 | 3.48 | 26.97 | 28.96 | 33.76 | 28.20 | 4.57 | 5.33 | 44.45 | 72 | 18 mN. max. |
| 18 | 44.86 | 41.68 | 3.48 | 30.15 | 32.13 | 36.96 | 31.25 | 4.57 | 5.33 | 47.35 | 79 | 22 m.N max. |
| 20 | 49.63 | 44.86 | 3.48 | 33.32 | 35.31 | 40.11 | 34.42 | 4.57 | 5.33 | 51.90 | 87 | 25 m.N max. |
| 22 | 52.78 | 49.63 | 3.76 | 36.49 | 38.48 | 43.31 | 37.59 | 4.29 | 5.05 | 54.10 | 108 | 27 mN. max. |
| 24 | 55.42 | 52.81 | 3.76 | 39.67 | 41.66 | 46.46 | 40.77 | 4.29 | 5.05 | 57.25 | 122 | 29 mN. max. |

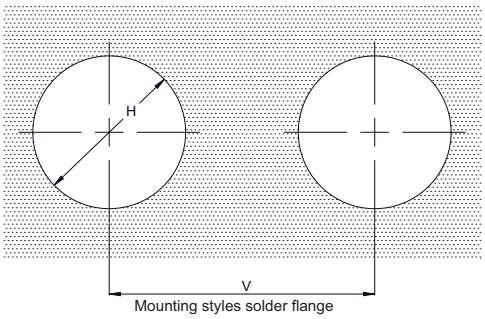
Dimensions in mm

## Receptacle Solder Round Flange

# TYPE 1






Mounting styles solder flange

| Size | A ±0 -0.2 | F Max. | G Max. | H Min. | P Max. Size 20 | P Max. Size 16-12 | V Min. | Weight Max. (g) |
|---|---|---|---|---|---|---|---|---|
| 08 | 18.36<br>17.86 | 14.27 | 12.70 | 12.96 | 4.93 | 5.69 | 31.70 | 15 |
| 10 | 21.59<br>21.08 | 17.67 | 14.27 | 14.53 | 4.93 | 5.69 | 34.90 | 21 |
| 12 | 26.80<br>26.29 | 22.22 | 19.05 | 19.30 | 4.93 | 5.69 | 39.60 | 31 |
| 14 | 27.94<br>27.43 | 23.77 | 20.62 | 20.88 | 4.93 | 5.69 | 41.25 | 35 |
| 16 | 30.99<br>30.48 | 26.97 | 23.80 | 24.05 | 4.93 | 5.69 | 44.45 | 46 |
| 18 | 34.39<br>33.78 | 30.15 | 26.97 | 27.23 | 4.93 | 5.69 | 47.35 | 51 |
| 20 | 37.34<br>36.83 | 33.32 | 30.15 | 30.40 | 4.93 | 5.69 | 51.90 | 59 |
| 22 | 40.64<br>40.13 | 36.49 | 33.32 | 33.58 | 4.93 | 5.69 | 54.10 | 73 |
| 24 | 43.68<br>43.17 | 39.67 | 36.50 | 36.75 | 4.93 | 5.69 | 57.25 | 86 |

Dimensions in mm

Stainless Steel shell exempt of sulphur to help withstand Electron Beam (E.B.) welding and laser.

Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

# SECTION 2.2

## Arrangements

### Male Insert. Front Face View

**08-03** 3 contacts **size 20** ▲



**08-06** 6 contacts **size 22** ▲



**08-98** 3 contacts **size 20**



**10-05** 5 contacts **size 20**



**10-06** 6 contacts **size 20** ▲



**10-12** 12 contacts **size 22** ▲



**12-03** 3 contacts **size 16**



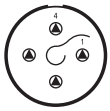
**12-12** 12 contacts **size 20** ▲



**12-21** 21 contacts **size 22** ▲



**14-04** 4 contacts **size 12**



**14-07** 7 contacts **size 16**



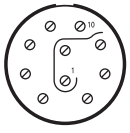
**14-12** 9 contacts **size 20**
3 contacts **size 16**



**14-15** 15 contacts **size 20**



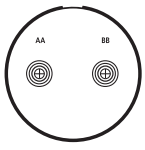
**16-10** 10 contacts **size 16**



**16-24** 24 contacts **size 20**



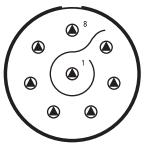
**18-02** 2 contacts **K6** □ *



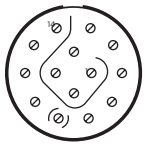

▲ Aluminum, please consult TE Technical Support  * Consult TE Technical Support  □ For K6 contacts, specify wire AWG

## Male Insert. Front Face View

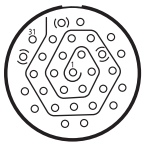
**18-08** 8 contacts **size 12**



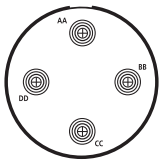
**18-14** 14 contacts **size 16**



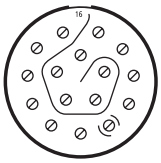
**18-31** 31 contacts **size 20**



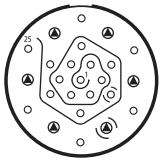
**20-04** 4 contacts **K6** □



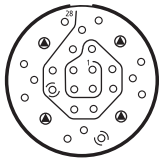

**20-16** 16 contacts **size 16** *



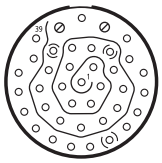
**20-25** 19 contacts **size 20**
6 contacts **size 12**



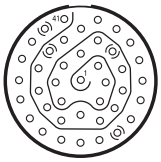
**20-28** 24 contacts **size 20**
4 contacts **size 12**



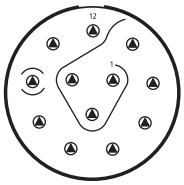
**20-39** 37 contacts **size 20**
2 contacts **size 16**



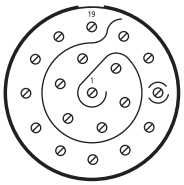
**20-41** 41 contacts **size 20**



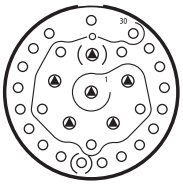
**22-12** 12 contacts **size 12**



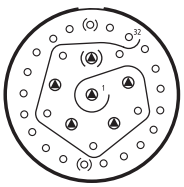
**22-19** 19 contacts **size 16**



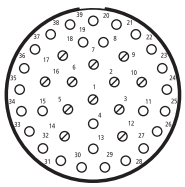
**22-30** 24 contacts **size 20**
6 contacts **size 12** *



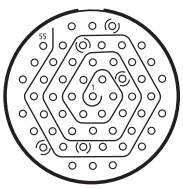
**22-32** 26 contacts **size 20**
6 contacts **size 12** *



**22-39** 27 contacts **size 20**
12 contacts **size 16** *



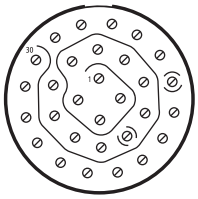
**22-55** 55 contacts **size 20**



▲ Aluminum, please consult TE Technical Support  * Consult TE Technical Support  □ For K6 contacts, specify wire AWG

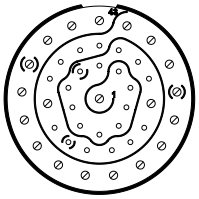
**24-30** 30 contacts **size 16**

*



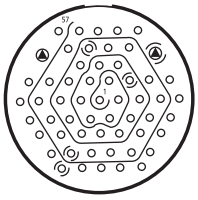
**24-43** 23 contacts **size 20**
20 contacts **size 16**

*

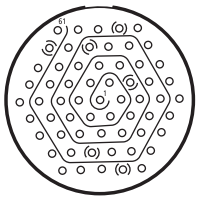


**24-57** 55 contacts **size 20**
2 contacts **size 12**

*

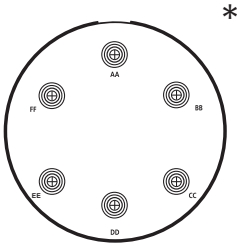


**24-61** 61 contacts **size 20**



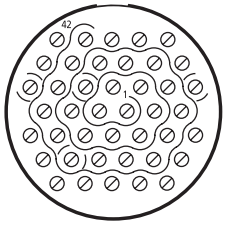
**28-06** 6 contacts **K6**

* □




**28-42** 42 contacts **size 16**

*



▲ Aluminum, please consult TE Technical Support

* Consult TE Technical Support

□ For K6 contacts, specify wire AWG

| Sizes and number of contacts | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Arrangements** | **22** | **20** | **16** | **12** | **K6** | **Arrangements** | **22** | **20** | **16** | **12** | **K6** | **Arrangements** | **22** | **20** | **16** | **12** | **K6** |
| 08-03 | - | 3 | - | - | - | 16-24 | - | 24 | - | - | - | 22-32* | - | 26 | - | 6 | - |
| 08-06 | 6 | - | - | - | - | 18-02 * | - | - | - | - | 2 | 22-39* | - | 27 | 12 | - | - |
| 08-98 | - | 3 | - | - | - | 18-08 | - | - | - | 8 | - | 22-55 | - | 55 | - | - | - |
| 10-05 | - | 5 | - | - | - | 18-14 | - | - | 14 | - | - | 24-30* | - | - | 30 | - | - |
| 10-06 | - | 6 | - | - | - | 18-31 | - | 31 | - | - | - | 24-43* | - | 23 | 20 | - | - |
| 10-12 | 12 | - | - | - | - | 20-04 | - | - | - | - | 4 | 24-57* | - | 55 | - | 2 | - |
| 12-03 | - | - | 3 | - | - | 20-16* | - | - | 16 | - | - | 24-61 | - | 61 | - | - | - |
| 12-12 | - | 12 | - | - | - | 20-25 | - | 19 | - | 6 | - | 28-06* | - | - | - | - | 6 |
| 12-21 | 21 | - | - | - | - | 20-28 | - | 24 | - | 4 | - | 28-42* | - | - | 42 | - | - |
| 14-04 | - | - | - | 4 | - | 20-39 | - | 37 | 2 | - | - | | | | | | |
| 14-07 | - | - | 7 | - | - | 20-41 | - | 41 | - | - | - | | | | | | |
| 14-12 | - | 9 | 3 | - | - | 22-12 | - | - | - | 12 | - | | | | | | |
| 14-15 | - | 15 | - | - | - | 22-19 | - | - | 19 | - | - | | | | | | |
| 16-10 | - | - | 10 | - | - | 22-30* | - | 24 | - | 6 | - | | | | | | |

* Consult TE Technical Support

# SECTION 2.3

## PART-NUMBERING

### DEUTSCH PART NUMBERING SYSTEM

| Example of order: 983-1YE 22-55 PN | 983- | 1 | YE | 22- | 55 | P | N |
|---|---|---|---|---|---|---|---|
| **Connector type** | | | | | | | |
| **Shell type**<br>**0** Square flange receptacle<br>**1** Solder receptacle<br>**7** Jam-nut receptacle | | | | | | | |
| **Connector model**<br>**Y-YE** for receptacle only | | | | | | | |
| **Shell size**<br>**08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 28** | | | | | | | |
| **Arrangements : see section 2.2** | | | | | | | |
| **Contact type**<br>**P** Male contact<br>**S** Female contact, consult TE Technical Support | | | | | | | |
| **Insert clocking position**<br>**N - 6 - 7 - 8 - 9 - Y** | | | | | | | |

No Aluminum Hermetic according to EN2997 and ESC 10 specifications.
For any inquiry concerning Aluminum Hermetics, please consult TE Technical Support.

## ASD-STAN PART NUMBERING SYSTEM

**Example of order:** EN2997YE12255MN

| EN2997 | YE | 1 | 22 | 55 | M | N |
|---|---|---|---|---|---|---|

**Connector type**

**Connector model**
**Y-YE**

**Shell type**
**0** Square flange receptacle
**1** Solder receptacle
**7** Jam-nut mounting receptacle

**Shell size**
**08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 28**

**Arrangements : see section 2.2**

**Contact type**
**M** Male standard contact

**Insert clocking position**
**N - 6 - 7 - 8 - 9 - Y**

## ESC10 PART NUMBERING SYSTEM

**Example of order:** ESC10YE12255PNO

| ESC10 | YE | 1 | 22 | 55 | P | N | O |
|---|---|---|---|---|---|---|---|

**Connector type**

**Connector model**
**YE**

**Shell type**
**1** Solder mounted receptacle
**2** Square flange receptacle
**3** Jam-nut mounting receptacle

**Shell size**
**08 - 10 - 12 - 14 - 16 - 18 - 20 - 22**

**Arrangements : see section 2.2**

**Contact type**
**P** Male standard contact

**Insert clocking position**
**N - 6 - 7 - 8 - 9 - Y**

**Variant identifier (alphabetic)**
**O** no minor variation
**B** eyelet termination

# SECTION 3

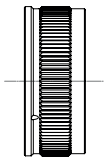
## Backshells



# SECTION 3.1

## Backshells

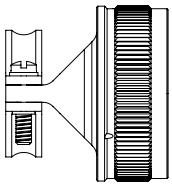
### Nut



| Part number | | | | |
|---|---|---|---|---|
| Size | Stainless steel | Alu. nickel | Alu. cadmium | Alu. black anodized |
| 08 | 66240-08 A | 006-0909-08 A499 | 006-0909-08 A838 | 006-0909-08 |
| 10 | 66240-10 A | 006-0909-10 A499 | 006-0909-10 A838 | 006-0909-10 |
| 12 | 66240-12 A | 006-0909-12 A499 | 006-0909-12 A838 | 006-0909-12 |
| 14 | 66240-14 A | 006-0909-14 A499 | 006-0909-14 A838 | 006-0909-14 |
| 16 | 66240-16 A | 006-0909-16 A499 | 006-0909-16 A838 | 006-0909-16 |
| 18 | 66240-18 A | 006-0909-18 A499 | 006-0909-18 A838 | 006-0909-18 |
| 20 | 66240-20 A | 006-0909-20 A499 | 006-0909-20 A838 | 006-0909-20 |
| 22 | 66240-22 A | 006-0909-22 A499 | 006-0909-22 A838 | 006-0909-22 |
| 24 | 66240-24 A | 006-0909-24 A499 | 006-0909-24 A838 | 006-0909-24 |
| 28 | 66240-28 A | 006-0909-28 A499 | 006-0909-28 A838 | 006-0909-28 |

| Used for connectors | | | | |
|---|---|---|---|---|
| Models | K-S-KE-SE<br>KV-SV-KF-SF | R-RS | W-WS | A |

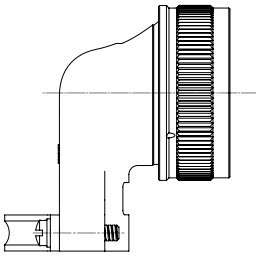
### Straight Cable Clamp



| Part number | | | | |
|---|---|---|---|---|
| Size | Stainless steel | Alu. nickel | Alu. cadmium | Alu. black anodized |
| 08 | 66241-08 A | 006-0910-08 A499 | 006-0910-08 A838 | 006-0910-08 |
| 10 | 66241-10 A | 006-0910-10 A499 | 006-0910-10 A838 | 006-0910-10 |
| 12 | 66241-12 A | 006-0910-12 A499 | 006-0910-12 A838 | 006-0910-12 |
| 14 | 66241-14 A | 006-0910-14 A499 | 006-0910-14 A838 | 006-0910-14 |
| 16 | 66241-16 A | 006-0910-16 A499 | 006-0910-16 A838 | 006-0910-16 |
| 18 | 66241-18 A | 006-0910-18 A499 | 006-0910-18 A838 | 006-0910-18 |
| 20 | 66241-20 A | 006-0910-20 A499 | 006-0910-20 A838 | 006-0910-20 |
| 22 | 66241-22 A | 006-0910-22 A499 | 006-0910-22 A838 | 006-0910-22 |
| 24 | 66241-24 A | 006-0910-24 A499 | 006-0910-24 A838 | 006-0910-24 |
| 28 | 66241-28 A | 006-0910-28 A499 | 006-0910-28 A838 | 006-0910-28 |

| Used for connectors | | | | |
|---|---|---|---|---|
| Models | K-S-KE-SE<br>KV-SV-KF-SF | R-RS | W-WS | A |

## 90° Cable Clamp



| Part number | | | | |
|---|---|---|---|---|
| Size | Stainless steel | Alu. nickel | Alu. cadmium | Alu. black anodized |
| 08 | 66332-08 A | 006-0908-08 A499 | 006-0908-08 A838 | 006-0908-08 |
| 10 | 66332-10 A | 006-0908-10 A499 | 006-0908-10 A838 | 006-0908-10 |
| 12 | 66332-12 A | 006-0908-12 A499 | 006-0908-12 A838 | 006-0908-12 |
| 14 | 66332-14 A | 006-0908-14 A499 | 006-0908-14 A838 | 006-0908-14 |
| 16 | 66332-16 A | 006-0908-16 A499 | 006-0908-16 A838 | 006-0908-16 |
| 18 | 66332-18 A | 006-0908-18 A499 | 006-0908-18 A838 | 006-0908-18 |
| 20 | 66332-20 A | 006-0908-20 A499 | 006-0908-20 A838 | 006-0908-20 |
| 22 | 66332-22 A | 006-0908-22 A499 | 006-0908-22 A838 | 006-0908-22 |
| 24 | 66332-24 A | 006-0908-24 A499 | 006-0908-24 A838 | 006-0908-24 |
| 28 | 66332-28 A | 006-0908-28 A499 | 006-0908-28 A838 | 006-0908-28 |

| Used for connectors | | | | |
|---|---|---|---|---|
| Models | K-S-KE-SE<br>KV-SV-KF-SF | R-RS | W-WS | A |

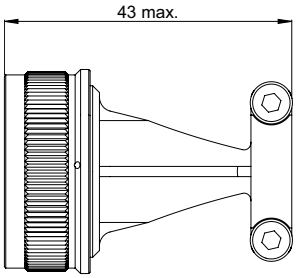


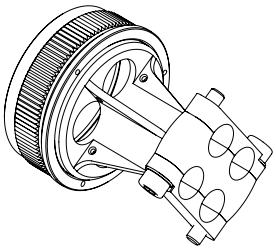


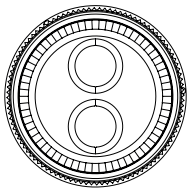
# SECTION 3.2

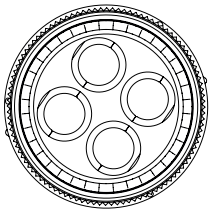
## Open Backshells for K6 and Quadrax Arrangements (18-02, 20-04, 28-06)

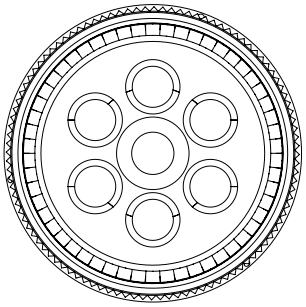
Accessories with straight cable clamp









| * | AWG cable |
|---|---|
| 0 | without sleeve |
| 1 | 6 |
| 2 | 8 |
| 4 | 10/12 |

699-8027-*1
(stainless steel)

697-8027-*1
(aluminum)

699-8027-*2
(stainless steel)

697-8027-*2
(aluminum)

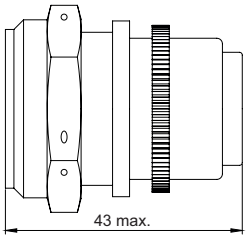
699-8027-*4
(stainless steel)

697-8027-*4
(aluminum)

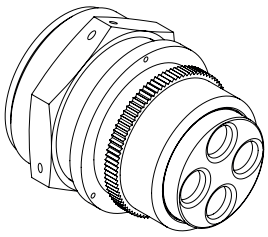
# SECTION 3.3

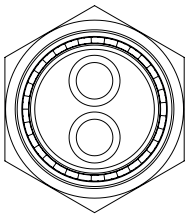
## Closed Backshells for K6 and Quadrax Arrangements (18-02, 20-04, 28-06)

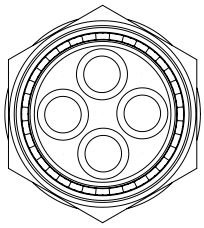
EMI shielding backshell

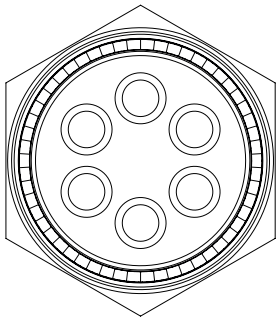



(ABS 1452)









699-0655-18
(stainless steel)

697-0474-18
(aluminum)

699-0655-20
(stainless steel)

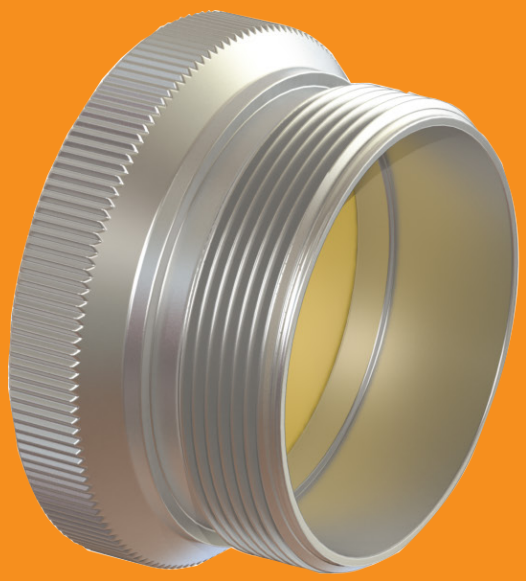
697-0474-20
(aluminum)

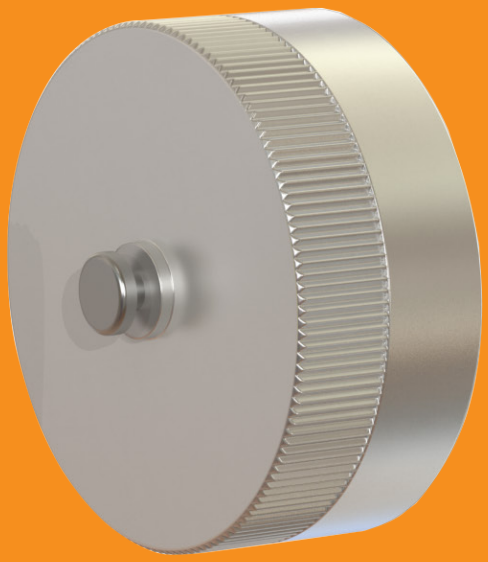
699-0655-28
(stainless steel)

697-0474-28
(aluminum)

# SECTION 4

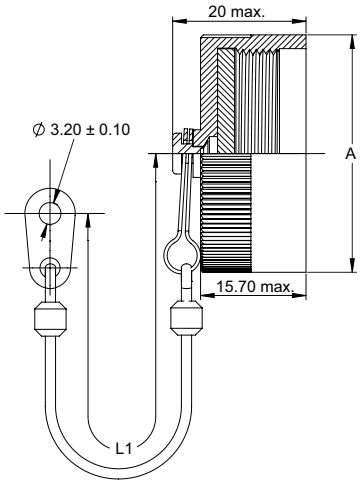
## Protective Covers





## PROTECTIVE COVERS

### For Receptacle



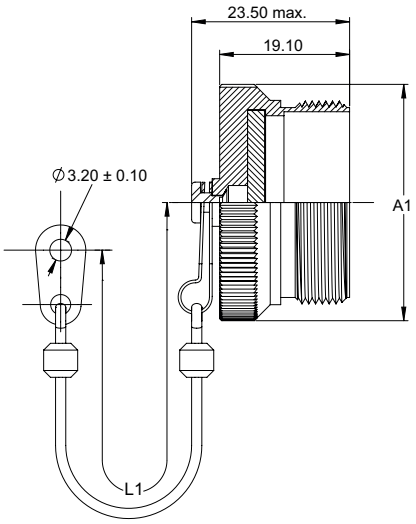

| Part Number | | |
|---|---|---|
| Stainless steel | Alu. nickel | Alu. cadmium |
| 983-3KE-* ** | 983-3R-* ** | 983-3W-* ** |

| Used for connectors | | | |
|---|---|---|---|
| Models | K-S-KE-SE<br>KV-SV-KF-SF | R-RS | W-WS |

Note: same protective cover whatever the connector keying position

* C : With chain and small eyelet
D : With cord and small eyelet
N : Without chain or cord and with holes for locking wire
** : Shell size

### For Plug




| Part Number | | |
|---|---|---|
| Stainless steel | Alu. nickel | Alu. cadmium |
| 983-4KE-* ** | 983-4R-* ** | 983-4W-* ** |

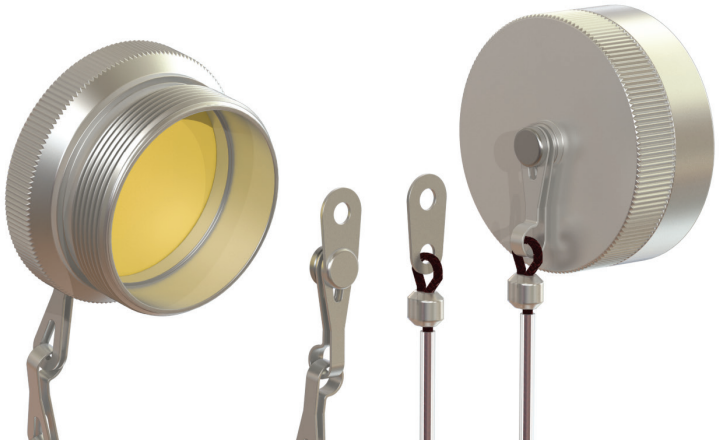
| Used for connectors | | | |
|---|---|---|---|
| Models | K-S-KE-SE<br>KV-SV-KF-SF | R-RS | W-WS |

Note: same protective cover whatever the connector keying position

* C : With chain and small eyelet
D : With cord and small eyelet
N : Without chain or cord and with holes for locking wire
** : Shell size

| Size | A Max. | A1 Max. | L1 ±6.25mm |
|---|---|---|---|
| 08 | 19.70 | 19.46 | 127 |
| 10 | 23.01 | 23.01 | 127 |
| 12 | 27.38 | 27.38 | 127 |
| 14 | 28.98 | 28.98 | 127 |
| 16 | 32.16 | 32.16 | 127 |
| 18 | 34.93 | 34.93 | 127 |
| 20 | 38.35 | 38.35 | 127 |
| 22 | 41.29 | 41.28 | 127 |
| 24 | 44.70 | 44.70 | 127 |
| 28 | 51.00 | 51.30 | 127 |

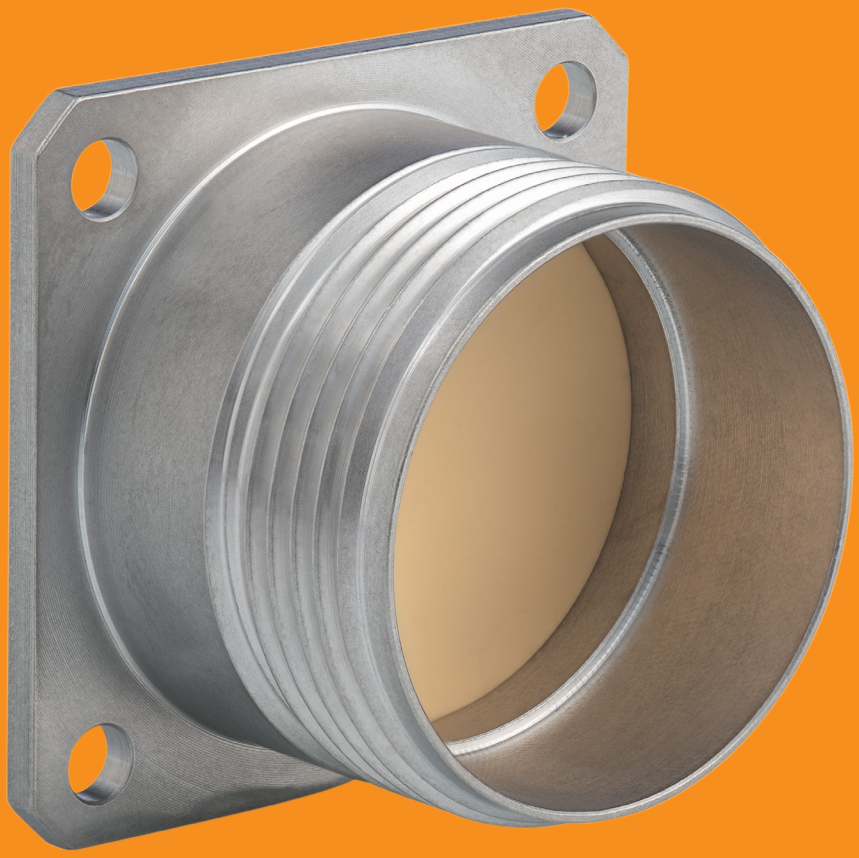
Dimensions in mm



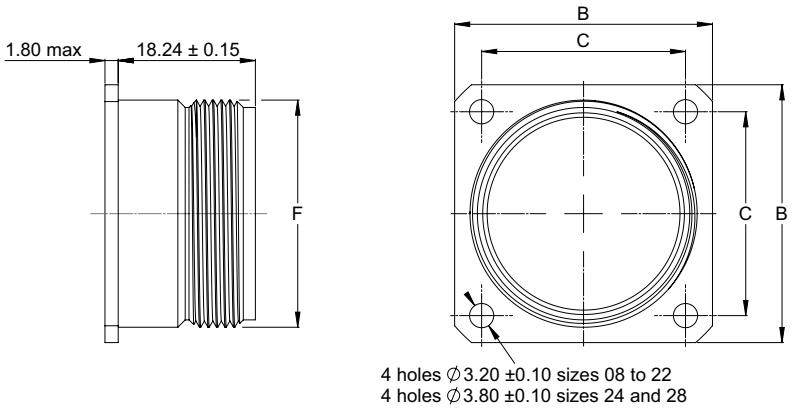
Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

# SECTION 5

## Dummy Receptacles



## Dummy Receptacles




| Size | B Max. | C ±0.05 | F Max. |
|---|---|---|---|
| 08 | 20.75 | 15.09 | 14.27 |
| 10 | 23.93 | 18.26 | 17.67 |
| 12 | 26.32 | 20.62 | 22.22 |
| 14 | 28.71 | 23.01 | 23.77 |
| 16 | 31.88 | 24.61 | 26.97 |
| 18 | 34.24 | 26.97 | 30.15 |
| 20 | 36.63 | 29.36 | 33.32 |
| 22 | 39.80 | 31.75 | 36.49 |
| 24 | 43.39 | 34.92 | 39.67 |
| 28 | 50.93 | 39.67 | 46.02 |

Dimensions in mm

## DEUTSCH PART NUMBERING SYSTEM

**Example of order:** 983-0KE-PR 10

**983 - 0 KE- PR 10**

**Connector type**

**Shell type**
**0** Sealed square flange receptacle

**Connector model**
**A-R-W-K-KE**

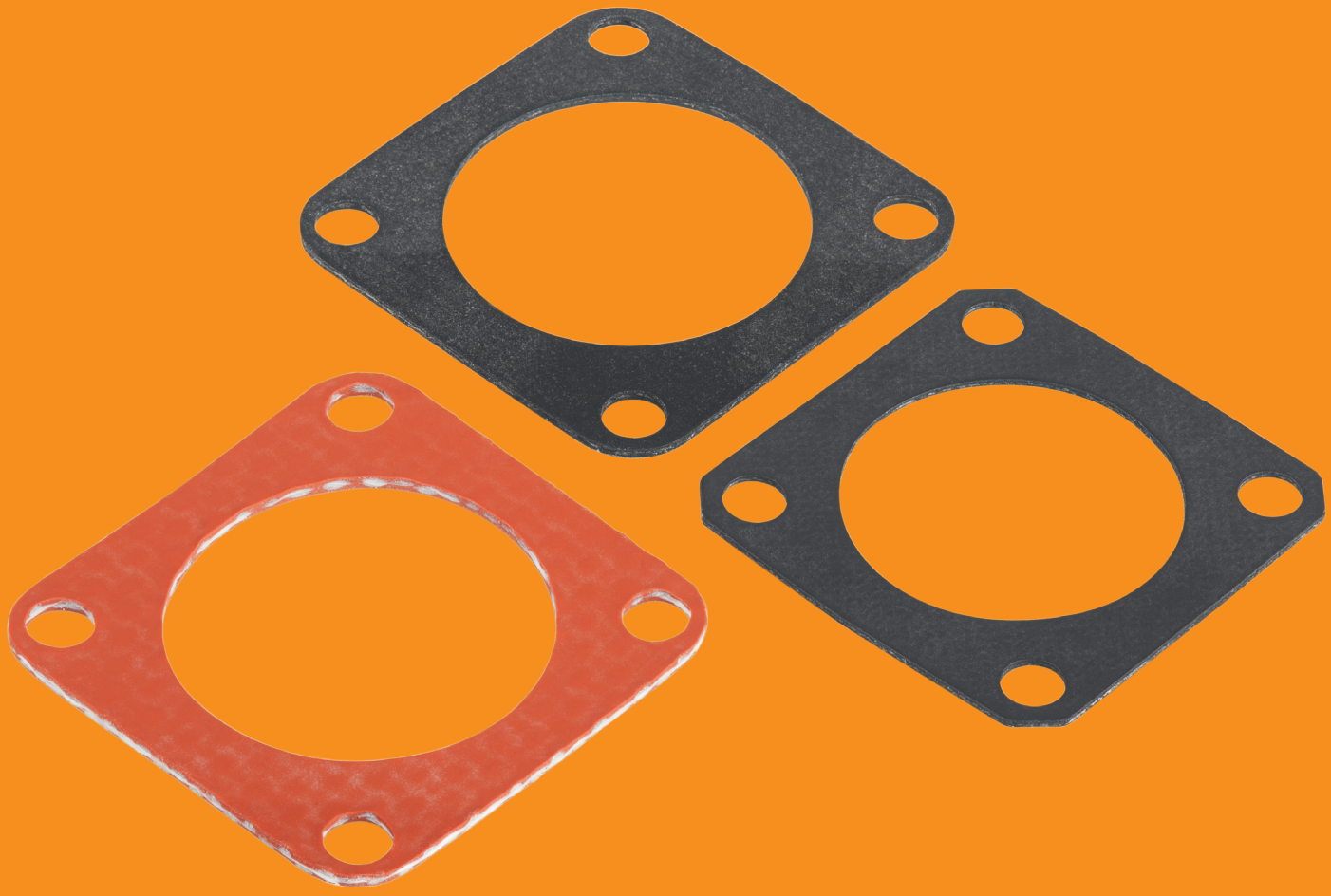
**PR** Dummy receptacle

**Shell size**
**08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 28**

Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

# SECTION 6

## Panel Seals

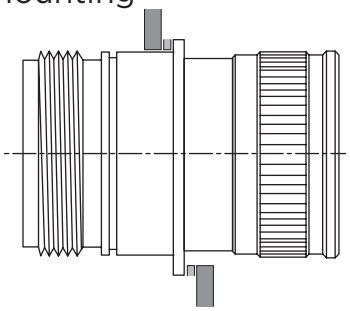


## PANEL SEALS

### Only for Square Flange Receptacle

Connectors do not include panel seals. Please order panel seals separately.
For part numbers and dimensions, please contact TE Technical Support.

Front Flange Mounting



Rear Flange Mounting

Panel seals are available in:

- Nylon tissue impregnated with chloroprene
- Aramid tissue impregnated with fluoroelastomer
- Fluoro-silicon
- Silicon elastomer reinforced with glass tissue

# SECTION 7

## Mated & Unmated Dimensions



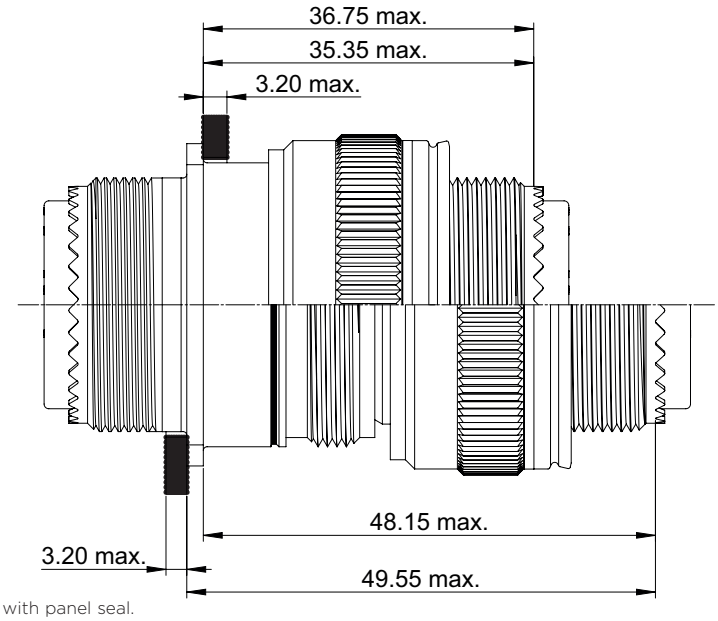


# SECTION 7.1

## For Sealed Connectors

### Square Flange

TYPE 0

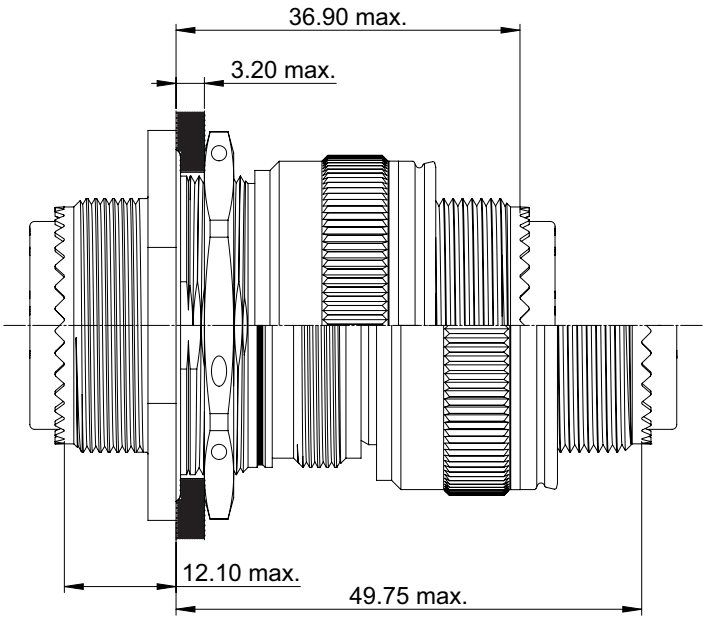



TYPE 6

* Note: Max. dimension given with panel seal.

### Jam-Nut Mounting

TYPE 7



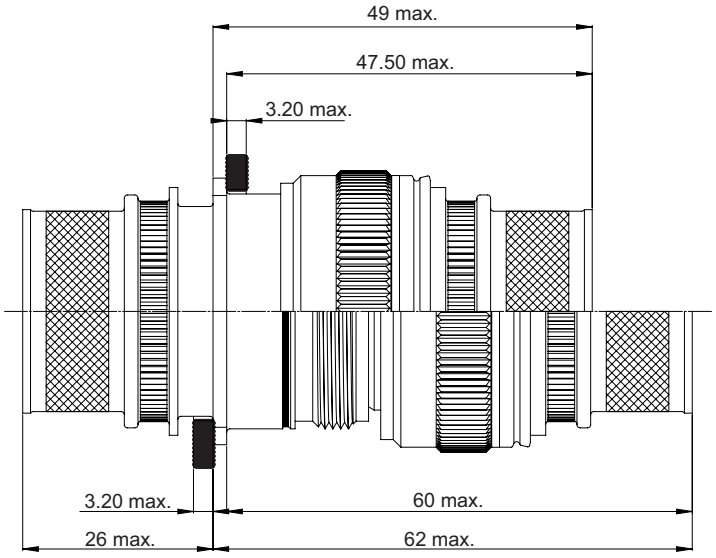

TYPE 6

Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

# SECTION 7.2

## For Sealed Connectors with Integral Accessory

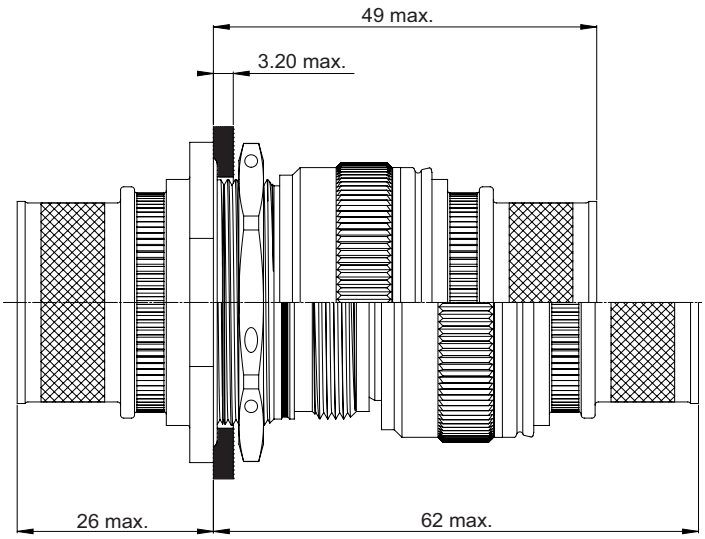
### Square Flange




**TYPE 7**

**TYPE 2**

### Jam-Nut Mounting




**TYPE 7**

**TYPE 3**

Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

### Plugs and receptacles mating possibilities

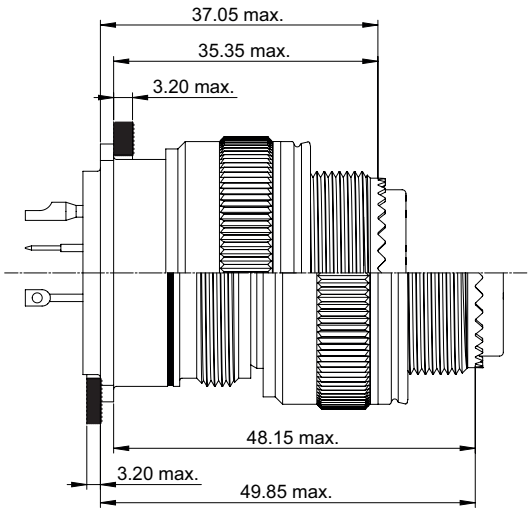
| Temperature class | 175° C | 200° C | 200° C | 260° C Cyclic |
|---|---|---|---|---|
| Shells material | Aluminum | Aluminum | Stainless steel | Stainless steel |
| Plugs | W / WS or A | R or RS | K or S | SE/KE, KF/SF, KV/SV |
| Receptacles | WS or A | RS | Y or S | YE SE SF SV |

All other plug / receptacle combinations are under user's responsibility.

# SECTION 7.3

## For Hermetic Receptacles

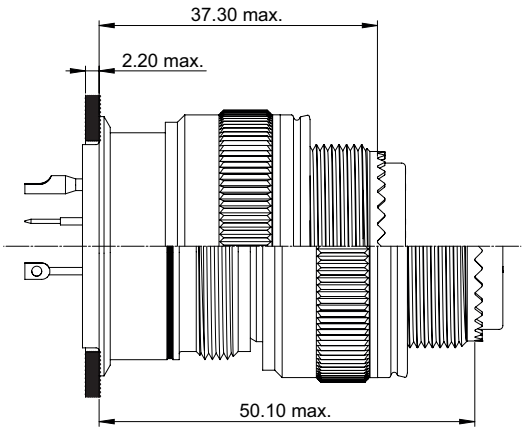
### Square Flange




**TYPE 0**

**TYPE 6**

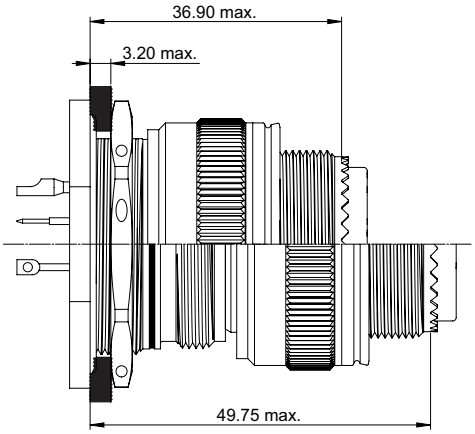
### Solder Hole Mounting




**TYPE 1**

**TYPE 6**

### Jam-Nut Mounting



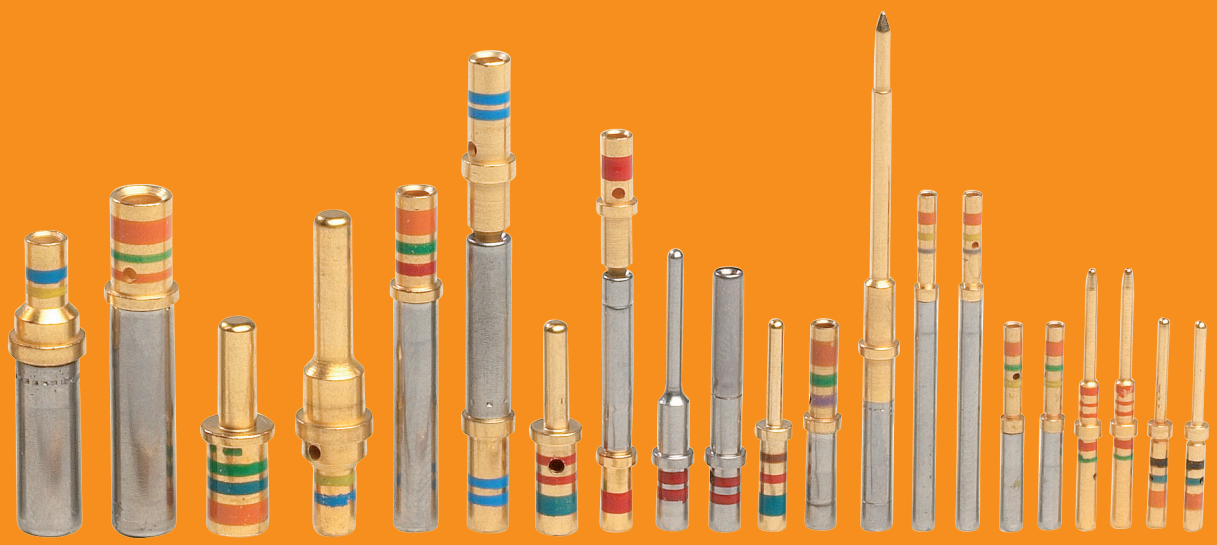

**TYPE 7**

**TYPE 6**

Overal dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).

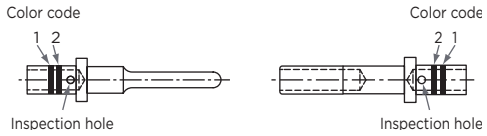
# SECTION 8

## Contacts & Tooling



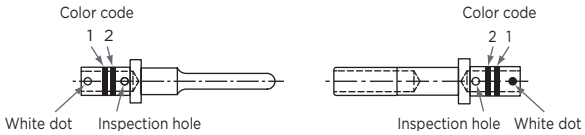
## CONTACTS

### For R - RS - K - S - W - WS MODELS




**Male contact** **Female contact**

### For KE - SE - KV - SV - KF - SF MODELS




**Male contact** **Female contact**

| | CONTACTS | | | | | | CABLES | | | Observations |
|---|---|---|---|---|---|---|---|---|---|---|
| | PN Reference | Type | Size | Mark or Color 1 | Mark or Color 2 | White Dot | Section in mm² | AWG Wire | Finished Wire Dia. * | |
| Models R - RS - K - S - W - Ws | 097-0287-22<br>097-0288-22 | P<br>S | 22 | Green | | - | 0.15 to 0.40 | 22 to 26 | 0.80 to 1.68 | Standards contacts delivered with connector |
| | 006-0937-20A<br>006-0912-20A | P<br>S | 20 | Red | | - | 0.25 to 0.60 | 20 to 24 | 0.85 to 2.10 | Standards contacts delivered with connector |
| | 006-0937-16A<br>006-0912-16A | P<br>S | 16 | Blue | | - | 0.60 to 1.20 | 16 to 20 | 1.20 to 2.70 | Standards contacts delivered with connector |
| | 006-0937-12A<br>006-0912-12A | P<br>S | 12 | Yellow | | - | 1.20 to 3.00 | 12 to 16 | 1.90 to 4.00 | Standards contacts delivered with connector |
| | 006-0044-20A<br>006-0055-20A | P<br>S | 20 | Brown | Red | - | 0.25 to 1.00 | 18 to 24 | 0.85 to 2.10 | Contacts to be ordered separately |
| | 006-0972-20A<br>006-0973-20A | P<br>S | 20 | White | Red | - | 0.055 to 0.15 | 26 to 30 | 0.85 to 2.10 | Contacts to be ordered separately |
| | 006-1102-16A<br>006-1104-16A | P<br>S | 16 | White | Blue | - | 1.00 to 2.00 | 14 to 18 | 1.20 to 2.70 | Contacts to be ordered separately |
| | 182-0450-16<br>182-0451-16 | P<br>S | 16 | Red | Blue | Yes | 0.25 to 0.60 | 20 to 24 | 1.20 to 2.70 | Contacts to be ordered separately |
| | 025-0870-16<br>025-0871-16 | P<br>S | 16 | White | Blue | - | 0.055 to 0.60 | 26 to 30 | 1.20 to 2.70 | Contacts to be ordered separately |
| Models KE - SE - KV - SV - KF - SF | 097-0299-22<br>097-0300-22 | P<br>S | 22 | Green | | Yes | 0.15 to 0.40 | 22 to 26 | 0.85 to 1.68 | Standards contacts delivered with connector |
| | 097-0015-20<br>097-0016-20 | P<br>S | 20 | Red | Red | Yes | 0.25 to 0.60 | 20 to 24 | 0.85 to 2.10 | Standards contacts delivered with connector |
| | 097-0047-20<br>097-0053-20 | P<br>S | 20 | Green | Red | Yes | 0.25 | 24 | 1 | Contacts to be ordered separately |
| | 097-0014-16<br>097-0013-16 | P<br>S | 16 | Blue | Blue | Yes | 0.60 to 1.20 | 16 to 20 | 1.20 to 2.70 | Standards contacts delivered with connector |
| | 097-0177-16<br>097-0178-16 | P<br>S | 16 | White | Blue | Yes | 1.00 to 2.00 | 14 to 18 | 1.20 to 2.70 | Contacts to be ordered separately |
| | 097-0165-12<br>097-0166-12 | P<br>S | 12 | Yellow | | Yes | 2.00 to 3.00 | 12 to 14 | 1.90 to 4.00 | Standards contacts delivered with connector |
| NRG band | 097-0234-20 | S | 20 | Red | Red | Yes | 0.25 to 0.60 | 20 to 24 | 0.85 to 2.10 | NRG band contacts |
| | 097-0234-16 | S | 16 | Blue | Blue | Yes | 0.60 to 1.20 | 16 to 20 | 1.20 to 2.70 | NRG band contacts |
| | 097-0234-12 | S | 12 | Yellow | Yellow | Yes | 2.00 to 3.00 | 12 to 14 | 1.90 to 4.00 | NRG band contacts |

* Closest American Wire Gauge

Dimensions in mm

## CONTACTS

Current nominal rating (as per cables used - see table below)

| Contact Type | Size | | Conductors sizes | | | | Maximum permissible current rating per contact (Amp.) | |
|---|---|---|---|---|---|---|---|---|
| | | | Standard cables Code | | Fire resistant cables as per EN 2234 Code | | Connector | |
| | Contact | Bucket | ASD | AWG* | ASD | AWG* | Sealed | Hermetic |
| Standard | 22 | 22 | 004 | 22 | 004 | 22 | 5.0 | 3 |
| | | | 002 | 24 | 002 | 24 | 3.0 | - |
| | | | 001 | 26 | - | - | 2.0 | - |
| | 20 | 20 | 006 | 20 | - | - | 7.5 | 5 |
| | | | 004 | 22 | 004 | 22 | 5.0 | - |
| | | | 002 | 24 | - | - | 3.0 | - |
| | 16 | 16 | 012 | 16 | - | - | 13.0 | 10 |
| | | | 010 | 18 | 010 | 18 | 10.0 | - |
| | | | 006 | 20 | 006 | 20 | 7.5 | - |
| | 12 | 12 | 030 | 12 | - | - | 23.0 | 17 |
| | | | 020 | 14 | 020 | 14 | 17.0 | - |
| | | | 012 | 16 | - | - | 13.0 | - |
| Specific | 20 | 18 | 010 | 18 | - | - | 7.5 | - |
| | | | 006 | 20 | - | - | 7.5 | - |
| | | | 004 | 22 | 004 | 22 | 5.0 | - |
| | | | 002 | 24 | - | - | 3.0 | - |

* Closest American Wire Gauge

Dimensions in mm

## CONTACTS AND TOOLS



| SEALING PLUG | | | TOOLS | | | |
|---|---|---|---|---|---|---|
| Size | Part number | Color code | Crimping tool | Pilot stop | Tool insertion | Strip length in mm |
| 22 | 097-0298-22 | Black | M22520/2-01 | M22520/2-23 | 057-0286-22 | 4.00 to 5.00 |
| 20 | 097-0140-20 | Red | 057-0461-11 | 057-0462-21 | M 15570-20 | 4.00 to 5.00 |
| 16 | 097-0139-16 | Blue | M22520/1-01 or 057-0461-11 | M22520/1-02 or 057-0462-21 | M 15570-16 | 6.30 to 7.30 |
| 12 | 097-0138-12 | Yellow | 057-0461-11 | 057-0462-21 | M 15570-12 | 6.30 to 7.30 |

## QUADRAX CONTACTS

### For arrangements 18-02, 20-04 and 28-06

| CONTACT KIT (CONTACTS + SLEEVE) | | | | TOOLS | | |
|---|---|---|---|---|---|---|
| Arrangements | Com. part number | Type | Size | For size 24 contacts | For contact body | Extraction tool |
| 18-02 | 182-0611-08<br>182-0612-08 | P<br>S | 8 | M22520/2-01 + K709 | M22520/5-01<br>M22520/5-45B | 025-0711-06 |
| 20-04 | 182-0611-08<br>182-0612-08 | P<br>S | 8 | M22520/2-01 + K709 | M22520/5-01<br>M22520/5-45B | 025-0711-06 |
| 28-06 | 182-0611-08<br>182-0612-08 | P<br>S | 8 | M22520/2-01 + K709 | M22520/5-01<br>M22520/5-45B | 025-0711-06 |

## POWER CONTACTS K6

### For arrangements 18-02, 20-04 and 28-06 only -200°C :

| KIT CONTACT (contacts + sleeve) | | | DECOMPOSITION OF THE KIT | | COLOR CODE | | TOOLS | | | SEALING PLUG |
|---|---|---|---|---|---|---|---|---|---|---|
| Commercial PN | Type | Wire size | Contact PN | Sleeve | 1 | 2 | Crimping tool | Positioner | Extraction tool | K6 |
| 182-0672-06A<br>182-0673-06 | P<br>S | 6 | 182-0657-06A<br>182-0658-06 | 182-0601-06 | Green | Green | M22520/23-01 | M22520/23-03 | 025-0711-06 | 182-8004-08 A |
| 182-0672-08A<br>182-0673-08 | P<br>S | 8 | 182-0661-06A<br>182-0662-06 | 182-0601-08 | Green | Red | M22520/23-01 | M22520/23-02 | 025-0711-06 | 182-8004-08 A |
| 182-0672-10A<br>182-0673-10 | P<br>S | 10-12 | 182-0664-06A<br>182-0665-06 | 182-0601-10 | Green | Brown | M22520/23-01 | For AWG12: TP1498<br>For AWG10: WA23-2962 | 025-0711-06 | 182-8004-08 A |

## POWER CONTACTS K6

### For arrangements 18-02, 20-04 and 28-06 only -260°C :

| KIT CONTACT (contacts + sleeve) | | | DECOMPOSITION OF THE KIT | | COLOR CODE | | TOOLS | | | SEALING PLUG |
|---|---|---|---|---|---|---|---|---|---|---|
| Commercial PN | Type | Wire size | Contact PN | Sleeve | 1 | 2 | Crimping tool | Positioner | Extraction tool | K6 |
| 182-0672-06<br>182-0704-06 | P<br>S | 6 | 182-0657-06<br>182-0700-06 | 182-0601-06 | Green | Green | M22520/23-01 | M22520/23-03 | 025-0711-06 | 182-8004-08 A |
| 182-0672-08<br>182-0704-08 | P<br>S | 8 | 182-0661-06<br>182-0701-06 | 182-0601-08 | Green | Red | M22520/23-01 | M22520/23-02 | 025-0711-06 | 182-8004-08 A |
| 182-0672-10<br>182-0704-10 | P<br>S | 10-12 | 182-0664-06<br>182-0702-06 | 182-0601-10 | Green | Brown | M22520/23-01 | For AWG12: TP1498<br>For AWG10: WA23-2962 | 025-0711-06 | 182-8004-08 A |

## THERMOCOUPLE CONTACTS

| CONTACTS | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Commercial PN | Type | Size | Color code | | | White Dot | ind. | Observation |
| | | | 1 | 2 | 3 | | | |
| 006-1186-20<br>006-1187-20 | P<br>S | 20 | Red | Red | - | Yes | Yellow | Ch |
| 006-1188-20<br>006-1189-20 | P<br>S | 20 | Red | Red | - | Yes | Black | Al |
| 025-0402-20<br>025-0403-20 | P<br>S | 20 | Purple | Red | - | - | Black | ■ Al |
| 025-0404-20<br>025-0405-20 | P<br>S | 20 | Purple | Red | - | - | Yellow | ■ Ch |
| 006-0982-16<br>097-0037-16 | P<br>S | 16 | Blue | Blue | - | - | Yellow | Ch |
| 006-0983-16<br>097-0036-16 | P<br>S | 16 | Blue | Blue | - | - | Black | Al |

■ Enlarged barrel

| CABLES | | | SEALING PLUG | | CRIMPING TOOL | | INSERTION AND EXTRACTION TOOL | |
|---|---|---|---|---|---|---|---|---|
| Size | Section Min.-Max. mm² | AWG* | Part number | Color | Part number | Pilot stop | Wired contacts | |
| | | | | | | | Insertion | Extraction |
| 20 | 0.21 - 0.60 | 20 - 24 | 097-0140-20 | Red | M 22520/1-01 | M 22520/1-02 | M 15570-20 | M 15570-20 |
| Enlarged 20 | 0.38 - 0.93 | 18 - 22 | 097-0140-20 | Red | M 22520/1-01 | M 22520/1-02 | M 15570-20 | M 15570-20 |
| 16 | 0.60 - 1.34 | 16 - 20 | 097-0139-16 | Blue | M 22520/1-01 | M 22520/1-02 | M 15570-16 | M 15570-16 |

* Closest American Wire Gauge

## LET'S CONNECT

We make it easy to connect with our experts and are ready to provide all the support you need. Just call your local support number or visit www.te.com/industrial to chat with a Product Information Specialist.

## Technical Support

te.com/support-center

| | | | |
|---|---|---|---|
| North America | +1 800 522 6752 | Asia Pacific | +86 400 820 6015 |
| North America (Toll) | +1 717 986 7777 | Japan | +81 044 844 8180 |
| EMEA/South Africa | +800 0440 5100 | Australia | +61 2 9554 2695 |
| EMEA (Toll) | +31 73 624 6999 | New Zealand | +64 (0) 9 634 4580 |
| India (Toll-Free) | +800 440 5100 | | |

# te.com/deutsch983

DEUTSCH, AMP, AGASTAT, CII, HARTMAN, KILOVAC, LL Rowe, MICRODOT, NANONICS, POLAMCO, Raychem, SEACON, TE, TE Connectivity, TE Connectivity (logo) and Every Connection Counts are trademarks.

All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2016 TE Connectivity Ltd. family of companies All Rights Reserved.

**1-1773883-7 11/16**

# Unikeyic Electronics

Global Electronic Components Distributor

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

## TE Connectivity:

1-917659-5 1622820-6 1801174-1 322335 ROX9J100R ROX9J820R T4112401051-000 1-350945-0 2149966-1 336330-1 7-2178711-4 SC30R33KT 2008571-3 363549-000 MPT100C8K2F 320552 5174225-5 ROX9J160R ROX9J4K3 SMF3100KJT ROX9J2K4 173796-E 641763-1 828801-6 ROX9J120R 2132781-3 539635-1 SMA-A0102FTDL10K 1-316080-2 967116-2