

DEUTSCH 983 SERIES CONNECTORS

EN2997, ESC10, BACC63 SPECIFICATIONS

Extreme Reliability in Harsh Aerospace & Military Applications



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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
- Napking RinG contacts available

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.

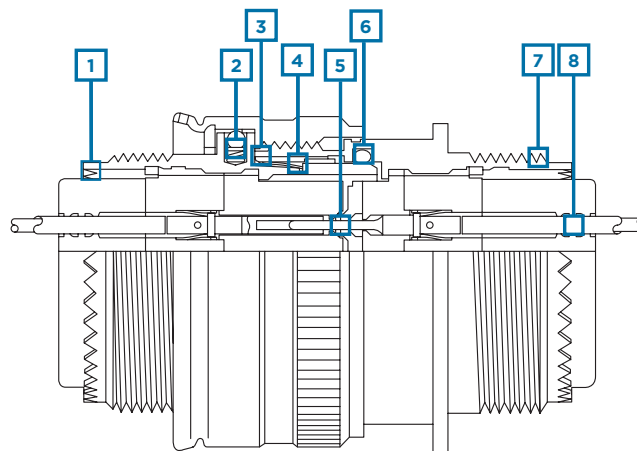
TE's DEUTSCH 983 Series connectors are distinguishable from MIL-DTL-83723 connectors by following improvements :

- 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

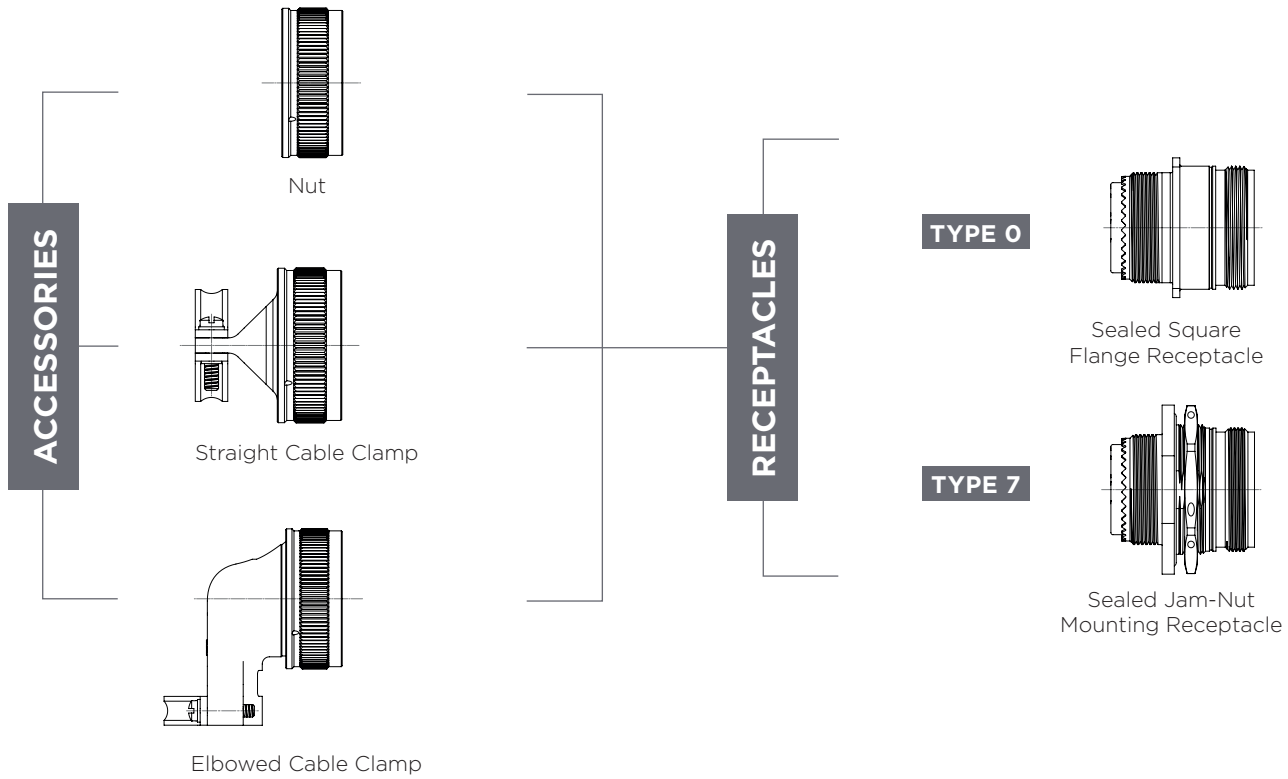
6 Interface sealing assumed by High Frequency (H.F.) gasket

7 Shell/insert assumed by potting

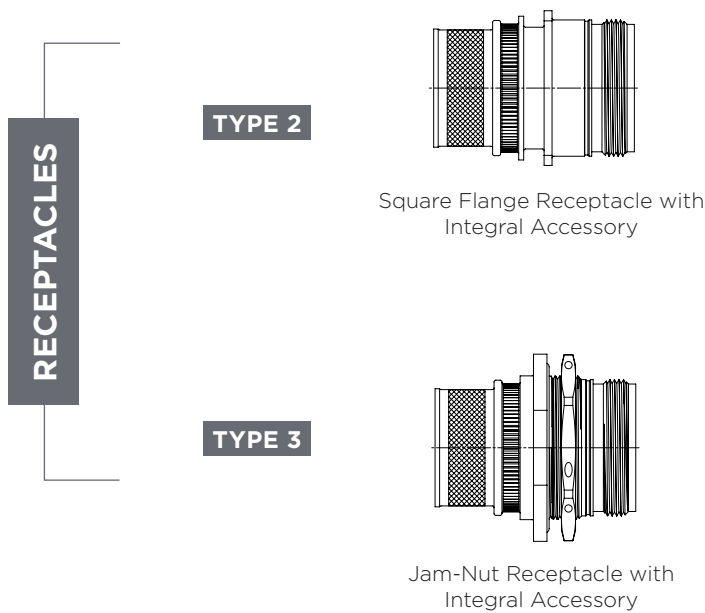
8 Sealing on each wire thanks to several sealing barriers



SYNOPTIC FOR SEALED RECEPTACLES

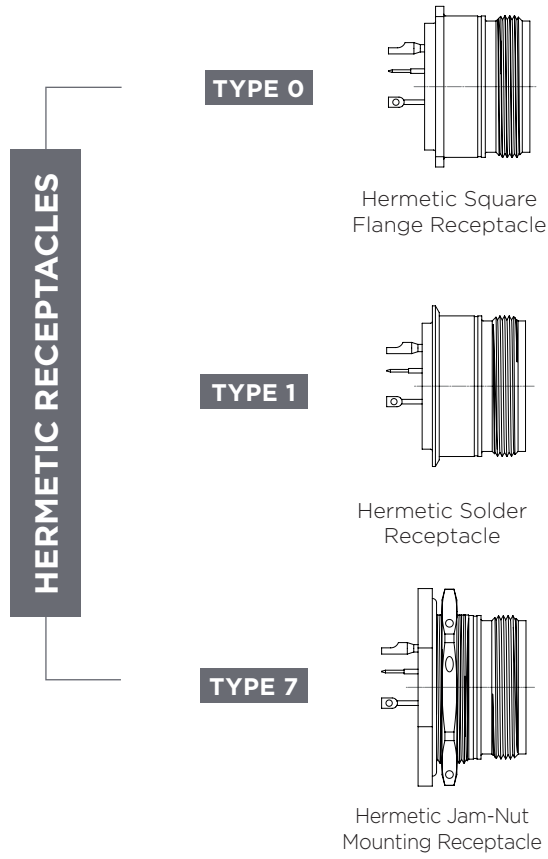


SYNOPTIC FOR SEALED RECEPTACLES WITH INTEGRAL ACCESSORY



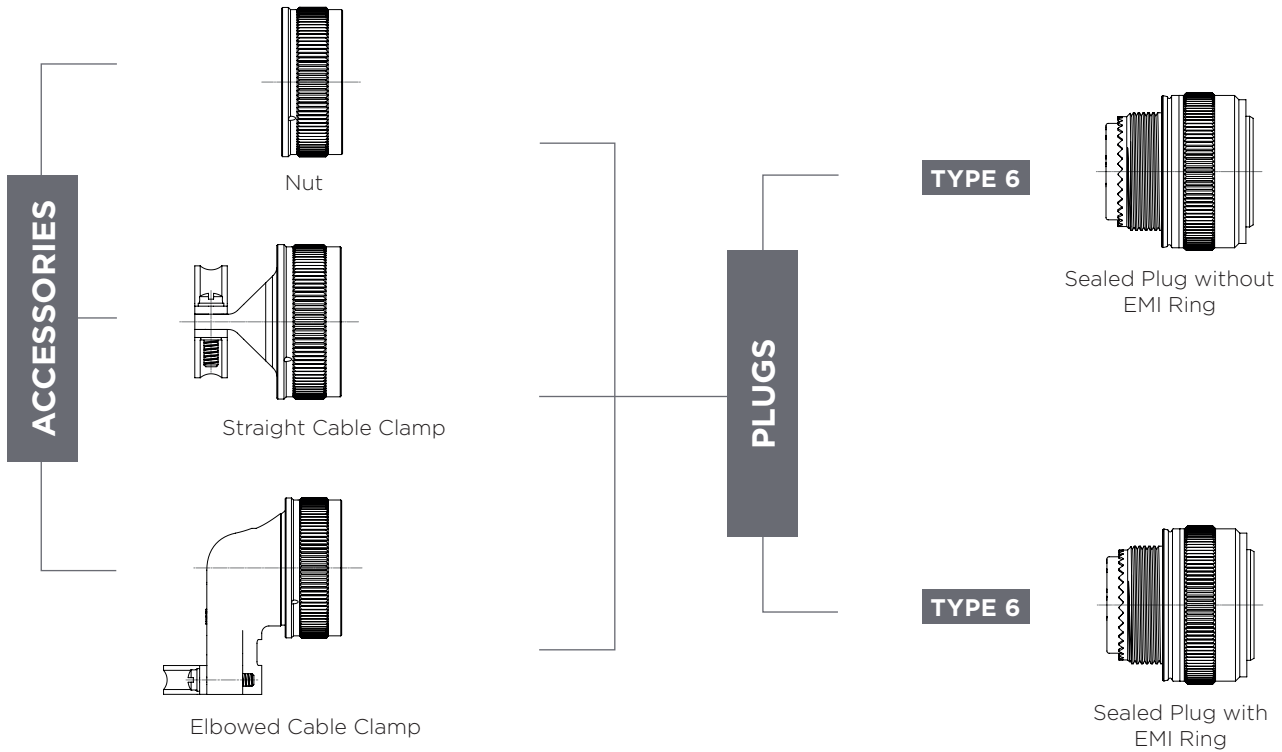


SYNOPTIC FOR HERMETIC RECEPTACLES





SYNOPTIC FOR SEALED PLUG



SYNOPTIC FOR SEALED PLUG WITH INTEGRAL ACCESSORY





TECHNICAL CHARACTERISTICS

| | | | Models of connectors | | | | | | | | | | | | | |
|---|----------|--|----------------------|---|----|---|----|---|---|---|----|----|----|----|----|----|
| | | | A | W | WS | R | RS | K | S | Y | KE | SE | YE | KV | SV | KF |
| 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 | | | | • | | • | | • | | | • | | | • | | • |
| 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 | | • | • | • | • | • | • | • | • | • | • | • | • | • | • | • |
| Sealed | | • | • | • | • | • | • | | | • | • | | • | • | • | • |

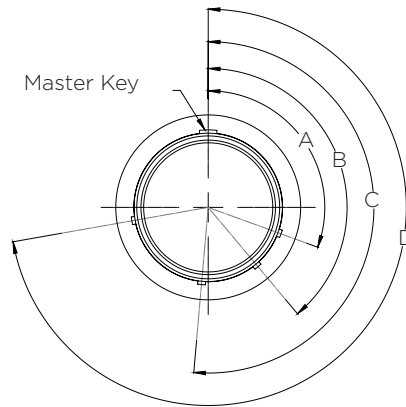
Electrical

| | | |
|---|--|---|
| Insulation resistance | At 25°C and 65% R.H At 260°C and 65% R.H | > 5000 MΩ > 1000 MΩ |
| Dielectric withstanding voltage | At sea level At 15 000 meters altitude At 30 000 meters altitude | 1500 Vrms 50 Hz mated connectors 1000 Vrms 50 Hz mated connectors 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





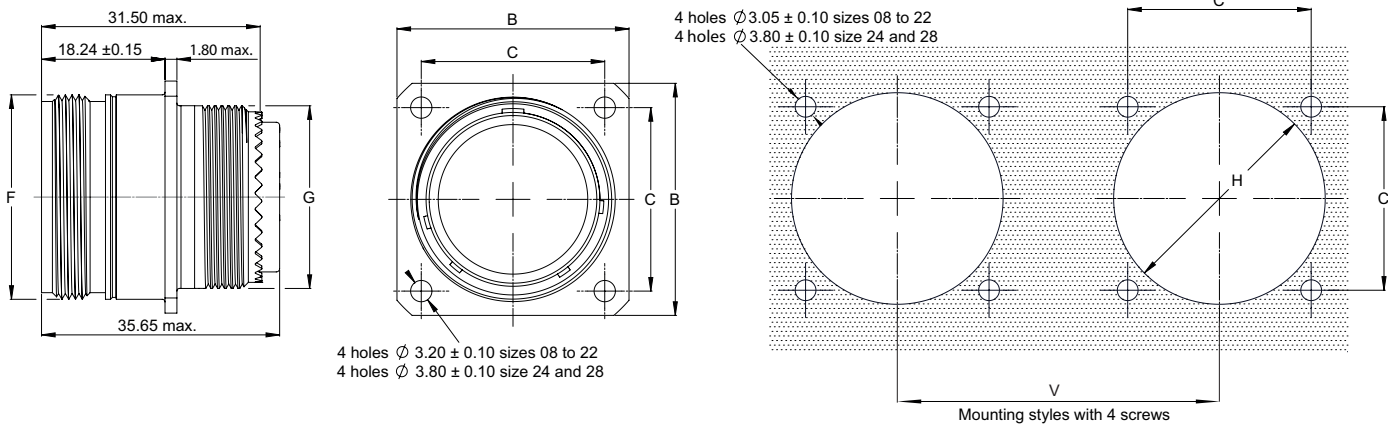
SECTION 1.1

Sealed Connectors Standard

RECEPTACLE

Square Flange

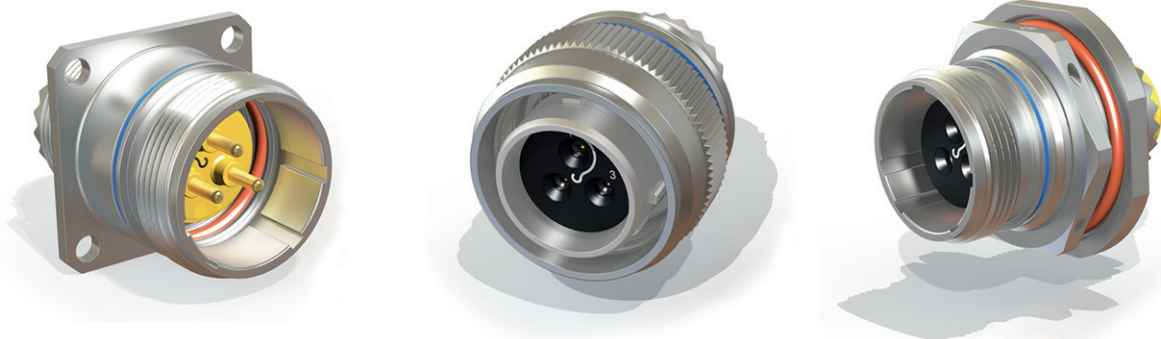
TYPE O



| 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

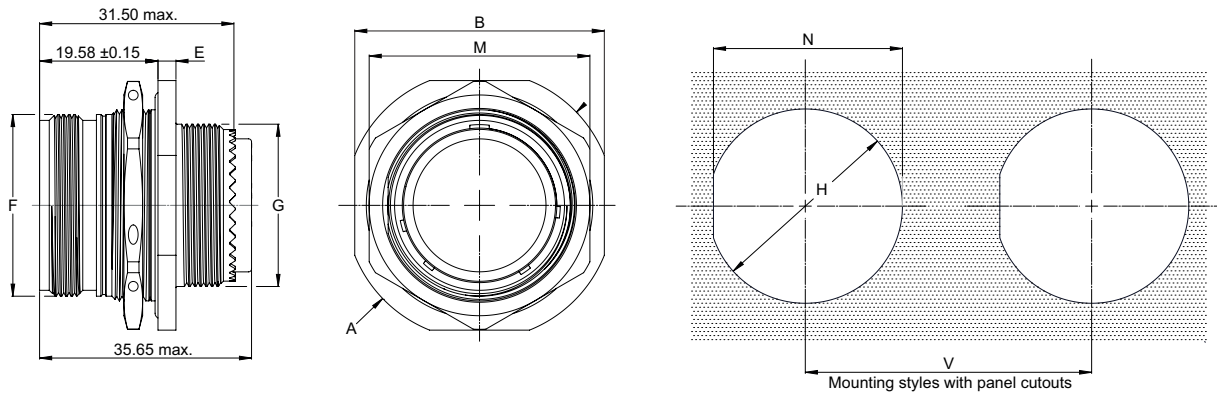


Overall dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).



Jam-Nut Mounting

TYPE 7



| Size | A Max. | B Max. | E Max. | F Max. | G Max. | H O -0.26 | M Max. | N O -0.26 | V Min. | Weight Max. (g)* | | Tightening torque of panel nut |
|------|-----------|-----------|-----------|-----------|-----------|-----------------|-----------|-----------------|-----------|------------------|----------|-----------------------------------|
| | | | | | | | | | | Stainless steel | Aluminum | |
| 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. |

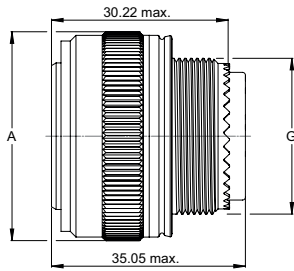
*Without contact

Dimensions in mm

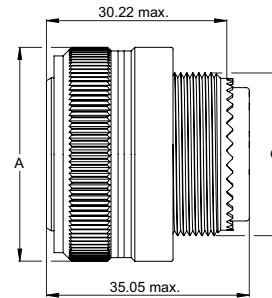
PLUGS

TYPE 6

Stainless Steel



Aluminum



| Size | A Max. | G Max. | Weight Max. (g)* | |
|------|-----------|-----------|------------------|----------|
| | | | Stainless steel | 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

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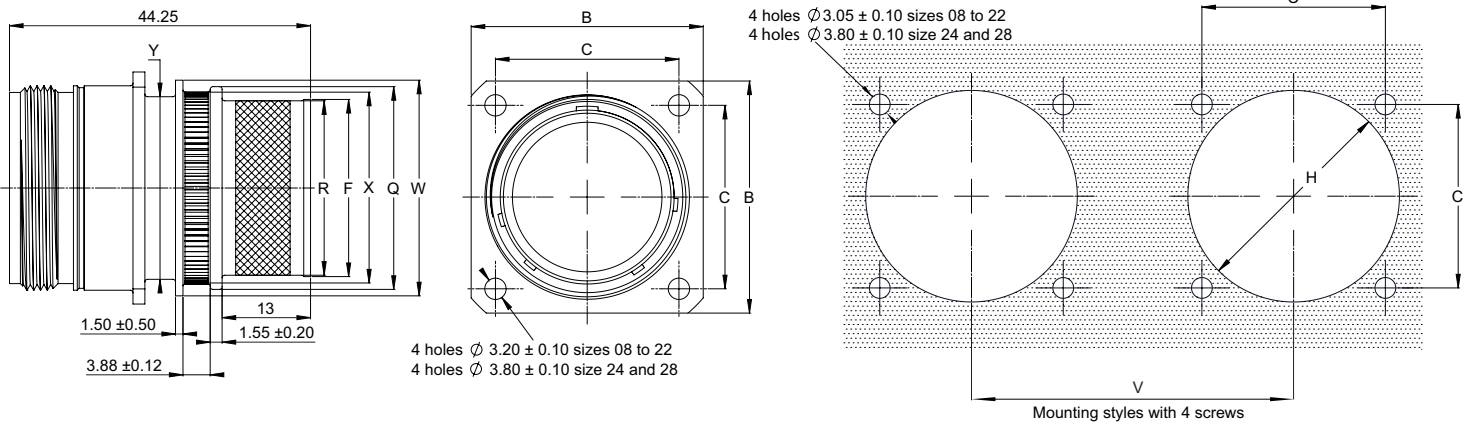
SECTION 1.2

Sealed Connectors with Integral Accessory

RECEPTACLE

Square Flange

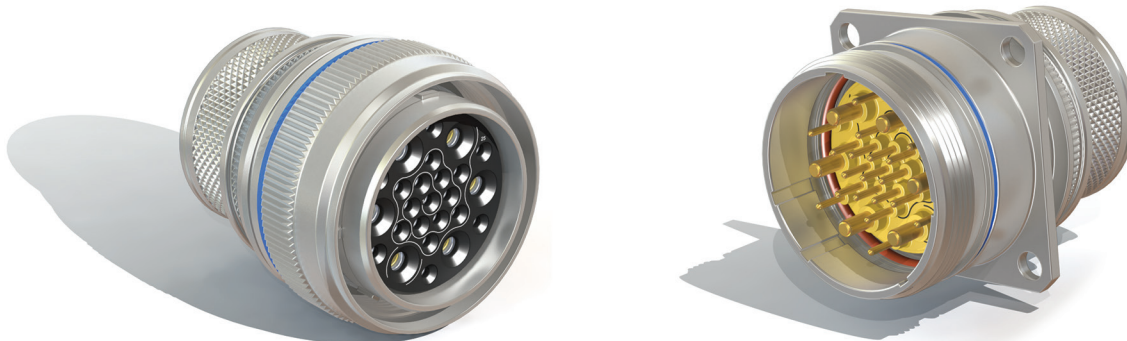
TYPE 2



| 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

Connector preferred mounted from the rear

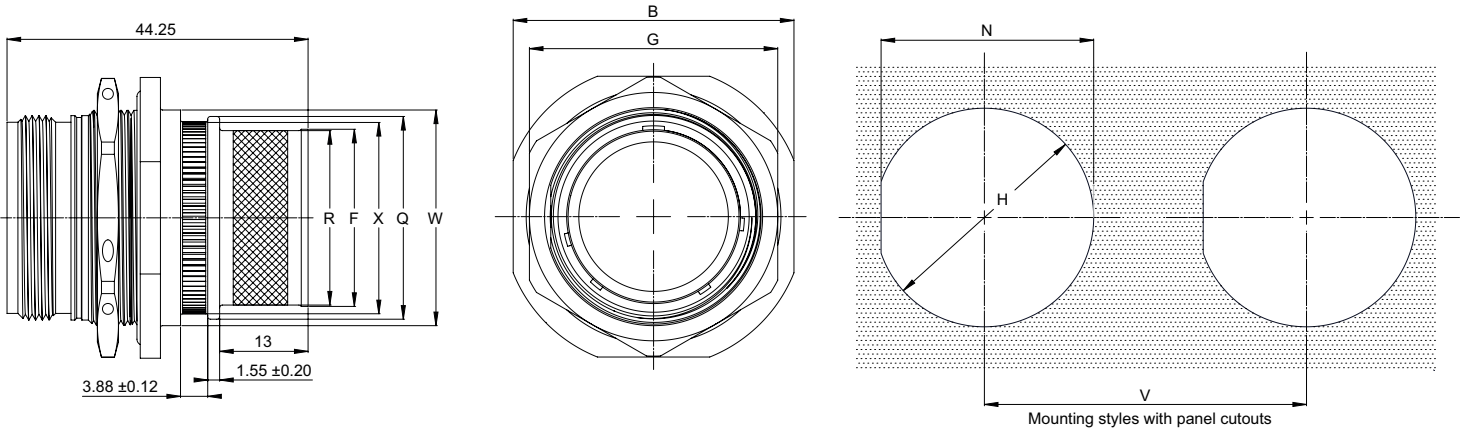


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Jam-Nut Mounting

TYPE 3

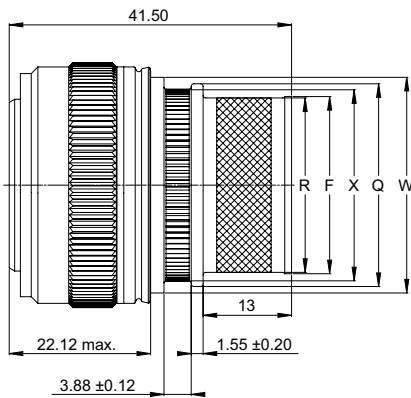


| Size | B Max. | G Max. | R ±0.10 | F ±0.10 | X ±0.10 | Q ±0.10 | W ±0.25 | N 0 -0.26 | H 0 -0.26 | V Min. | Tightening torque of panel nut |
|------|-----------|-----------|------------|------------|------------|------------|------------|-----------------|-----------------|-----------|-----------------------------------|
| 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

Overall 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

| | | | |
|--|--|--|---|
| <p>14-15 15 contacts size 20</p> | <p>16-10 10 contacts size 16</p> | <p>16-24 24 contacts size 20</p> | <p>18-02 2 contacts Quadrax or 2 K6 contacts</p> |
| | | | <p>K6 version, 699-8060-18 Standard version with Quadrax contacts</p> |
| <p>18-08 8 contacts size 12</p> | <p>18-14 14 contacts size 16</p> | <p>18-31 31 contacts size 20</p> | <p>20-04 4 contacts Quadrax or 4 K6 contacts</p> |
| | | | <p>Standard version with K6 contacts with Quadrax contacts use MOD A1306</p> |
| <p>20-16 16 contacts size 16</p> | <p>20-25 19 contacts size 20 6 contacts size 12</p> | <p>20-28 24 contacts size 20 4 contacts size 12</p> | <p>20-39 37 contacts size 20 2 contacts size 16</p> |
| | | | |
| <p>20-41 41 contacts size 20</p> | <p>22-12 12 contacts size 12</p> | <p>22-19 19 contacts size 16</p> | <p>22-30 24 contacts size 20 6 contacts size 12</p> |
| | | | |

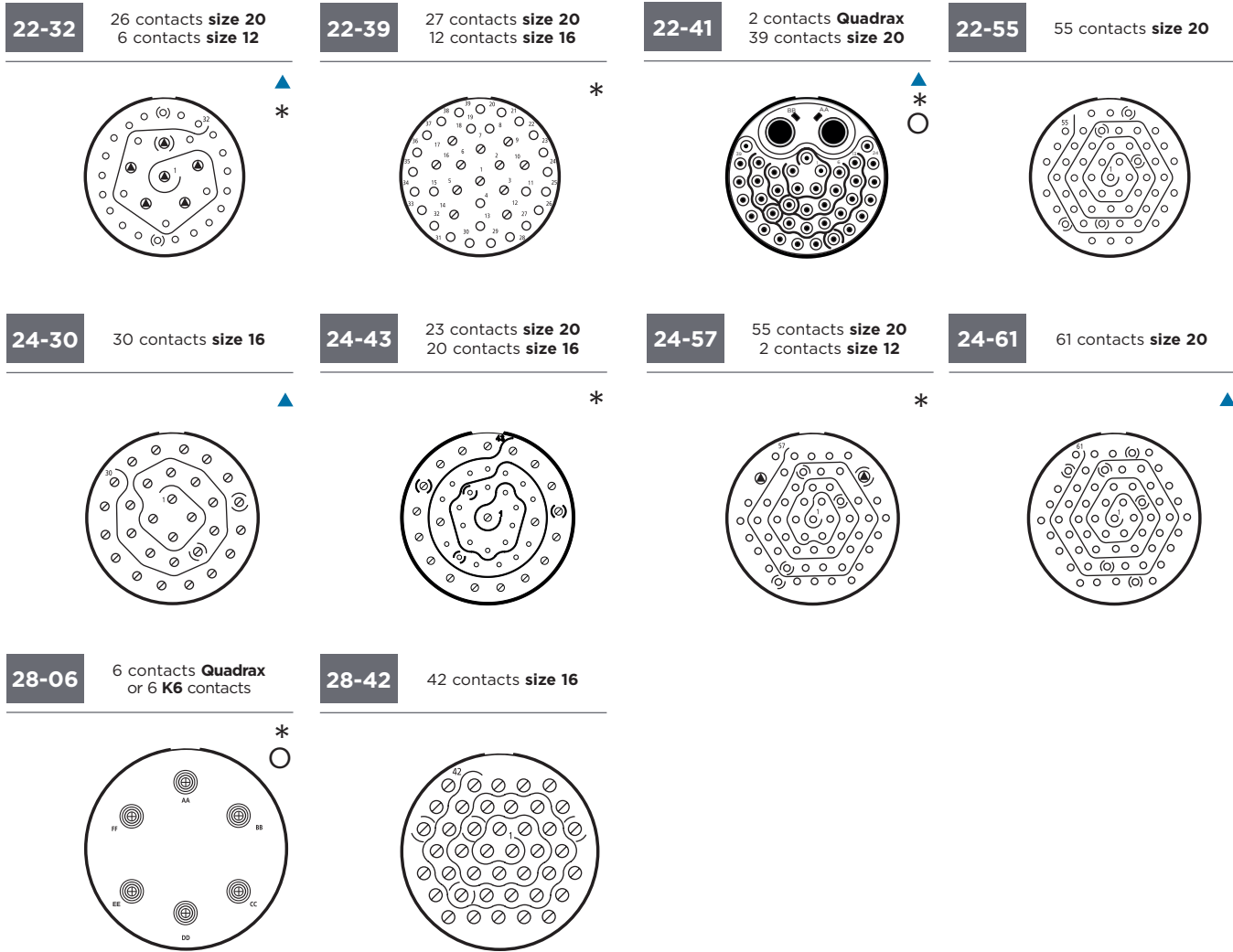
▲ Consult TE Technical Support

* not ESC10

○ not EN2997



Male Insert. Front Face View



▲ Consult TE Technical Support * not ESCIO ○ 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 *

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-SV-SF
(**W-R-K-KE-KF-KV** 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-SV-SF
 (W-R-K-KE-KF-KV 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-SE-SF-KV-SV
(**W-R-K-KE-KF-KV** 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



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

ESC10 connectors, always supplied without contacts

SECTION 2

Hermetic Receptacles



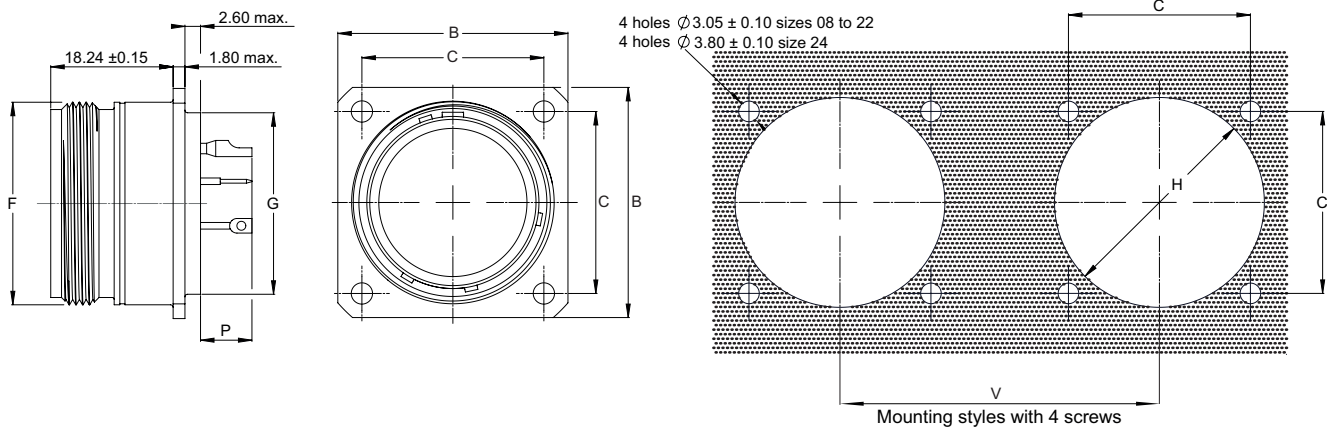


SECTION 2.1

Hermetic Receptacles Stainless Steel

Receptacle Square Flange

TYPE 0



| Size | B Max. | C ± 0.05 | F Max. | G Max. | H Min. | P max Size 20 16-12 | | V Min. | Weight Max. (g) 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

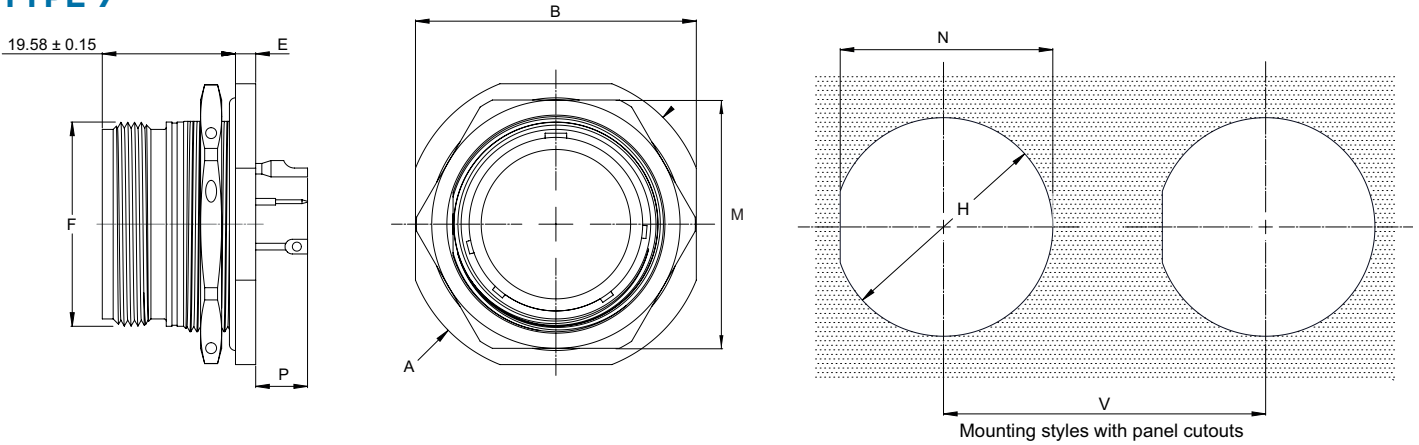


Overall dimensions and characteristics are given for indication guidance only. TE Connectivity reserves the right to modify them for production improvement reasons (Proprietary products only).



Receptacle Jam-Nut Mounting

TYPE 7

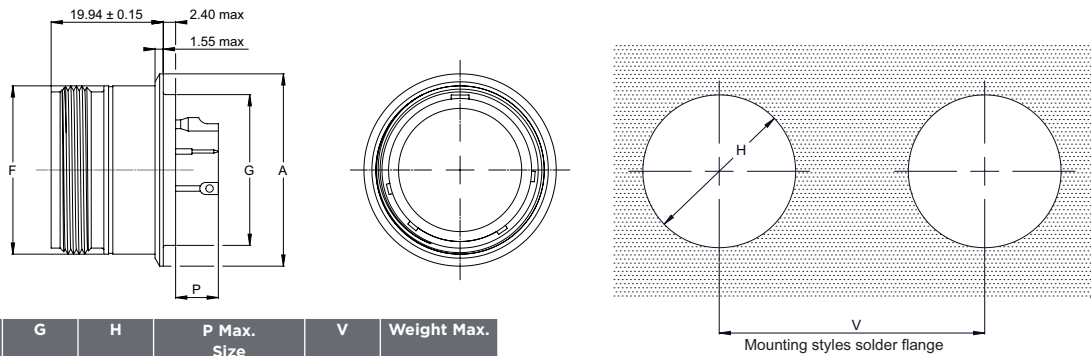


| Size | A | B | E | F | H | M | N | P Max. Size | | V | Weight Max. (g) Stainless steel | Tightening torque of panel nut |
|------|-------|-------|------|-------|-------|-------|------------|-------------|-------|-------|------------------------------------|--------------------------------|
| | Max. | Max. | Max. | Max. | Min. | Max. | O -0.26 | 20 | 16-12 | | | |
| 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 m.N max. |
| 16 | 41.68 | 38.51 | 3.48 | 26.97 | 28.96 | 33.76 | 28.20 | 4.57 | 5.33 | 44.45 | 72 | 18 m.N 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 m.N max. |
| 24 | 55.42 | 52.81 | 3.76 | 39.67 | 41.66 | 46.46 | 40.77 | 4.29 | 5.05 | 57.25 | 122 | 29 m.N max. |

Dimensions in mm

Receptacle Solder Round Flange

TYPE 1



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

Overall 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

| | | | |
|--|---|--|--|
| <p>18-08 8 contacts size 12</p> | <p>18-14 14 contacts size 16</p> | <p>18-31 31 contacts size 20</p> | <p>20-04 4 contacts K6</p> |
| | | | |
| <p>20-16 16 contacts size 16</p> | <p>20-25 19 contacts size 20 6 contacts size 12</p> | <p>20-28 24 contacts size 20 4 contacts size 12</p> | <p>20-39 37 contacts size 20 2 contacts size 16</p> |
| | | | |
| <p>20-41 41 contacts size 20</p> | <p>22-12 12 contacts size 12</p> | <p>22-19 19 contacts size 16</p> | <p>22-30 24 contacts size 20 6 contacts size 12</p> |
| | | | |
| <p>22-32 26 contacts size 20 6 contacts size 12</p> | <p>22-39 27 contacts size 20 12 contacts size 16</p> | <p>22-55 55 contacts size 20</p> | |
| | | | |

▲ Aluminum, please consult TE Technical Support

* Consult TE Technical Support

□ For K6 contacts, specify wire AWG



24-30

30 contacts **size 16**

24-43

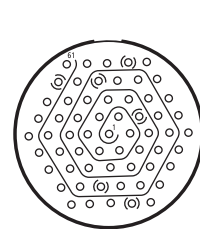
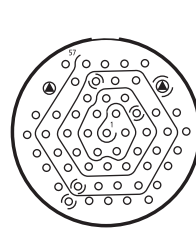
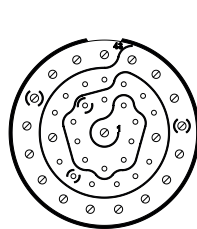
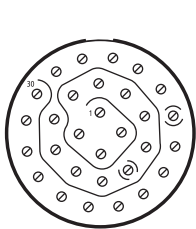
23 contacts **size 20**
20 contacts **size 16**

24-57

55 contacts **size 20**
2 contacts **size 12**

24-61

61 contacts **size 20**

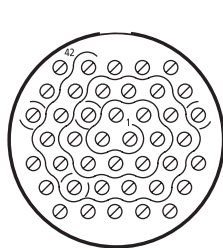
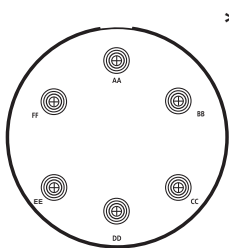


28-06

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 0 Square flange receptacle 1 Solder receptacle 7 Jam-nut receptacle | | | | | | | |
| Connector model Y-YE for receptacle only | | | | | | | |
| Shell size 08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 28 | | | | | | | |
| Arrangements : see section 2.2 | | | | | | | |
| Contact type P Male contact S Female contact, consult TE Technical Support | | | | | | | |
| Insert clocking position 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

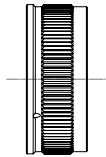




SECTION 3.1

Backshells

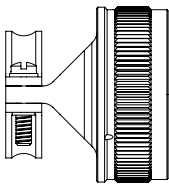
Nut



| 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 KV-SV-KF-SF | R-RS | W-WS | A |

Straight Cable Clamp

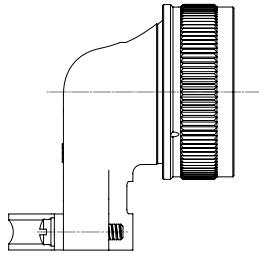


| Part number | | | | |
|-------------|-----------------|------------------|------------------|---------------------|
| Size | Stainless steel | Alu. nickel | Alu. cadmium | Alu. black anodized |
| 08 | 66241-08 A | 006-0910-08 A499 | 006-0910-08 A838 | 006-0910-08 |
| 10 | 66241-10 A | 006-0910-10 A499 | 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 KV-SV-KF-SF | R-RS | W-WS | A |



90° Cable Clamp



| Size | Part number | | | |
|------|-----------------|------------------|------------------|---------------------|
| | 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 |

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

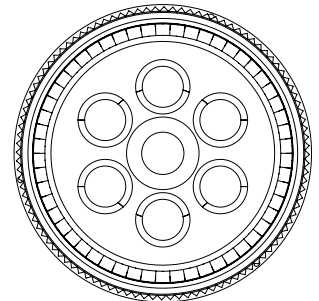
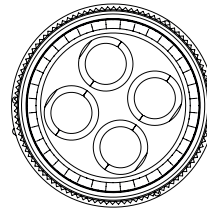
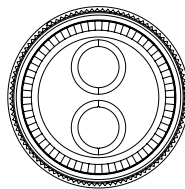
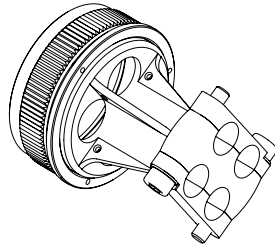
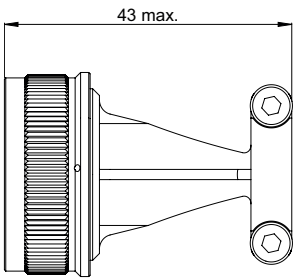




SECTION 3.2

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)

699-8027-*2
(stainless steel)

699-8027-*4
(stainless steel)

697-8027-*1
(aluminum)

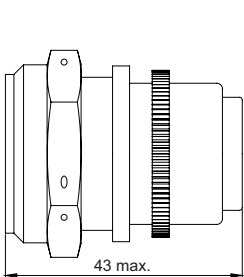
697-8027-*2
(aluminum)

697-8027-*4
(aluminum)

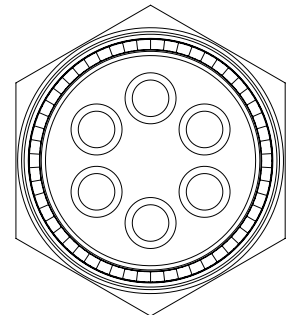
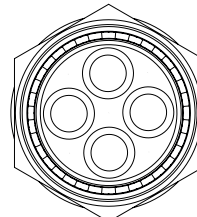
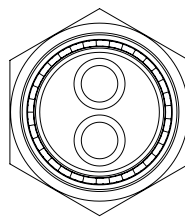
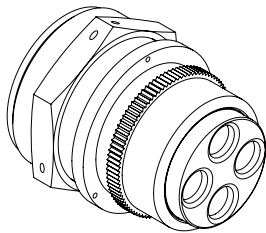
SECTION 3.3

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

EMI shielding backshell



(ABS 1452)



699-0655-18
(stainless steel)

699-0655-20
(stainless steel)

699-0655-28
(stainless steel)

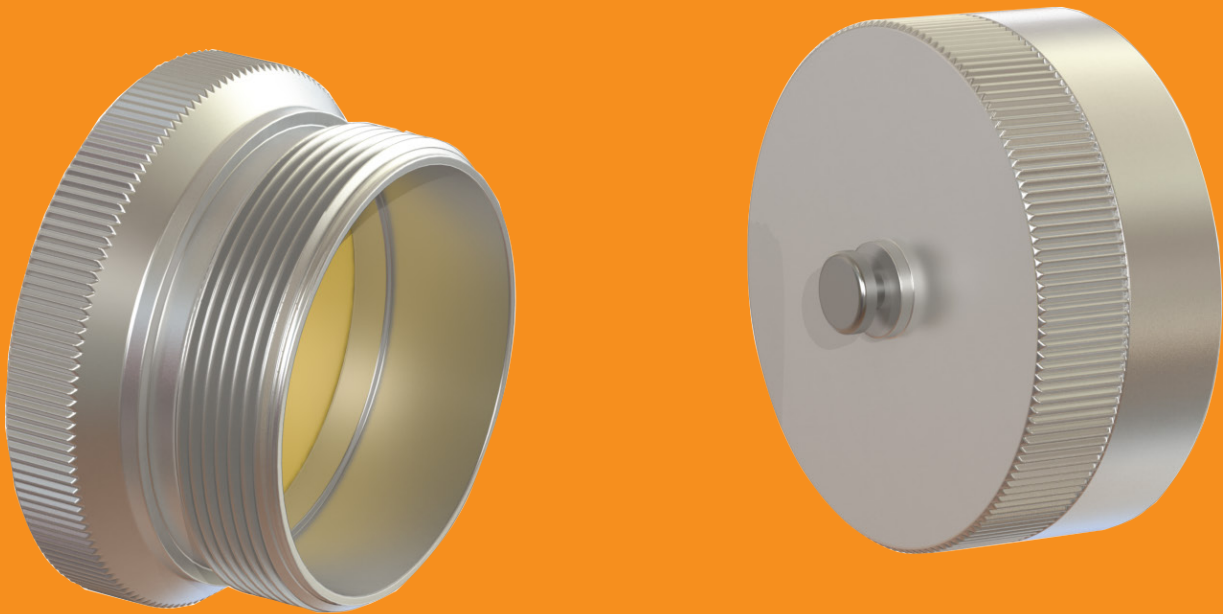
697-0474-18
(aluminum)

697-0474-20
(aluminum)

697-0474-28
(aluminum)

SECTION 4

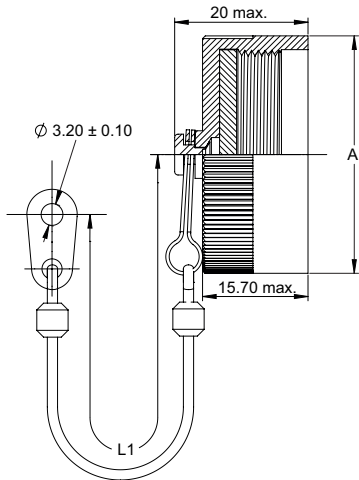
Protective Covers





PROTECTIVE COVERS

For Receptacle



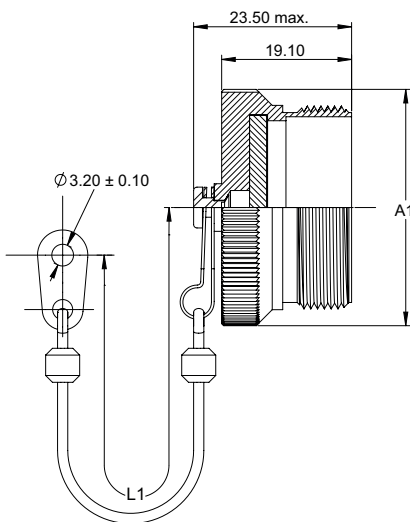
| Part Number | | |
|-----------------|-------------|--------------|
| Stainless steel | Alu. nickel | Alu. cadmium |
| 983-3KE-* ** | 983-3R-* ** | 983-3W-* ** |

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

Note: same protective cover whatever the connector keying position

- * C : With chain and small eyelet (preferred)
- 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 KV-SV-KF-SF | R-RS | W-WS |

Note: same protective cover whatever the connector keying position

- * C : With chain and small eyelet (preferred)
- 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 |

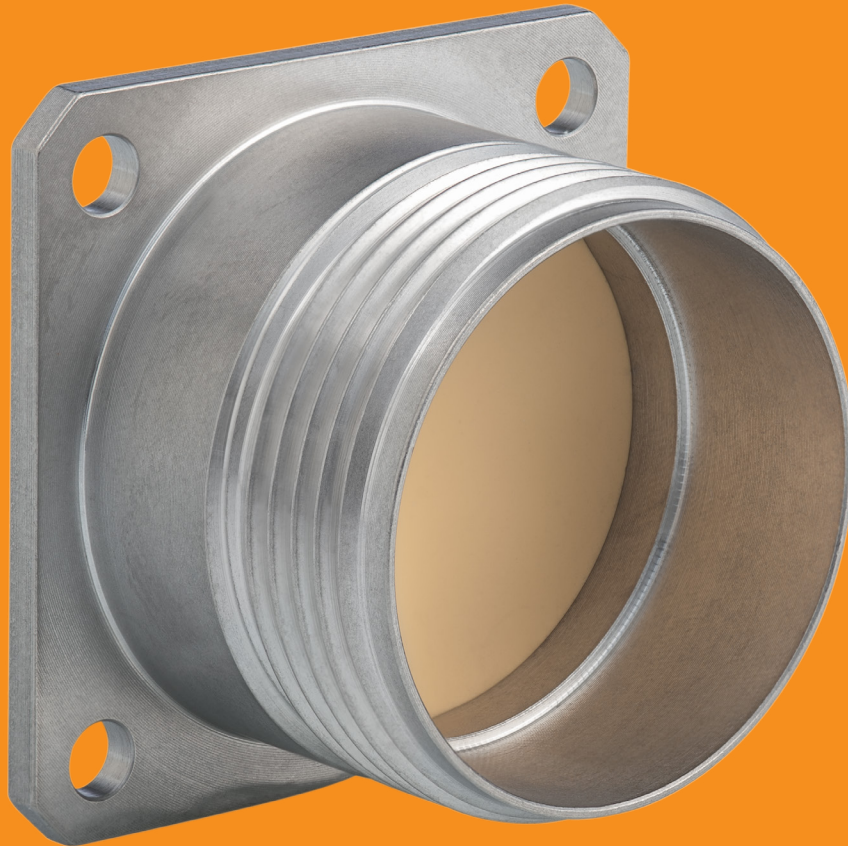
Dimensions in mm



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

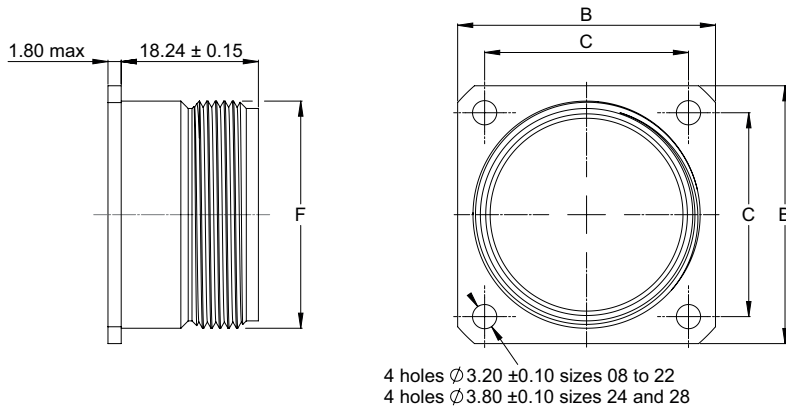
SECTION 5

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-OKE-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

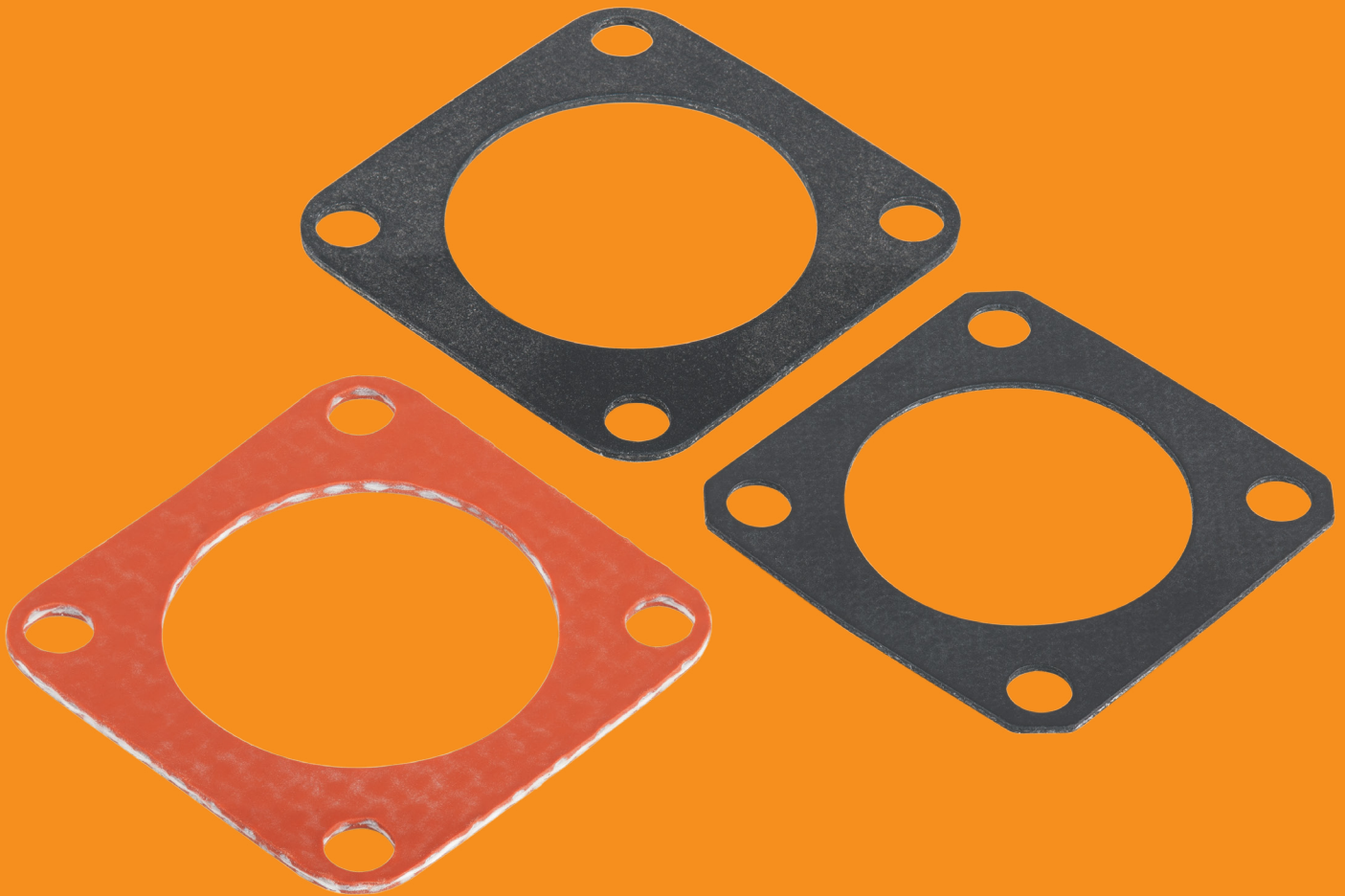
Shell size

08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24 - 28

Overall 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



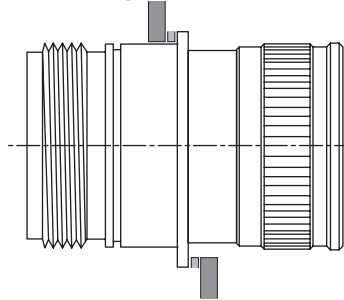


PANEL SEALS

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

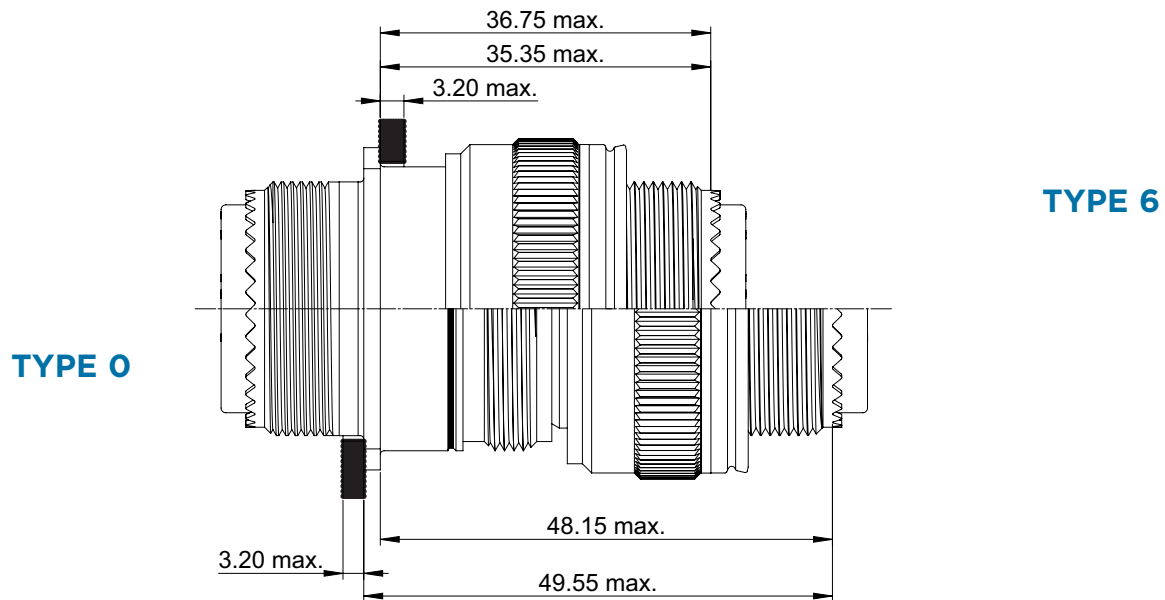




SECTION 7.1

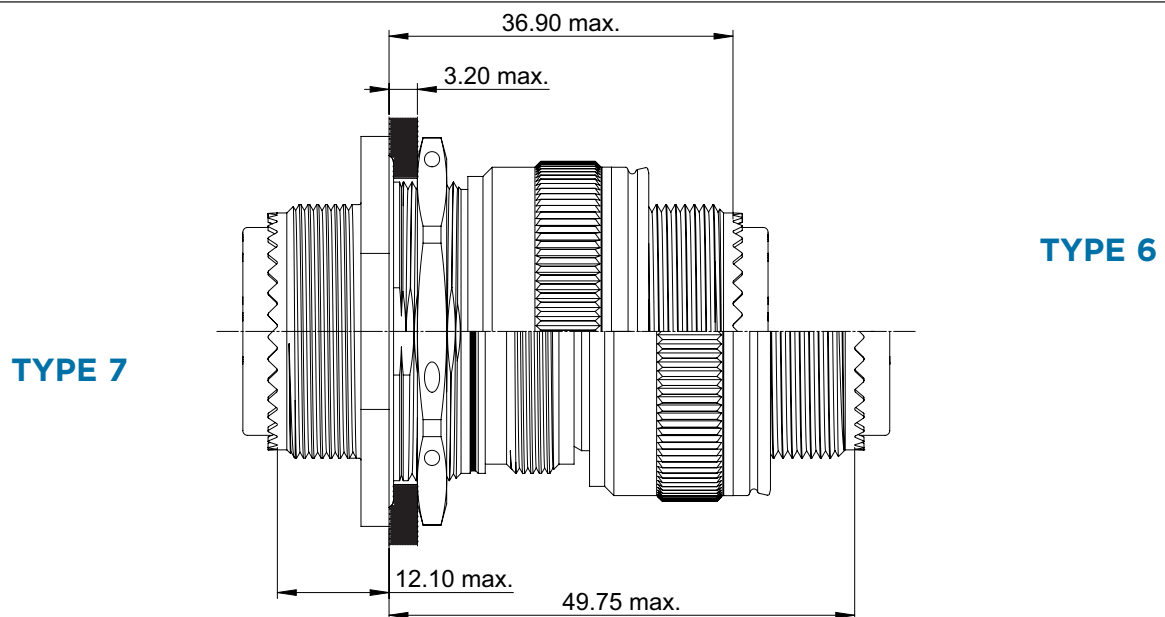
For Sealed Connectors

Square Flange



* Note: Max. dimension given with panel seal.

Jam-Nut Mounting



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

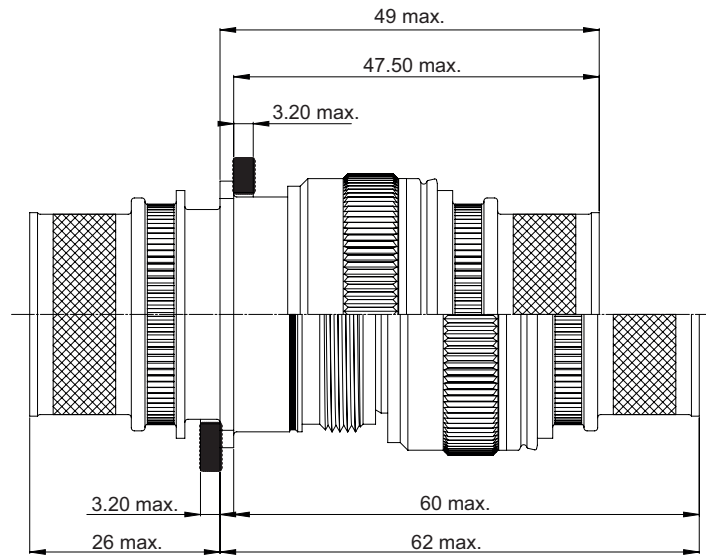


SECTION 7.2

For Sealed Connectors with Integral Accessory

Square Flange

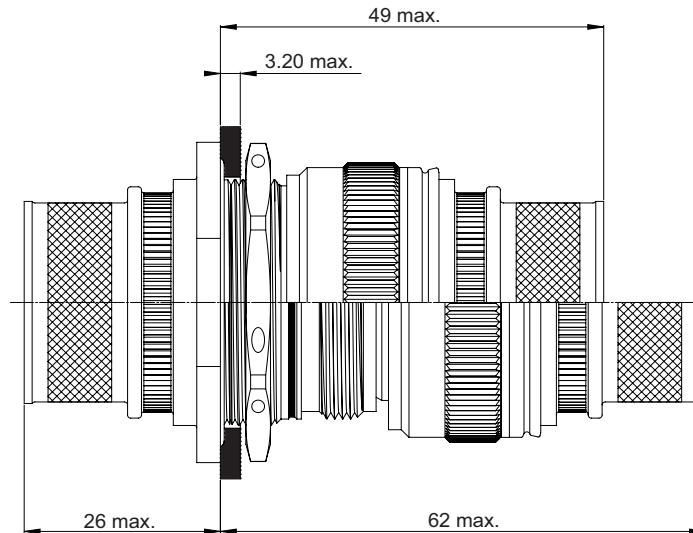
TYPE 2



TYPE 7

Jam-Nut Mounting

TYPE 3



TYPE 7

Overall 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.

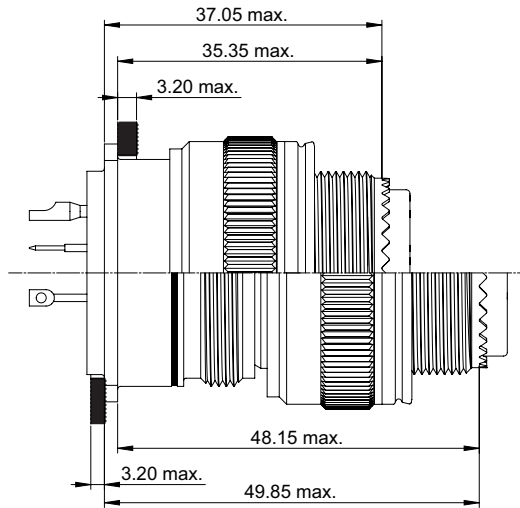


SECTION 7.3

For Hermetic Receptacles

Square Flange

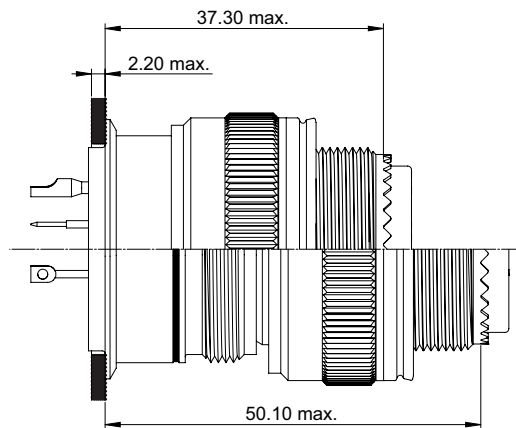
TYPE 0



TYPE 6

Solder Hole Mounting

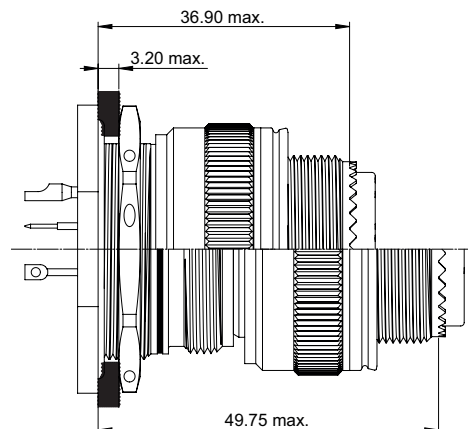
TYPE 1



TYPE 6

Jam-Nut Mounting

TYPE 7

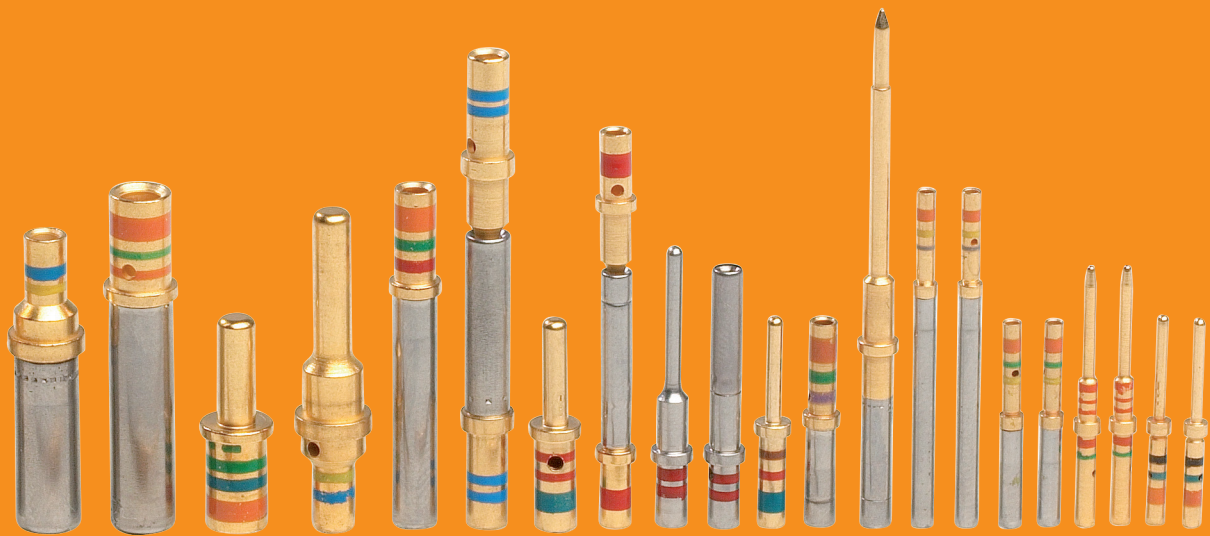


TYPE 6

Overall 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

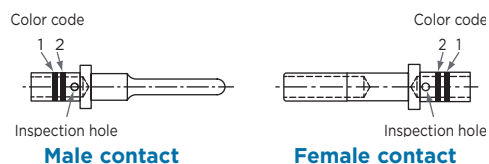
Contacts & Tooling



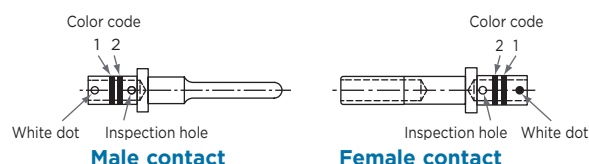


CONTACTS

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



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



| | CONTACTS | | | | | CABLES | | | Observations | |
|------------------------------------|------------------------------|--------|-------|----------------------|-----------|----------------------------|---------------|----------------------|---|---|
| | PN Reference | Type | Size | Mark or Color 1 2 | White Dot | Section in mm ² | AWG Wire | Finished Wire Dia. * | | |
| Models R - RS - K - S - W - Ws | 097-0287-22 097-0288-22 | P S | 22 | Green | - | 0.15 to 0.40 | 22 to 26 | 0.80 to 1.68 | Standards contacts delivered with connector | |
| | 006-0937-20A 006-0912-20A | P S | 20 | Red | - | 0.25 to 0.60 | 20 to 24 | 0.85 to 2.10 | Standards contacts delivered with connector | |
| | 006-0937-16A 006-0912-16A | P S | 16 | Blue | - | 0.60 to 1.20 | 16 to 20 | 1.20 to 2.70 | Standards contacts delivered with connector | |
| | 006-0937-12A 006-0912-12A | P S | 12 | Yellow | - | 1.20 to 3.00 | 12 to 16 | 1.90 to 4.00 | Standards contacts delivered with connector | |
| | 006-0044-20A 006-0055-20A | P 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 006-0973-20A | P 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 006-1104-16A | P S | 16 | White | Blue | - | 1.00 to 2.00 | 14 to 18 | 1.20 to 2.70 | Contacts to be ordered separately |
| | 182-0450-16 182-0451-16 | P S | 16 | Red | Blue | Yes | 0.25 to 0.60 | 20 to 24 | 1.20 to 2.70 | Contacts to be ordered separately |
| 025-0870-16 025-0871-16 | P 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 | 097-0299-22 097-0300-22 | P S | 22 | Green | Yes | 0.15 to 0.40 | 22 to 26 | 0.85 to 1.68 | Standards contacts delivered with connector | |
| | 097-0015-20 097-0016-20 | P S | 20 | Red | Red | Yes | 0.25 to 0.60 | 20 to 24 | 0.85 to 2.10 | Standards contacts delivered with connector |
| | 097-0047-20 097-0053-20 | P S | 20 | Green | Red | Yes | 0.25 | 24 | 1 | Contacts to be ordered separately |
| | 097-0014-16 097-0013-16 | P S | 16 | Blue | Blue | Yes | 0.60 to 1.20 | 16 to 20 | 1.20 to 2.70 | Standards contacts delivered with connector |
| | 097-0177-16 097-0178-16 | P S | 16 | White | Blue | Yes | 1.00 to 2.00 | 14 to 18 | 1.20 to 2.70 | Contacts to be ordered separately |
| | 097-0165-12 097-0166-12 | P 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 | P | 8 | M22520/2-01 + K709 | M22520/5-01 | 025-0711-06 |
| | 182-0612-08 | S | | | M22520/5-45B | |
| 20-04 | 182-0611-08 | P | 8 | M22520/2-01 + K709 | M22520/5-01 | 025-0711-06 |
| | 182-0612-08 | S | | | M22520/5-45B | |
| 28-06 | 182-0611-08 | P | 8 | M22520/2-01 + K709 | M22520/5-01 | 025-0711-06 |
| | 182-0612-08 | S | | | M22520/5-45B | |

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 182-0673-06 | P S | 6 | 182-0657-06A 182-0658-06 | 182-0601-06 | Green | Green | M22520/23-01 | M22520/23-03 | 025-0711-06 | 182-8004-08 A |
| 182-0672-08A 182-0673-08 | P S | 8 | 182-0661-06A 182-0662-06 | 182-0601-08 | Green | Red | M22520/23-01 | M22520/23-02 | 025-0711-06 | 182-8004-08 A |
| 182-0672-10A 182-0673-10 | P S | 10-12 | 182-0664-06A 182-0665-06 | 182-0601-10 | Green | Brown | M22520/23-01 | For AWG12: TP1498 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 |
| 182-0672-06 182-0704-06 | P S | 6 | 182-0657-06 182-0700-06 | 182-0601-06 | Green | Green | M22520/23-01 | M22520/23-03 | 025-0711-06 | 182-8004-08 A |
| 182-0672-08 182-0704-08 | P S | 8 | 182-0661-06 182-0701-06 | 182-0601-08 | Green | Red | M22520/23-01 | M22520/23-02 | 025-0711-06 | 182-8004-08 A |
| 182-0672-10 182-0704-10 | P S | 10-12 | 182-0664-06 182-0702-06 | 182-0601-10 | Green | Brown | M22520/23-01 | For AWG12: TP1498 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 | | | |
| 006-1186-20 006-1187-20 | P S | 20 | Red | Red | - | Yes | Yellow | Ch |
| 006-1188-20 006-1189-20 | P S | 20 | Red | Red | - | Yes | Black | Al |
| 025-0402-20 025-0403-20 | P S | 20 | Purple | Red | - | - | Black | ■ Al |
| 025-0404-20 025-0405-20 | P S | 20 | Purple | Red | - | - | Yellow | ■ Ch |
| 006-0982-16 097-0037-16 | P S | 16 | Blue | Blue | - | - | Yellow | Ch |
| 006-0983-16 097-0036-16 | P S | 16 | Blue | Blue | - | - | Black | Al |

■ Enlarged barrel

| CABLES | | | SEALING PLUG | | CRIMPING TOOL | | INSERTION AND EXTRACTION TOOL | |
|-------------|-----------------------------------|---------|--------------|-------|---------------|--------------|-------------------------------|------------|
| Size | Section Min.-Max. mm ² | 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

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