



Compact Circular Connectors

Derived from MIL-DTL-38999 & JN1003



Presentation

SOURIAU is a recognized worldwide market leader in the design and manufacture of connectors and interconnect systems for harsh environments.

The relationship between the company and the motorsport industry goes back many years.

SOURIAU's main production facility is located in Le Mans and since 1990 we supply connectors to local racing teams for the world famous 24 Hours Endurance Racing.

The **Motorsport** activity is a market where more and more electronics are installed and where space and weight constraints become more critical. **8STA** and **8TA Series** are designed to be smaller and lighter with high reliability features to protect the driver and are used across the world of motorsport on 2 and 4 wheels.

8STA & 8TA circular connectors are derived from international military specifications **MIL-DTL-38999** and **JN1003**, and are designed to withstand high levels of shock and vibration in harsh environments.

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Standard Series

| | |
|---|----|
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| 8TA Series compact low profile | 23 |
| 8STA Series PC Tail contacts | 26 |
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Derived Series

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| | |
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8STA/8TA SERIES

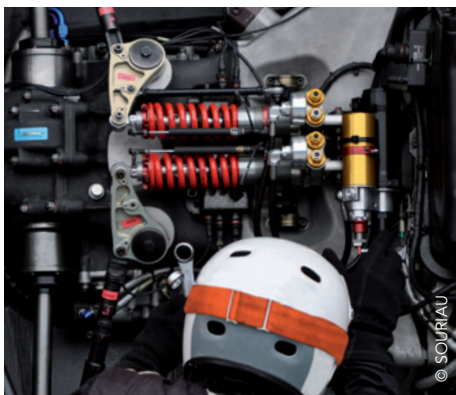
8STA/8TA Series

Overview

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|--|----|
| ■ Typical applications | 6 |
| ■ Features & Benefits | 7 |
| ■ 8STA/8TA Series product overview | 8 |
| ■ Custom solutions | 9 |
| ■ Contact layouts | 10 |



Typical applications



Engine



Sensors



Steering Wheel



Telemetry & Network



Fuel Tank



ERS / Power Distribution



Features & Benefits

ROBUST

Compact and Reliable

Compact circular range derived from MIL-DTL-38999 and JN1003. Smallest removable contacts connector on the market: shell size 02. Withstand high levels of shock and vibration in harsh environments.

ALL IN ONE

Integrated Backshell

Cost effective. Space and weight saving. Right angle and straight version available. Easy to implement with heat shrink boot.

SEALED

Environmental Resistant

Grommet and interfacial seal as MilAero products, IP67. 500 mating/unmating endurance. Withstands most of motorsport fluids.

EASY TO USE

User Friendly

Quick bayonet locking: 1/3 turn to mate. Secure mating with audible clic and visual color indication. Up to 7 color coded keyway orientations.

LARGE OFFER

A Complete Range

Signal, power, coax and concentric twinax contacts. 12 shell sizes: from size 02 up to size 24. More than 100 contact layouts. Many derived products.

A wide product range



Aluminum

- **Black Zinc** Conductive
- **Nickel** RoHS

Stainless Steel

- **Passivated** RoHS

Composite

- Without plating



Reliable

MIL-DTL-38999 and **JN1003** derived

Compact

Miniature sizes 02, 04, 06
Low profile version

High sealing solutions

Hermetic version
Fuel immersible version



Adaptability

Crimp / Solder / PC Tail

Versatility

Signal / Power / Coax
Concentric twinax

High density

#26 contact layouts

8STA/8TA Series comparison

8STA Series

Dedicated Characteristics

- Derived from **MIL-DTL-38999, JN1003** and **VG96912 Standard**
- **Miniature sizes** 02, 04, 06
Up to **shell size 24**
- **Scoop proof**
- **Nickel** plating

8STA/8TA Series

Common Characteristics

- Optimized **oval flange**
- **Conductive** black zinc or nickel plating
- **Rugged aluminum body** to ensure long service life in the harshest environments
- **Color-coded** keyway

8TA Series

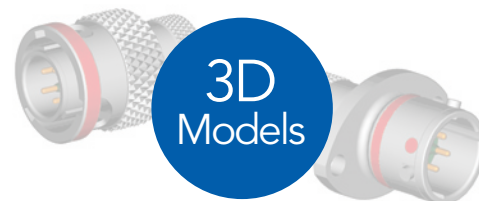
Dedicated Characteristics

- Derived from **MIL-DTL-38999 Series 2**
- Compact **low profile**

SOURIAU services



High levels of finished connector stock from our **worldwide distributors**



3D models **available online** on www.souriau.com
Registration is quick and the **downloads are free!**

Custom solutions

Let your need take the lead! Due to the constant innovative needs from the Motorsport market, **SOURIAU** is dedicated to produce derived products on demand.

One of the primary objectives with this product family, is to push the boundaries in terms of **miniaturization** and **weight reduction**, as demonstrated by the introduction of the world smallest, and now most popular, motorsport connector with removable contacts: **8STA shell size 02**.

Continuing on with this theme, several new products can be found in this catalogue, including receptacles with **integrated clinch nuts** eliminating the need for nut plates, connector designed for **steering boss system** for column using, **single hole fixing** solution for space and weight saving and 8STA **High Density** with pin contacts normally associated with much larger connectors.

Let's have a look on the latest **SOURIAU** innovations:

COAX CONTACTS [see p.32](#)



High frequency transmission

HIGH DENSITY [see p.34](#)



#26 removable contacts

CLINCH NUTS [see p.38](#)



Space and weight saving

SINGLE HOLE FIXING [see p.40](#)



Space and weight saving

STEERING BOSS SYSTEM [see p.42](#)



Designed for column using

BLIND MATING PLUG [see p.44](#)



Hard-to-reach areas solution

HERMETIC SIZE 02 [see p.46](#)



Weld mounting compact design

HERMETIC FEED-THROUGH [see p.50](#)



Solder contacts on both sides of bulkhead

THERMAL PROTECTION

A global solution with our sister company **DARCHEM ENGINEERING**

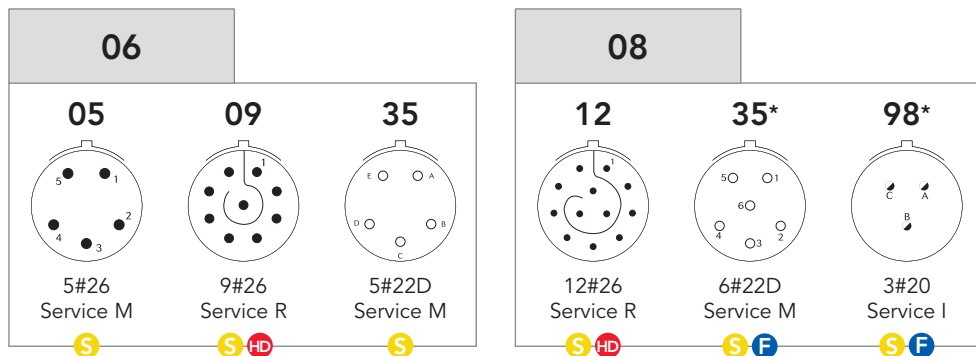
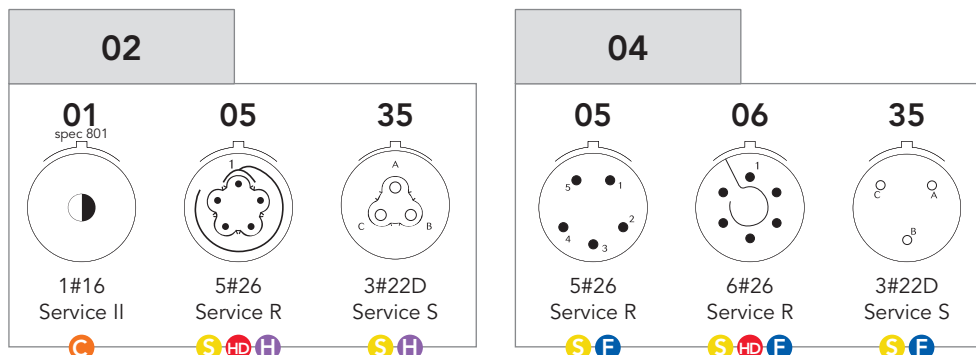


[Click here for more information](#)

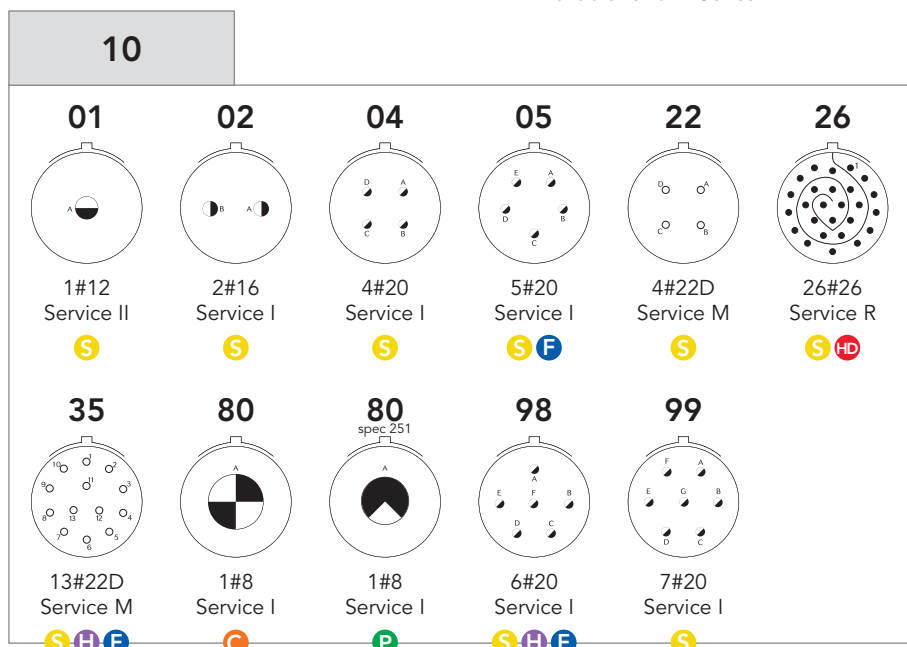
Contact layouts

S Signal P Power C Concentric Twinax (=Triax) or Coax HD High Density H Hermetic version developed F Fuel Immersible version developed

Contact sizes #26 #22D #20 #16 #12 #8 Coax or Concentric Twinax - consult us #8 Power #4 Power



* Available for 8TA Series



Size 02: Marking on shell.

Rear view of receptacle for male and female insulator. Opposite marking between plug and receptacle.

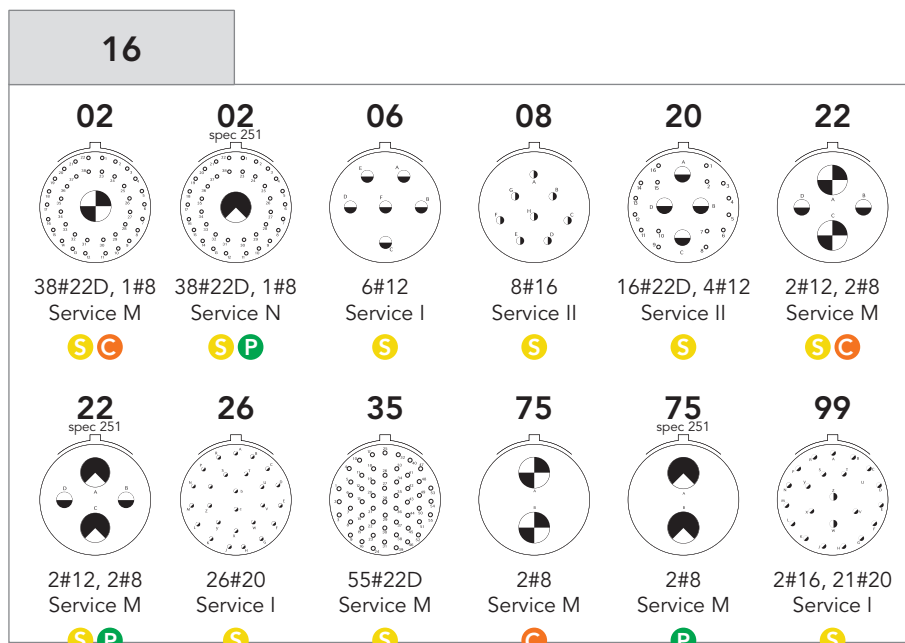
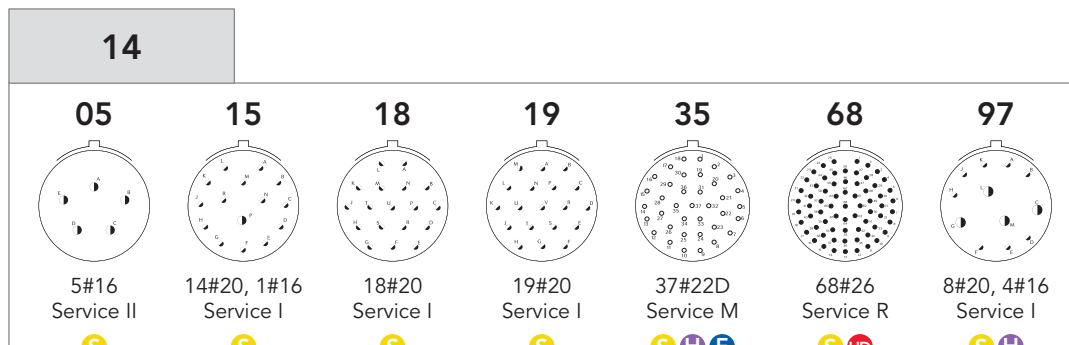
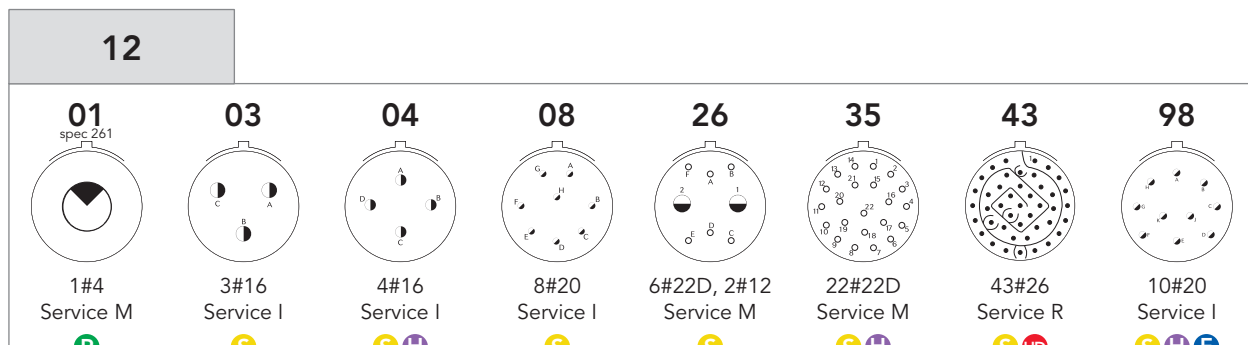
Sizes 04 to 24: Marking on insulator.

Front view of male insulator for plug and receptacle. Opposite marking between male and female insulator.

Contact layouts

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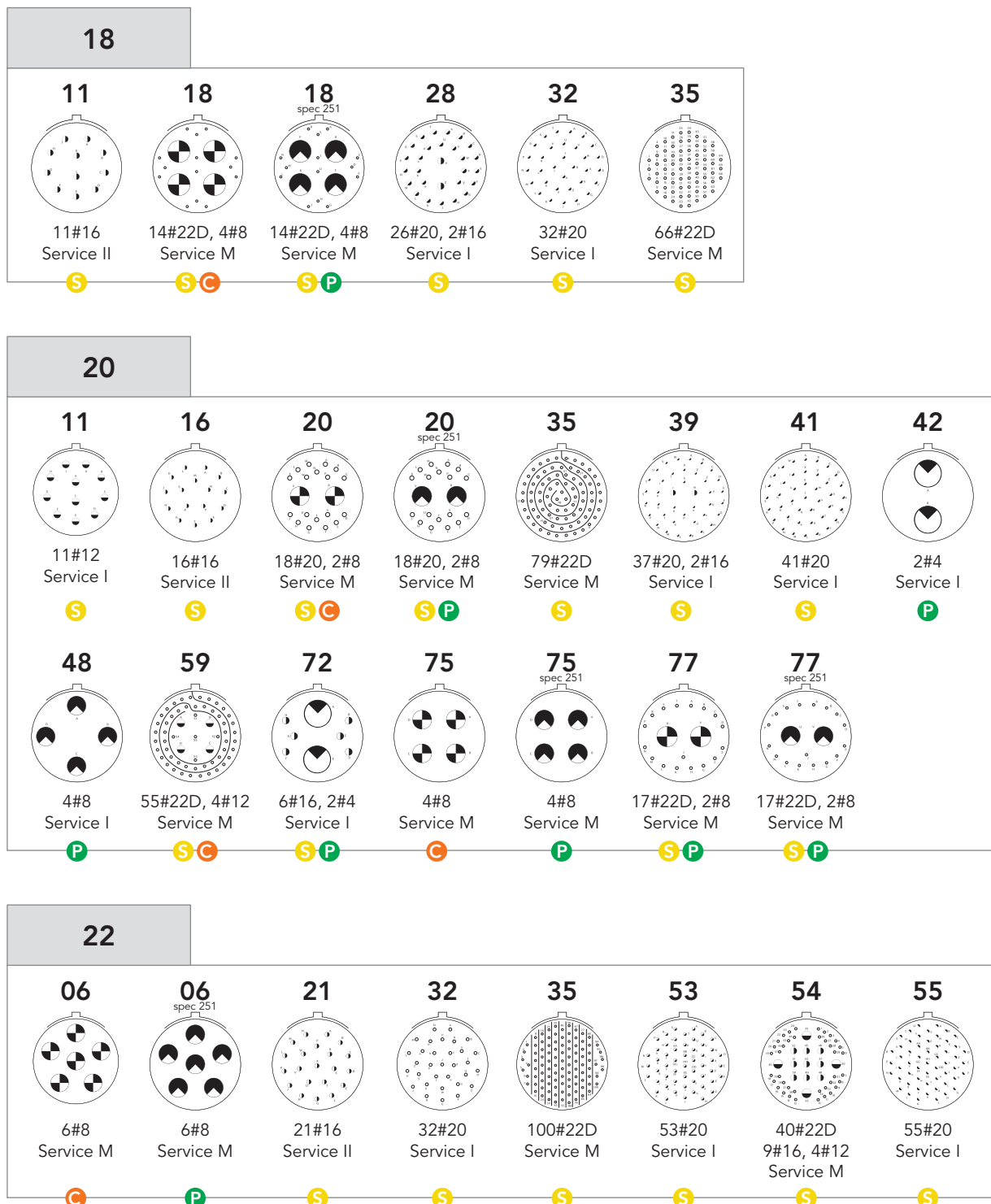


Sizes 04 to 24: Marking on insulator.
Front view of male insulator for plug and receptacle. Opposite marking between male and female insulator.

Contact layouts

S Signal **P** Power **C** Concentric Twinax (=Triax) or Coax

Contact sizes ● #26 ○ #22D ◐ #20 ◑ #16 ◒ #12 ◓ #8 Coax or Concentric Twinax - consult us ◔ #8 Power ◕ #4 Power

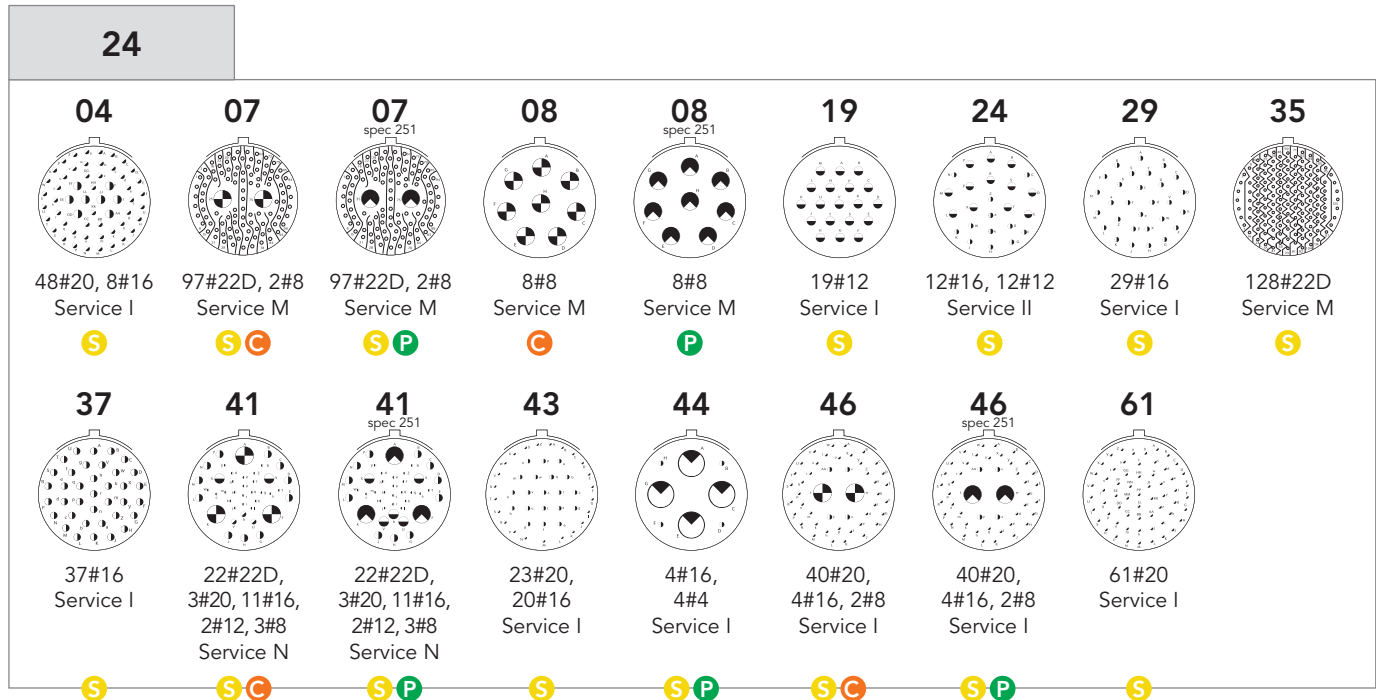


Sizes 04 to 24: Marking on insulator.
Front view of male insulator for plug and receptacle. Opposite marking between male and female insulator.

Contact layouts

S Signal **P** Power **C** Concentric Twinax (=Triax) or Coax

Contact sizes ● #26 ○ #22D ◐ #20 ◑ #16 ◒ #12 ◓ #8 Coax or Concentric Twinax - consult us ◔ #8 Power ◕ #4 Power



Test voltage rating (Vrms)

| Service | Sea level | at 21 000 m |
|---------|-----------|-------------|
| R | 400 | N/A |
| S | 1,000 | N/A |
| M | 1,300 | 800 |
| N | 1,000 | 600 |
| I | 1,800 | 1,000 |
| II | 2,300 | 1,000 |

Sizes 04 to 24: Marking on insulator.
Front view of male insulator for plug and receptacle. Opposite marking between male and female insulator.

8STA/8TA SERIES

8STA/8TA Series

Standard Ranges

| | |
|---|----|
| ■ 8STA Series - Miniature shell sizes 02, 04 & 06 | 16 |
| ■ 8STA Series - Shell sizes 08 to 24 | 19 |
| ■ 8TA Series - Compact low profile | 23 |
| ■ 8STA Series - PC Tail contacts | 26 |
| ■ 8STA Series - Power contacts | 29 |
| ■ 8STA Series - Coax contacts..... | 32 |
| ■ 8STA Series - High density #26 contacts..... | 34 |

Description

- Ultra compact design & very lightweight connector
- Rugged aluminium body to ensure long service life in the harshest environment
- Positive locking mechanism with locked colour indicators
- Scoop proof
- 7 color-coded keyway orientations
- Boot termination feature
- PCB option available
- Conductive black zinc or nickel plating



Technical features

Mechanical

- **Shell:**
Aluminium alloy
Glass fibre loaded plastic - composite (shell size 06 only)
- **Shell plating:**
Aluminum: Conductive Black Zinc
Nickel (F)
Composite without plating (X)
- **Insulator:** Thermoplastic
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 147m/s², 10 to 2000Hz
- **Contact retention:**
35 N (size 26)
45 N (size 22D)

Electrical

- **Test voltage:**
Size 26: 400 Vrms
Size 22D: 1000 Vrms (shell size 02 & 04)
1300 Vrms (shell size 06)
- **Contact resistance:**
Size 26: <16 mΩ
Size 22D: <14.6 mΩ
- **Insulation resistance:**
≥ 5000MΩ @ 400Vdc / Size 26
≥ 5000MΩ @ 500Vdc / Size 22D
- **Contact rating:**
Size 26: 3 Amp
Size 22D: 5 Amp

Environmental

- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:**
Aluminum: 48 hours
Composite: 500 hours

Ordering information

| | | | | | | | |
|-------------------------------|---|---|--|----|----|---|---|
| Basic series | 8STA | 0 | | 04 | 05 | P | N |
| Shell type | 0: Oval flange receptacle - PCB version available, please see p.XX 1: In-line receptacle 6: Plug 7: Jam nut receptacle (consult us) | | | | | | |
| Material & Plating | empty: Aluminum conductive Black zinc F: Aluminum Nickel X: Composite without plating (shell size 06 only) | | | | | | |
| Shell size | 02, 04, 06 | | | | | | |
| Contact layout | See page 10 | | | | | | |
| Type of contact | P: Pin S: Socket | | | | | | |
| Orientation | N: Red / A: Yellow / B: Blue / C: Orange / D: Green / E: Grey (shell size 02 only) / U: Universal (aluminum alloy only) | | | | | | |
| Specification | None: Standard version 499: Integrated nut on the flange - M2 insert (only for shell type 0 and 2) - for more details, please see page 38 528: Integrated nut on the flange - M2.5 insert (only for shell type 0 and 2) - for more details, please see page 38 562: PCB version - for more details, please see page 26 022: Fuel immersible version (shell sizes 04 and 06 only) - for more details, please see page 52 | | | | | | |

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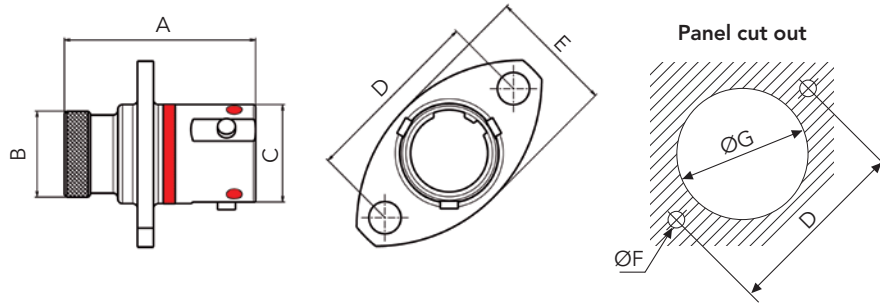
Dimensions

Jam nut receptacle

| Shell size | ØA Max | B Max | C ^{±0.15} | ØD Max | E Max | F Max | ØG Max | H ^{±0.2} | ØJ ^{±0.1} |
|------------|--------|------------------------------|--------------------|--------|-------|-------|--------|-------------------|--------------------|
| 02 | 8.6 | 16.3 (02-05) 17.6 (02-35) | N/A | N/A | 18.2 | 17 | 20.5 | 9.05 | 9.7 |
| 04 | 10.25 | 18.3 | 7.6 | 8.7 | 20.2 | 18.5 | 22.2 | 12 | 12.8 |
| 06 | 11.7 | 14.25 | 10.3 | 10.5 | 22.25 | 19.5 | 24.4 | 13.7 | 14.4 |

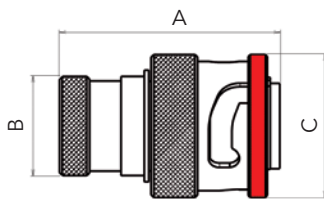
Note: All dimensions are in millimeters (mm)

Oval flange receptacle



| Shell size | A ± 0.2 | $\text{Ø}B\pm 0.2$ | $\text{Ø}C\pm 0.2$ | D ± 0.2 | E Max | $\text{Ø}F\pm 0.2$ | $\text{Ø}G\pm 0.1$ |
|------------|-------------|--------------------|--------------------|-------------|-------|--------------------|--------------------|
| 02 | 17.5 | 7.2 | 8.3 | 15.3 | 10.7 | 3.1 | 9.3 |
| 04 | 18.1 | 8.5 | 10.0 | 16.2 | 13.2 | 3.1 | 12.0 |
| 06 | 23.1 | 10.2 | 11.55 | 18.0 | 14.8 | 3.1 | 13.0 |

Plug

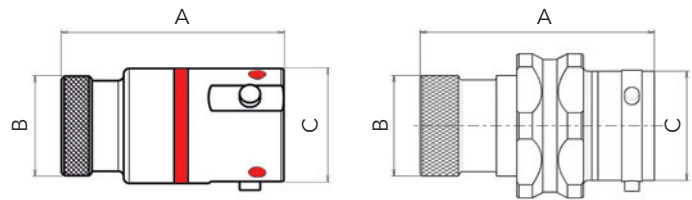


| Shell size | A | $\text{Ø}B$ | $\text{Ø}C$ |
|------------|----------------|-----------------|-----------------|
| 02 | 17.5 | 7.2 | 10.4 |
| 04 | 18.3 ± 0.2 | 8.5 ± 0.1 | 13.4 ± 0.1 |
| 06 | 22.1 ± 0.1 | 10.25 ± 0.1 | 15.05 ± 0.2 |

In-line receptacle

Shell sizes 02 and 04

Shell size 06

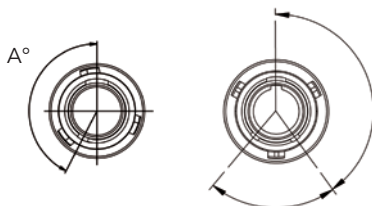


| Shell size | A | $\text{Ø}B$ | $\text{Ø}C$ |
|------------|----------------|---------------|----------------|
| 02 | 17.5 | 7.2 | 8.3 |
| 04 | 18.1 ± 0.2 | 8.5 ± 0.1 | 10.0 ± 0.2 |
| 06 | 23.2 | 10.05 | 10.8 |

Orientations

Size 2

Sizes 4 & 6



View from front face of plug.

| Key positions | N | A | B | C | D | E | U |
|---------------|------|--------|------|--------|-------|------|------|
| Angle A° | 153° | 51° | 102° | 204° | 255° | 306° | None |
| Angle B° | 75° | 120° | 120° | 115° | 115° | - | None |
| Angle C° | 145° | 130° | 110° | 155° | 90° | - | None |
| Color band | Red | Yellow | Blue | Orange | Green | Grey | None |

Note: All dimensions are in millimeters (mm)



Description

- 5 shell styles:
- 100% scoop-proof
- EMI-RFI shielding and shell to shell continuity is provided by conductive plating and integral grounding ring fitting to the plug
- Environment sealing from interfacial seal and rear grommet (sealing IP67)
- Positive locking mechanism with locked colour indicator
- 6 color-coded keyway orientations
- Conductive black zinc or nickel plating

Technical features

Mechanical

- **Shell:** Aluminium alloy
- **Shell plating:**
Conductive black zinc
Nickel (F)
- **Insulator:** Thermoplastic
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 147m/s², 10 to 2000Hz
- **Contact retention:**

| | |
|-----------|-------|
| Size 22D: | 45 N |
| Size 20: | 60N |
| Size 16: | 100 N |
| Size 12: | 100 N |
| Size 8: | 110 N |
| Size 4: | 200 N |

Electrical

- **Test voltage:**

| Service | M | N | I | II |
|-----------|-------|-------|-------|-------|
| Sea level | 1,300 | 1,000 | 1,800 | 2,300 |
- **Contact resistance:**

| | |
|-----------|---------|
| Size 22D: | 14.6 mΩ |
| Size 20: | 7.3 mΩ |
| Size 16: | 3.8 mΩ |
| Size 12: | 3.5 mΩ |
| Size 8: | 3 mΩ |
| Size 4: | 2 mΩ |
- **Insulation resistance:**
≥ 5000 MΩ (at 500 Vdc)
- **Contact rating:**

| | |
|-----------|-------|
| Size 22D: | 5 A |
| Size 20: | 7.5 A |
| Size 16: | 13 A |
| Size 12: | 23 A |
| Size 8: | 45 A |
| Size 4: | 80 A |
- **Shell continuity:** ≤10 mΩ

Environmental

- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:**
Aluminum: 48 hours

Ordering information

| | | | | | | |
|---|-------------|----------|-----------|-----------|----------|----------|
| Basic series | 8STA | 0 | 10 | 35 | P | N |
| Shell type | | | | | | |
| 0: Oval flange receptacle front or rear mounting - PCB version available, please see p.XX | | | | | | |
| 1: In-line receptacle | | | | | | |
| 6: Plug | | | | | | |
| 7: Jam nut receptacle | | | | | | |
| Material & Plating | | | | | | |
| None: Aluminum Black zinc cobalt | | | | | | |
| F: Aluminum Nickel | | | | | | |
| Shell size | | | | | | |
| 08, 10, 12, 14, 16, 18, 20, 22, 24 | | | | | | |
| Contact layout: See pages 10 to 13 | | | | | | |
| Type of contact | | | | | | |
| P: Pin | | | | | | |
| S: Socket | | | | | | |
| Orientation | | | | | | |
| N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal | | | | | | |
| Specification | | | | | | |
| None: Standard version | | | | | | |
| 499: Integrated nut on the flange - M2 insert (only for shell style 0 & 2) - for more details, please see page 38 | | | | | | |
| 528: Integrated nut on the flange - M2.5 insert (only for shell style 0 & 2) - for more details, please see page 38 | | | | | | |
| 523: Lightweight In-line receptacle (shell type 1 only) | | | | | | |
| 022: Fuel immersible version - for more details, please see page 52 | | | | | | |

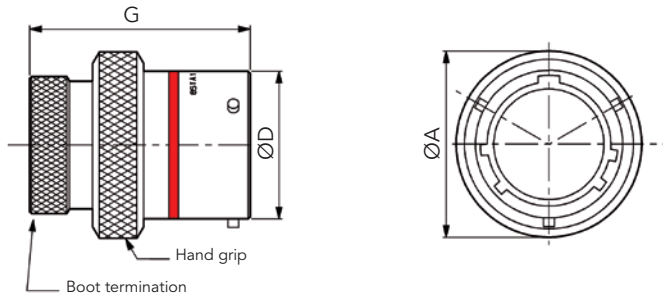
Dimensions

| Plug | | | |
|------|------------|---------|--------|
| | Shell size | ØA max. | B max. |
| | 08 | 18.70 | 18.55 |
| | 10 | 21.50 | |
| | 12 | 25.10 | |
| | 14 | 29.00 | |
| | 16 | 32.20 | |
| | 18 | 35.40 | 19.30 |
| | 20 | 38.20 | |
| | 22 | 41.30 | |
| 24 | 44.50 | 19.05 | |

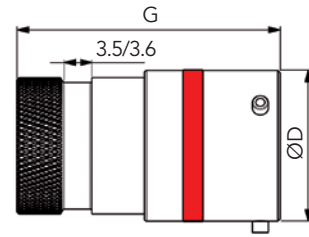
Note: All dimensions are in millimeters (mm)

In-line receptacle

Standard version

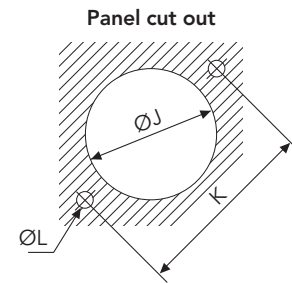
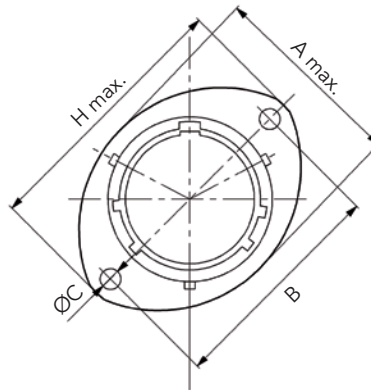
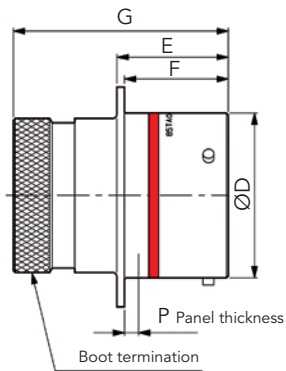


Lightweight version (specification 523)



| Shell size | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
|--------------------------------------|------|------|-------|-------|------|-------|-------|-------|------|
| ØA max. | 17.6 | 20.7 | 25.1 | 28.3 | 31.4 | 34.7 | 38.1 | 41.2 | 44.7 |
| ØD ^{+0.20} _{-0.13} | 12 | 15 | 19.05 | 22.22 | 25.4 | 28.57 | 31.75 | 34.92 | 38.1 |
| G max. | 33.5 | | | | | | | | |

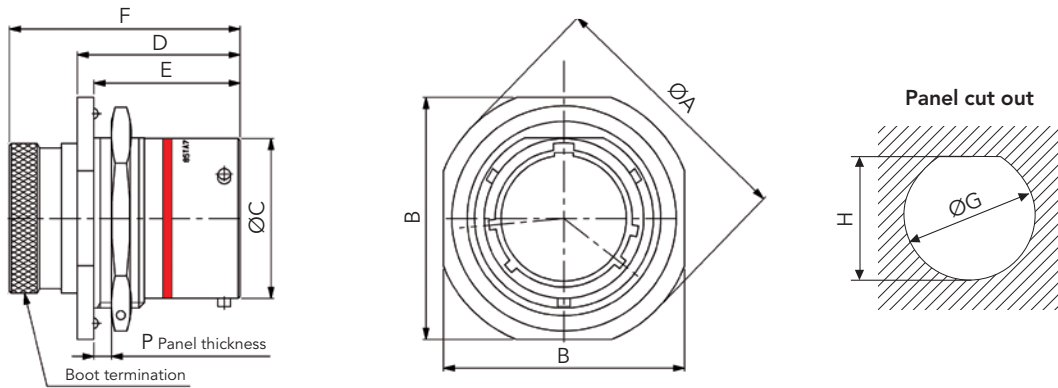
Oval flange receptacle



| Shell size | A max. | B ±0.20 | ØC ⁰ _{+0.1} | ØD ^{+0.2} _{-0.13} | E ⁰ _{+0.15} | F ⁰ _{-0.13} | G max. | H max. | P max. | ØJ ±0.10 | K ±0.20 | ØL ±0.20 |
|------------|--------|---------|---------------------------------|-------------------------------------|---------------------------------|---------------------------------|--------|--------|--------|----------|---------|----------|
| 08 | 16.50 | 21.40 | 3.20 | 12.00 | 17.21 | 16.05 | 33.50 | 27.20 | 3.00 | 14.50 | 21.40 | 3.60 |
| 10 | 19.50 | 25.90 | | 15.00 | | | | 32.00 | | 17.40 | 25.90 | |
| 12 | 24.00 | 29.10 | | 19.05 | | | | 35.20 | | 21.90 | 29.10 | |
| 14 | 27.00 | 32.50 | | 22.22 | | | | 38.40 | | 25.00 | 32.50 | |
| 16 | 30.30 | 34.80 | | 25.40 | | | | 41.00 | | 28.20 | 34.80 | |
| 18 | 33.70 | 38.20 | | 28.57 | | | | 44.70 | | 31.40 | 38.20 | |
| 20 | 37.00 | 41.60 | | 31.75 | | | | 47.90 | | 34.60 | 41.60 | |
| 22 | 40.40 | 45.00 | 34.90 | 51.00 | 37.60 | 45.00 | | | | | | |
| 24 | 43.40 | 49.50 | 3.77 | 38.10 | 18.20 | 15.29 | 55.80 | 41.00 | 49.50 | 4.10 | | |

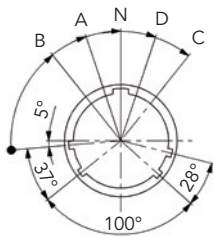
Note: All dimensions are in millimeters (mm)

Jam nut receptacle

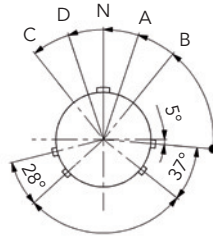


| Shell size | ØA ±0.3 | B ±0.24 | ØC $0_{-0.12}^0$ | D ±0.10 | E ±0.24 | F ±0.3 | P max. | ØG ±0.10 | H ±0.20 | Tightening torque (mN) |
|------------|---------|---------|------------------|---------|---------|--------|--------|----------|---------|------------------------|
| 08 | 26.90 | 24.10 | 11.97 | 25.91 | 23.24 | 36.71 | 3.00 | 14.50 | 13.60 | 4 |
| 10 | 30.15 | 27.30 | 14.94 | | | | | 17.70 | 16.80 | 6 |
| 12 | 34.89 | 32.10 | 19.01 | | | | | 22.70 | 20.90 | 9 |
| 14 | 38.06 | 34.92 | 22.18 | | | | | 25.70 | 24.10 | 10 |
| 16 | 41.25 | 38.40 | 25.36 | 26.71 | 37.51 | | | 28.80 | 27.20 | 13 |
| 18 | 44.41 | 41.60 | 28.53 | | | | | 32.00 | 30.40 | 20 |
| 20 | 49.19 | 46.30 | 31.71 | | | | | 35.10 | 33.60 | 23 |
| 22 | 52.33 | 49.50 | 34.88 | | | | | 38.00 | 36.80 | 25 |
| 24 | 55.50 | 52.45 | 38.06 | | | | | 42.00 | 39.90 | 26 |

Orientations



Viewed from face of receptacle



Viewed from face of plug

| Shell size | N Red | A Yellow | B Blue | C Orange | D Green |
|------------|-------|----------|--------|----------|---------|
| 08 | 95° | 77° | - | - | 113° |
| 10 | 95° | 81° | 67° | 123° | 109° |
| 12 | 95° | 75° | 63° | 127° | 116° |
| 14 | 95° | 74° | 61° | 129° | 116° |
| 16 | 95° | 77° | 65° | 125° | 113° |
| 18 | 95° | 77° | 65° | 125° | 113° |
| 20 | 95° | 77° | 65° | 125° | 113° |
| 22 | 95° | 80° | 69° | 121° | 110° |
| 24 | 95° | 80° | 69° | 121° | 110° |

For each shell size, U orientation can be mateable with any other orientations.

Note: All dimensions are in millimeters (mm)

Description

- Rugged aluminium body to ensure long service life in the harshest environment
- Compact low profile derived from MIL-DTL-38999 Series 2
- 6 gold plated #22D contacts
- Environment sealing from interfacial seal and rear grommet
- Positive locking mechanism with locked color indicators 3 keyway orientations
- Not scoop proof
- Conductive black zinc plating



Technical features

Mechanical

- **Shell:** Aluminium alloy
- **Shell plating:**
Conductive black zinc
Nickel (consult us)
- **Insulator:** Thermoplastic
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** Random 100 to 1000 Hz - 1 g²/Hz
- **Contact retention:** 45 N

Electrical

- **Test voltage:** 1300 Vrms (sea level)
- **Contact resistance:** <14.6 mΩ
- **Insulation resistance:**
≥ 5000 MΩ (at 500 Vdc)
- **Contact rating:** 5A
- **Shell continuity:** <60 mΩ

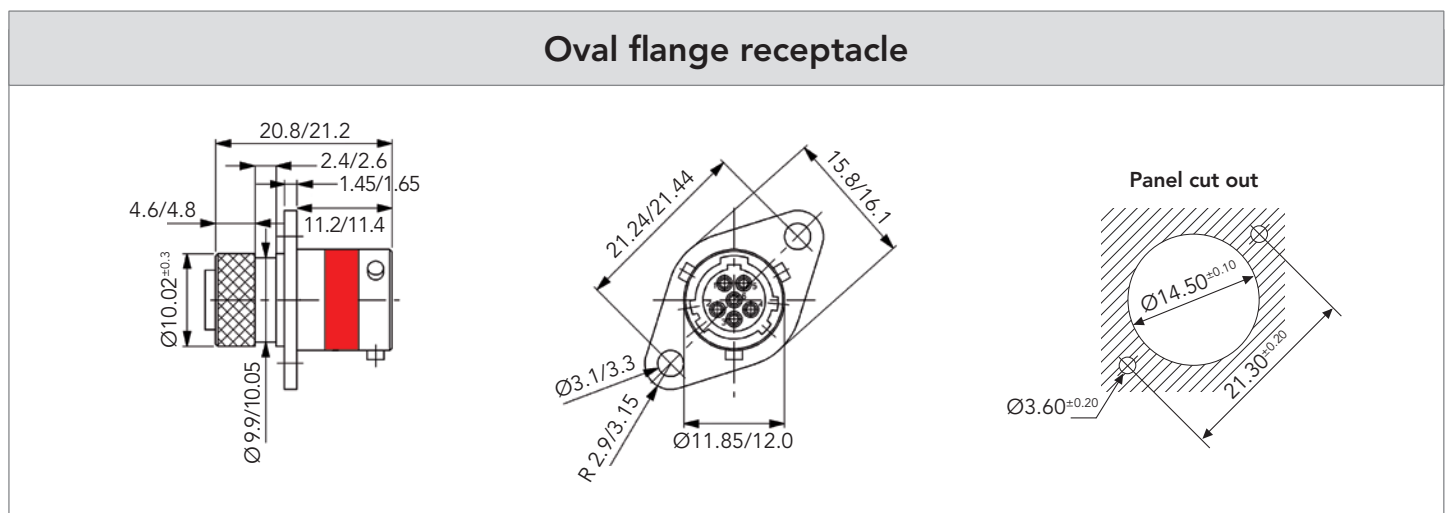
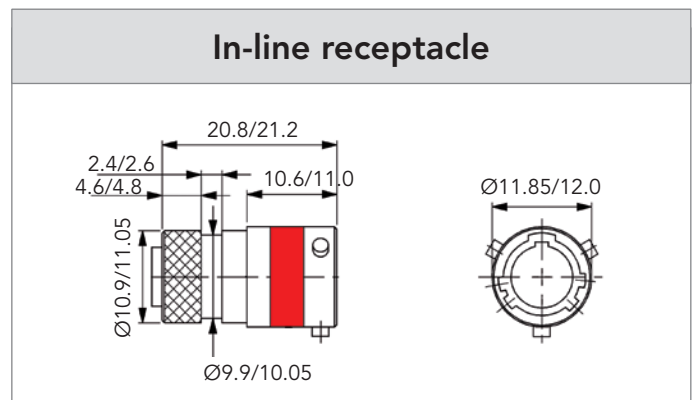
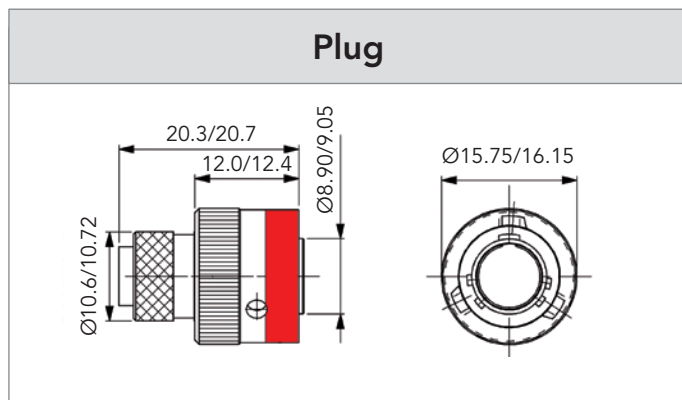
Environmental

- **Operating temperature:** -55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours

Ordering information

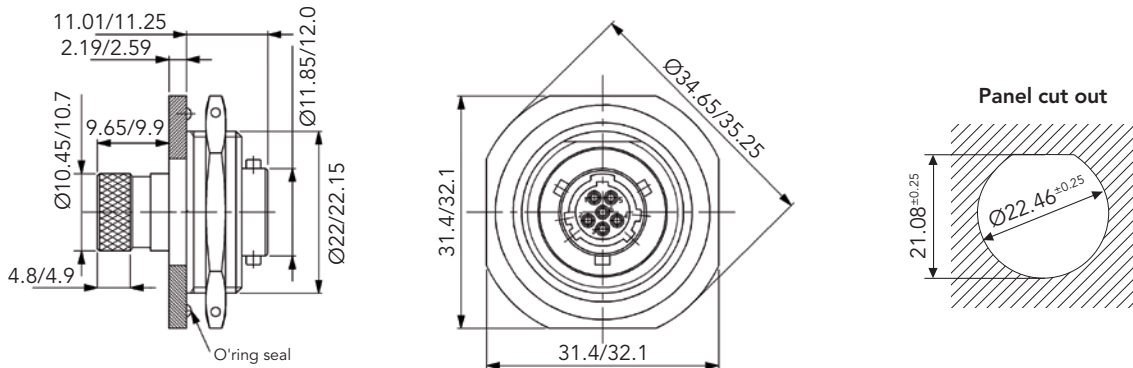
| | | | | | | |
|-----------------|---|---|----|----|---|---|
| Basic series | 8TA | 0 | 08 | 35 | P | N |
| Shell type | <ul style="list-style-type: none"> 0: Oval flange receptacle (for front or rear mounting) 1: In-line receptacle 6: Plug 7: Jam nut receptacle | | | | | |
| Shell size | 08 | | | | | |
| Contact layout: | See page 10 | | | | | |
| Type of contact | <ul style="list-style-type: none"> P: Pin S: Socket | | | | | |
| Orientation | N: Red / A: Yellow / D: Green | | | | | |

Dimensions

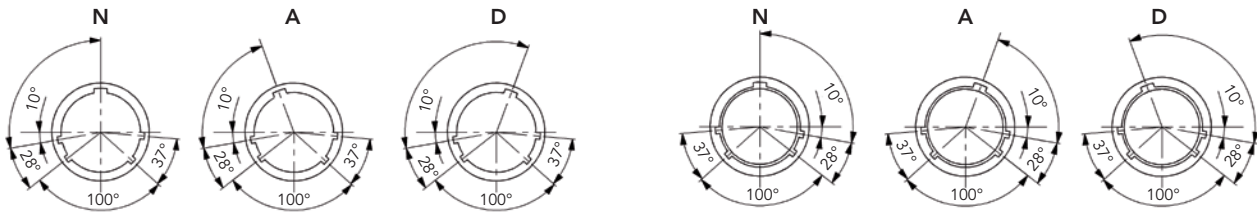


Note: All dimensions are in millimeters (mm)

Jam nut receptacle



Orientations



Viewed from front face of receptacle

Viewed from front face of plug

| Key positions | Alpha 1 | Color band |
|---------------|---------|------------|
| N | 100° | Red |
| A | 82° | Yellow |
| D | 118° | Green |

Note: All dimensions are in millimeters (mm)

Description

- Rugged aluminium body to ensure long service life in the harshest environment
- 8STA PCB connectors are available in shell sizes 02 to 24 (12 sizes)
- 100% scoop proof
- Available with clinch nut
- 6 colour coded keyway orientations



Technical features

Mechanical

- **Shell:** Aluminium
- **Shell plating:** Conductive black zinc
- **Insulator:** Liquid silicone rubber
- **Seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 matings/unmatings
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 147m/s², 10 to 2000 Hz

Electrical

- **Contact resistance:**
Size 26: 16 mΩ
Size 22D: 14.6 mΩ
Size 20: 7.3 mΩ
Size 16: 3.8 mΩ
- **Insulation resistance:**
≥ 5000MΩ (at 500Vdc)
- **Contact rating:**
Size 26: 3 Amp
Size 22D: 5 Amp
Size 20: 7.5 Amp
Size 16: 13 Amp
- **Shell continuity:** ≤ 10mΩ

Environmental

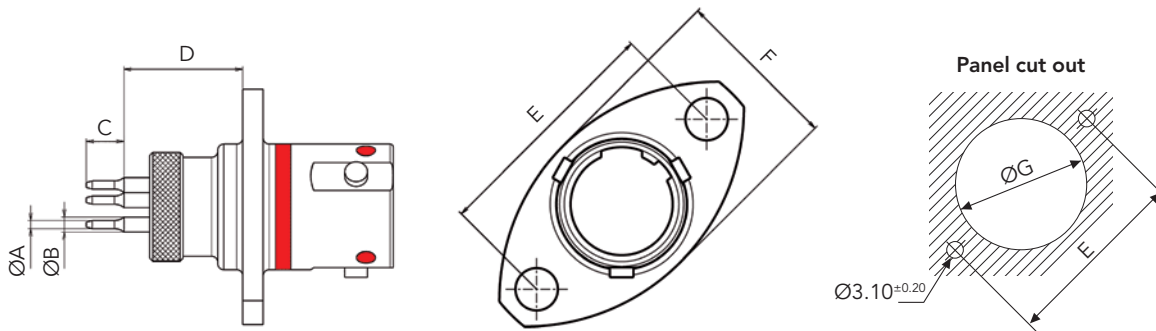
- **Temperature range:** -55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours

Ordering information

| | | | | | | | |
|---|------|---|----|----|---|---|---|
| Basic series | 8STA | 2 | 12 | 35 | P | N | - |
| Shell type 2: Oval flange receptacle with PCB contacts | | | | | | | |
| Shell size 02, 06, 04, 08, 10, 12, 14, 16, 18, 20, 22, 24 | | | | | | | |
| Contact layout See pages 10 to 13 | | | | | | | |
| Type of contact P: Pin S: Socket | | | | | | | |
| Orientation N: Red, A: Yellow, B: Blue, C: Orange, D: Green, E: Grey (shell size 02 only) | | | | | | | |
| Specification None: Standard version 499: Integrated clinch nut on flange (M2 for sizes 02, 04 & 06; M3 for sizes 08 to 24) 528: Integrated clinch nut on flange (M2.5 for sizes 02, 04 & 06) 571: Specific PC tail (length = 4.6mm) - only available for sizes 08 to 24 (see next page) 625: Specific PC tail (length = 8.5mm) - only available for sizes 08 to 24 (see next page) | | | | | | | |

Dimensions

Shell sizes 02, 04 & 06

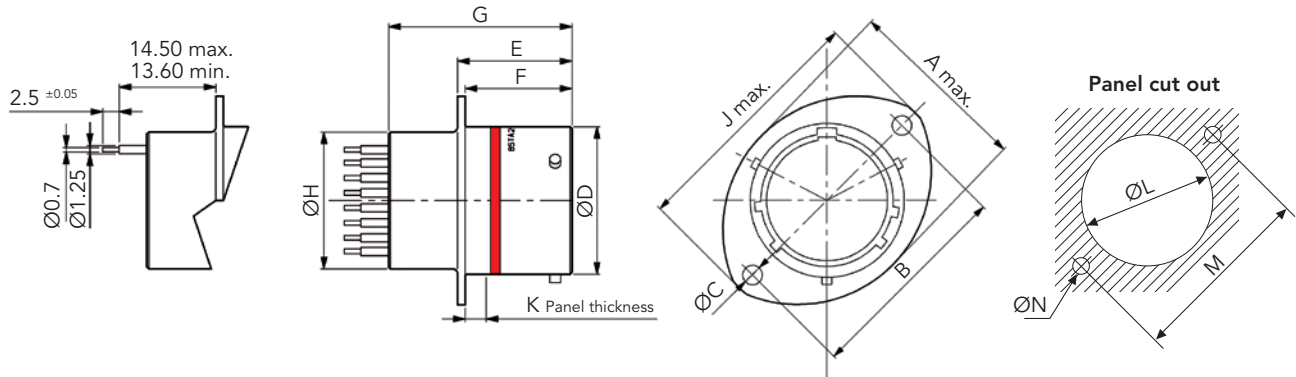


| Contact size | ØA Max | ØB Max |
|--------------|--------|--------|
| #22D | 0.70 | 1.25 |
| #26 | 0.55 | 1.16 |

| Shell size | C Max | D max | E | F Max | ØG |
|------------|-------|-------|----------------------|-------|----------------------|
| 02 | 2.5 | 9.5 | 15.3 ^{±0.2} | 10.7 | 9.3 ^{±0.1} |
| 04 | 2.5 | 8.7 | 16.2 ^{±0.2} | 13.2 | 12.0 ^{±0.1} |
| 06 | 4.1 | 14.7 | 18.0 ^{±0.2} | 14.8 | 13.0 ^{±0.1} |

Note: All dimensions are in millimeters (mm)

Shell sizes 08 to 24



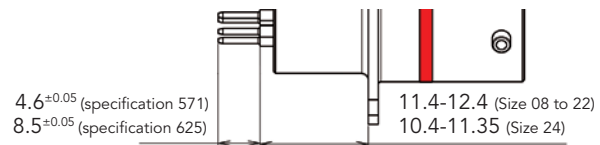
| Shell size | A Max | B ^{±0.20} | ØC | ØD ^{+0.2} | E | F | G Max | ØH Max | J Max | K Max | ØL ^{±0.10} | M ^{±0.20} | ØN ^{±0.20} |
|------------|-------|--------------------|-------|--------------------|-------|-------|-------|--------|-------|-------|---------------------|--------------------|---------------------|
| 08 | 16.50 | 21.40 | 3.20 | 12.00 | 17.21 | 16.05 | 27.65 | 11.10 | 27.20 | 3.00 | 14.50 | 21.40 | 3.60 |
| 10 | 19.50 | 25.90 | | 14.97 | | | | 13.90 | 32.00 | | 17.40 | 25.90 | |
| 12 | 24.00 | 29.10 | | 19.05 | | | | 17.35 | 35.20 | | 21.90 | 29.10 | |
| 14 | 26.90 | 32.50 | | 22.22 | | | | 20.50 | 38.40 | | 25.00 | 32.50 | |
| 16 | 30.30 | 34.80 | | 25.40 | | | | 23.70 | 41.00 | | 28.20 | 34.80 | |
| 18 | 33.70 | 38.20 | | 28.57 | | | | 26.91 | 44.70 | | 31.40 | 38.20 | |
| 20 | 37.00 | 41.60 | | 31.77 | | | | 30.11 | 47.80 | | 34.60 | 41.60 | |
| 22 | 40.40 | 45.00 | 34.90 | 33.20 | 51.00 | 37.60 | 45.00 | | | | | | |
| 24 | 43.40 | 49.50 | 3.77 | 38.10 | 18.20 | 15.29 | 36.40 | 55.80 | 41.00 | 49.50 | 4.10 | | |

Specific PC Tail version

Available with layouts using contacts #22D and/or #20
 Also available with clinch nut: please consult us

Specification 571: PC tail length = 4.6 mm

Specification 625: PC tail length = 8.5 mm



Note: All dimensions are in millimeters (mm)

Description

- A #4 contact for a wide range of wire sizes: Size 8, 10, 16, 25 & 35 mm²
- Easy visual wire identification: colored band on contact
- Allow the use of small wire sections: Reducer for wires 8 & 10 mm² in contact barrel 16mm²
- Ideal for high power applications: Up to 200A continuous (12-01 specif. 261)
- Space & cost saving with mixed connectors: Only one connector instead of 2 to transmit signal & power



Technical features

Mechanical

- **Shell:** Aluminium alloy
- **Shell plating:** Conductive black zinc
- **Insulator:** Thermoplastic
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold over nickel
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 147m/s², 10 to 2000Hz
- **Contact retention:**

| | |
|----------------|----------------|
| Size 22D: 45 N | Size 20: 60 N |
| Size 16: 100 N | Size 12: 100 N |
| Size 8: 110 N | Size 4: 200 N |

Electrical

- **Test voltage:**

| Service | M | N | I | II |
|-----------|------|------|------|------|
| Sea level | 1300 | 1000 | 1800 | 2300 |
- **Contact resistance:**

| | |
|-----------|---------|
| Size 22D: | 14.6 mΩ |
| Size 20: | 7.3 mΩ |
| Size 16: | 3.8 mΩ |
| Size 12: | 3.5 mΩ |
| Size 8: | 3 mΩ |
| Size 4: | 2 mΩ |
- **Insulation resistance:** ≥ 5000 MΩ (at 500 Vdc)
- **Contact rating:**

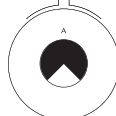

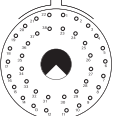
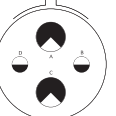
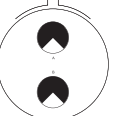
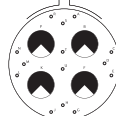

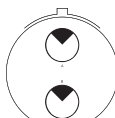
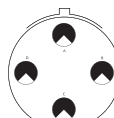

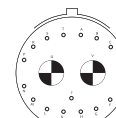
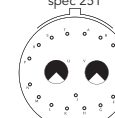
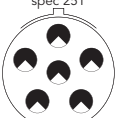
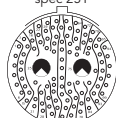
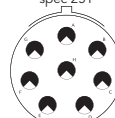

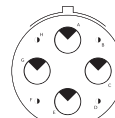
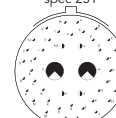
| | |
|-----------|-------|
| Size 22D: | 5 A |
| Size 20: | 7.5 A |
| Size 16: | 13 A |
| Size 12: | 23 A |
| Size 8: | 45 A |
| Size 4: | 80 A |
- **Shell continuity:** ≤10 mΩ

Environmental

- **Operating temperature:** -55°C to +175°C
- **Sealing mated connectors:** IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours

Contact layouts viewed from front face of male insulator

Contact sizes ○ #22D ● #20 ◐ #16 ◑ #12 ◒ #8 Power ◓ #4 Power

| | | | | | |
|---|---|--|---|--|---|
| 10 | 12 | 16 | | | 18 |
| 80 spec 251  1#8 Service I | 01 spec 261  1#4 Service M | 02 spec 251  38#22D, 1#8 Service N | 22 spec 251  2#12, 2#8 Service M | 75 spec 251  2#8 Service M | 18 spec 251  14#22D, 4#8 Service M |
| 20 | | | | | |
| 20 spec 251  18#20, 2#8 Service M | 42  2#4 Service I | 48  4#8 Service I | 75 spec 251  4#8 Service M | 77  17#22D, 2#8 Service M | 77 spec 251  17#22D, 2#8 Service M |
| 22 | | | | | |
| 06 spec 251  6#8 Service M | | | | | |
| 24 | | | | | |
| 07 spec 251  97#22D, 2#8 Service M | 08 spec 251  8#8 Service M | 41 spec 251  22#22D, 3#20, 11#16, 2#12, 3#8 Service N | 44  4#16, 4#4 Service I | 46 spec 251  40#20, 4#16, 2#8 Service I | |

Ordering information

| | | | | | | | |
|---|-------------|----------|-----------|-----------|----------|----------|------------|
| Basic series | 8STA | 0 | 12 | 01 | P | N | 261 |
| Shell type | | | | | | | |
| 0: Oval flange receptacle (for front or rear mounting) | | | | | | | |
| 1: In-line receptacle | | | | | | | |
| 6: Plug | | | | | | | |
| 7: Jam nut receptacle | | | | | | | |
| Shell size: 10, 12, 16, 18, 20, 22, 24 | | | | | | | |
| Contact layout: See previous page | | | | | | | |
| Type of contact | | | | | | | |
| P: Pin A: without pin contacts (specifications 261 & 545 only) | | | | | | | |
| S: Socket B: without socket contacts (specifications 261 & 545 only) | | | | | | | |
| Orientation: N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal | | | | | | | |
| Specification | | | | | | | |
| None: for contact layouts 20-48 & 24-44 | | | | | | | |
| 251: for contact layouts 10-80, 16-02, 16-75, 18-18, 20-75, 20-78, 24-07, 24-41 & 24-46 | | | | | | | |
| 261: only for 12-01 - see note below | | | | | | | |
| 540: Layout 12-01 with protected socket | | | | | | | |
| 545: Only for layout 24-44 - delivered with contacts #16 & without power contacts #4, power contact #4 to be ordered separately according wire section to be used (see table below) | | | | | | | |

Note : Layout 12-01 specif. 261 only.

1) Standard connector (8STAx1201yz261 where x = shell type; y = type of cts; z = orientation) is provided with power contacts for 16mm² wire.

2) For 10mm² wire, order standard connector (note 1) + reducing sleeve 8400 2351 A separately.

3) For 25mm² wire, order connector without contact, see A & B details in type of contact (ex : 8STAx1201Az261 or Bz261) + contact separately (pin : 8599 7598 900 & socket : 8599 7599 900)

4) For 35mm² wire, order connector without contact, see A & B details in type of contact (ex : 8STAx1201Az261 or Bz261) + contact separately (pin : 8599 0313 & socket : 8599 0316)

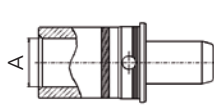
Power contacts

| Designation | Wire 16 mm ² | Wire 25 mm ² | Wire 35 mm ² |
|---|--|--|---|
| | Removable contact | | Non removable contact |
| Color band | Red | Blue | Green |
| Pin contact | 8599 7520A 900 | 8599 7598 900 | 8599 0313 |
| Socket contact | 8599 7521A 900 | 8599 7599 900 | 8599 0316 |
| Reducer - wire 8 & 10 mm² | 8400 2351A | - | - |
| Crimping tool | M22520/23-01 + Die M22520/23-04 + Positionner M22520/23-11 And for wider wire 50 mm ² : M22520/23-01+ Die WA23-4 + Positionner WA23-176L | M22520/23-01 + Die M22520/23-04 + Positionner M22520/23-11 | M22520/23-01 + Die 8599-0319 + Positionner 8599-0318 (male) + Positionner 8599-0317 (female) |
| Plastic extraction tool | M81969/14-07 (blue) | | - |

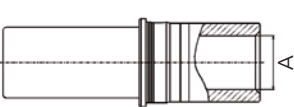
Specific wire dimensions

Power contact #4

Pin contact



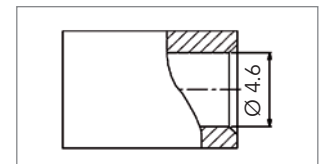
Socket contact



| Cable section | A | | |
|-------------------|--------------------|--------------------|--------------------|
| | 16 mm ² | 25 mm ² | 35 mm ² |
| Contact Ø | 6.5 Min. | 7.33 Min. | 8.65 Min. |
| Color band | Red | Blue | Green |

Reducer for wire 8 and 10 mm²

Compatible with pin and socket contact, wire 16 mm²



Note: All dimensions are in millimeters (mm)

Description

- High vibration withstanding
- Coax contact available for AWG 16, 12 and 8
- Up to 18 GHz DC for #8 coax contact under vibration
- Removable contacts
- Available in shell size 02



Technical features

Mechanical

- **Shell:** Aluminium alloy
- **Shell plating:**
Conductive black zinc
Nickel
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 147m/s², 10 to 2000Hz

- **Contact retention:**
Size 16: 100 N
Size 12: 100 N
Size 8: 110 N

Electrical

- **Grounding:**
Contact grounded with shell
- **Contact definition:**
Coax compliant with M39029/76-424
- **Cable accommodated:**
M17/119-RG174
M17/113-RG316
M17/094-RG179

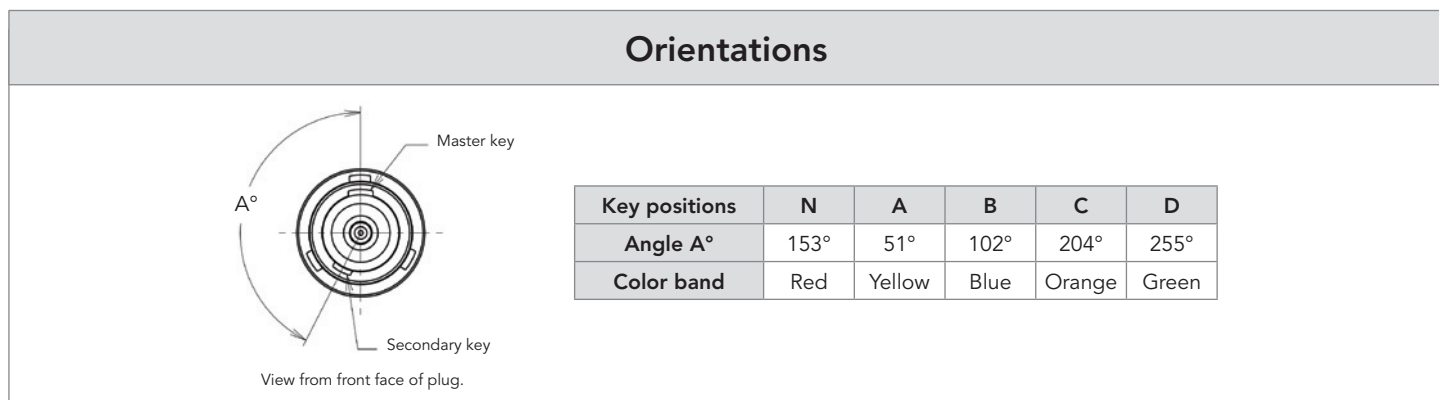
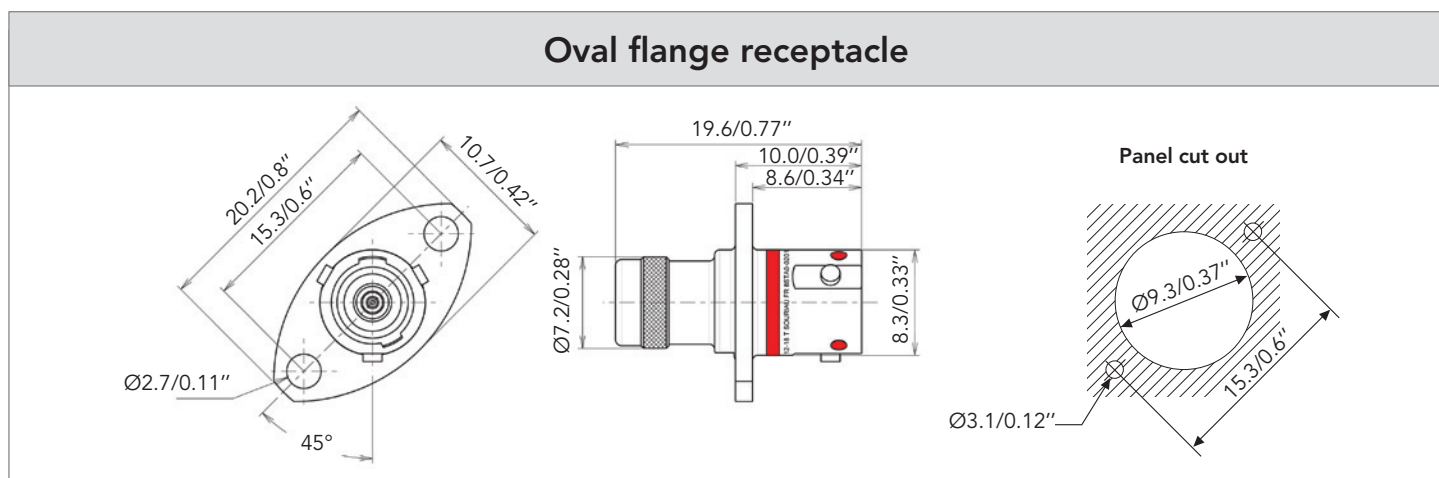
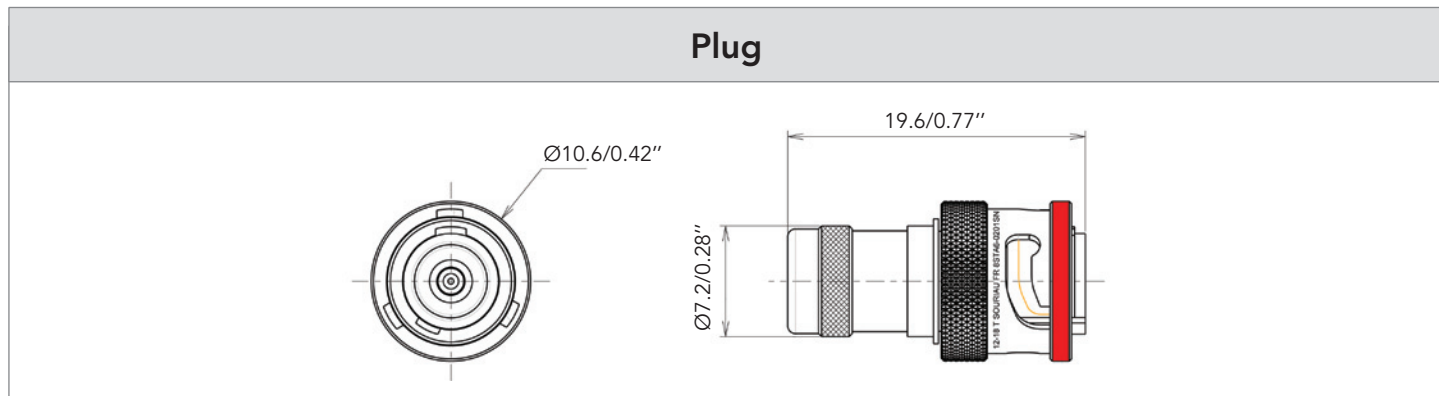
Environmental

- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:**
Aluminum Nickel: 48 hours
Aluminum conductive Black Zinc: 48 hours

Ordering information

| | | | | | | | |
|---|------|---|----|----|---|---|-----|
| Basic series | 8STA | 0 | 02 | 01 | P | N | 801 |
| Shell type 0: Oval flange receptacle 6: Plug | | | | | | | |
| Material & Plating None: Aluminum Black zinc F: Aluminum Nickel | | | | | | | |
| Shell size: 02, consult us for other sizes | | | | | | | |
| Contact layout: 01, consult us for other layouts | | | | | | | |
| Type of contact P: Pin, for oval flange receptacle only S: Socket, for plug only | | | | | | | |
| Orientation N: Red / A: Yellow / B: Blue / C: Orange / D: Green | | | | | | | |
| Mandatory specification 801: Delivered with grounded coax contact | | | | | | | |

Dimensions



Note: All dimensions are in millimeters and inches (mm/inch).

Description

- Derived from MIL-DTL-38999 & JN1003 standard
- Rugged aluminium body to ensure long service life in the harshest environment
- 100% scoop proof
- Available in 6 shell sizes: 02-05; 04-06; 06-09; 08-12; 10-26; 12-43; 14-68
- Contacts #26 for AWG 24 to 30



Technical features

Mechanical

- **Shell:** Aluminium alloy
- **Shell plating:**
Conductive black zinc
Nickel (F)
- **Insulator:** Thermoplastic
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 147m/s², 10 to 2000Hz

Electrical

- **Contact resistance:** Size 26: 16m Ω
- **Insulation resistance:**
 $\geq 5000M\Omega$ (at 500Vdc)
- **Contact rating:** Size 26: 3 Amp
- **Shell continuity:** $\leq 10m\Omega$

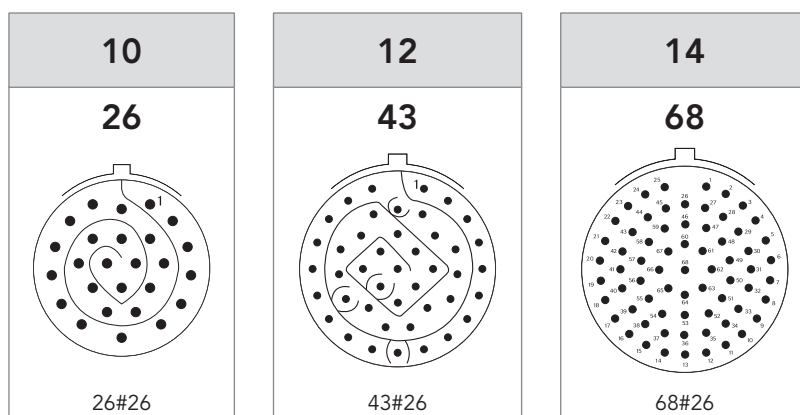
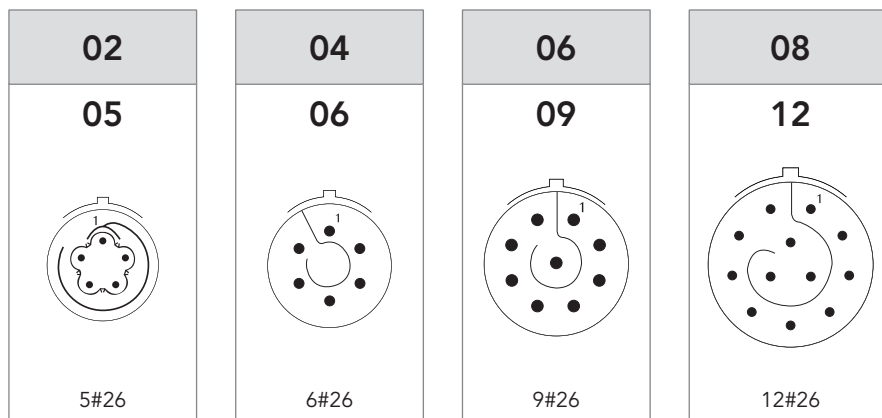
Environmental

- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours

Ordering information

| Basic series | 8STA | 6 | 12 | 43 | P | N |
|--|------|---|----|----|---|---|
| Shell type 0: Oval flange receptacle 1: In line receptacle 2: Oval Flange receptacle with PCB contacts 6: Plug 7: Jam nut receptacle | | | | | | |
| Shell size 02, 04, 06, 08, 10, 12, 14 | | | | | | |
| Contact layout: See below | | | | | | |
| Type of contact P: Pin S: Socket | | | | | | |
| Orientation N: Red, A: Yellow, B: Blue, C: Orange, D: Green, E: Grey (shell size 02 only), U: Universal | | | | | | |
| Specification None : Standard crimp version 499: Integrated clinch nut on the flange: . M2 insert (shell type 0 & 2 only for shell sizes 04 & 06) . M3 insert (shell type 0 & 2 only for shell sizes 08, 10 & 12) 523: Light weight in line receptacle - for shell sizes 08 to 12 (shell type 1 only) 528: Integrated clinch nut on the flange: M2.5 insert (shell type 0 & 2 only for shell sizes 04 & 06) 566: Rackable plug - for shell sizes 10 & 12 (shell type 6 only) | | | | | | |

Contact layouts (viewed from front face of male insulator)



8STA/8TA SERIES

8STA/8TA Series

Derived Series

| | |
|---|----|
| ■ 8STA Series - Integrated clinch nuts..... | 38 |
| ■ 8STA Series - Single hole fixing..... | 40 |
| ■ 8STA Series - Quick release for steering boss system..... | 42 |
| ■ 8STA Series - Blind mating plug..... | 44 |
| ■ 8STA Series - Hermetic shell size 02..... | 46 |
| ■ 8STA Series - Hermetic fuel tank..... | 48 |
| ■ 8STA Series - Hermetic feed-through..... | 50 |
| ■ 8STA Series - Fuel immersible..... | 52 |

Description

- A convenient and time saving feature - Weight saving opportunities: Elimination of nut plates
- SOURIAU's offer:
 - . 12 shell sizes available, from size 02 to 24
 - . Available with standard crimp contacts (shell type 0) and PCB contacts (shell type 2)



Technical features

Mechanical

- **Shell:** Aluminium alloy
- **Shell plating:** Conductive black zinc
- **Insulator:** Thermoplastic
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 147m/s², 10 to 2000Hz

Contact retention:

| | |
|-----------|-------|
| Size 26: | 35 N |
| Size 22D: | 45 N |
| Size 20: | 60N |
| Size 16: | 100 N |
| Size 12: | 100 N |
| Size 8: | 110 N |
| Size 4: | 200 N |

Electrical

- Please see details page 16 for sizes 02 to 06, and page 19 for sizes 08 to 24

Environmental

- **Operating temperature:** -55°C to +175°C
- **Sealing mated connectors:** IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours

Current solution:



Connector + extra nut plate fixed on the rear connector side.

NEW solution:



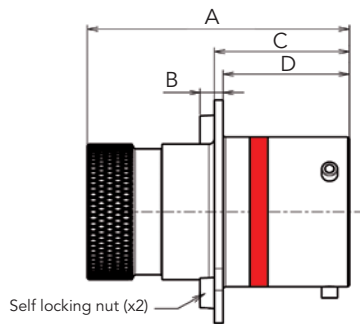
Integrated clinch nuts on the flange = **Cost and time saving!**

Ordering information

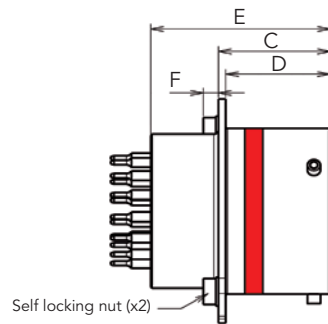
| | | | | | | | |
|----------------------------------|---|----------|-----------|-----------|----------|----------|------------|
| Basic series | 8STA | 0 | 10 | 35 | P | N | 499 |
| Shell type | 0: Oval flange receptacle 2: Oval flange receptacle with PCB contacts | | | | | | |
| Shell size | 02, 04, 06, 08, 10, 12, 14, 16, 18, 20, 22, 24 | | | | | | |
| Contact layout | See pages 10 to 13 | | | | | | |
| Type of contact | P: Pin S: Socket | | | | | | |
| Orientation | N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal | | | | | | |
| Specification (mandatory) | 499: Integrated nut on the flange - M2 insert for sizes 02 to 06 / M3 insert for sizes 08 to 24 528: Integrated nut on the flange - M2.5 insert for sizes 02 to 06 | | | | | | |

Dimensions

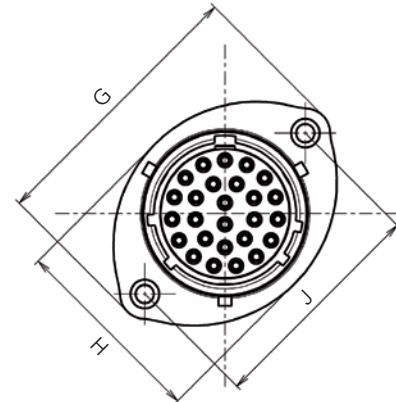
Oval flange receptacle



Standard version



PC Tail version



| Shell size | A | B | C | D | E max. | F | G max. | H max. | J ±0.20 |
|------------|-------|-------|-------|-------|--------|-------|--------|--------|---------|
| 02 | 16.30 | 3.22 | 10.15 | 8.80 | 17.5 | 2.05 | 21.4 | 10.50 | 15.4 |
| 04 | 18.30 | 3.37 | 10.7 | 9.2 | 18.3 | | 22.3 | 13.2 | 16.4 |
| 06 | 23.25 | 3.83 | 12.95 | 10.95 | 23.25 | | 24.0 | 15.0 | 18.2 |
| 08 | 33.4 | 3.32 | 17.21 | 16.05 | 27.65 | 2.72 | 29.25 | 16.50 | 21.40 |
| 10 | | | | | | | 33.75 | 19.50 | 25.90 |
| 12 | | | | | | | 36.95 | 24.00 | 29.10 |
| 14 | | | | 40.35 | | | 27.00 | 32.50 | |
| 16 | | | | 42.65 | | | 30.30 | 34.80 | |
| 18 | | | | 46.05 | | | 33.70 | 38.20 | |
| 20 | 15.29 | 18.20 | 15.29 | 15.29 | 15.29 | 15.29 | 49.45 | 37.00 | 41.60 |
| 22 | | | | | | | 52.85 | 40.40 | 45.00 |
| 24 | | | | | | | 57.35 | 43.40 | 49.50 |

For other dimensions please see:

p.16 for Standard version sizes 02 to 06.

p.19 for Standard version sizes 08 to 24.

p.26 for PC Tail version sizes 02 to 24.

Note: All dimensions are in millimeters (mm)

Description

- Half flange weight saving connector
- Derived from MIL-DTL-38999 & JN1003 standard
- 100% scoop proof
- Available from 02 to 24 shell sizes
- Clinch nuts or PCB version available



Technical features

Mechanical

- **Shell:** Aluminium alloy
- **Shell plating:**
Conductive black zinc:
Nickel (F)
- **Insulator:** Thermoplastic
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 147m/s², 10 to 2000Hz
- **Contact retention:**

| | |
|-----------|-------|
| Size 26: | 35 N |
| Size 22D: | 45 N |
| Size 20: | 60N |
| Size 16: | 100 N |
| Size 12: | 100 N |
| Size 8: | 110 N |
| Size 4: | 200 N |

Electrical

- **Test voltage:**

| Service | Sea level | @21,000m |
|---------|-----------|----------|
| R | 400 | N/A |
| S | 1,000 | N/A |
| M | 1,300 | 800 |
| N | 1,000 | 600 |
| I | 1,800 | 1,000 |
| II | 2,300 | 1,000 |

- **Contact resistance:**

| | |
|-----------|---------|
| Size 26: | <16 mΩ |
| Size 22D: | 14.6 mΩ |
| Size 20: | 7.3 mΩ |
| Size 16: | 3.8 mΩ |
| Size 12: | 3.5 mΩ |
| Size 8: | 3 mΩ |
| Size 4: | 2 mΩ |

- **Insulation resistance:**

≥ 5000MΩ @ 400Vdc / Size 26
 ≥ 5000MΩ @ 500Vdc / All other sizes

- **Contact rating:**

| | |
|-----------|-------|
| Size 26: | 3 Amp |
| Size 22D: | 5 A |
| Size 20: | 7.5 A |
| Size 16: | 13 A |
| Size 12: | 23 A |
| Size 8: | 45 A |
| Size 4: | 80 A |

- **Shell continuity:** ≤10 mΩ

Environmental

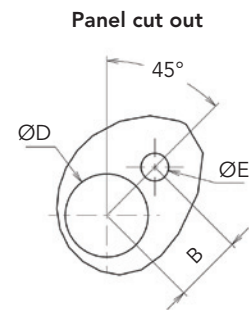
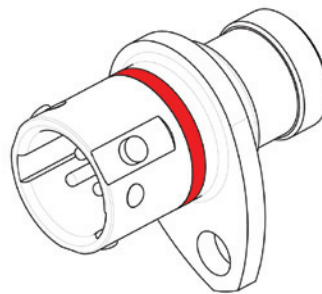
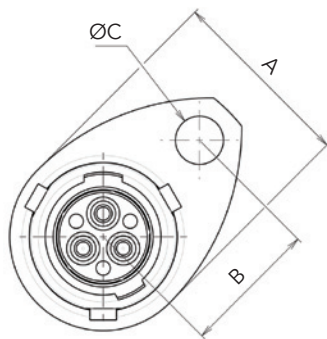
- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:**
Aluminum Nickel: 48 hours
Aluminum conductive Black Zinc: 48 hours

Ordering information

| | | | | | | | | |
|-------------------------------|---|----------|--|-----------|-----------|----------|----------|------------|
| Basic series | 8STA | 0 | | 10 | 35 | P | N | 890 |
| Shell type | 0: Half oval flange receptacle | | | | | | | |
| Material & Plating | None: Aluminum Black zinc F: Aluminum Nickel | | | | | | | |
| Shell size | 02, 04, 06, 08, 10, 12, 14, 16, 18, 20, 22, 24 | | | | | | | |
| Contact layout: | See pages 10 to 13 | | | | | | | |
| Type of contact | P: Pin S: Socket | | | | | | | |
| Orientation | N: Red / A: Yellow / B: Blue / C: Orange / D: Green / E: Grey (shell size 02 only) / U: Universal (consult us) | | | | | | | |
| Specification | 890: Single hole fixing - half oval flange receptacle | | | | | | | |

For any other configuration (clinch nuts, PC tail, ...), please consult us.

Dimensions



| Size | 02 | 04 | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
|--------------------------|------------|------------|------------|------------|-------------|-------------|-------------|------------|------------|------------|------------|-------------|
| A max. | 10.7/0.42" | 13.2/0.52" | 14.9/0.59" | 16.5/0.65" | 19.5/0.77" | 24.0/0.94" | 27.0/1.06" | 30.3/1.19" | 33.7/1.33" | 37.0/1.46" | 40.4/1.59" | 43.4/1.71" |
| B^{±0.1} | 7.65/0.30" | 8.1/0.32" | 9.0/0.35" | 10.7/0.42" | 12.95/0.51" | 14.55/0.57" | 16.25/0.64" | 17.4/0.69" | 19.1/0.75" | 20.8/0.82" | 22.5/0.89" | 24.75/0.97" |
| ØC max. | 2.80/0.11" | | | 3.20/0.13" | | | | | | | | 3.77/0.15" |
| ØD^{±0.1} | 9.3/0.37" | 12.0/0.47" | 13.0/0.51" | 14.5/0.57" | 17.4/0.69" | 21.9/0.86" | 25.0/0.98" | 28.2/1.11" | 31.4/1.24" | 34.6/1.36" | 37.6/1.48" | 41.0/1.61" |
| ØE^{±0.2} | 3.10/0.12" | | | 3.60/0.14" | | | | | | | | 4.10/0.16" |

Note: All dimensions are in millimeters and inches (mm/inch).

Description

- Rugged aluminium body to ensure long service life in the harshest environment.
- 100% scoop proof.
- Available in 2 shell sizes: 10 and 12, please consult us for other sizes.
- Standard insulators shell sizes 10 and 12 available.



Technical features

Mechanical

- **Shell:** Aluminium
- **Shell plating:** Conductive black zinc
- **Insulator:** Thermoplastic
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 147m/s², 10 to 2000Hz

Electrical

- **Contact resistance:**
Size 22D: 14.6mΩ
- **Insulation resistance:** ≥ 5000MΩ @ 500Vdc
- **Contact rating:**
Size 22D: 5 Amp
- **Shell continuity:** ≤ 10mΩ

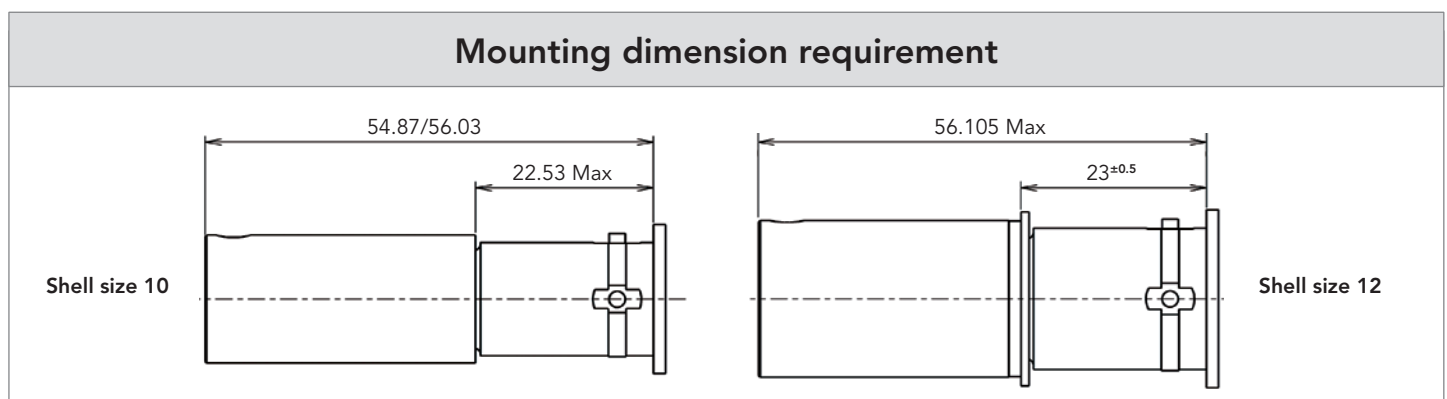
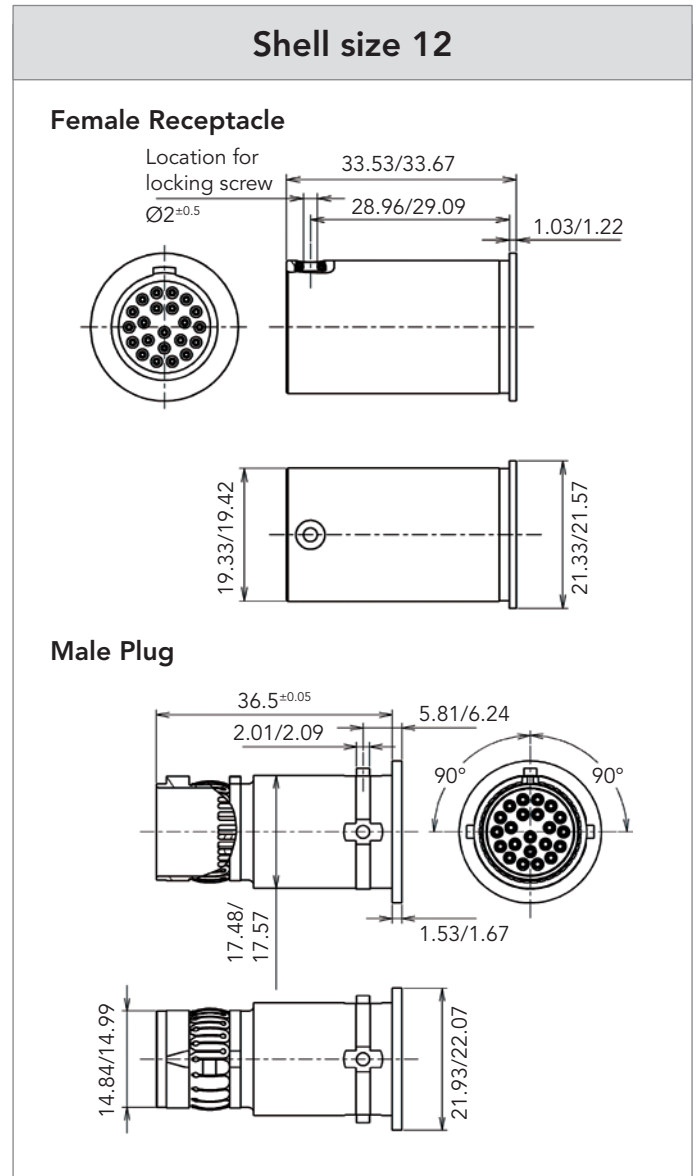
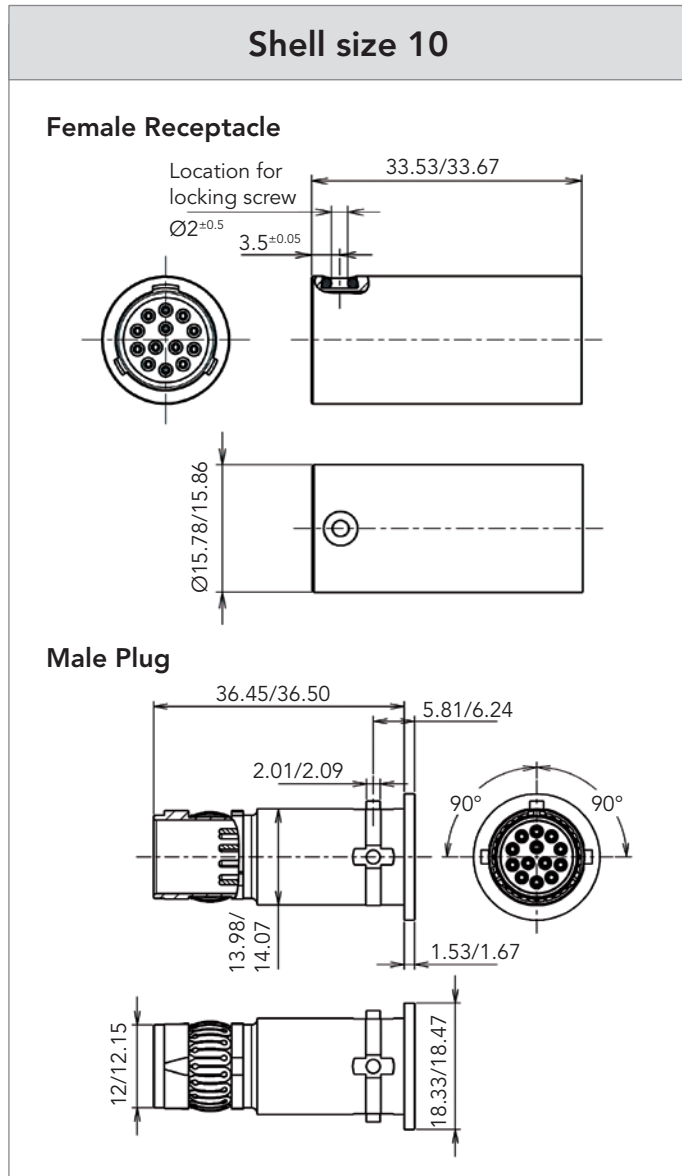
Environmental

- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours

Ordering information

| | | | | | | | |
|--|------|---|----|----|---|---|-----|
| Basic series | 8STA | 6 | 12 | 35 | P | N | 518 |
| Shell type 0: Receptacle side 6: Plug side | | | | | | | |
| Shell size: 08 (consult us), 10, 12 | | | | | | | |
| Contact layout: See pages 10 to 13 | | | | | | | |
| Type of contact P: Pin S: Socket | | | | | | | |
| Orientation: N | | | | | | | |
| Specification (mandatory) 518: Steering column | | | | | | | |

Dimensions



Note: All dimensions are in millimeters (mm)

Description

- Blind mating solution for quick connection in hard-to-reach areas.
- Specific 8STA plug: compensating for misalignment in 3 axes.
- Blind connection:
 - . Easy and fast connection without any coupling/uncoupling between float-mounting unit and fixed unit.
 - . 100% Scoop proof.
- A versatile product:
 - . Available in sizes 10, 12, 14 and 16
 - . All layouts according connector shell size.
 - . Available in crimp contacts.
- Mandatory mating part: standard jam nut receptacle 8STA7



Technical features

Mechanical

- Shell: Aluminium alloy
- Shell plating: Conductive black zinc
- Insulator: Thermoplastic
- Grommet & seal: Liquid silicone rubber
- External cover: Green fluoro silicone
- Contact: Copper alloy
- Contact plating: Gold
- Contact retention:
 - Size 22D: 45N Size 20: 60N
 - Size 16: 100N Size 12: 100N
 - Size 8: 110N Size 4: 200N
- Flange dimension:
 - . Flange of plug size 16 equivalent to flange of receptacle size 22
 - . Flange of plug size 14 equivalent to flange of receptacle size 20
 - . Flange of plug size 12 equivalent to flange of receptacle size 18
 - . Flange of plug size 10 equivalent to flange of receptacle size 16

Electrical

- Test voltage

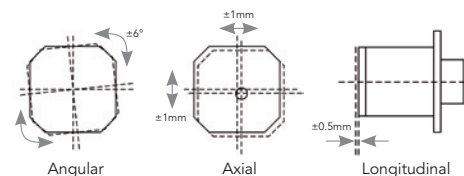
| Service | M | N | I | II |
|-----------|------|------|------|------|
| Sea level | 1300 | 1000 | 1800 | 2300 |

- Contact resistance:
 - Size 22D: 4.6 mΩ
 - Size 20: 7.3 mΩ Size 16: 3.8 mΩ
 - Size 12: 3.5 mΩ Size 4: 2 mΩ
- Insulation resistance:
 - ≥ 5000 MΩ (at 500 Vdc)
- Contact rating:
 - Size 22D: 5A Size 20: 7.5A
 - Size 16: 13A Size 12: 23A
 - Size 8: 45A Size 4: 80A

Environmental

- Temperature range: -55°C to +175°C
- Sealing mated connectors:
 - IP67 (1 meter for 30 min. minimum)
- Salt spray: 48 hours

Compensating for misalignment in 3 axes



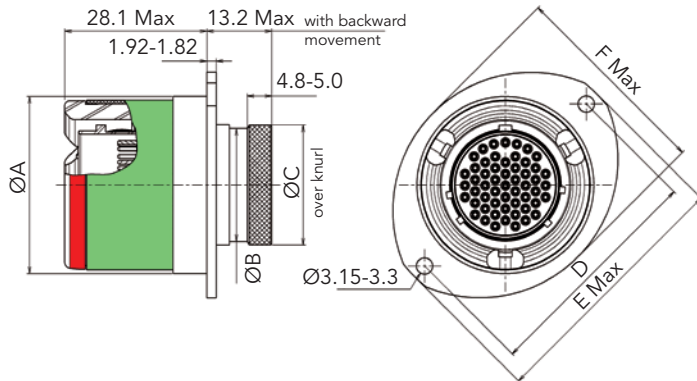
Ordering information

| | | | | | | | |
|----------------------------------|---------------------------------------|---|----|----|---|---|-----|
| Basic series | 8STA | 6 | 12 | 35 | S | N | 566 |
| Shell style | 6: Blind mating plug | | | | | | |
| Shell size | 10, 12, 14, 16 | | | | | | |
| Contact layouts | See pages 10 to 13 | | | | | | |
| Type of contacts | P: Pin contacts S: Socket contacts | | | | | | |
| Orientation | N: Red | | | | | | |
| Specification (mandatory) | 566: Rackable plug | | | | | | |

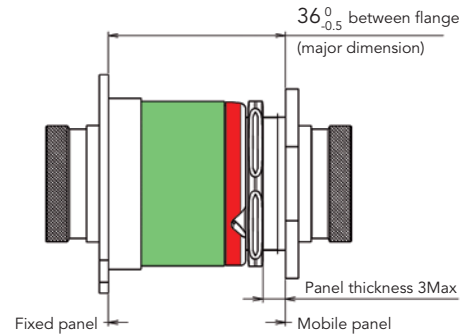
Note: Receptacle to be used with rackable plug = 8STA7xxxx (standard jam nut version)

Dimensions

Plug type 6



Mated Connector
(plug type 6 & jam nut receptacle type 7)



| Shell size | $\varnothing A_{-0}^{+0.3}$ | $\varnothing B_{-0}^{+0.2}$ | $\varnothing C$ | $D_{-0}^{+0.4}$ | E | F |
|------------|-----------------------------|-----------------------------|-----------------|-----------------|-------|-------|
| 10 | 25.17 | 12.85 | 13.72 | 34.60 | 41.00 | 30.30 |
| 12 | 28.35 | 15.92 | 17.26 | 38.00 | 44.70 | 33.70 |
| 14 | 31.52 | 18.90 | 20.41 | 41.40 | 47.90 | 37.00 |
| 16 | 34.70 | 22.08 | 23.60 | 44.80 | 51.00 | 40.40 |

Note: All dimensions are in millimeters (mm)

Description

- The smallest hermetic circular 5 ways PCB connector on the market
- Lightweight 8STA connector
- Suitable for welding directly to sensor bodies: Designed for weld fixing
- Excellent corrosion resistance: Stainless steel body
- Excellent hermeticity: Hermetic glass bead (1.10^{-7} cm³/s)
- Intermateable with standard plug size 02
- Easy identification with colour coded bands: 7 visual keyway orientations
- Rapid & secure locking system with audible click: Bayonet connector



Technical features

Mechanical

- **Shell:** Stainless steel
- **Shell plating:** Passivated
- **Insulator:** Glass bead
- **Contact:** Iron-Nickel (NiFe2)
- **Contact plating:** Nickel
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 10 to 2000 Hz 30g

Electrical

- **Test voltage:** 400Vrms (sea level)
- **Contact resistance:** 2 m Ω
- **Insulation resistance:** $\geq 5000M\Omega$ (at 500Vdc)
- **Contact rating:** 1.8 Amp

Environmental

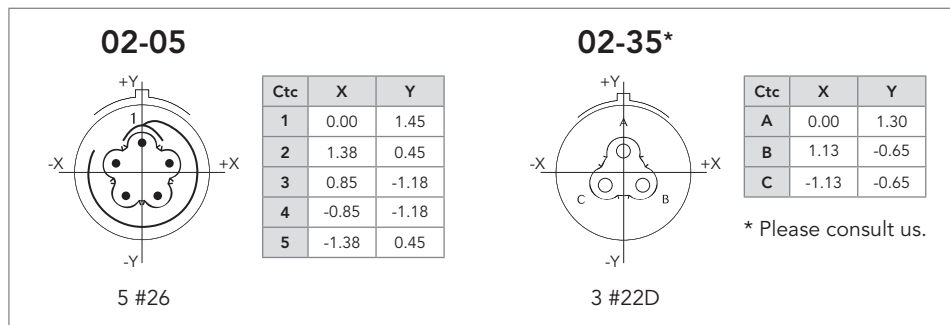
- **Operating temperature:** -55°C to +175°C
- **Sealing mated connectors:** IP67 (1 meter for 30 min minimum)
- **Salt spray:** 48 hours
- **Hermeticity:** 1.10^{-7} cm³/s

Ordering information

| | | | | | | | | |
|---------------------------|---|---|---|----|----|---|---|-----|
| Basic series | 8STA | 1 | Y | 02 | 05 | P | N | 170 |
| Shell type | 1: In-line connector | | | | | | | |
| Class | Y: Hermetic version | | | | | | | |
| Shell size | 02 | | | | | | | |
| Contact layout | See below for available layouts | | | | | | | |
| Type of contact | P: Pin contacts | | | | | | | |
| Orientation | N: Red / C: Orange - please consult us for other keyway | | | | | | | |
| Specification (mandatory) | 170: Hermetic shell size 02 | | | | | | | |

Contact layouts

and PCB drilling information. Viewed from front face of male insulator

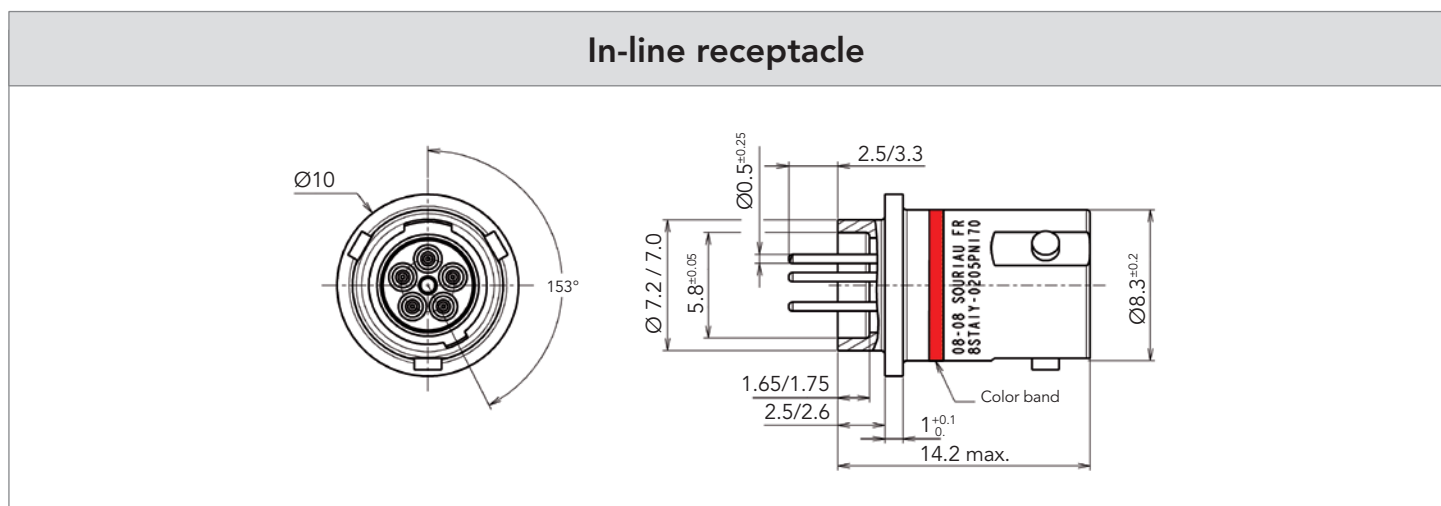


Connector weight

Maximum in grams

| Layout | In-line receptacle |
|--------|--------------------|
| 02-05 | 2.5 |
| 02-35 | 2.5 |

Dimensions



Note: All dimensions are in millimeters (mm)

Description

- Hermetically sealed connector: $1.10^{-7} \text{ cm}^3/\text{s}$ @ 15PSI
- Withstands pressure differential without loss of electrical performances: Glass to metal insert
- Excellent resistance to racing fuels & fluids: Viton® interfacial seal
- Excellent corrosion resistance: Stainless steel material
- Low profile design for heat shrink boot & cost effective connector
- Integrated backshell

Technical features

Mechanical

- **Shell:** Stainless steel
- **Shell plating:** Passivated
- **Insulator:** Glass bead
- **Contact:** Nickel iron
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:** 10 to 2000 Hz 30g

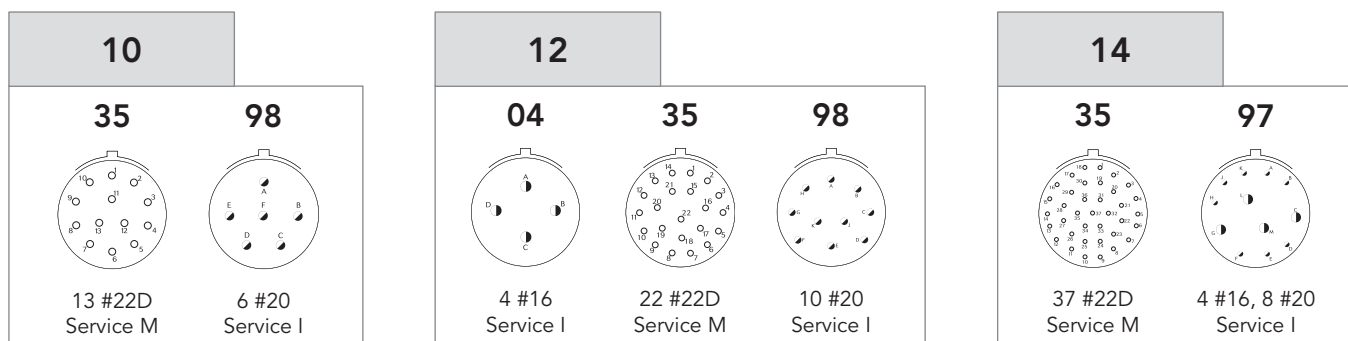
Electrical

- **Test voltage:**
Service I: 1800V
Service M: 1300V
- **Contact resistance:** 2 mΩ
- **Insulation resistance:**
 $\geq 5000\text{M}\Omega$ (at 500Vdc)
- **Contact rating:**
Size 16: 10 A
Size 20: 5 A
Size 22D: 3 A

Environmental

- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 meter for 30 min minimum)
- **Salt spray:** 48 hours
- **Hermeticity:** $1.10^{-7} \text{ cm}^3/\text{s}$

Contact layouts (viewed from front face of male insulator)



Ordering information

| | | | | | | | | |
|---------------------------|---|---|---|----|----|---|---|-----|
| Basic series | 8STA | 7 | Y | 10 | 98 | P | N | 022 |
| Shell type | 7: Jam nut receptacle | | | | | | | |
| Class | Y: Hermetic version | | | | | | | |
| Shell size | 10, 12, 14 | | | | | | | |
| Contact layout | See previous page for available layouts | | | | | | | |
| Type of contact | P: Pin contacts | | | | | | | |
| Orientation | N: Red / A: Yellow / D: Green | | | | | | | |
| Specification (mandatory) | 022: Fuel immersible version | | | | | | | |

Dimensions

Jam nut receptacle

Panel thickness: 1.5 to 5

| Shell size | ø A max. | ø B max. | C max. | ø D max. | E Thread | Panel cut out | |
|------------|----------|----------|--------|----------|----------|---------------|---------|
| | | | | | | ø F ±0.10 | G ±0.20 |
| 10 | 15.04 | 28.40 | 25.95 | 20.50 | M18 x 1 | 17.70 | 16.80 |
| 12 | 19.09 | 33.00 | 30.75 | 23.67 | M21 x 1 | 22.70 | 20.90 |
| 14 | 22.26 | 36.30 | 33.85 | 26.84 | M24 x 1 | 25.70 | 24.10 |

Connector weight

Maximum in grams

| Shell size | Jam nut receptacle |
|------------|--------------------|
| 10 | 35 |
| 12 | 52 |
| 14 | 63 |

Note: All dimensions are in millimeters (mm)

Description

- Solder contacts on both sides of bulkhead
- Designed for high vibration environment
- Wire soldered on both sides of the feed-through: no plugs needed
- Cost and space saving:
 - . Adapted to space-constrained area
 - . No plugs necessary
- Easy to solder:
 - . Contacts fully tin plated
 - . Different contact sizes available
- High performance sealing: $<1.10^{-7}$ atm.cm³/s

Technical features

Mechanical

- **Shell:** Stainless steel
- **Shell plating:** Passivated
- **Insulator:** Glass bead
- **Contact:** Nickel iron, tin plated

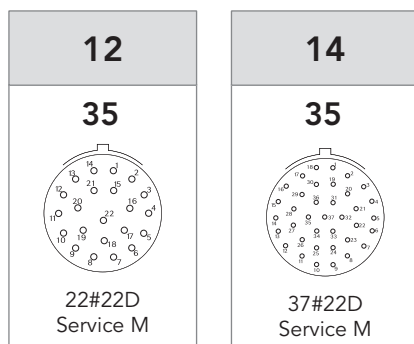
Electrical

- **Test voltage:** Service M: 1300V
- **Contact resistance:** 2 mΩ
- **Insulation resistance:**
 - ≥ 5000MΩ (at 500Vdc)
- **Contact rating:** Size 22D: 3 A

Environmental

- **Operating temperature:**
 - 55°C to +175°C
- **Sealing mated connectors:**
 - IP67 (1 meter for 30 min minimum)
- **Salt spray:** 48 hours
- **Hermeticity:** 1.10^{-7} cm³/s

Contact layouts (viewed from front face of male insulator)

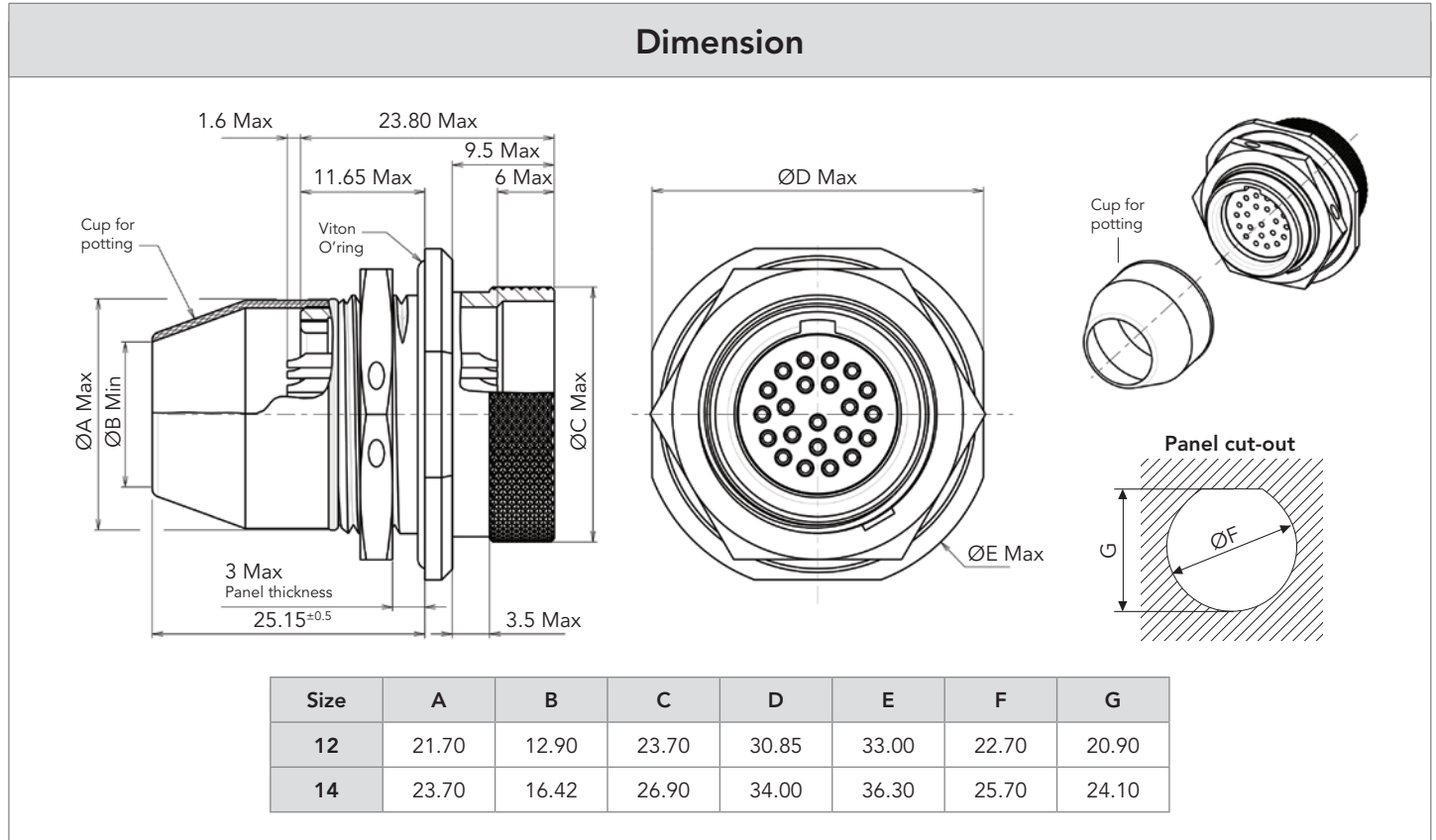


Consult us for other layouts or shell sizes.

Ordering information

| | | | | | | |
|-----------------------|--|---|---|----|----|-----|
| Basic series | 8STA | 7 | Y | 12 | 35 | 199 |
| Shell type | 7: Jam nut receptacle | | | | | |
| Class | Y: Hermetic version | | | | | |
| Shell size | 12, 14 | | | | | |
| Contact layout | 35 | | | | | |
| Specification | 199: #22 solder cup contacts on both sides | | | | | |

Note: Delivery will contain the cup for potting and the jam nut receptacle not mounted. Consult us for other layouts or shell sizes.



Note: All dimensions are in millimeters (mm)

Description

- Available for 8STA & 8TA Series
- Special fuel resistant insert: continuous immersion without loss of performance
- Excellent connector sealing on panels by using the jam nut version



Technical features

Mechanical

- **Shell:** Aluminium alloy
- **Shell plating:** Conductive black zinc
- **Insulator:** Thermoplastic
- **Grommet & seal:** Fluoroelastomer
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** 300g for 3ms and EIA-364-27
- **Vibration:**
8STA: 147m/s², 10 to 2000Hz
8TA: random 100 to 1000 Hz - 1G²/Hz
- **Contact retention:** (8TA: Size 22D only)
Size 22D: 45 N
Size 20: 60N
Size 16: 100 N
Size 12: 100 N

Electrical

- **Test voltage:** 1300 Vrms
- **Contact resistance:** (8TA: Size 22D only)
Size 22D: 14.6 mΩ
Size 20: 7.3 mΩ
Size 16: 3.8 mΩ
Size 12: 3.5 mΩ
- **Insulation resistance:**
≥ 5000 MΩ (at 500 Vdc)
- **Contact rating:** (8TA: Size 22D only)
Size 22D: 5 A
Size 20: 7.5 A
Size 16: 13 A
Size 12: 23 A
- **Shell continuity:** ≤10 mΩ

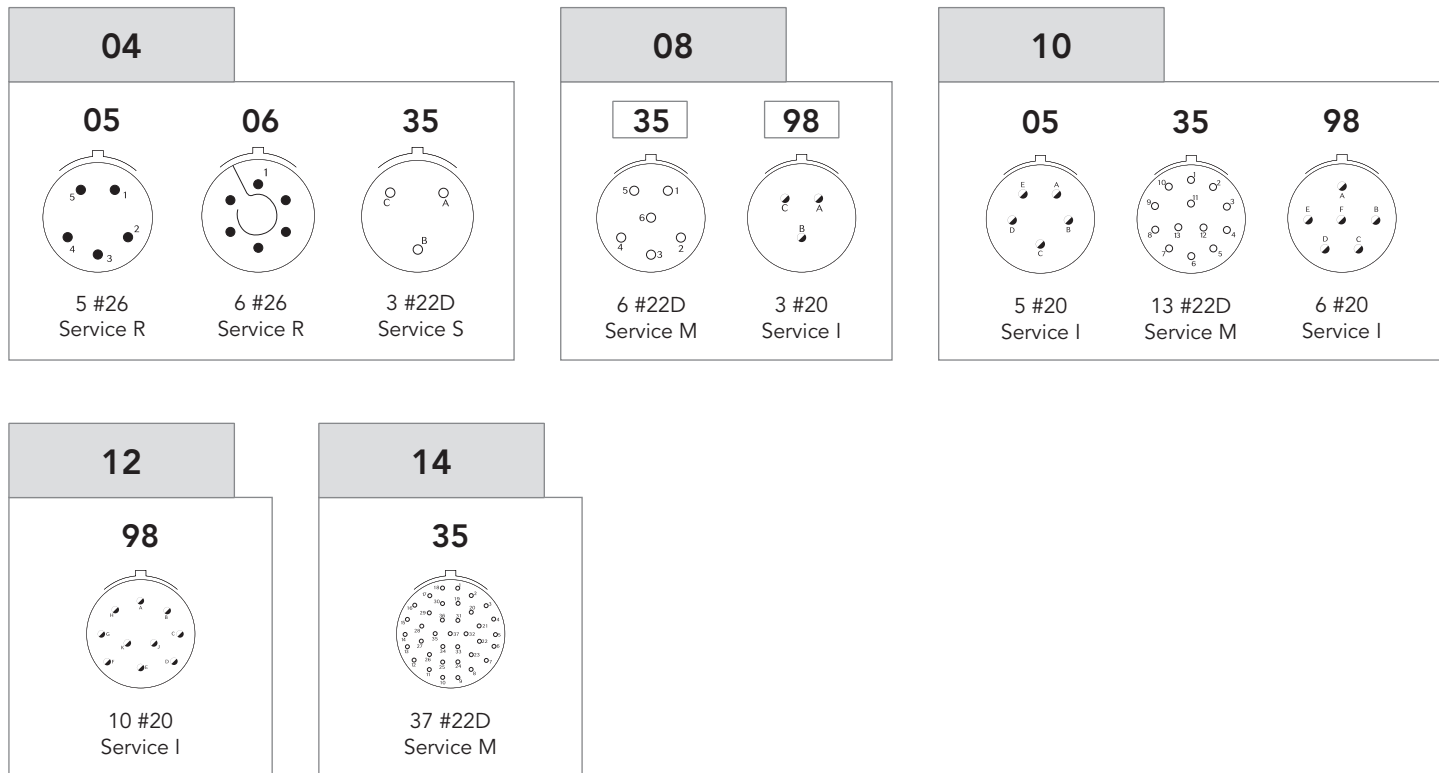
Environmental

- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours
- **Resistance to fluids:**
Withstands most of Motorsport fluids

Ordering information

| | | | | | | | |
|----------------------------------|-------------|--------|----------|----------|--------|--------|------------|
| Basic series | 8STA 8TA | 0 0 | 08 08 | 35 35 | P P | N N | 022 022 |
| Shell type | | | | | | | |
| 0: Oval flange receptacle | | | | | | | |
| 1: In-line receptacle | | | | | | | |
| 6: Plug | | | | | | | |
| 7: Jam nut receptacle | | | | | | | |
| Shell size | | | | | | | |
| 04, 08, 10, 12, 14, 16 | | | | | | | |
| Contact layout | | | | | | | |
| See below for available layouts | | | | | | | |
| Type of contact | | | | | | | |
| P: Pin contacts | | | | | | | |
| S: Socket contacts | | | | | | | |
| Orientation | | | | | | | |
| N: Red | | | | | | | |
| A: Yellow | | | | | | | |
| D: Green | | | | | | | |
| Specification (mandatory) | | | | | | | |
| 022: Fuel immersible version | | | | | | | |

Contact layouts (viewed from front face of male insulator)



For both 8STA & 8TA, all others for 8STA only.

8STA/8TA SERIES

8STA/8TA Series

Common Section

| | |
|--|----|
| ■ Crimp contacts | 56 |
| ■ PC Tail contacts | 57 |
| ■ Wiring instructions..... | 57 |
| ■ Filler plugs..... | 58 |
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| ■ Insertion and extraction tools..... | 59 |
| ■ Boots, Shrinkable termination detail | 59 |
| ■ Metal protective caps..... | 60 |
| ■ Nut plates, Gaskets | 61 |

Contacts

Crimp contacts

| Series | Contact size | Shell size & layout | Contact type | Contact Ø max. | Part numbers | Admissible wire section | | | | External Ø over insulation (mm) | |
|------------------------------|----------------------|-----------------------|--------------|----------------|------------------------------------|-------------------------|------------------------|------|------|---------------------------------|------|
| | | | | | | mm ² | | AWG | | Min. | Max. |
| | | | | | | Min. | Max. | Min. | Max. | | |
| 8STA Series | #26 High Density | 06-05 | Pin | 0.50 | 8593 0998 A | 0.055 | 0.215 | 30 | 24 | 0.60 | 0.83 |
| | | | Socket | | 8593 0999 A | | | | | | |
| | | Shell sizes 08 to 24 | Pin | | 8599-0297 | | | | | | |
| | | | Socket | | 8599-0298 | | | | | | |
| | | 04-05 | Pin | | 8593-0947 A | | | | | | |
| | | | Socket | | 8593-0948 A | | | | | | |
| | | 02-05; 04-06 06-09 | Pin | | 8599-1001 | | | | | | |
| | | | Socket | | 8599-1002 | | | | | | |
| | #22D Signal contact | Shell sizes 08 to 24 | Pin | 0.76 | 8599-0702 JJ | 0.090 | 0.380 | 28 | 22 | 0.76 | 1.37 |
| | | | Socket | | 8599-0706 900 | | | | | | |
| | | 02-35; 04-35 06-35 | Pin | | 8599-0702 JJ | 0.090 | 0.380 | 28 | 22 | 0.71 | 1.37 |
| | | | Socket | | 8599-0710 900 | | | | | | |
| | #20 Signal contact | Shell sizes 08 to 24 | Pin | 1.00 | 8599-0703 SA | 0.215 | 0.600 | 24 | 20 | 1.02 | 2.11 |
| | | | Socket | | 8599-0707 900 | | | | | | |
| | #16 Signal contact | Shell sizes 08 to 24 | Pin | 1.60 | 8599-0704 MJ | 0.600 | 1.340 | 20 | 16 | 1.65 | 2.77 |
| | | | Socket | | 8599-0708 900 | | | | | | |
| | #16 Coaxial contact | Shell sizes 08 to 24 | Pin | 1.60 | M39029/76 424 | RG 174; RG 179; RG 316 | | | | 1.65 | 2.60 |
| | | | Socket | | M39029/77 428 | | | | | | |
| | #12 Signal contact | Shell sizes 08 to 24 | Pin | 2.40 | 8599-0705 MJ | 1.910 | 3.180 | 14 | 12 | 2.46 | 3.61 |
| | | | Socket | | 8599-0709 900 | | | | | | |
| | #12 Coaxial contact | Shell sizes 08 to 24 | Pin | | M39029/102 558 | RG 174; RG 179; RG 316 | | | | 2.40 | 2.60 |
| | | | Socket | | M39029/103 559 | | | | | | |
| | #08 Power contact | Shell sizes 08 to 24 | Pin | 3.64 | 8599-7580 | - | 8.980 | - | 8 | 4.50 | 6.50 |
| | | | Socket | | 8599-7581 | | | | | | |
| Boot | | | 8599-4542 | | | | | | | | |
| Reductor* | | | 8599-7645 | | | | | | | | |
| #08 Coaxial contact | Shell sizes 08 to 24 | Pin | 3.64 | M39029/59 366 | RG 188A/U | | | | - | 2.80 | |
| | | Socket | | M39029/60 367 | | | | | | | |
| | | Boot | | 8590-4571 | | | | | | | |
| #08 Triaxial contact | Shell sizes 08 to 24 | Pin | 3.64 | M39029/90-529 | MIL-C17/176 00002; FILECA F2703/14 | | | | 3.15 | 3.40 | |
| | | Socket | | M39029/91-530 | RAYCHEM CHEMINAX 10612; | | | | | | |
| | | Boot | | 8590-4571 | FILOTEX M 17/176 00002 | | | | | | |
| #04 Power contact (see p.29) | Shell sizes 08 to 24 | Pin | 5.75 | 8599-7520A 900 | 7 | 10 | According to wire used | | | | |
| | | Socket | | 8599-7521A 900 | | | | | | | |
| | | Boot | | 8599-4593 | | | | | | | |
| | | Reductor** | | 8400-2351A | | | | | | | |
| | | Pin | | 8599-7520A 900 | 4 | 16 | | | | | |
| | | Socket | | 8599-7521A 900 | | | | | | | |
| Boot | 8599-4594 | | | | | | | | | | |
| 8TA Series | #22D Signal contact | 08-35 | Pin | 0.76 | 8599-0702 JJ | 0.090 | 0.380 | 28 | 22 | 0.71 | 1.37 |
| | | | Socket | | 8599-0710 900 | | | | | | |
| | #20 Signal contact | 08-98 | Pin | 1.00 | 8599-0703 SA | 0.215 | 0.600 | 24 | 20 | 1.02 | 2.11 |
| | | | Socket | | 8599-0711 900 | | | | | | |

* Reductor must be used for wire 8 mm²
 ** Reductor must be used for wire 8 & 10 mm²
 Note: All dimensions are in millimeters (mm)

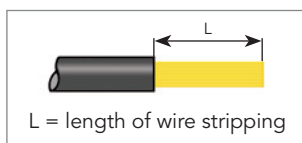
PC tail contacts

| Contact size | Shell size & layout | Contact type | Contact Ø max. | Part numbers |
|--------------|----------------------|--------------|----------------|----------------|
| #22D | 02-35 | Pin | 0.76 | 8599 1031-JJ |
| | | Socket | | 8599 1032-900 |
| | 04-35 | Pin | 0.76 | F1P2P3C0004ALY |
| | | Socket | | F1P2ES32201A00 |
| | Shell size 06 | Pin | 0.76 | F1P1P3E0002AJJ |
| | | Socket | | F1P1ES32202A00 |
| | Shell sizes 08 to 24 | Pin | 0.76 | F1P1P3E0001ALY |
| | | Socket | | F1P1ES32201A00 |
| #26 | 02-05 | Pin | 0.50 | 8593 0949 A |
| | | Socket | | 8593 0950 A |
| | 04-05 | Pin | | 8593 0953 A |
| | | Socket | | 8593 0951 A |
| | 04-06 | Pin | | 8593 0954 A |
| | | Socket | | 8593 0952 A |
| | 06-05 | Pin | | 8593 1000 A |
| | | Socket | | 8593 1001 A |
| | Shell sizes 08 to 24 | Pin | | 8599 0292 |
| | | Socket | | 8599 0293 |
| #20 | Shell sizes 08 to 24 | Pin | 1.04 | F1P1P3E0020ALY |
| | | Socket | | F1P1ES32001A00 |
| #16 | Shell sizes 08 to 24 | Pin | 1.61 | F1P1P3E0016ALY |
| | | Socket | | F1P1ES31601A00 |

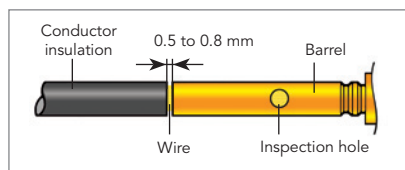
Wiring instruction

Cable preparation and wire stripping

| Contact size | #26 | #22D | #20 | #16 | #12 | #8 | #4 |
|--------------|-----|------|-----|-----|-----|----|----|
| L | 4 | | 6 | | | | 12 |



Insertion of wire in contact barrel



When inserting the stripped wire into the contact barrel check that no strands are left outside and that the wire is visible through the wire inspection hole in the barrel.

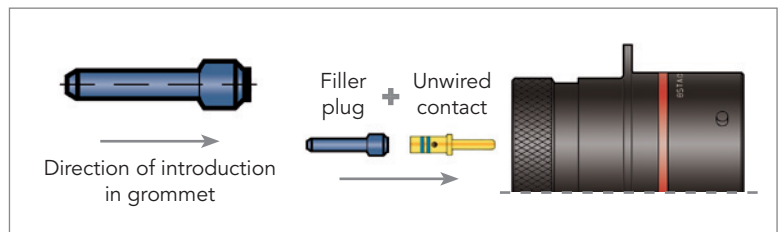
- Important:
- Slide any accessories over wire strands before carrying out the following operations.
 - Contacts are inserted and extracted from the rear of the connector.

Note: All dimensions are in millimeters (mm)

Filler plugs

These filler plugs are installed at the rear of unwired contacts to maintain connector sealing.

| Contact size | MS Part number (Rev. N) | Color | SOURIAU Part number | Color |
|--------------|-------------------------|--------|---------------------|--------|
| #22D | MS27488-22-2 | Black | 8660-212 | Black |
| #20 | MS27488-20-2 | Red | 8522-389A | Red |
| #16 | MS27488-16-2 | Green | 8522-390A | Blue |
| #12 | MS27488-12-2 | Orange | 8522-391A | Orange |



Recommended tooling

Crimp contacts

8STA Series size 02, 04 and 06 and 8TA Series

| Contact size | Contact type | Wire size | Shell size & layout | Locator part number | | Tool part number | |
|--------------|--------------|-----------|---------------------|---------------------|-----------|------------------|---------|
| | | | | Norm | SOURIAU | Norm | SOURIAU |
| #22D | Pin | 22 to 28 | 02-35 | M22520/2-09 | 8476-09 | M22520/2-01 | 8476-01 |
| | Socket | | 04-35 | | | | |
| #26 | Pin | 24 to 30 | 06-05 | - | 8599-0048 | | |
| | | | Socket | | 06-05 | | |
| | Pin | | 04-05 | - | 8599-0050 | | |
| | | | Socket | | 04-05 | | |
| | Pin | | 02-05 | - | 640 088 | | |
| | | | Socket | | 04-06 | 640 089 | |
| | | | 06-09 | | | | |

Crimp contacts

8STA Series size 08 to 24

| Contact size | Contact type | Plier M22520/1-01 | | Plier M22520/2-01 (SOURIAU 8476-01) | | Plier M300BT | Pneumatic plier M22520/23-01 | |
|--------------|--------------|--------------------|---------|-------------------------------------|-----------|---------------------|------------------------------|---------------------|
| | | Turret Part number | | Locator Part number | | Locator Part number | Turret Part number | Locator Part number |
| | | Norm | SOURIAU | Norm | SOURIAU | | | |
| #26 | Pin | - | - | - | 8599-0397 | - | - | - |
| | Socket | - | - | - | 8599-0398 | - | - | - |
| #22D | Pin | - | - | M22520/2-09 | 8476-09 | - | - | - |
| | Socket | - | - | M22520/2-06 | - | - | - | - |
| #20 | Pin | M22520/1-04 | 8365-04 | M22520/2-10 | 8476-10 | - | - | - |
| | Socket | | | | | - | - | - |
| #16 | Pin | M22520/1-04 | 8365-04 | - | - | - | - | - |
| | Socket | | | - | - | - | - | - |
| #12 | Pin | M22520/1-04 | 8365-04 | - | - | - | - | - |
| | Socket | | | - | - | - | - | - |
| #8 | Pin | - | - | - | - | SP 593 | M22520/23-02 | 8599-9601 |
| | Socket | - | - | - | - | | | |
| #4 | pin | - | - | - | - | - | M22520/23-04 | M22520/23-11 |
| | Socket | - | - | - | - | - | | |

Insertion and extraction tools

| Contact size | Material | Part number | | Color | | |
|--------------|----------------|---------------|-----------|---------------|------------|--------|
| | | Specification | SOURIAU | Insertion | Extraction | |
| #26 | Shell 02 to 06 | Plastic | - | 8599 0444 900 | Blue | Red |
| | Shell 08 to 24 | Plastic | - | 8599 0394 900 | Black | White |
| #22D | Plastic | M81969/14-01 | - | | Green | White |
| #20 | Plastic | M81969/14-10 | - | | Red | Orange |
| #16 | Plastic | M81969/14-03 | - | | Blue | White |
| #12 | Plastic | M81969/14-04 | - | | Yellow | |
| #8 | Plastic | M81969/14-06 | - | | - | Red |
| | Metallic | - | 8660 197 | | - | - |
| #4 | Plastic | M81969/14-07 | - | | - | Blue |
| | Metallic | - | 8533 8175 | | - | - |



Boots

8STA Series

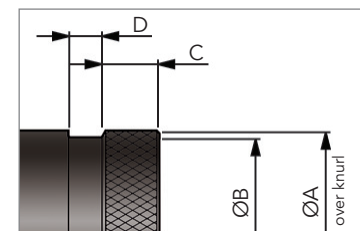
| Shell size | Straight boot | | 90° boot | |
|------------|----------------|-----------|----------------|-----------|
| | Raychem | Hellerman | Raychem | Hellerman |
| 02 | 203W301-25-G02 | 1037-4-G | 223W601-25 | 1182-4-G |
| 04 | 204W221-25-G03 | 1037-4-G | 224W221-25-G03 | 1182-4-G |
| 06 | 204W221 | 1030-4-G | 224W221 | 1181-4-G |
| 08 | 202K121 | 152-42-G | 222K121 | 1152-4-G |
| 10 | 202K132 | 152-42-G | 222K132 | 1152-4-G |
| 12 | 202K142 | 154-42-G | 222K142 | 1154-4-G |
| 14 | 202K142 | 155-42-G | 222K142 | 1155-4-G |
| 16 | 202K153 | 156-42-G | 222K153 | 1156-4-G |
| 18 | 202K153 | 156-42-G | 222K153 | 1156-4-G |
| 20 | 202K163 | 157-43-G | 222K163 | 1157-4-G |
| 22 | 202K163 | 157-43-G | 222K163 | 1157-4-G |
| 24 | 202K174 | 157-43-G | 222K174 | 1157-4-G |

8TA Series

| Shell size | Straight boot | | 90° boot | |
|------------|---------------|-----------|----------|-----------|
| | Raychem | Hellerman | Raychem | Hellerman |
| 08 | 202K121 | 152-42-G | 222K121 | 1152-4-G |

Shrinkable termination detail

| Shell size | 8TA | 8STA | | | | | | | | | | | |
|------------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | 08 | 02 | 04 | 06 | 08 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 |
| ØA | 8.65 | 7.20 | 8.65 | 9.90 | 10.62 | 13.72 | 17.26 | 20.41 | 23.6 | 26.76 | 29.93 | 33.11 | 36.3 |
| ØB±0.05 | 8.00 | 6.55 | 8.00 | 9.25 | 9.70 | 12.65 | 16.02 | 19.00 | 22.23 | 25.22 | 28.37 | 31.86 | 34.67 |
| C±0.05 | 2.70 | 2.20 | 2.70 | 4.20 | 6.00 | | | | | | | | |
| D | 2.30 | 2.30 | 2.30 | 3.50 | 3.50 | | | | | | | | |



Note: All dimensions are in millimeters (mm)

Metal protective caps with lanyard

Plug caps

Cord material: Nylon

Cap plating: Conductive Black Zinc

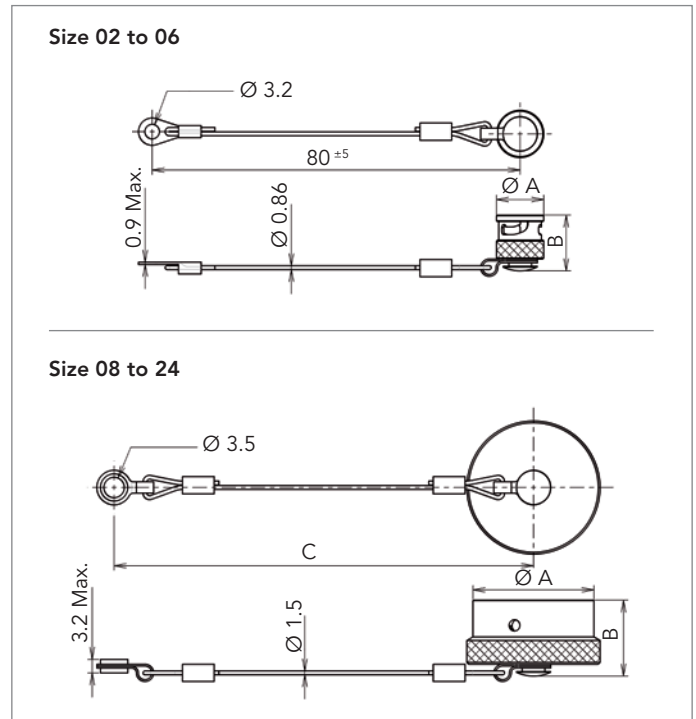
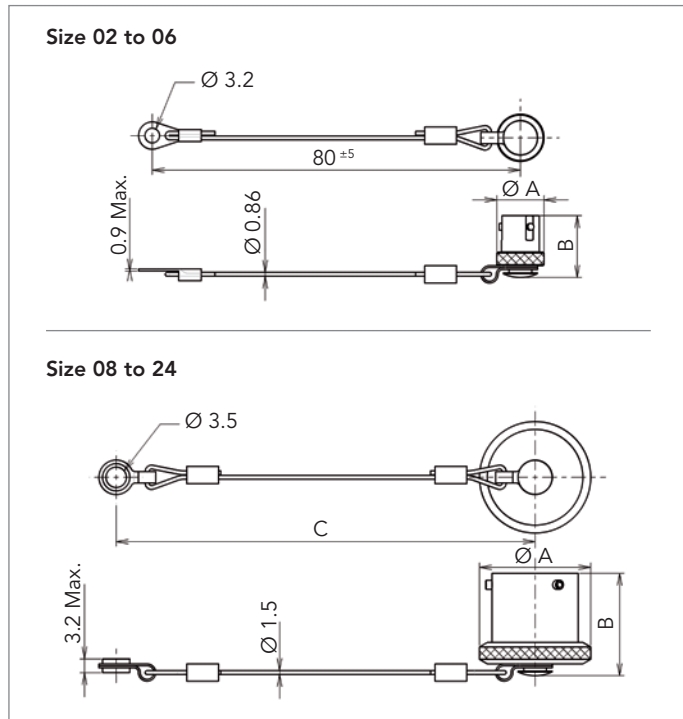
| Shell size & Layout | Part number | Ø A Max. | B Max. | C ±5 |
|---------------------|-------------|----------|--------|------|
| 02 | 8STA802A | 10.60 | 13.20 | - |
| 04 | 8STA804A | 12.20 | 13.80 | - |
| 06-05 | 8STA806A | 15.25 | 15.50 | - |
| 06-09 06-35 | 8STA8F06A | 15.25 | 15.50 | - |
| 08 | 8STA808A | 17.50 | 27.44 | 128 |
| 10 | 8STA810A | 20.50 | | 128 |
| 12 | 8STA812A | 24.50 | | 140 |
| 14 | 8STA814A | 27.50 | | 140 |
| 16 | 8STA816A | 30.90 | | 140 |
| 18 | 8STA818A | 34.00 | | 140 |
| 20 | 8STA820A | 37.20 | | 153 |
| 22 | 8STA822A | 40.40 | | 153 |
| 24 | 8STA824A | 43.50 | | 153 |

Receptacle caps

Cord material: Nylon

Cap plating: Conductive Black Zinc

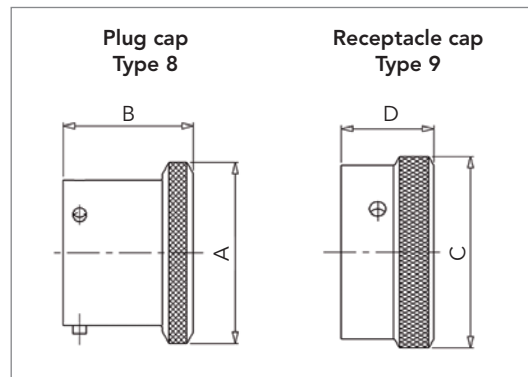
| Shell size & Layout | Part number | Ø A Max. | B Max. | C ±5 | |
|---------------------|-------------|----------|--------|-------|-----|
| 02 | 8STA902A | 10.60 | 13.20 | - | |
| 04 | 8STA904A | 13.50 | 13.80 | - | |
| 06-05 | 8STA906A | 15.25 | 14.30 | - | |
| 06-09 06-35 | 8STA9F06A | 15.25 | 14.30 | - | |
| 08 | 8STA908A | 19.05 | 21.44 | 128 | |
| 10 | 8STA910A | 21.85 | | 128 | |
| 12 | 8STA912A | 26.15 | | 140 | |
| 14 | 8STA914A | 29.35 | | 140 | |
| 16 | 8STA916A | 32.55 | | 140 | |
| 18 | 8STA918A | 35.35 | | 140 | |
| 20 | 8STA920A | 38.85 | | 153 | |
| 22 | 8STA922A | 42.05 | | 153 | |
| 24 | 8STA924A | 45.15 | | 22.22 | 153 |



Note: All dimensions are in millimeters (mm)

Metal protective caps without lanyard

| Shell size & Layout | Part numbers | | Dimensions | | | |
|---------------------|--------------|------------|------------|--------|---------|--------|
| | Plug cap | Recep. cap | ØA Max. | B Max. | ØC Max. | D Max. |
| 02 | 8STA802 | 8STA902 | 10.60 | 11.20 | 10.60 | 9.85 |
| 04 | 8STA804 | 8STA904 | 12.30 | 10.80 | 13.60 | 10.95 |
| 06-05 | 8STA8F06 | 8STA9F06 | 15.15 | 11.05 | 15.15 | 9.70 |
| 06-09 06-35 | 8STA806 | 8STA906 | 15.25 | 11.15 | 15.15 | 13.00 |
| 08 | 8TA | 8TA908 | - | - | - | - |
| | 8STA | 8STA908 | 17.50 | 21.00 | 19.00 | 14.20 |
| 10 | 8STA810 | 8STA910 | 20.50 | | 21.80 | |
| 12 | 8STA812 | 8STA912 | 24.50 | | 26.10 | |
| 14 | 8STA814 | 8STA914 | 27.70 | | 29.30 | |
| 16 | 8STA816 | 8STA916 | 30.90 | | 32.50 | 15.00 |
| 18 | 8STA818 | 8STA918 | 34.00 | | 35.30 | |
| 20 | 8STA820 | 8STA920 | 37.20 | | 38.80 | |
| 22 | 8STA822 | 8STA922 | 40.40 | 42.00 | | |
| 24 | 8STA824 | 8STA924 | 43.50 | 45.10 | 15.85 | |



Nut plates

Nut plates are available for all 8STA sizes. Designed for oval flange receptacles with two holes. Their design was specially made for motorsport market.



| Shell size | Self-locking nut thread | Part number |
|------------|-------------------------|-------------|
| 02 | M2 | 8STA-02 M20 |
| | M2.5 | 8STA-02 M25 |
| 04 | M2 | 8STA-04 |
| | M2.5 | 8STA-04 M25 |
| 06 | M2.5 | 8STA-06 M25 |
| 08 | M3 | 8STA-08 |
| 10 | | 8STA-10 |
| 12 | | 8STA-12 |
| 14 | | 8STA-14 |
| 16 | | 8STA-16 |
| 18 | | 8STA-18 |
| 20 | | 8STA-20 |
| 22 | | 8STA-22 |
| 24 | | 8STA-24 |

Gaskets

Gaskets are available for all 8STA sizes. They are available in Standard version (liquid silicone rubber) and Fuel tank version (fluorel).



| Shell size | Part number Standard | Part number Fuel tank |
|------------|----------------------|-----------------------|
| 02 | 8STA-G02 | 8STA-G02 022 |
| 04 | 8STA-G04 | 8STA-G04 022 |
| 06 | 8STA-G06 | 8STA-G06 022 |
| 08 | 8STA-G08 | 8STA-G08 022 |
| 10 | 8STA-G10 | 8STA-G10 022 |
| 12 | 8STA-G12 | 8STA-G12 022 |
| 14 | 8STA-G14 | 8STA-G14 022 |
| 16 | 8STA-G16 | 8STA-G16 022 |
| 18 | 8STA-G18 | 8STA-G18 022 |
| 20 | 8STA-G20 | 8STA-G20 022 |
| 22 | 8STA-G22 | 8STA-G22 022 |
| 24 | 8STA-G24 | 8STA-G24 022 |

Note: All dimensions are in millimeters (mm)

8STA/8TA SERIES

8STA/8TA Series

Range Extension

| | |
|--|----|
| ■ 209 Series | 64 |
| ■ High power contacts | 64 |
| ■ Composite connectors | 65 |
| ■ micro38999 Series break away | 65 |
| ■ <i>microComp</i> [®] Series | 66 |
| ■ 8D8/8D9 Series | 66 |

Product range extension

209 Series

**Terminal blocks for power distribution.
Distribution of electrical current for aircraft equipment.**

Versatility:

- . The terminal blocks allow connection from 1 to 12 terminals.
- . A shunt can link the terminals.

Easy to install:

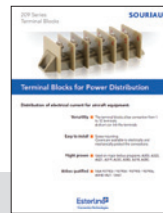
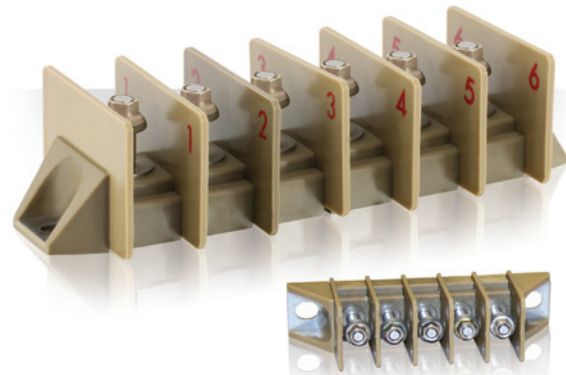
- . Screw mounting.
- . Covers are available to electrically and mechanically protect the connections.

Flight proven:

- . Used on major Airbus programs: A300, A320, A321, A319, A330, A340, A318, A380.

Airbus qualified:

- . NSA 937903 / 937904 / 937905 / 937906.
- . ASNE 0421 / 0467.



See «209 Series Terminal Blocks» datasheet on www.souriau.com

High Power Contacts

High Power up to 850A. 38999 compliant design to meet the harshest military requirement where high power and shielding are needed.

3 aluminum shell sizes available:

- . Size 19 (450A max); size 23 (650A max); size 25 (850A max).
- . Different finish: cadmium, zinc nickel, electroless nickel.
- . Threaded coupling.

Superior contact technology equipped with a silver plated braid:

- . High contact endurance.
- . Low contact resistance.
- . No microcut under vibration.

Modular design for easy installation:

- . Removable backshell: straight, right angle or bus bar.
- . Backshell termination: for thread or shrink boot.
- . Possible to crimp various cable (Ø from 50 to 185mm).

Safety.



See «38999 Series III, High Power Contacts» datasheet on www.souriau.com

Product range extension

Composite Connectors

SOURIAU leader on composite circular connectors. Denser and lighter than MIL-C-26500 and 852. Better performances compared to 38999 Series III at similar price.

Low weight:

- . Up to 25% weight saving compared to aluminum.

High performance:

- . According to D38999 (QPL approved).
- . 1500 hours salt spray.

Superior design:

- . Match the latest lightning strike and 230V requirement.



micro38999 Series Break Away

micro38999, 8BA Series: miniature product with a break away release. Space saving with scoop proof connector for harsh and EMI applications.

A compact and high density solution:

- . Diameter up to 45% smaller than size 9 (D38999).
- . Up to 50% shorter.
- . Integrated backshell: Cost and space saving.
- . #26 & #22 contacts

Excellent features:

- . Designed for D38999 requirements.
- . IP67 sealing when mated.
- . Ballseal (EMI).
- . Stainless steel (1500 matings) and aluminum (500 matings).

RoHS and Cadmium free:

- . Available in zinc nickel (RoHS) plating.
- . Nickel and olive drab cadmium plating available.



Product range extension

microComp® Series

To respond to miniaturization and weight saving trends in aeronautical and defense applications SOURIAU has developed an innovative high density connector range.

Very light & high density:

- . Shell in composite (or aluminum).
- . Up to 66% lighter than HD D-Sub.
- . Very high density up to 40% smaller than HD D-Sub.

Excellent features:

- . With crimp removable contacts for wire AWG 24 to 28.
- . Temperature up to 175°C.
- . High vibration and shock withstanding.
- . Standard MIL-STD 83513 accessories.
- . Compatible with high speed data rates (Gigabit Ethernet...).

Quick connect version for harsh environment:

- . 104 contacts push-push.



See «microComp® Series» datasheet on www.souriau.com

8D8/8D9 Series

8D8: high vibration push-pull connector.
8D9: lanyard quick release, high performance.

A wide range with excellent performances:

- . MIL-DTL-38999 layouts and contacts
- . MIL-DTL-38999 Series electric performances
- . Scoop proof
- . Compatible with standard backshells 38999 Series III
- . Very high performance coupling with ball locking concept, check of locking by free ring when mated.

Easy to connect-disconnect:

- . 8D8 Series: ideal for restricted space mating.
- . 8D9 Series: simple push to connect - pull to disconnect.

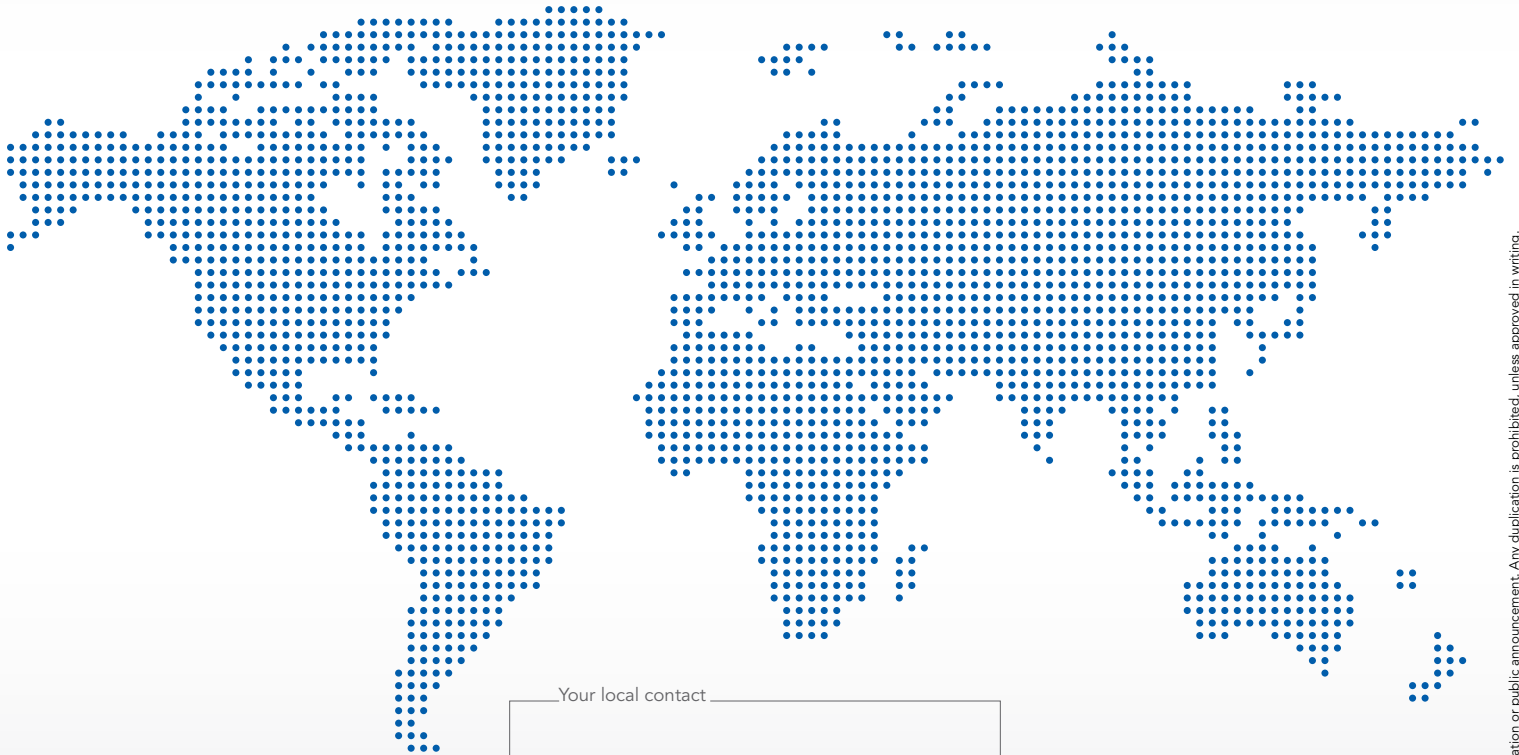
High vibration performance:

- . Up to 44g
- . 8D8 Series: ideal for mil-aero and space applications.
- . 8D9 Series: ideal for missiles, inter-stage separation, UAVs, space probes.



See «8D8/8D9 Series - 38999 Push-pull/Quick release» catalog on www.souriau.com

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Your local contact



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