

Connectors for Motorsport and Racing



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.

SOURIAU connectors 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.

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microComp® Series

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MOTORSPORT

Motorsport

Overview

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Typical applications



Engine



Data Acquisition System



Steering Wheel



Telemetry & Network



Fuel Tank



e-Racing

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Features & Benefits

MICRO SIZE

Compact and Lightweight

8STA: Smallest removable contacts connector on the market: size 01.
8TA: Compact low profile.
microComp®: High density contact from 7 to 101 ways.

EASY TO USE

User Friendly

8STA: Quick bayonet locking system - 1/3 turn to mate.
microComp®: Crimp removable contacts AWG 24 to 28.

ROBUST

Reliable Products

Withstand high levels of shock and vibration in harsh environment.
Tolerate most of motorsport fluids.
Operating temperature: -55°C to +175°C.

LARGE OFFER

A Complete Range

8STA: Signal, power, coax and concentric twinax contacts.
microComp®: Ethernet 1Gb high speed. Sealed version available.

FLEXIBLE

Custom Solutions

Whether you need a different material (stainless steel, bronze), a specific contact or an hermeticity, **SOURIAU** will offer the best solution for your application.

From standard to specific solutions for motorsport

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 is to push the boundaries in terms of **miniaturization** and **weight reduction**, as demonstrated by the introduction of the world smallest motorsport connector with removable contacts: **8STA shell size 01**.

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 **High Density** with pin contacts normally associated with much larger connectors.

Lightweight
High density layouts, miniature sizes, integrated backshell, composite shell.

Quick release
Frequent disconnect.
Difficult areas to reach.

Power distribution
High voltage.
High current.

**RELIABLE
and
CUSTOMIZED
Solutions**

Based on standard series:

- 8STA & 8TA Series
- microComp® Series

Sensors
Extreme vibration.
Restricted areas.

Custom solutions
Innovative solutions.
Let your need take the lead.

Engine control unit
High power load, critical function.
Extremely reliable in harsh environments.

Fuel pump
Fuel, oils and lubricant immersion.
Extremely reliable in continuous immersion.

Product ranges comparison

8STA Series

- **Miniature sizes** 02, 04, 06
Up to **shell size 24**
- **Scoop proof**
- **Conductive** black zinc or nickel plating
- **Color-coded** keyway

8TA Series

- Compact **low profile**
- **Conductive** black zinc or nickel plating
- **Color-coded** keyway

microComp® Series

- Crimp **removable contacts**
AWG 24 to 28
- **High density** layouts
from 7 to 104 ways
- High **vibration** and **shock** withstanding
- **Non magnetic**

A high service level



Sales network

- High levels of finished connector stock from our worldwide distributors
- Fast delivery



Custom solutions

- Due to the constant innovative needs from the Motorsport market, SOURIAU is dedicated to produce derived products on demand



Website and e-catalog

- Free and user friendly 3D models downloading
- Powerfull search tool
- Technical data and wiring instructions



MOTORSPORT

Motorsport

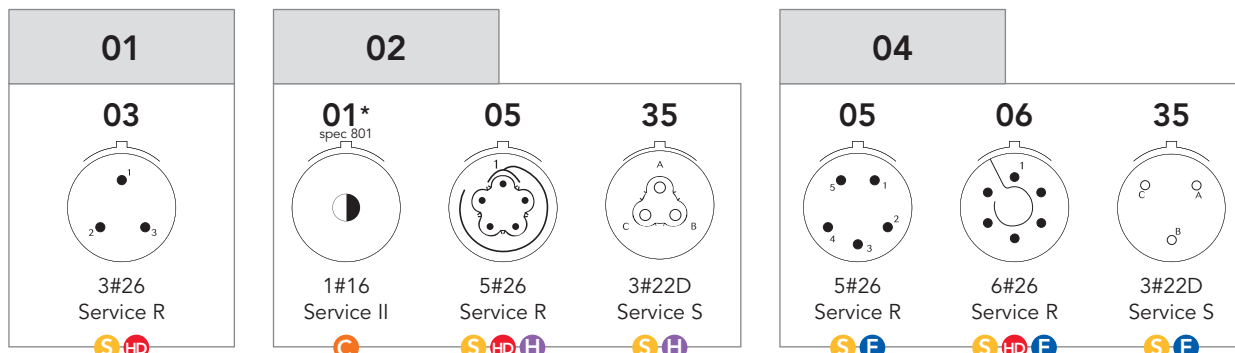
8STA/8TA Series

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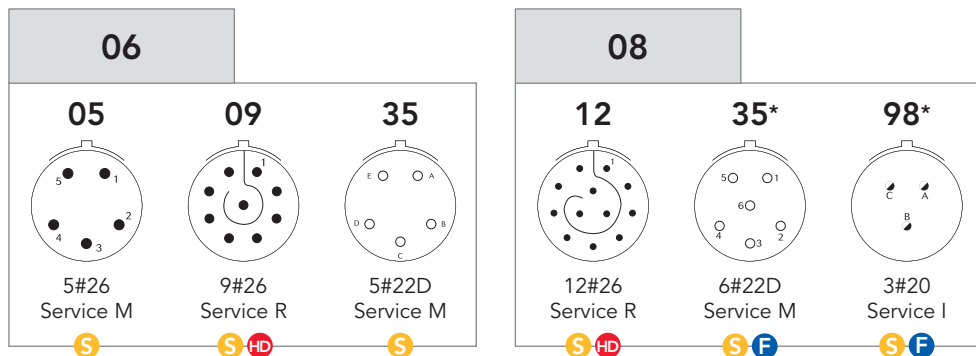
Contact layouts

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

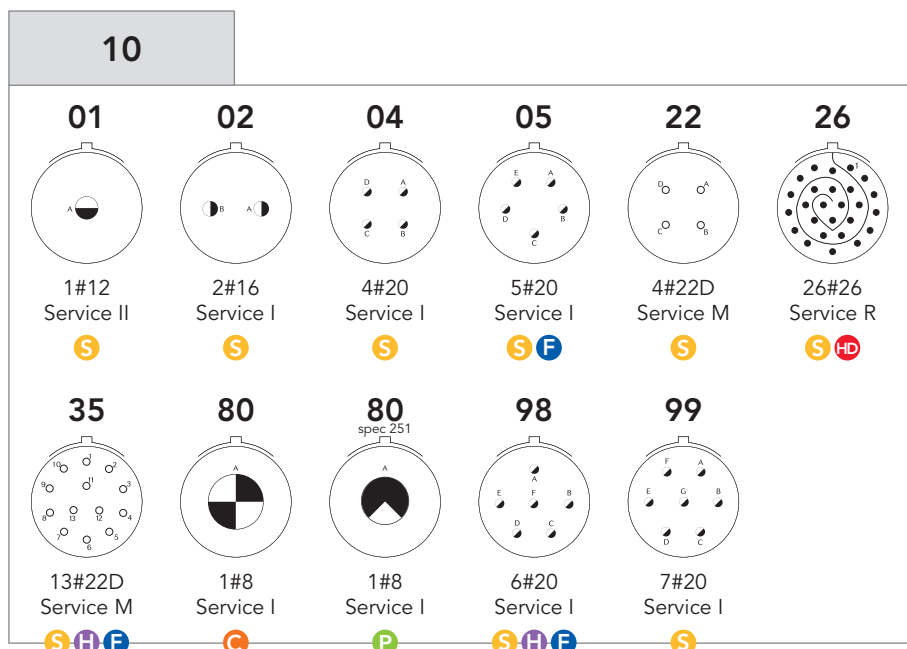
Contact sizes #26 #22D #20 #16 #12 #8 Coax or Concentric Twinax - consult us #8 Power #4 Power



* Consult us



* Available for 8TA Series

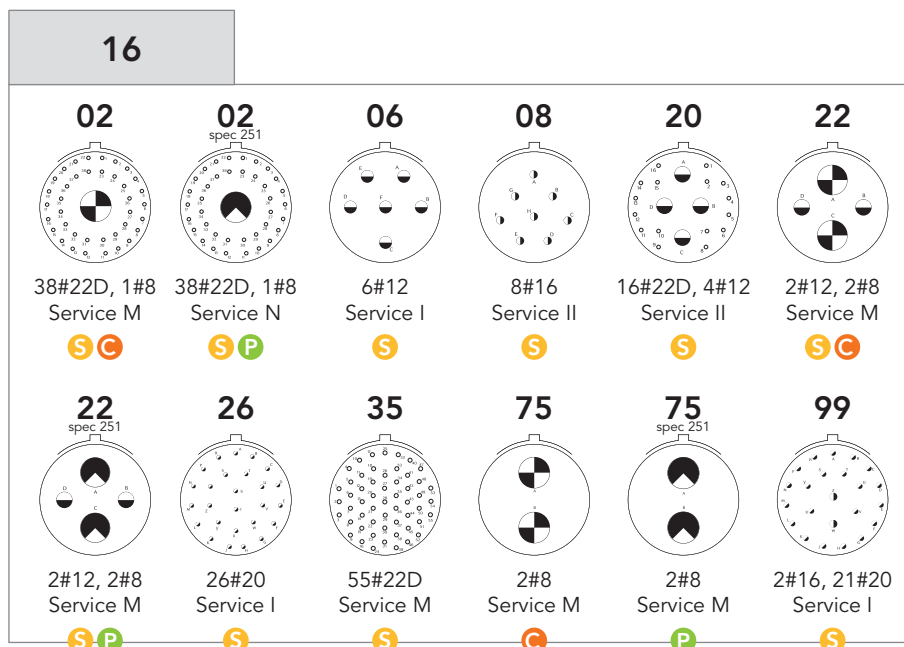
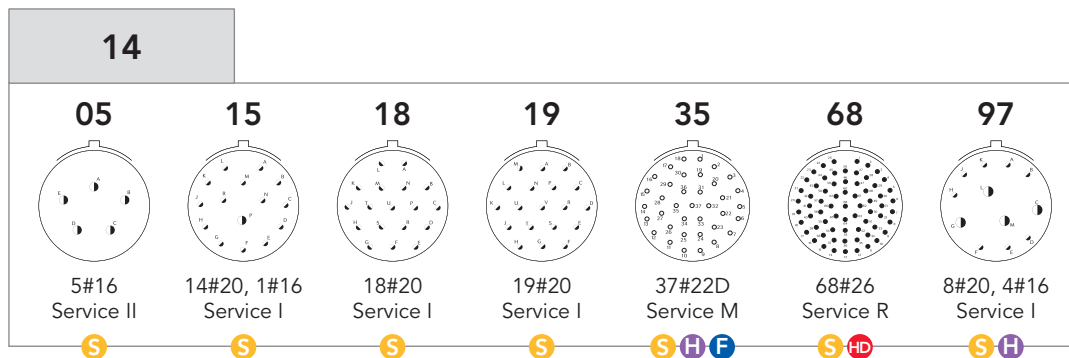
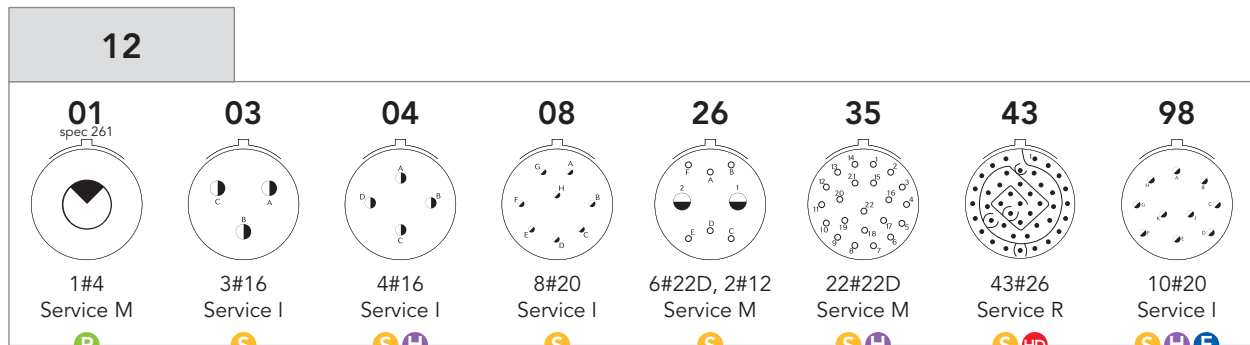


Sizes 01 and 02: Marking on shell.
 Rear view of receptacle for male and female insulator. Opposite marking between plug and receptacle.
Sizes 04 to 24: Marking on insulator.
 Front view of male insulator for plug and receptacle. Opposite marking between male and female insulator.

Contact layouts

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

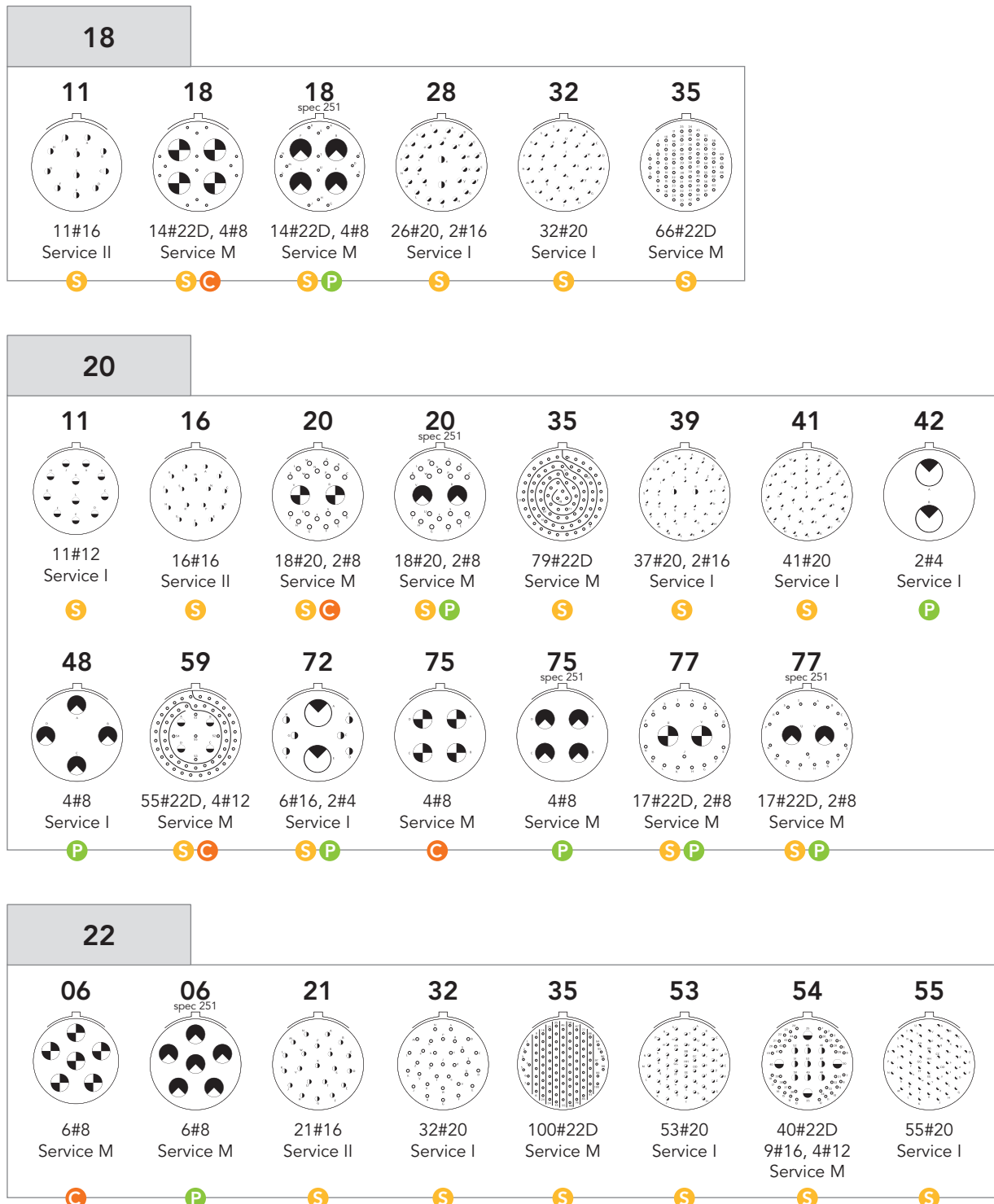


Sizes 04 to 24: Marking on insulator.
Front view of male insulator for plug and receptacle. Opposite marking between male and female insulator.

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

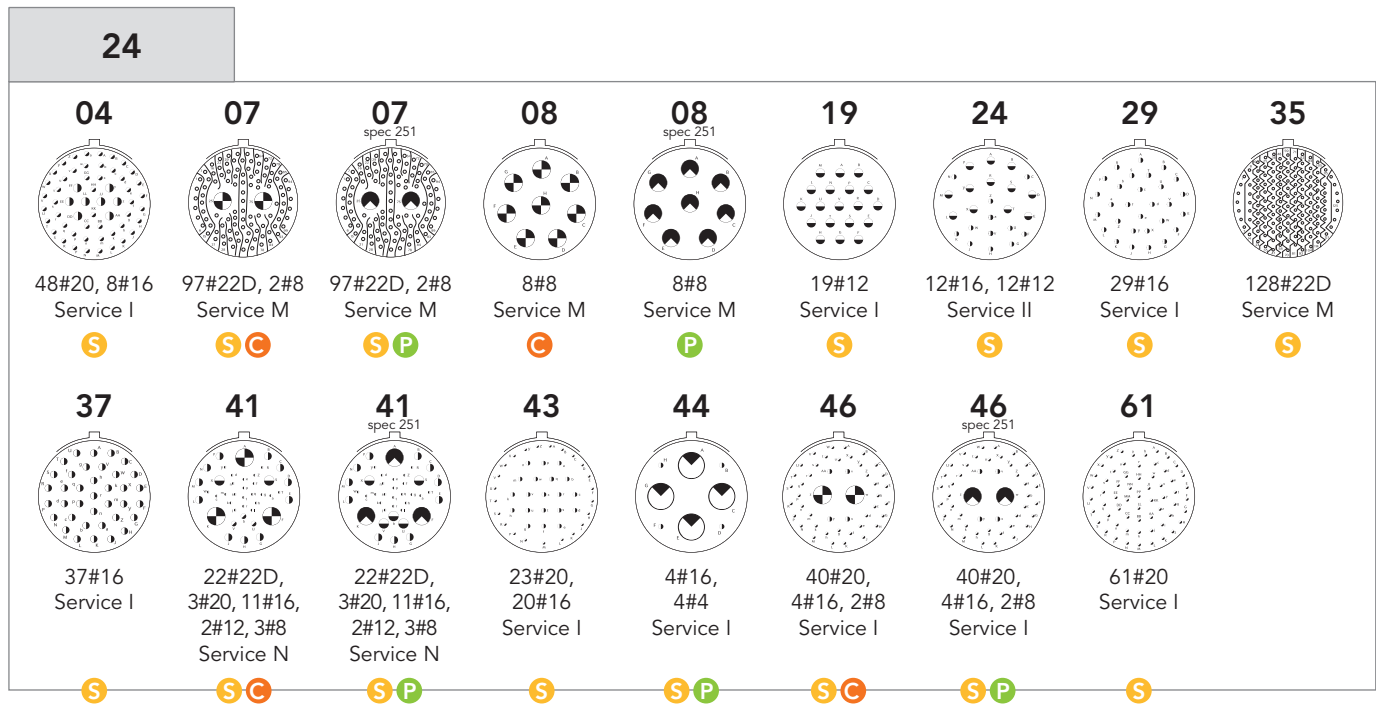


Sizes 04 to 24: Marking on insulator.
Front view of male insulator for plug and receptacle. Opposite marking between male and female insulator.

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.



Description

- Ultra compact design and 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
- **Shell plating:** Conductive Black Zinc (F)
- **Insulator:** Thermoplastic
- **Grommet & seal:** Liquid silicone rubber
- **Contact:** Copper alloy
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles
- **Shock:** Half sine mechanical shock, 50g/11ms
- **Vibration:** 147m/s², 10 to 2000Hz
- **Contact retention:** 20N Max.

Electrical

- **Test voltage rating (Vrms)**

Service	Sea level
R	400

- **Contact resistance:** <16 mΩ
- **Insulation resistance:** ≥ 5000MΩ @ 400Vdc
- **Contact rating:** 3 Amp

Environmental

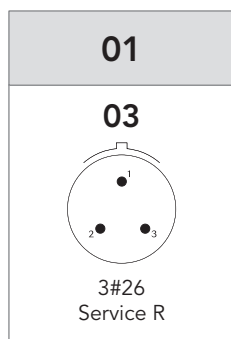
- **Operating temperature:** -55°C to +175°C
- **Sealing mated connectors:** IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours

Scale 1:1



Contact layout - Marking on shell

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

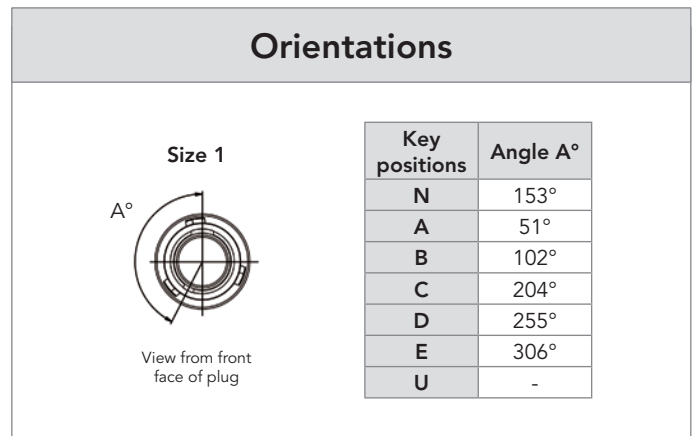
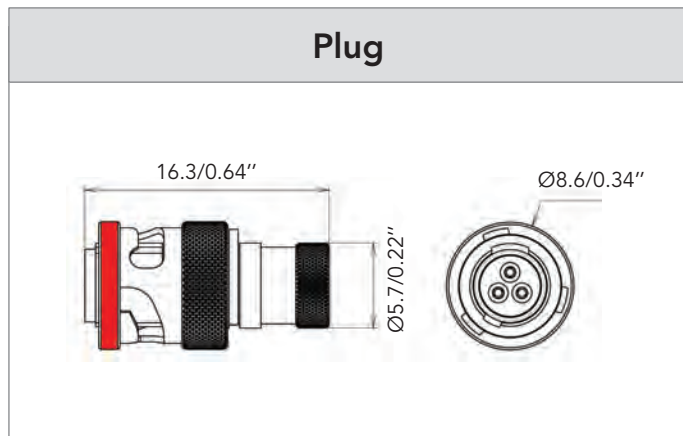
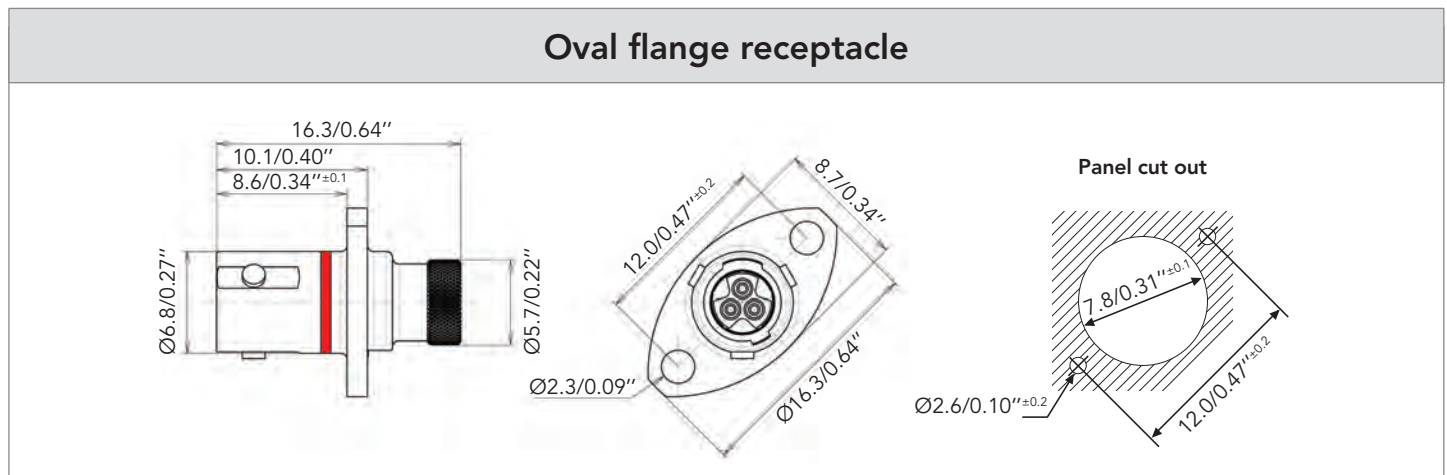


Ordering information

Basic series	8STA	0	01	03	P	N
Shell type	0: Oval flange receptacle 6: Plug					
Shell size	01					
Contact layout	03: 3 #26					
Type of contact	P: Pin S: Socket					
Orientation	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / E: Grey / U: Universal					

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

Dimensions



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



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.44 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 12						
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 30 528: Integrated nut on the flange - M2.5 insert (only for shell type 0 and 2) - for more details, please see page 30 562: PCB version - for more details, please see page 44 022: Fuel immersible version (shell sizes 04 and 06 only) - for more details, please see page 47						

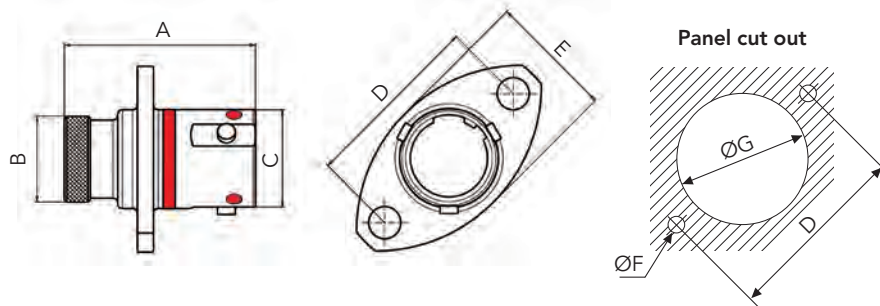
Dimensions

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

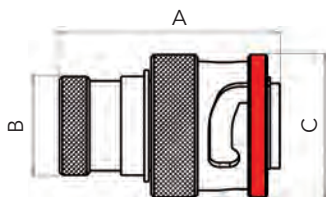
Note: All dimensions are in millimeters (mm)

Oval flange receptacle



Shell size	A ± 0.2	ØB ± 0.2	ØC ± 0.2	D ± 0.2	E Max	ØF ± 0.2	ØG ± 0.1	Panel tickness (max)	
								Rear mounting	Front mounting
02	17.5	7.2	8.3	15.3	10.7	3.1	9.3	1.5	1.5
04	18.1	8.5	10.0	16.2	13.2	3.1	12.0	1.0	2.5
06	23.1	10.2	11.55	18.0	14.8	3.1	13.0	1.5	2.5

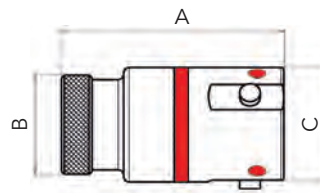
Plug



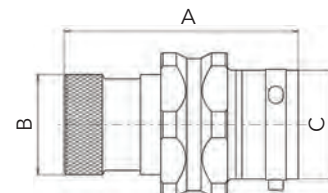
Shell size	A	ØB	ØC
02	17.5	7.2	10.4
04	18.3 ± 0.2	8.5 ± 0.1	13.4 ± 0.1
06	22.1 ± 0.1	10.25 ± 0.1	15.05 ± 0.2

In-line receptacle

Shell sizes 02 and 04



Shell size 06

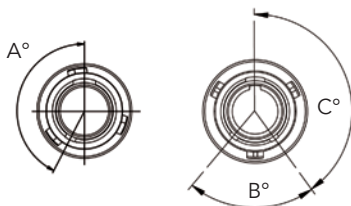


Shell size	A	ØB	ØC
02	17.5	7.2	8.3
04	18.1 ± 0.2	8.5 ± 0.1	10.0 ± 0.2
06	23.2	10.05	10.8

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

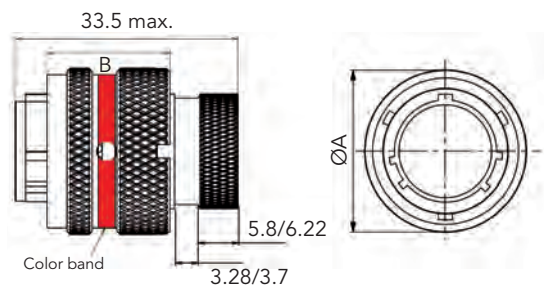
- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:**
Aluminum: 48 hours

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.44						
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 page 12						
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 30						
528: Integrated nut on the flange - M2.5 insert (only for shell style 0 & 2) - for more details, please see page 30						
523: Lightweight In-line receptacle (shell type 1 only)						
022: Fuel immersible version - for more details, please see page 47						

Dimensions

Plug

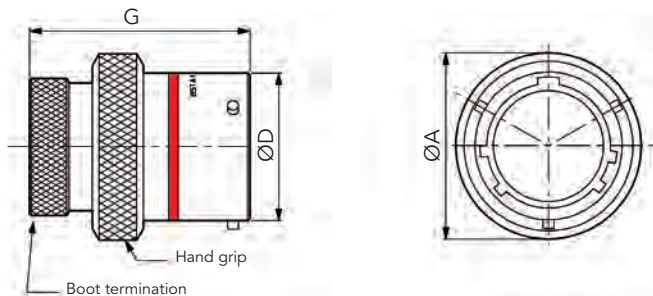


Shell size	ØA max.	B max.
08	18.70	18.55
10	21.50	
12	25.10	
14	29.00	
16	32.20	
18	35.40	19.30
20	38.20	
22	41.30	
24	44.50	19.05

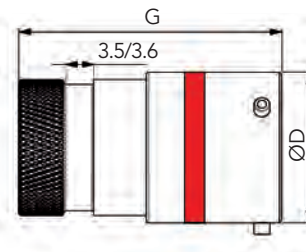
Note: All dimensions are in millimeters (mm)

In-line receptacle

Standard version

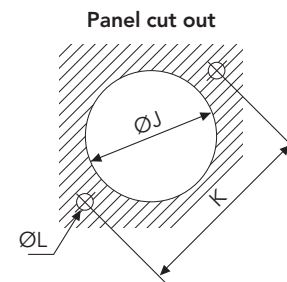
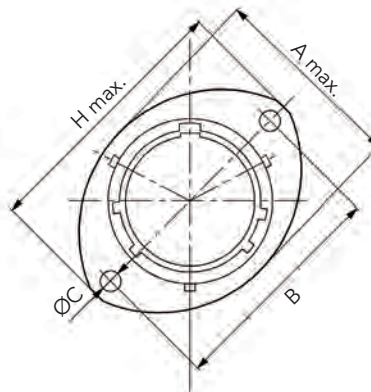
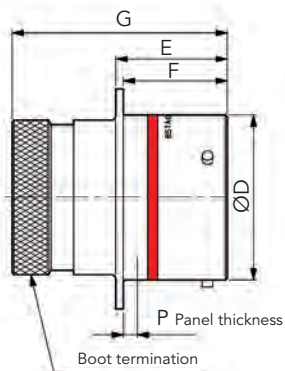


Lightweight version (specification 523)



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								

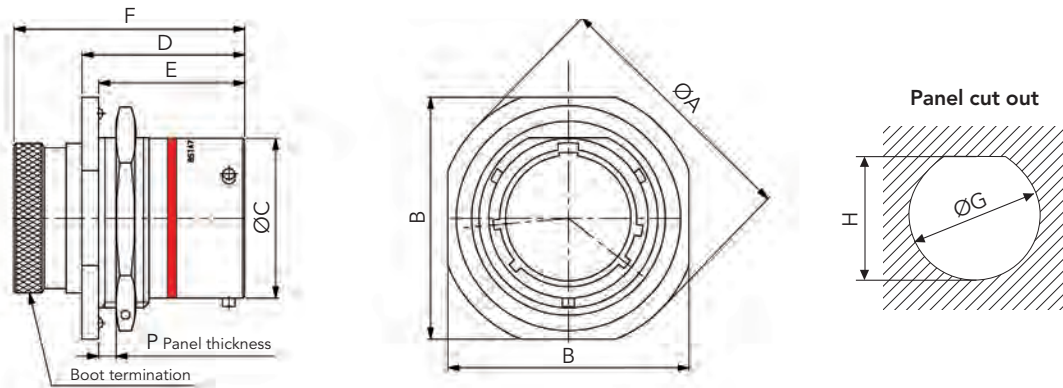
Oval flange receptacle



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		

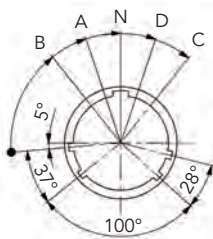
Note: All dimensions are in millimeters (mm)

Jam nut receptacle

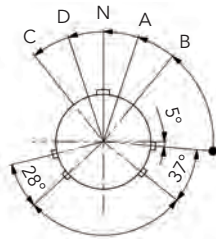


Shell size	ØA ±0.3	B ±0.24	ØC $0_{-0.12}^0$	D ±0.10	E ±0.24	F ±0.3	P max.	ØG ±0.10	H ±0.20	Tightening torque (mN)
08	26.90	24.10	11.97	25.91	23.24	36.71	3.00	14.50	13.60	4
10	30.15	27.30	14.94					17.70	16.80	6
12	34.89	32.10	19.01					22.70	20.90	9
14	38.06	34.92	22.18					25.70	24.10	10
16	41.25	38.40	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

- 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:**

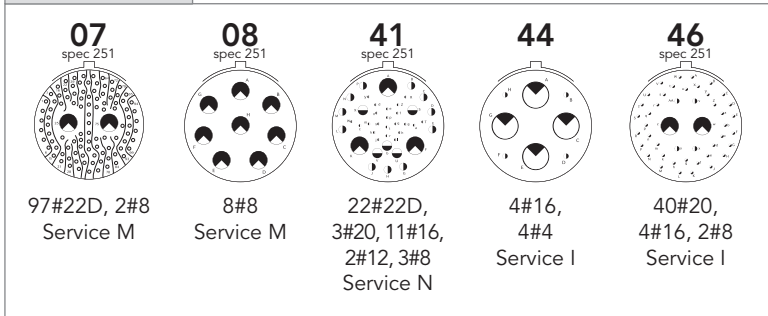
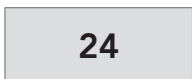
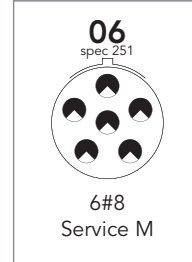
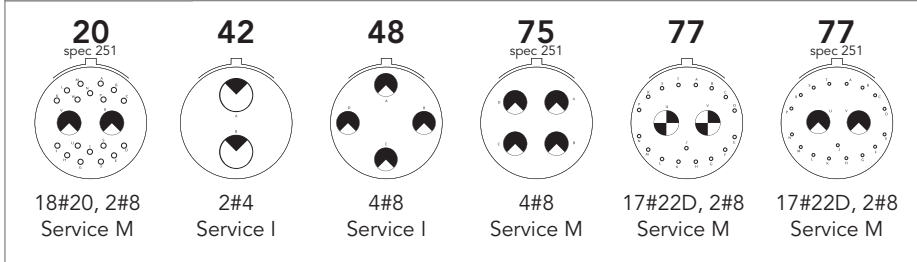
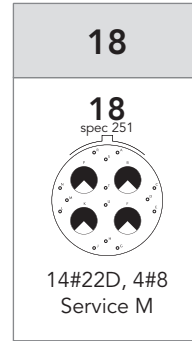
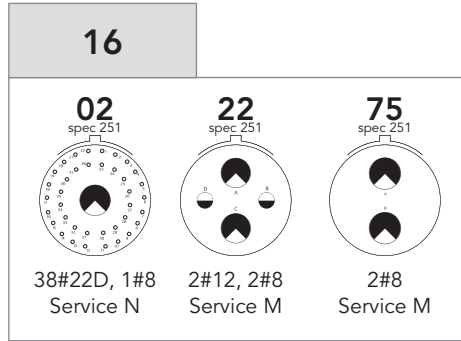
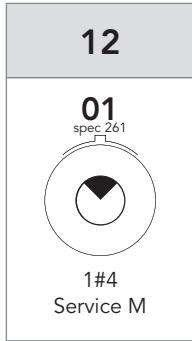
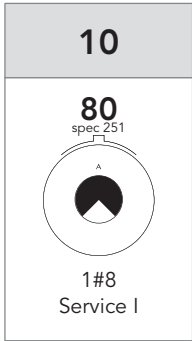
Size 22D:	5 A
Size 20:	7.5 A
Size 16:	13 A
Size 12:	23 A
Size 8:	45 A
Size 4:	80 A
- **Shell continuity:** ≤10 mΩ

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



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							
S: Socket							
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 (8STA_x1201_{yz}261 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 : 8STA_x1201Az261 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 : 8STA_x1201Az261 or Bz261) + contact separately (pin : 8599 0313 & socket : 8599 0316)

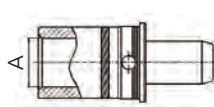
Power contacts

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)		-

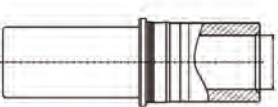
Specific wire dimensions

Power contact #4

Pin contact



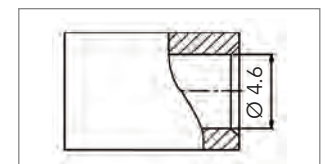
Socket contact



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

- 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: 16mΩ
- **Insulation resistance:**
≥5000MΩ (at 500Vdc)
- **Contact rating:** Size 26: 3 Amp
- **Shell continuity:** ≤10mΩ

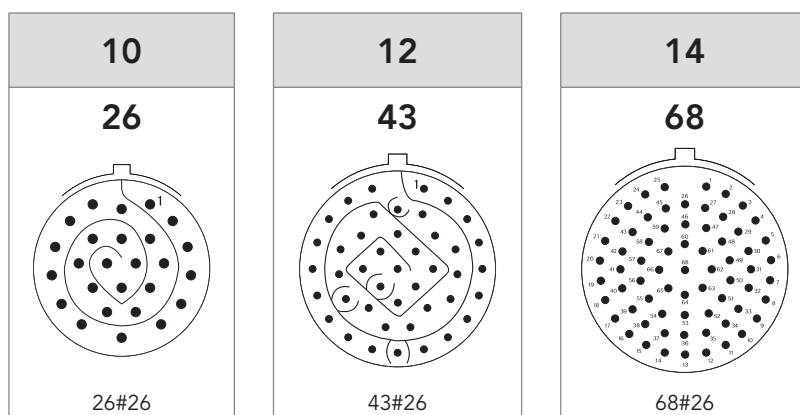
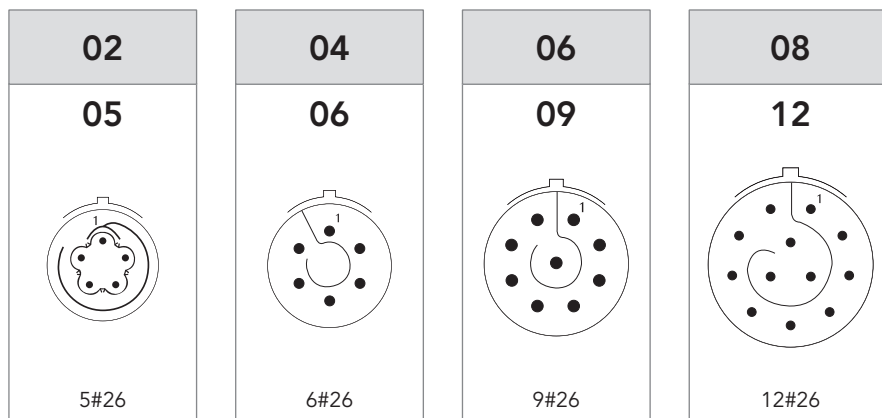
Environmental

- **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	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)



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:



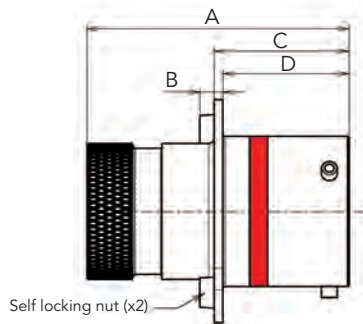
Integrated clinch nuts on the flange = **Cost and time saving!**

Ordering information

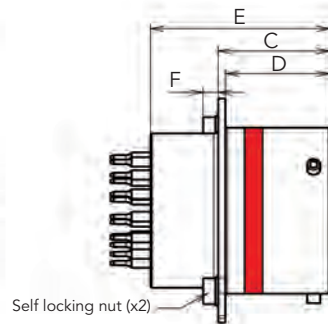
Basic series	8STA	0	10	35	P	N	499
Shell type							
0: Oval flange receptacle							
2: Oval flange receptacle with PCB contacts							
Shell size	02, 04, 06, 08, 10, 12, 14, 16, 18, 20, 22, 24						
Contact layout	See page 12						
Type of contact							
P: Pin							
S: Socket							
Orientation							
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

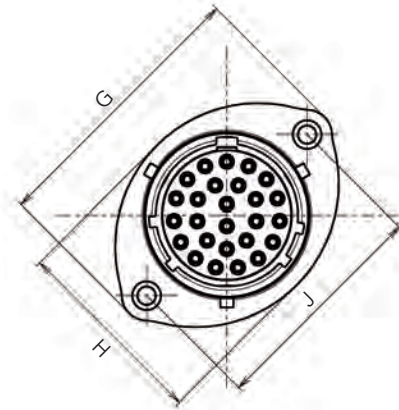
Oval flange receptacle



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.18 for Standard version sizes 02 to 06.

p.21 for Standard version sizes 08 to 24.

p.44 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

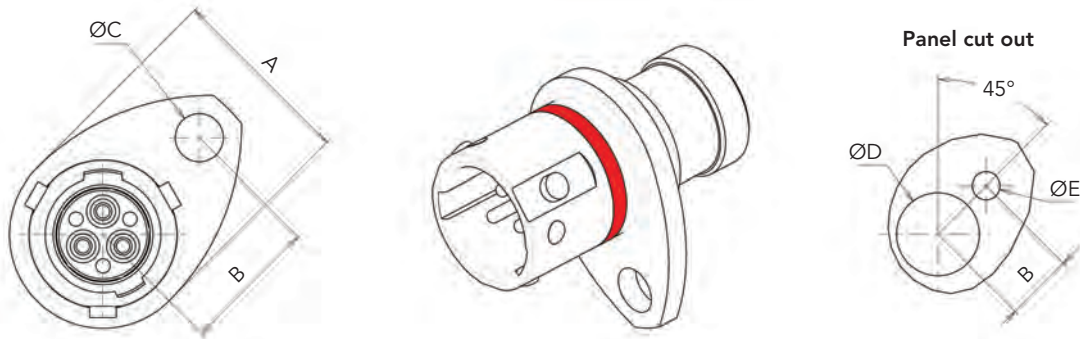
- **Operating temperature:**
-55°C to +175°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:**
Aluminum Nickel: 48 hours
Aluminum conductive Black Zinc: 48 hours

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 12							
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

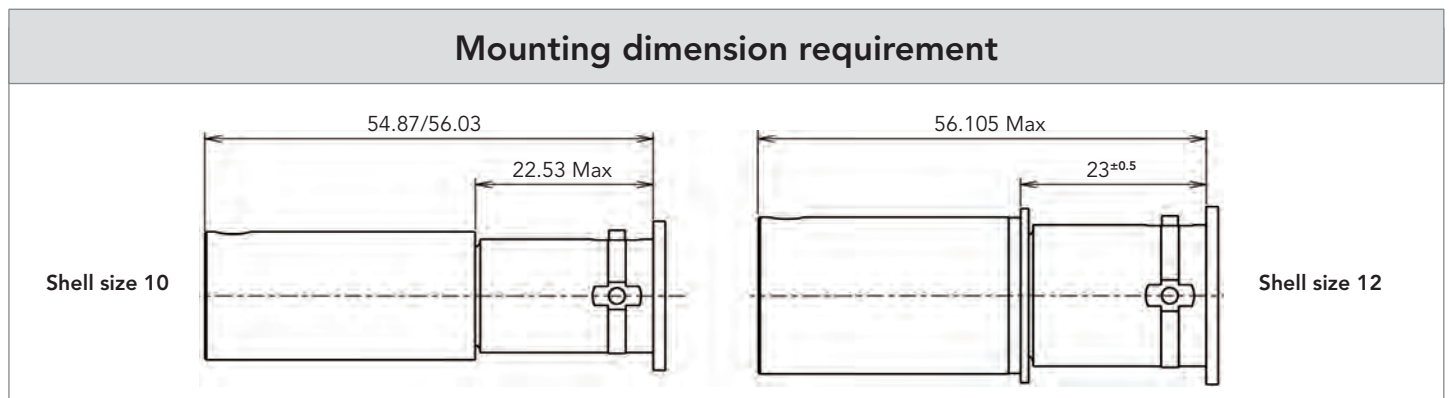
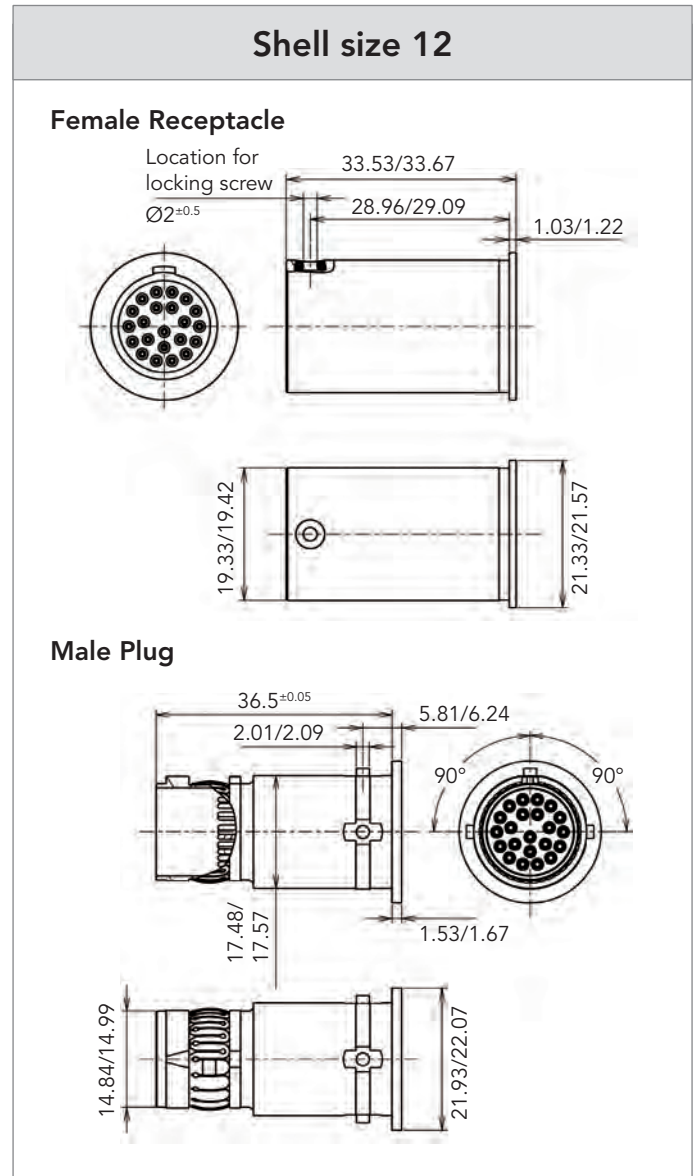
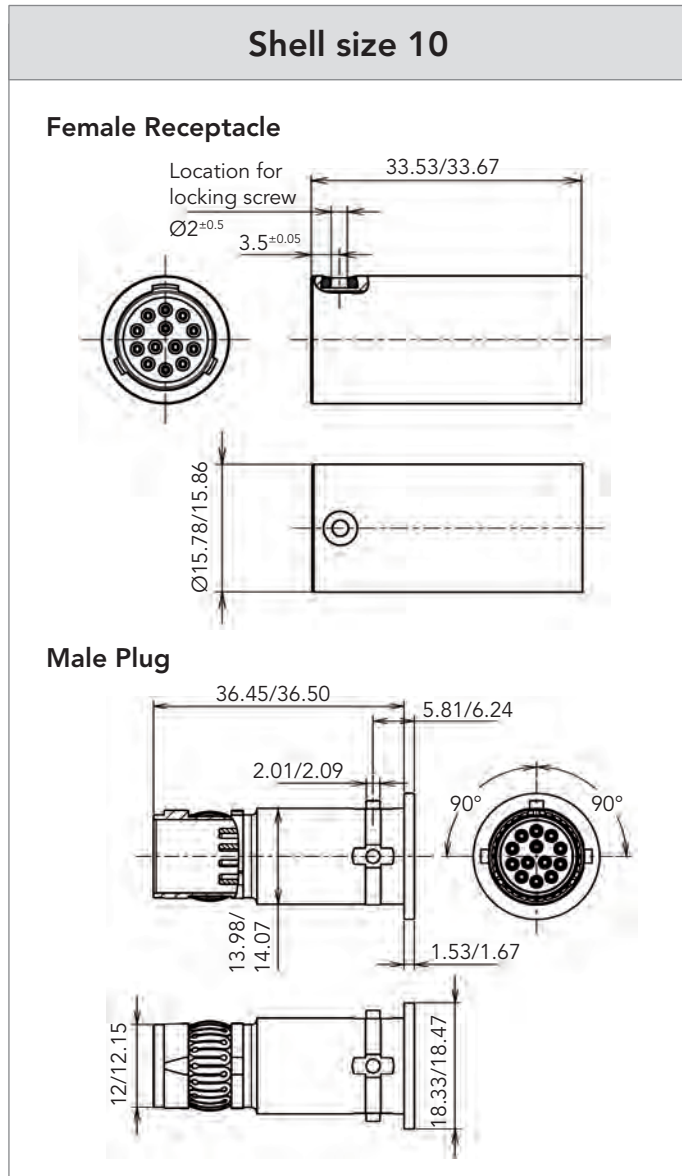
Environmental

- **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 page 12							
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

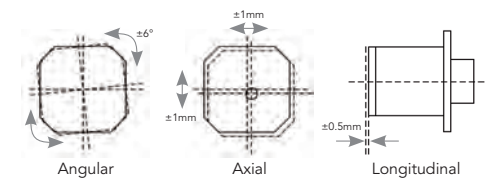
Service	M	N	I	II
Sea level	1300	1000	1800	2300

- 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



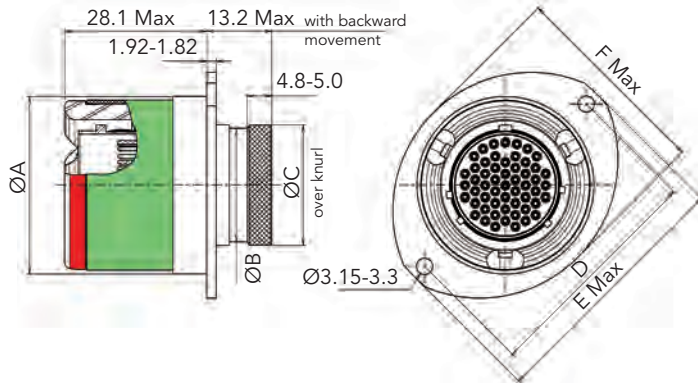
Ordering information

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

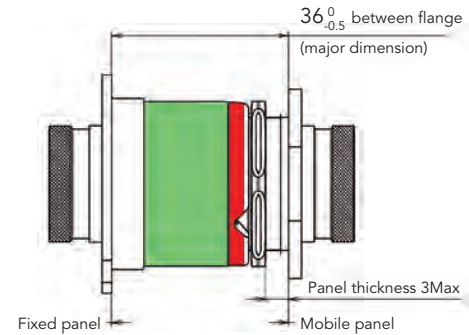
Note: Receptacle to be used with rackable plug = 8STA7xxxx (standard jam nut version)

Dimensions

Plug type 6



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



Shell size	$\text{ØA}_{-0}^{+0.3}$	$\text{ØB}_{-0}^{+0.2}$	ØC	$D_{-0}^{+0.4}$	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

- Bayonet coupling connector
- Glass sealed hermetic:
 - . high hermeticity performance
 - . compact low profile
- Various mounting styles:
 - . compact solder mount receptacle
 - . easy to replace jam nut receptacle
- Solder cup or PC tail contacts
- Specific fuel tank version for long term fuel immersion

Technical features

Mechanical

- **Shell:** Stainless steel
- **Shell plating:** Passivated
- **Insulator:** Glass bead
- **Contact:** Nickel iron
- **Contact plating:** Gold
- **Endurance:** 500 mating cycles

Electrical

- **Test voltage:**
 - Service I: 1800V
 - Service M: 1300V
- **Contact resistance:** 2 mΩ
- **Insulation resistance:**
 - ≥ 5000MΩ (at 500Vdc)
- **Contact rating:**
 - Size 16: 10 A
 - Size 20: 5 A
 - Size 22D: 3 A
 - Size 26: 1.8 A

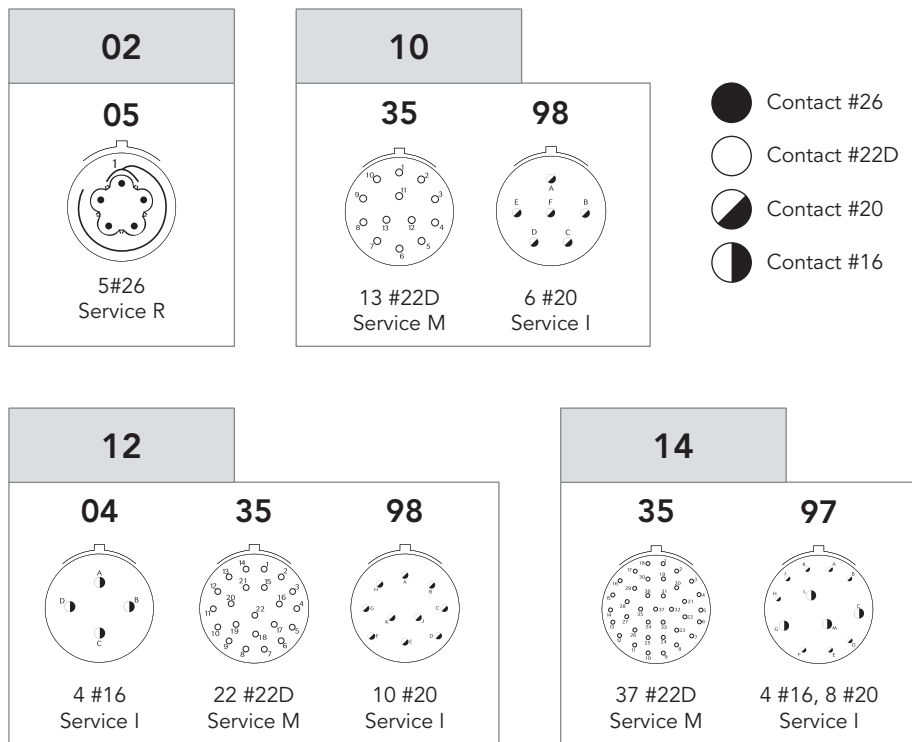
Environmental

- **Operating temperature:**
 - 55°C to +175°C
- **Sealing mated connectors:**
 - IP67 (1 meter for 30 min minimum)
- **Salt spray:** 48 hours
- **Hermeticity:**
 - Leak rate < 1.10⁻⁷ atm.cm³/s (helium gas test)

Ordering information

Basic series	8STA	1	Y	02	05	P	N	A73
Shell type								
1: Solder flange								
7: Jam nut receptacle								
Class								
Y: Hermetic version								
Shell size: 02, 04, 06, 08, 10, 12, 14								
Contact layout: See below for available layouts								
Type of contact								
C: Male PC tail contacts								
P: Male solder cup contacts								
Orientation								
N: Red / A: Yellow / B: Blue / C: Orange / D: Green								
Specification (mandatory)								
022: Fuel immersible version								
A73: Tin plating on contacts rear side and gold plating on contacts front side								

Contact layouts (viewed from front face of male insulator)



Contact layouts (matrix)

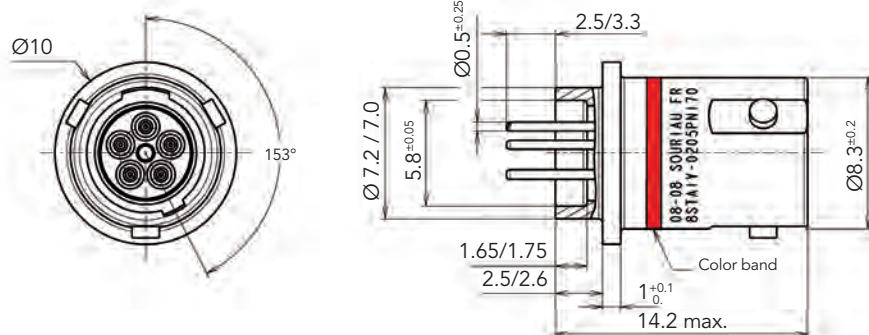
Shell size	Layout	Hermetic 8STA	Number of contacts			
			#26	#22D	#20	#16
02	02-05	OK	5			
	02-35	Available on request, please consult us		3		
04	04-05	Available on request, please consult us	5			
	04-06	Available on request, please consult us	6			
	04-35	Available on request, please consult us		3		
06	06-05	Available on request, please consult us	5			
	06-09	Available on request, please consult us	9			
	06-35	Available on request, please consult us		5		
08	08-12	Available on request, please consult us	12			
	08-35	Available on request, please consult us		6		
	08-98	Available on request, please consult us			3	
10	10-02	Available on request, please consult us				2
	10-04	Available on request, please consult us			4	
	10-05	Available on request, please consult us			5	
	10-22	Available on request, please consult us		4		
	10-26	Available on request, please consult us	26			
	10-35	OK		13		
	10-98	OK			6	

Shell size	Layout	Hermetic 8STA	Number of contacts				
			#26	#22D	#20	#16	#12
12	12-03	Available on request, please consult us				3	
	12-04	OK				4	
	12-08	Available on request, please consult us			8		
	12-26	Available on request, please consult us		6			2
	12-35	OK		22			
	12-43	Available on request, please consult us	43				
	12-98	OK			10		
14	14-05	Available on request, please consult us				5	
	14-15	Available on request, please consult us			14	1	
	14-18	Available on request, please consult us			18		
	14-19	Available on request, please consult us			19		
	14-35	OK		37			
	14-68	Available on request, please consult us	68				
	14-97	OK			8	4	

OK = SOURIAU's layout

Dimensions

Solder flange receptacle - size 02

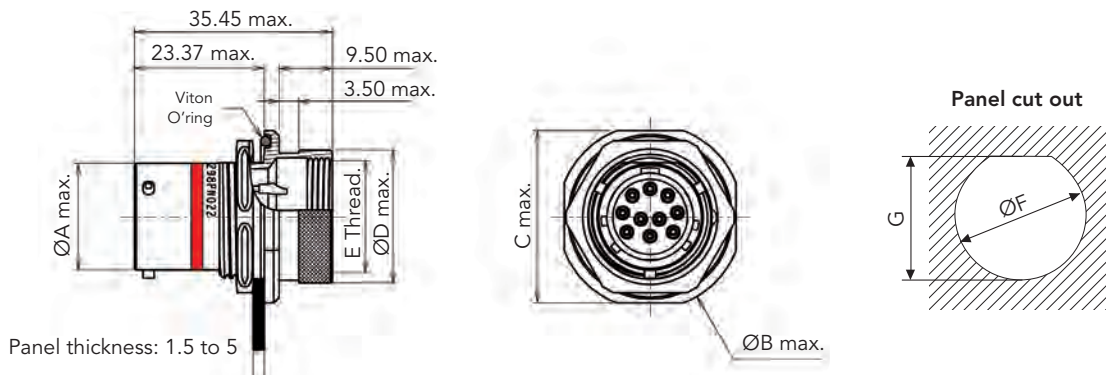


Please consult us for other shell sizes.

Note: All dimensions are in millimeters (mm)

Dimensions

Jam nut receptacle - sizes 10 to 14



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

Please consult us for other shell sizes.

Connector weight

Shell size	Receptacle type	Maximum weight in grams
02	In-line	2.5
10	Jam nut	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

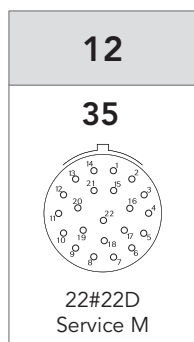
Electrical

- **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)

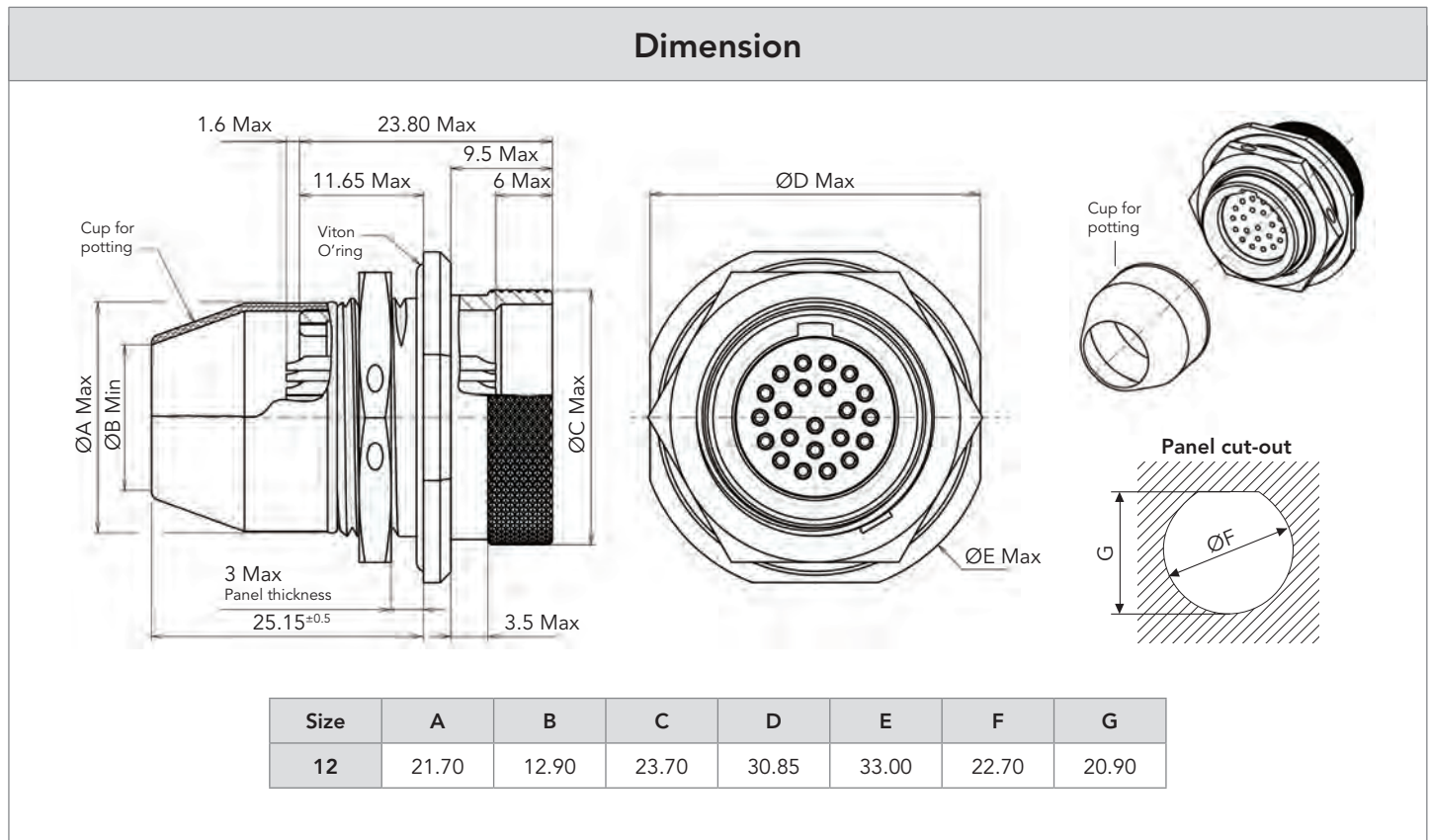


Consult us for other layouts or shell sizes.

Ordering information

Basic series	8STA	7	Y	12	35	199
Shell type	7: Jam nut receptacle					
Class	Y: Hermetic version					
Shell size	12					
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

- 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 m Ω
 - Size 22D: 14.6 m Ω
 - Size 20: 7.3 m Ω
 - Size 16: 3.8 m Ω
- **Insulation resistance:**
 - $\geq 5000M\Omega$ (at 500Vdc)
- **Contact rating:**
 - Size 26: 3 Amp
 - Size 22D: 5 Amp
 - Size 20: 7.5 Amp
 - Size 16: 13 Amp
- **Shell continuity:** $\leq 10m\Omega$

Environmental

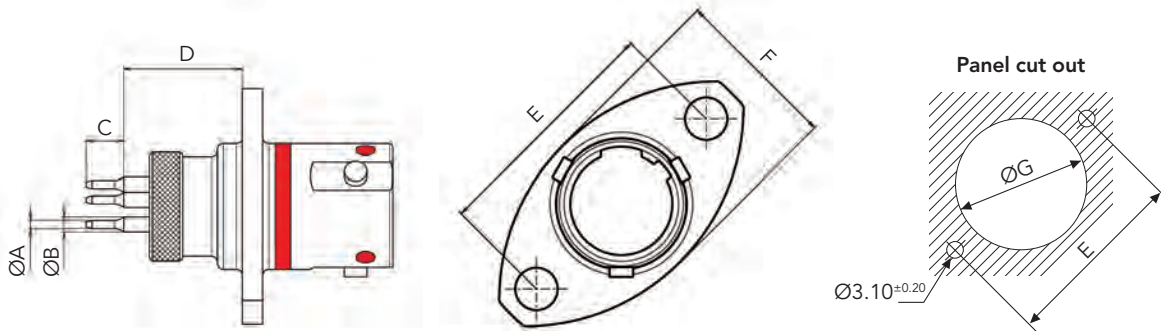
- **Temperature range:** -55 $^{\circ}c$ to +175 $^{\circ}c$
- **Sealing mated connectors:**
 - IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours

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 page 12							
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

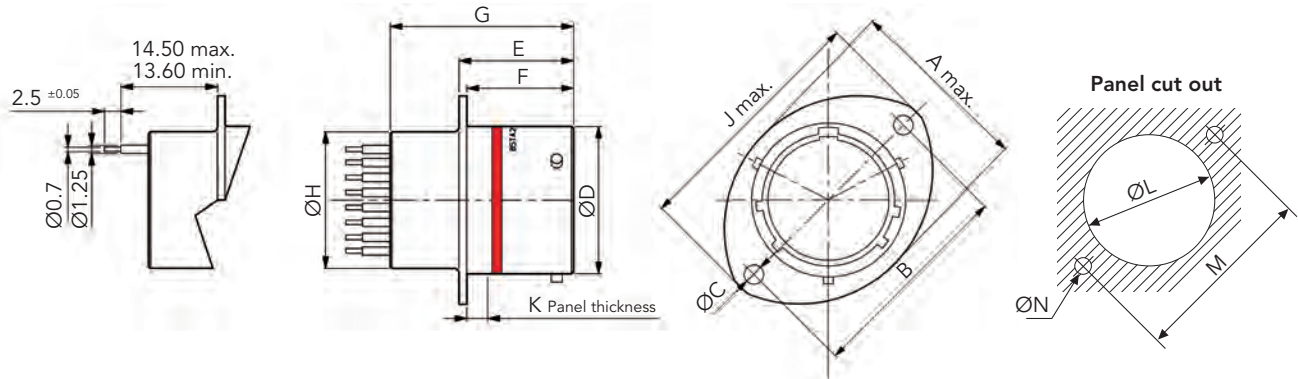


Contact size	ØA Max	ØB Max
#22D	0.70	1.25
#26	0.55	1.16

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



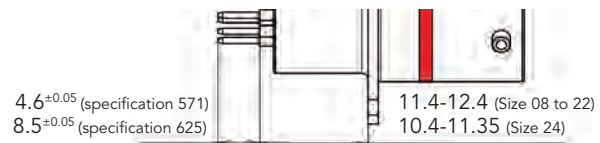
Shell size	A Max	B±0.20	ØC	ØD ^{+0.2}	E	F	G Max	ØH Max	J Max	K Max	ØL±0.10	M±0.20	ØN±0.20
08	16.50	21.40	3.20	12.00	17.21	16.05	27.65	11.10	27.20	3.00	14.50	21.40	3.60
10	19.50	25.90		14.97				13.90	32.00		17.40	25.90	
12	24.00	29.10		19.05				17.35	35.20		21.90	29.10	
14	26.90	32.50		22.22				20.50	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

- 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

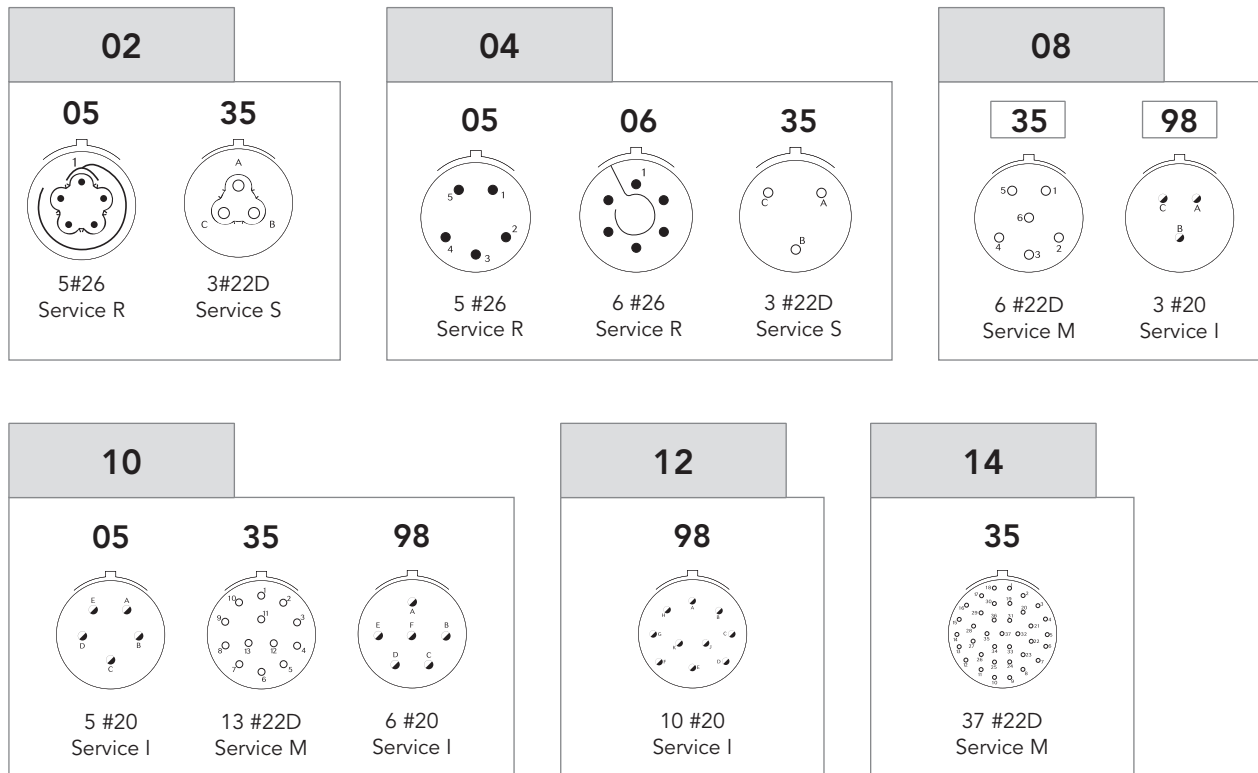
Environmental


- **Operating temperature:**
-55°C to +105°C
- **Sealing mated connectors:**
IP67 (1 metre for 30 min minimum)
- **Salt spray:** 48 hours
- **Resistance to fluids:**
Withstands most of Motorsport fluids

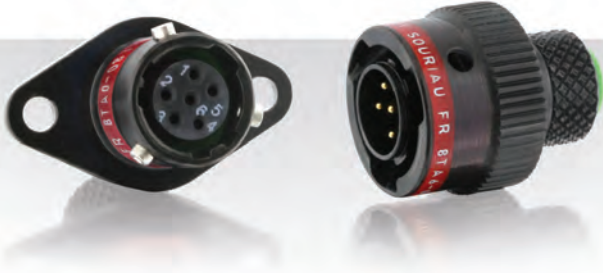
Ordering information

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							
02, 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.



Description

- Rugged aluminium body to ensure long service life in the harshest environment
- Compact low profile
- 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

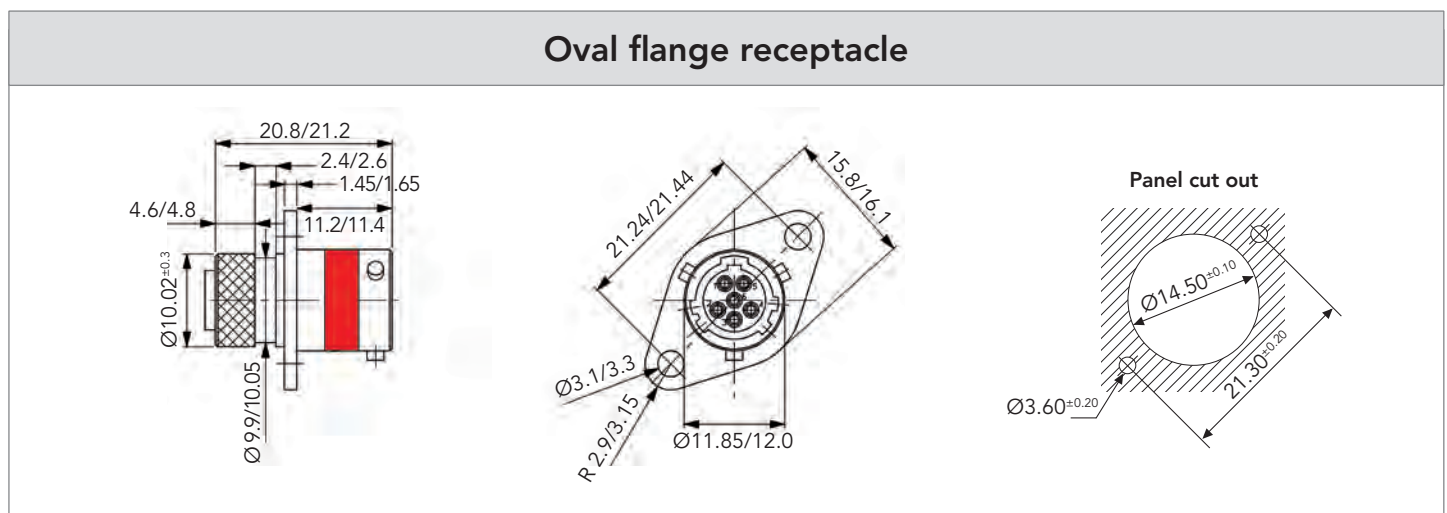
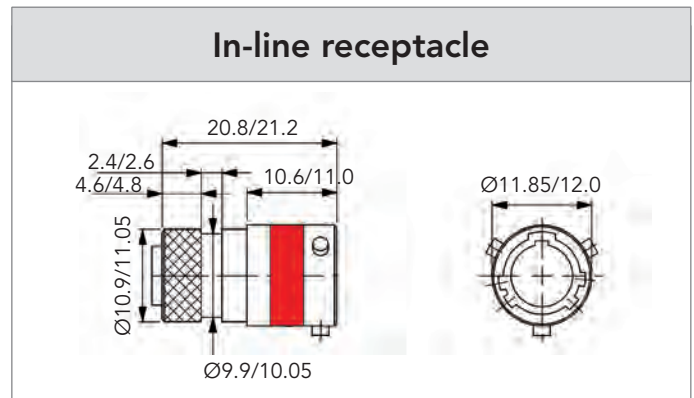
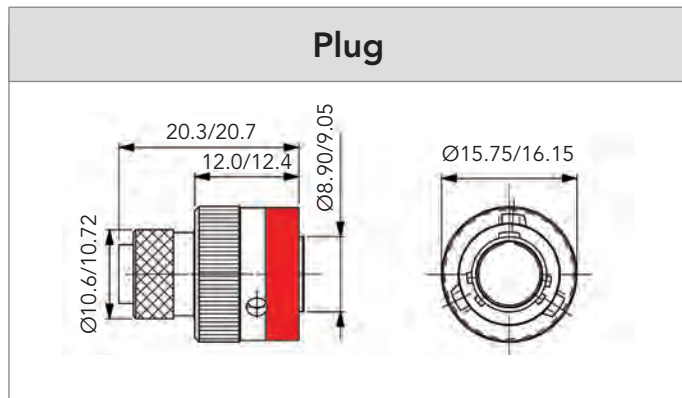
Environmental

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

Ordering information

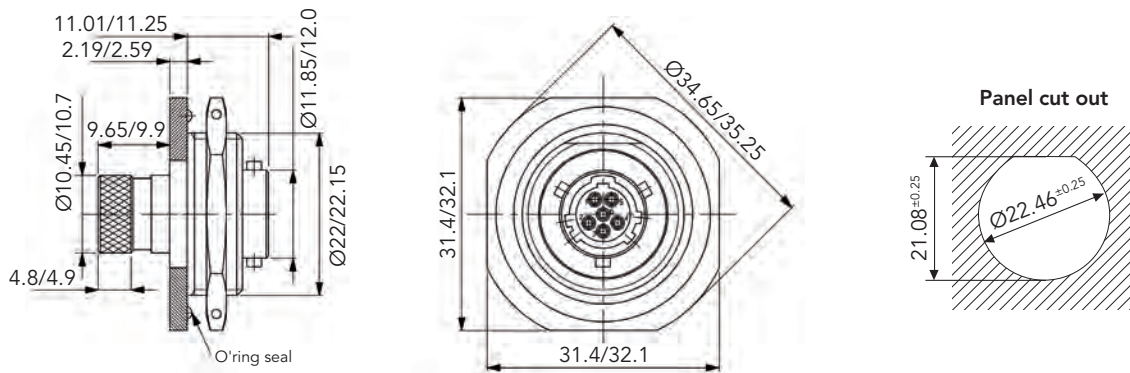
Basic series	8TA	0	08	35	P	N
Shell type	<ul style="list-style-type: none"> 0: Oval flange receptacle (for front or rear mounting) 1: In-line receptacle 6: Plug 7: Jam nut receptacle 					
Shell size	08					
Contact layout:	See page 12					
Type of contact	<ul style="list-style-type: none"> P: Pin S: Socket 					
Orientation	N: Red / A: Yellow / D: Green					

Dimensions

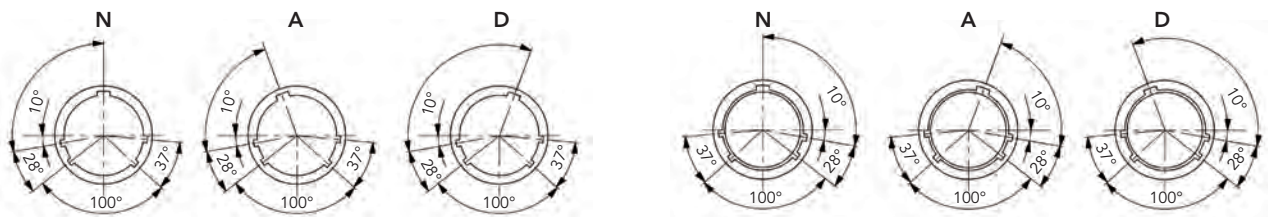


Note: All dimensions are in millimeters (mm)

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)

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.	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								
		01-03	Pin		8599-0297								
			Socket		8593-2516A								
	#22D Signal contact	Shell sizes 08 to 24	Pin	0.76	8599-0702 900	0.090	0.380	28	22	0.76	1.37		
			Socket		8599-0706 900								
		02-35; 04-35 06-35	Pin		8599-0702 900	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	2.40	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	2.40	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.25)	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 900	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)

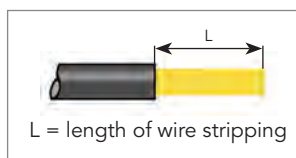
PC tail contacts

Contact size	Shell size & layout	Contact type	Contact Ø max.	Part numbers
#22D	02-35	Pin	0.76	8599 1031 900
		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

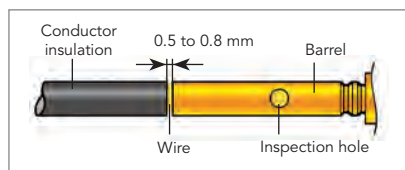
Wiring instruction

Cable preparation and wire stripping

Contact size	#26		#22D	#20	#16	#12	#8	#4
	Shell size 01	Other shell sizes						
L	3.5	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.

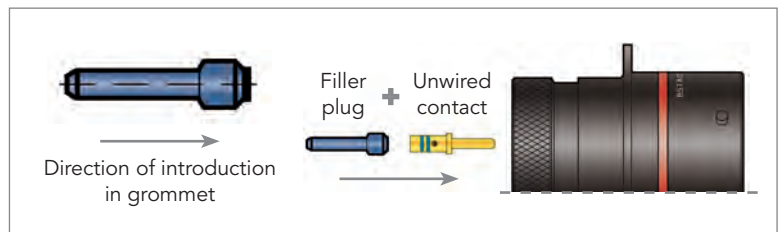
- Important:
- Slide any accessories over wire strands before carrying out the following operations.
 - Contacts are inserted and extracted from the rear of the connector.

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	Yellow



Recommended tooling

Crimp contacts

8STA Series sizes 01, 02, 04, 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 04-35 06-35 08-35 (8TA only)	M22520/2-09	8476-09	M22520/2-01	8476-01
	Socket		M22520/2-06	8476-06			
#26	Pin	24 to 30	06-05	-	8599-0048	M22520/2-01	8476-01
	Socket				8599-0049		
	Pin		04-05	-	8599-0050		
	Socket				8599-0051		
	Pin		02-05 04-06 06-09	-	640 088		
	Socket				640 089		
	Pin		01-03	-	8599-0397		
	Socket				8593-2556A		

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
#26	Pin	-	8599-0397	-	-	-
	Socket	-	8599-0398	-	-	-
#22D	Pin	-	M22520/2-09	-	-	-
	Socket	-	M22520/2-06	-	-	-
#20	Pin	M22520/1-04	M22520/2-10	-	-	-
	Socket			-	-	-
#16	Pin	M22520/1-04	-	-	-	-
	Socket		-	-	-	-
#12	Pin	M22520/1-04	-	-	-	-
	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	Plastic	-	8599 0444 900	Blue	Red
	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 (recommended)

8STA Series

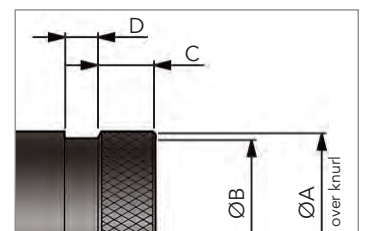
Shell size	Straight boot		90° boot	
	Raychem	Hellerman	Raychem	Hellerman
01	-	1038-4-G	-	1183-4-G
02	203W301-25-G02	1037-4-G	223W601-25	1182-4-G
04	204W221-25-G03	1037-4-G	224W221-25-G03	1182-4-G
06	204W221	1030-4-G	224W221	1181-4-G
08	202K121	152-42-G	222K121	1152-4-G
10	202K132	152-42-G	222K132	1152-4-G
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	01	02	04	06	08	10	12	14	16	18	20	22	24	
ØA	8.65	5.60	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±0.15	8.00	5.05	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±0.15	2.70	2.20	2.20	2.70	4.20	6.00									
D	2.30	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

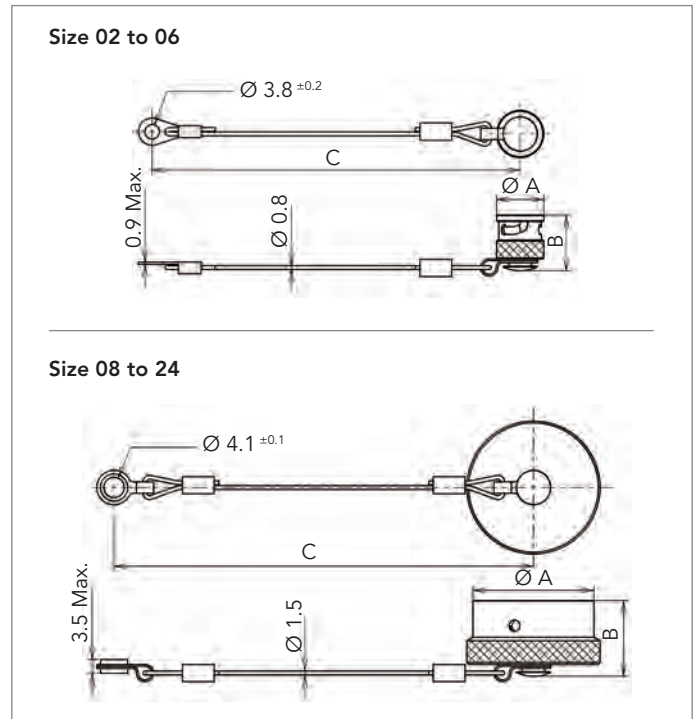
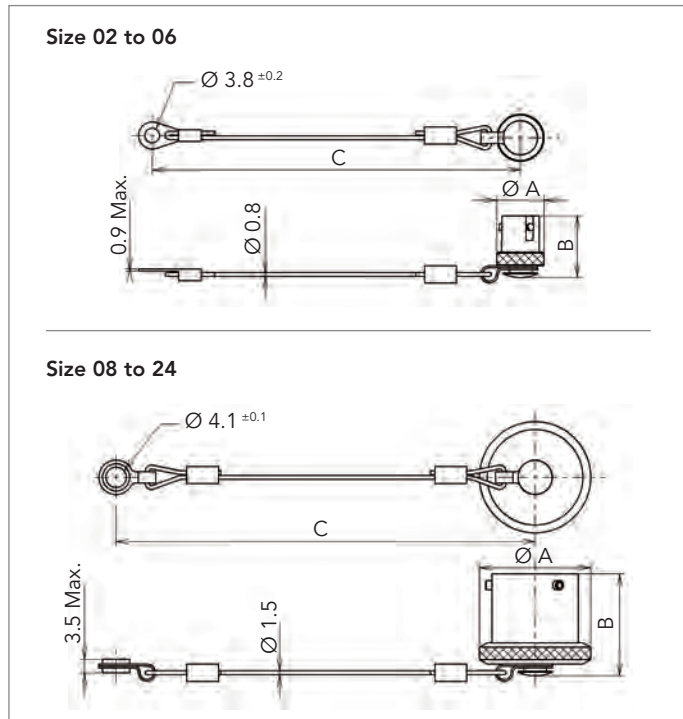
Shell size & Layout	Part number	Ø A Max.	B Max.	C ±5
02	8STA802A	10.60	13.20	80
04	8STA804A	12.20	13.80	
06-05	8STA806A	15.25	15.50	
06-09 06-35	8STA8F06A	15.25	15.50	
08	8STA808A	17.50	27.44	128
10	8STA810A	20.50		140
12	8STA812A	24.50		
14	8STA814A	27.50		
16	8STA816A	30.90		
18	8STA818A	34.00		153
20	8STA820A	37.20		
22	8STA822A	40.40		
24	8STA824A	43.50		

Receptacle caps

Cord material: Nylon

Cap plating: Conductive Black Zinc

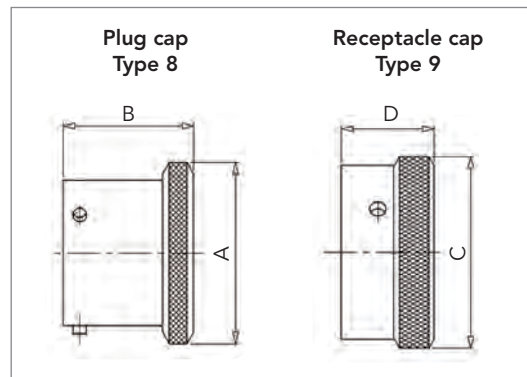
Shell size & Layout	Part number	Ø A Max.	B Max.	C ±5
02	8STA902A	10.60	14.30	80
04	8STA904A	13.60	15.50	
06-05	8STA906A	15.25	15.50	
06-09 06-35	8STA9F06A	15.25	15.50	
08	8STA908A	18.90	21	128
10	8STA910A	21.90		140
12	8STA912A	26.20		
14	8STA914A	29.40		
16	8STA916A	32.60	22	
18	8STA918A	35.40		
20	8STA920A	38.90		
22	8STA922A	42.10		
24	8STA924A	45.20	23	



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	8STA806	8STA906	15.15	11.05	15.15	9.70
06-09 06-35	8STA8F06	8STA9F06	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

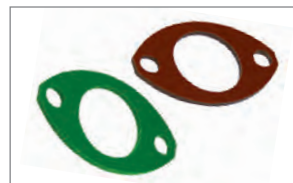
Nut plates are available for all 8STA sizes. Designed for oval flange receptacles with two holes. Their design was specially made for motorsport market.



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)

MOTORSPORT

Motorsport

microComp[®] Series

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■ Ordering information	61





Description

- Crimp removable contacts AWG 24 to 28
- High density layouts from 7 to 104 ways
- High vibration and shock withstanding
- Shell in composite and aluminium: very light and non magnetic

Technical features

Mechanical

- **Shell:**
Composite (glass fiber reinforced, material for maximum mechanical resistance)
Aluminum
- **Shell plating:** 10µ Ni over Cu
- **Contact:** Copper alloy
- **Contact plating:**
1.27 µm (50 µin) Au according to Type 2, Grade C of MIL-DTL-45204
- **Insulator:** Thermoplastic
- **Mounting accessories (clips, jackscrews and jackposts):**
Stainless steel, passivated per QQ-P-35
- **Grommet and seal:** Silicone rubber
- **Drilled bar:** Thermoplastic
- **Endurance/Durability:**
500 mating/unmating operations
- **Contact retention in insert:** 15 N
- **Vibration:**
Random: 44g
Sine: 20g
- **Shock:** 50g

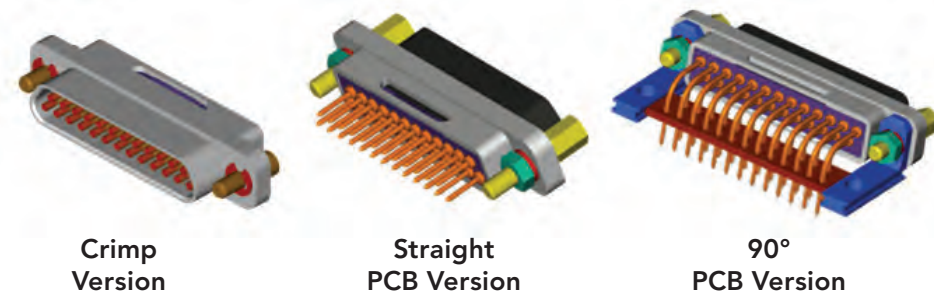
Electrical

- **Contact size:** #26
- **Contact pitch:** 2 mm
- **Current rating:** 2.5 Amps
- **Dielectric withstanding voltage**
Sea level: 600 Vrms
70.000 feet: 200 Vrms
- **Insulation resistance:** 5,000 MΩ
- **Low level contact resistance:** 6 mΩ
- **Rated current contact resistance:** <5 mΩ
- **Admissible wire gauge:**
AWG 24 to 28
- **Shielding effectiveness:**
> 60dB attenuation from 1 to 500 MHz
- **Shell to shell continuity:**
Composite version: < 2mΩ
Aluminum version: < 2mΩ

Environmental

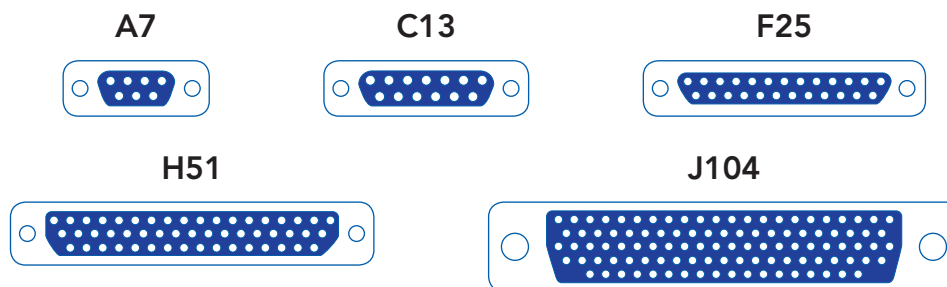
- **Operating temperature:**
-55°C to +175°C
- **Storage temperature range:**
-65°C to +125°C
- **Soldering temperature:** +260°C
- **Salt spray (corrosion):**
Composite shell: 2,000 hrs
Aluminum shell: 48 hrs
- **Flammability:**
UL 94V-0 (self-extinguishing materials)
- **RoHS compliant**

Product range



Available layouts

Scale 1:1



Ordering information

Part Number	8MC	N	F25	P
Shell material A: Aluminum empty: Composite				
Plating N: Electroless nickel plating empty: Without plating				
Sealing E: Sealed version . for crimp pin contacts, sealing = grommet . for crimp socket contacts, sealing = grommet + interfacial seal . for PCB contacts = non standard, please consult us T: Sealed version, interfacial seal only . interfacial seal is always on female connector with socket contacts empty: Without sealing				
Shell size & Contact layout A7: 7 ways C13: 13 ways F25: 25 ways H51: 51 ways J104: 104 ways				
Contact type P: Pin contacts for male connector S: Socket contacts for female connector				
Termination code L: Delivered without contacts 011: Crimp contacts for wire AWG 26 & 28 011B: Crimp contacts for wire AWG 24 & 26 OL3: Straight PCB contacts 1AON: 90° bent PCB male contacts, without bracket, with removable drilled bar 1A7N: 90° bent PCB male contacts, with bracket, with removable drilled bar and standard jackpost				

Insertion/extraction tool 8MCIET is always included with -S011, -S011B, -P011B and -P011 versions, but not with -L versions. Termination codes -011, -011B and -L are not marked on the connector (only for order). Jackscrews kits are never included.

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