



# 8STA/8TA Series

## Compact Circular Connectors

Derived from JN1003 & MIL-DTL-38999





# Company Profile

## SOURIAU

**The extreme environment interconnect specialist «from deep sea to deep space»**

*The company designs, manufactures and markets high performance interconnect solutions for severe environments from industrial broadband and universal ranges to complex system with integrated functions: filtering, high speed data transmission, hermetic seal, separation mechanism, remote handling, underwater mating, ...*



*Industrial*



*Aeronautical*



*Equipment & System*

*The dedicated end markets for SOURIAU's products are aeronautical, defense-space and industrial*



*Railway  
Geophysics  
Manufacturing environment  
Instrumentation  
Automation & process  
Motorsport*



*Civil & military aircraft  
Helicopter  
Weapon delivery system  
Avionics*



*Military marine  
Communications  
Satellites  
Launcher & missile*

*SOURIAU was established in 1977 and has been created by successive acquisitions of the industrial, aeronautical, defense and space activities of SOURIAU, JUPITER and BURNDY.*

*The Group's products are engineered and manufactured in the USA and Dominican Republic, Europe and Morocco, Japan and India, and sold by a worldwide sales and marketing organization, and in addition to SOURIAU's offices, a large network of licensed distributors and agents.*

*SOURIAU complies with most of national and international Quality Assurance Standards, production unit with ISO 14001*

**Quality Certificate  
Management System**

**ISO 9001**

**Environment Certificate  
Management System**

**ISO 14001**

**Quality Certificate  
Management System**

**Aeronautic Industry : EN 9100**

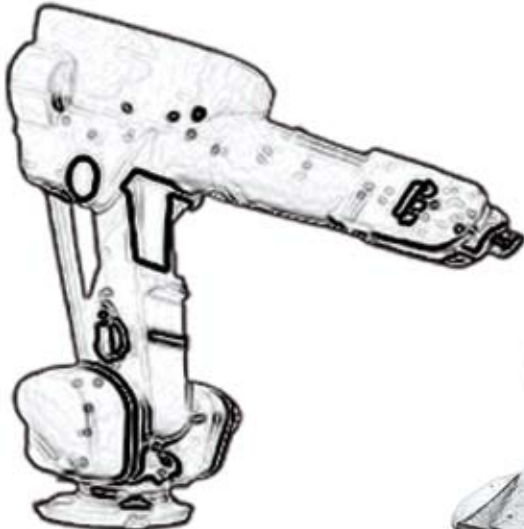


# 8STA

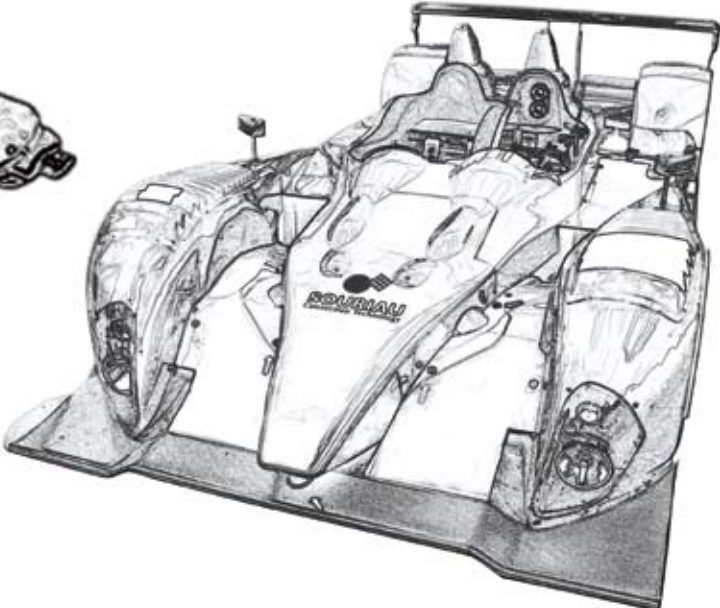
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### MOTORSPORT



### INDUSTRIAL



For further information on 8STA connectors, visit our website [www.motorsport-connectors.com](http://www.motorsport-connectors.com) or contact us at [contactindustry@souriau.com](mailto:contactindustry@souriau.com)



# Overview

## Introduction

8STA & 8TA circular connectors are derived from international military specifications MIL-DTL-38999 & Eurofighter JN 1003, and are designed to withstand high levels of shock & vibration in harsh environments.

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 worlds smallest, & now most popular connector of this type; 8STA size 2. Continuing on with this theme, several new products can be found in this latest catalogue, including chassis mounted receptacles with integrated nuts, eliminating the need for nut plates, lightweight cable receptacles, hermetic size 2 connectors and High Density 8STA with pin counts normally associated with much larger connectors.

8STA & 8TA connectors are recommended for harsh environment applications where size and weight should be minimized, such as Motorsport, Industrial applications, Unmanned Aerial Vehicles, Rugged Instrumentation, Future Soldier electronics etc.



8STA shell size 02 - page 9 to 12



8STA shell size 04 - page 13 to 16



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8STA shell size 06-35 - page 21 to 24



8STA shell size 08 to 24 - page 25 to 32



8STA High Density - page 33 to 36



# Overview



**8STA Power & Mixed signal/power** - page 37 to 44



**8STA with Integrated Clinchnut** - page 45 to 48



**8STA Hermetic shell size 02** - page 49 to 50



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**8STA / 8TA Fuel Immersible** - page 53 to 56



**8STA Through Bulkhead** - page 57 to 58



**8STA Grounded Connector** - page 11 & 59

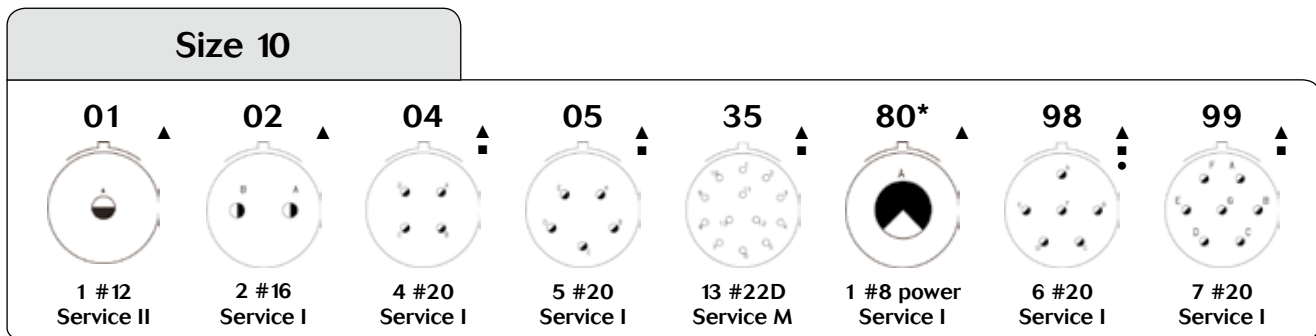
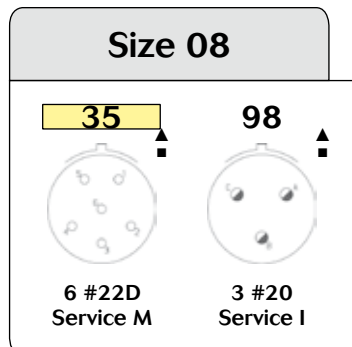
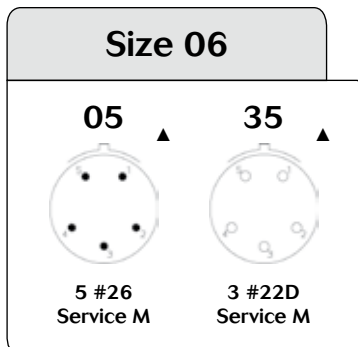
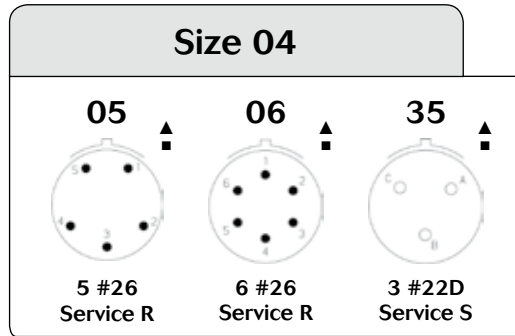
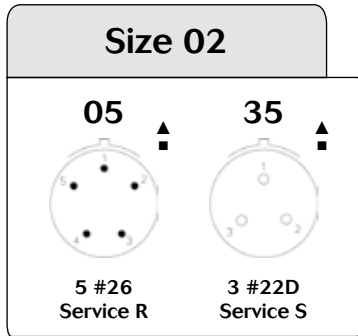


**8TA Connector** - page 59 to 62

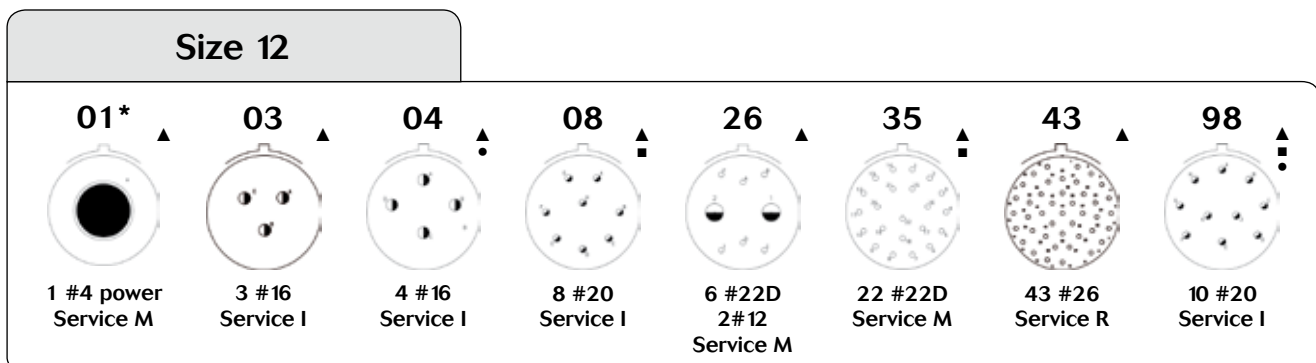


# 8STA

## Contact layouts



\*specif 251 only



\*specif 261 only

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



# 8STA

## Size 14

<b>05</b> ▲	<b>15</b> ▲	<b>18</b> ▲	<b>19</b> ▲	<b>35</b> ▲	<b>97</b> ▲
5 #16 Service II	14 #20 Service I 1 #16 Service I	18 #20 Service I	19 #20 Service I	37 #22D Service M	8 #20 Service I 4 #16 Service I

## Size 16

<b>02*</b> ▲	<b>06</b> ▲	<b>08</b> ▲	<b>26</b> ▲	<b>35</b> ▲	<b>75*</b> ▲	<b>99</b> ▲
1 #8 power Service N 38 #22D Service N	6 #12 Service I	8 #16 Service II	26 #20 Service I	55 #22D Service M	2 #8 power Service M	2 #16 Service I 21 #20 Service I

\*specif 251 only

## Size 18

<b>11</b> ▲	<b>18*</b> ▲	<b>28</b> ▲	<b>32</b> ▲	<b>35</b> ▲
11 #16 Service II	14 #22D Service M 4 #8 power Service M	26 #20 Service I 2 #16 Service I	32 #20 Service I	66 #22D Service M

\*specif 251 only

## Size 20

<b>11</b> ▲	<b>16</b> ▲	<b>35</b> ▲	<b>39</b> ▲	<b>41</b> ▲	<b>75*</b> ▲	<b>48</b> ▲	<b>78*</b> ▲
11 #12 Service I	16 #16 Service II	79 #22D Service M	37 #20 Service I 2 #16 Service I	41 #20 Service I	4 #8 power Service M	4 #8 power Service I	17 #22D Service M 2 #8 power Service M

\*specif 251

- ▲ Crimp contact layouts
- PC tail contact layouts
- Solder cup contact layouts

Shell sizes 22 & 24, please see next page.







# 8STA shell size 02



## Features & Benefits

- The smallest circular connector with removable contacts #26
- 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
- 7 colour-coded keyway orientations
- Boot termination feature
- PCB option available
- Conductive black zinc plating

## Technical characteristics

### Mechanical

• Shell	Aluminium alloy
• Shell plating	Conductive black zinc (standard)
• Insulator	Thermoplastic
• Grommet & seal	Liquid silicone rubber
• Contact	Copper alloy
• Contact plating	Gold
• Endurance	500 matings/unmatings
• Shock	300 g for 3 ms and EIA-364-27
• Vibration	147 m/s <sup>2</sup> , 10 to 2000 Hz
• Contact retention	35 N (size 26) 45 N (size 22D)

### Electrical

• Test voltage	400 Vrms (size 26) 1000 Vrms (size 22D)
• Contact resistance	< 16 mΩ (size 26) < 14.6 mΩ (size 22D)
• Insulation resistance	> 5000 mΩ (at 400 Vdc / size 26) > 5000 mΩ (at 500 Vdc / size 22D)
• Contact rating	3 A (size 26) 5 A (size 22D)

### Climatic

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

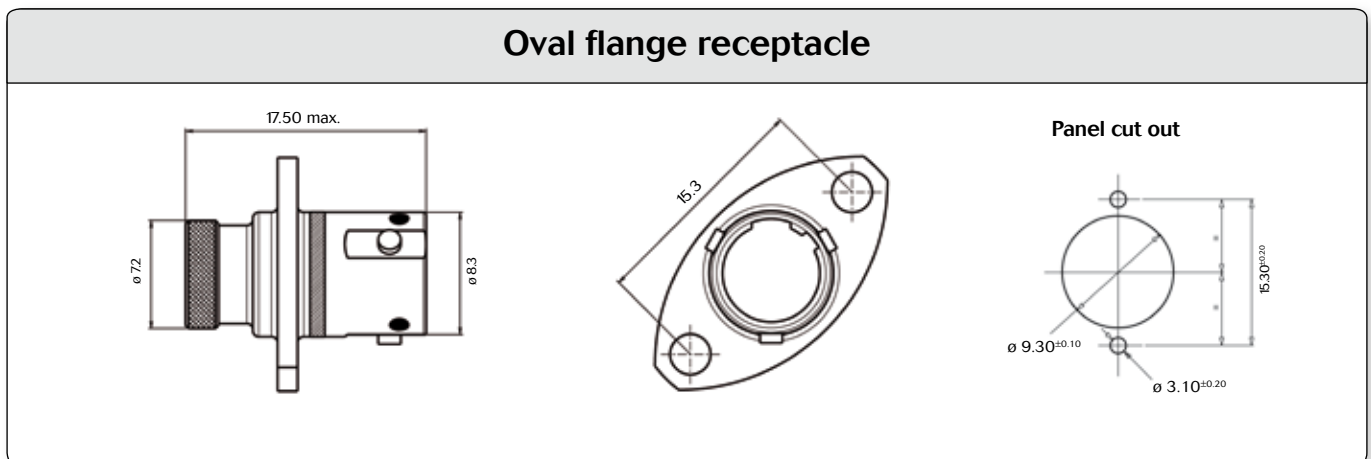
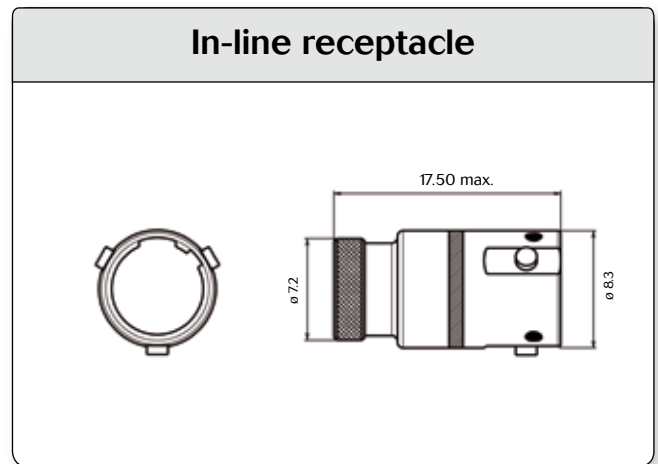
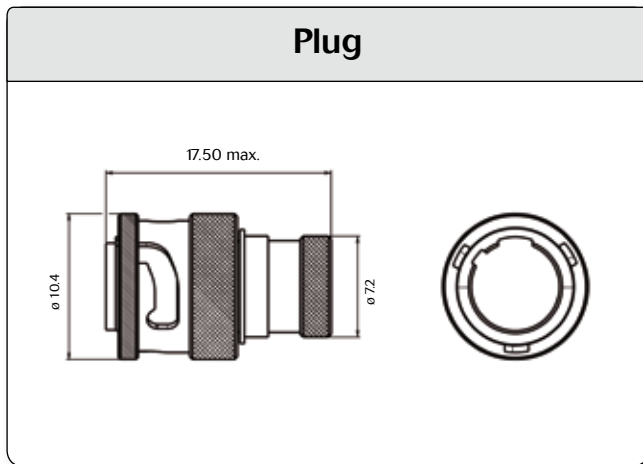


# 8STA shell size 02

## How to order

Basic series	8STA 0 - 02 05 P N -
Shell style	0: Oval flange receptacle 1: In-line receptacle 2: Oval flange receptacle with PCB contacts 6: Plug
Plating	- : Standard version F: Nickel version
Shell size	02
Contact layouts	See page 6-8
Type of contacts	P: Pin contacts S: Socket contacts
Orientations	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / E: Grey / U: Universal
Specification	- : Standard version 499: Integrated nut on the flange - M2 insert (only for shell style 0 & 2) - for more details, please see page 45-48 528: Integrated nut on the flange - M2.5 insert (only for shell style 0 & 2) - for more details, please see page 45-48

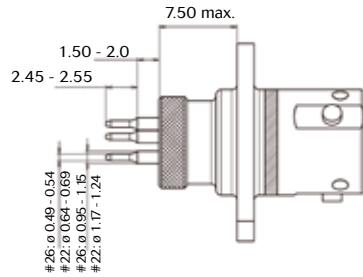
## Range presentation



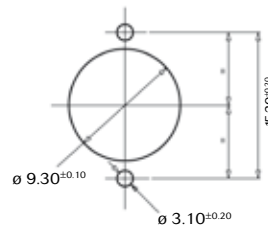


# 8STA shell size 02

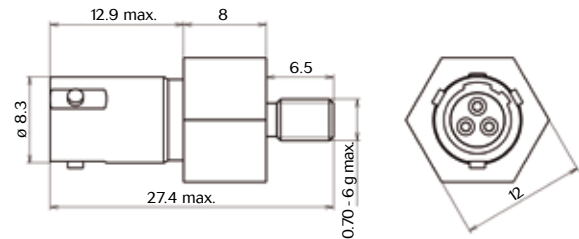
## Oval flange receptacle with PCB contacts



### Panel cut out

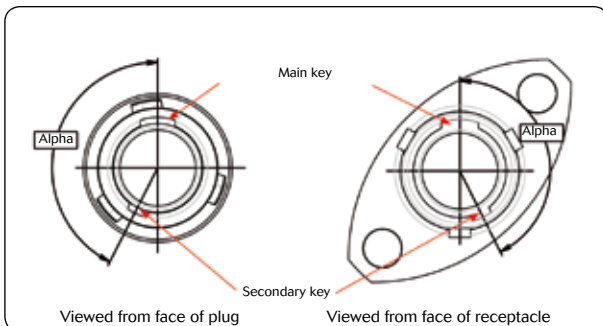


## Grounded receptacle



Please consult us for more information

## Orientation



Key positions	Alpha	Colour band
N	153°	RED
A	51°	YELLOW
B	102°	BLUE
C	204°	ORANGE
D	255°	GREEN
E	306°	GREY

Main key remains fixed. 8STA 02-05 & 8STA 02-35 have the same orientations. Keyways width dimensions are different to avoid wrong mating in blind conditions.



# 8STA shell size 02

## Contacts

Crimped & PCB contacts									
Contact size	Contact type	Contact $\varnothing$	Part numbers	Admissible wire section				External dia. over insulation (mm)	
				AWG		mm <sup>2</sup>		Min.	Max.
Crimp contact				Min.	Max.	Min.	Max.	Min.	Max.
22D	Male	0.76	8599-0702-JJ	28	22	0.095	0.38	0.71	1.37
	Female		8599-0710-900						
26	Male	0.50	8599 1001-JL	30	24	0.095	0.24	0.60	0.83
	Female		8599 1002-900						


  

PCB contact		Part numbers	
22D	Male	0.76	8599 1031-JJ
	Female		8599 1032-900
26	Male	0.50	8599 1004-JL
	Female		8599 1005-900


Crimping tools				
Contact size	Wire sizes	Type	Locator part number	Tool part number
22D	22 to 28	Male	8476 09	M22520/2-01
		Female	8476 06	
26	24 to 30	Male	640 088	
		Female	640 089	

## Accessories

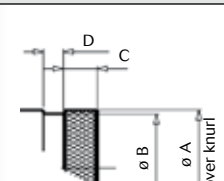
Insertion & extraction tools			
Contact size	Part numbers	Colour	
		Insertion	Extraction
22D	M81969/14-01 (plastic)	Green	White
26	8599-1006 (metallic)	Extraction only	

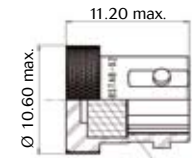
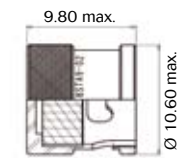
  


M81969/14-01



8599-1006

Shrinkable termination detail				
	$\varnothing A$	$B^{\pm 0.05}$	$C^{\pm 0.05}$	$D^{\pm 0.05}$
	7.2	6.55	2.2	2.30

Metal protective cap	
<b>Plug cap: 8STA802</b> 11.20 max. 	<b>Receptacle cap: 8STA902</b> 9.80 max. 



# 8STA shell size 04



## Features & Benefits

- Rugged aluminium body to ensure long service life in the harshest environment
- Optimum space & weight saving whilst achieving maximum strength
- Option of either #22 or #26 gold plated crimp contact or PCB contact available
- Environmental sealing from interfacial seal and rear grommet
- Positive locking mechanism with locked colour indicators
- 6 colour- coded keyway orientations
- Boot termination feature
- Conductive black zinc plating

## Technical characteristics

### Mechanical

- Shell: Aluminium alloy
- Shell plating: Conductive black zinc (standard)
- Insulator: Thermoplastic
- Grommet & seal: Liquid silicone rubber
- Contact: Copper alloy
- Contact plating: Gold
- Endurance: 500 matings/unmatings
- Shock: 300 g for 3 ms and EIA-364-27
- Vibration: 147 m/s<sup>2</sup>, 10 to 2000 Hz
- Contact retention: 35 N (size 26)  
45 N (size 22D)

### Electrical

- Test voltage: 400 Vrms (size 26)  
1000 Vrms (size 22D)
- Contact resistance: < 16 mΩ (size 26)  
< 14.6 mΩ (size 22D)
- Insulation resistance: > 5000 mΩ (at 400 Vdc / size 26)  
> 5000 mΩ (at 500 Vdc / size 22D)
- Contact rating: 3 A (size 26)  
5 A (size 22D)

### Climatic

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

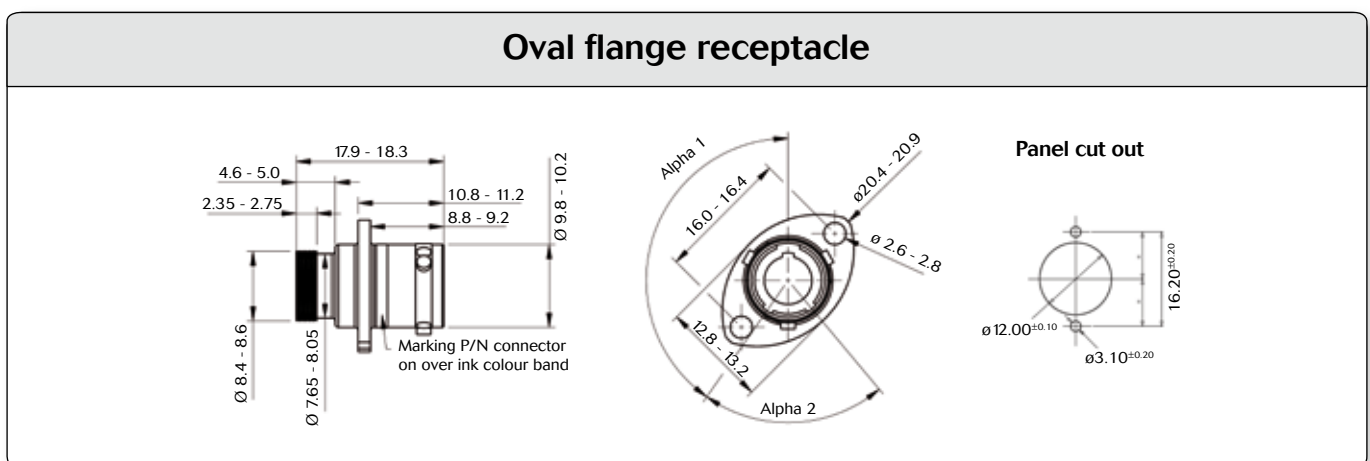
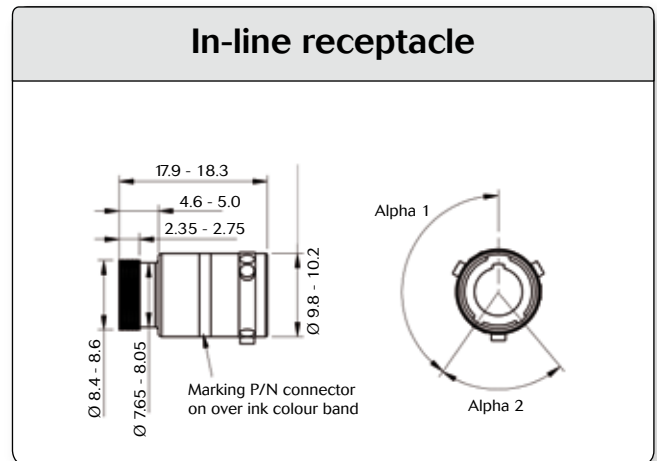
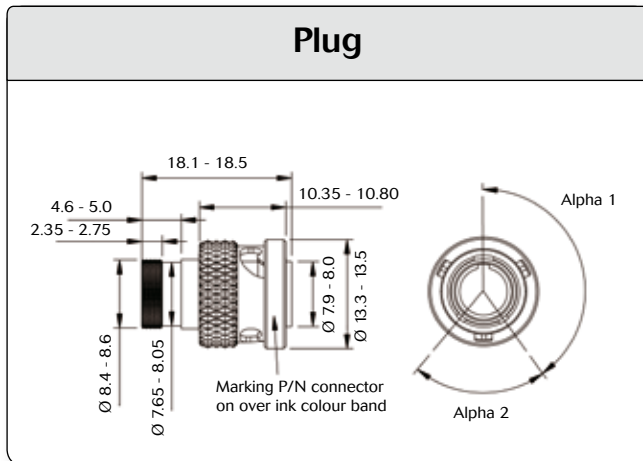


# 8STA shell size 04

## How to order

Basic series	8STA	0	-	04	05	P	N	-
Shell style	0: Oval flange receptacle 1: In-line receptacle 2: Oval flange receptacle with PCB contacts 6: Plug 7: Jam nut receptacle							
Plating	- : Standard version F: Nickel version							
Shell size	04							
Contact layouts	see page 6-8							
Type of contacts	P: Pin contacts S: Socket contacts							
Orientations	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal							
Specification	- : Standard version 499: Integrated nut on the flange - M2 insert (only for shell style 0 & 2) - for more details, please see page 45-48 528: Integrated nut on the flange - M2.5 insert (only for shell style 0 & 2) - for more details, please see page 45-48 022: Fuel immersible version - for more details, please see page 53-56							

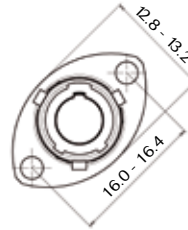
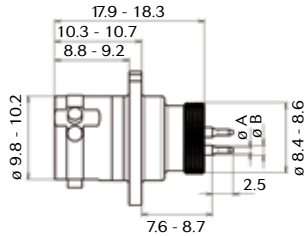
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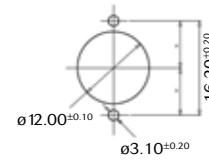


# 8STA shell size 04

## Oval flange receptacle with PCB contacts



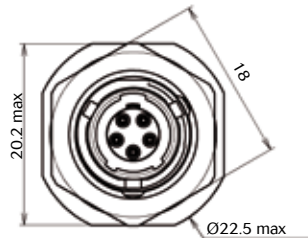
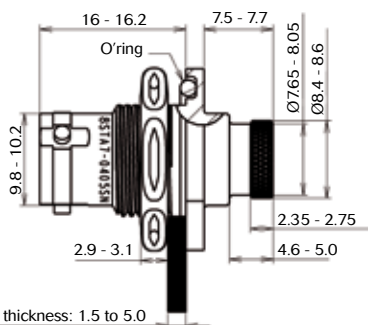
Panel cut out



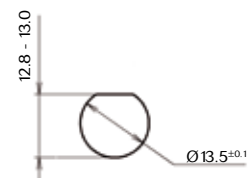
Layouts	Contacts	ø A	ø B
04-35	3 contacts #22D	0.64 / 0.69	1.19 / 1.24
04-05	5 contacts #26	0.49 / 0.54	1.1 / 1.15
04-06	6 contacts #26	0.49 / 0.54	1.1 / 1.15

For contact P/N, please consult us

## Jam nut receptacle



Panel cut out



Panel thickness: 1.5 to 5.0

## Orientation

Key positions	Alpha 1	Alpha 2	Colour band
N	145°	75°	RED
A	130°	120°	YELLOW
B	110°	120°	BLUE
C	155°	115°	ORANGE
D	90°	115°	GREEN
U	NONE	NONE	NONE

# 8STA shell size 04



## Contacts

Crimped contacts									
Contact size	Contact type	Contact $\varnothing$	Part numbers	Admissible wire section				External dia. over insulation (mm)	
				AWG		mm <sup>2</sup>		Min.	Max.
Crimp contact				Min.	Max.	Min.	Max.	Min.	Max.
22D	Male	0.76	8599-0702 JJ	28	22	0.095	0.38	0.71	1.37
	Female		8599-0710 900						
26 - layout 04-05	Male	0.50	8599-0777 LY	30	24	0.095	0.24	0.60	0.83
	Female		8599-0778 900						
26 - layout 04-06	Male		8599-1001 JL						
	Female		8599-1002 900						

Crimping tools						
Contact size	Wire sizes	Type	Locator part number		Tool part number	
			Spec.	SOURIAU	Spec.	SOURIAU
22D	22 to 28	Male	M22520/2-09	8476-09	M22520/2-01	8476-01
		Female	M22520/2-06	8476-06		
26 - layout 04-05	24 to 30	Male	-	8599-0050		
		Female	-	8599-0051		
Male		-	640 088			
Female		-	640 089			
26 - layout 04-06						

## Accessories

Insertion & extraction tools			
Contact size	Part numbers	Colour	
		Insertion	Extraction
22D	M81969/14-01 (plastic)	Green	White
26 - layout 04-05			
26 - layout 04-06	8599-1006 (metallic)	-	



Shrinkable termination detail				
	$\varnothing A$	$B^{\pm 0.05}$	$C^{\pm 0.05}$	$D^{\pm 0.05}$
	8.65	8.00	2.70	2.30

Metal protective cap	
<b>Plug cap: 8STA804</b> 	<b>Receptacle cap: 8STA904</b> 

Filler plug			
Contact size	Part numbers		Colour
	Spec.	SOURIAU	
22D	MS27488-22	8660-2.12	Black
<small>not available for contact #26</small>			



# 8STA shell size 06-05



## Features & Benefits

- Rugged aluminium body to ensure long service life in the harshest environment
- Small compact connector with boot termination feature
- Environmental sealing from interfacial seal and rear grommet
- Positive locking mechanism with locked colour indicators
- 6 colour-coded keyway orientations
- Conductive black zinc plating
- Available with 5 contacts #26 (crimp or PCB)

## Technical characteristics

### Mechanical

• Shell	Aluminium alloy
• Shell plating	Conductive black zinc
• Insulator	Thermoplastic
• Grommet & seal	Liquid silicone rubber
• Contact	Copper alloy
• Contact plating	Gold
• Endurance	500 matings/unmatings
• Shock	300 g for 3 ms and EIA-364-27
• Vibration	147 m/s <sup>2</sup> , 10 to 2000 Hz
• Contact retention	45 N

### Electrical

• Test voltage	1300 Vrms
• Contact resistance	< 16 mΩ
• Insulation resistance	> 5000 mΩ (at 500 Vdc)
• Contact rating	3 A

### Climatic

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

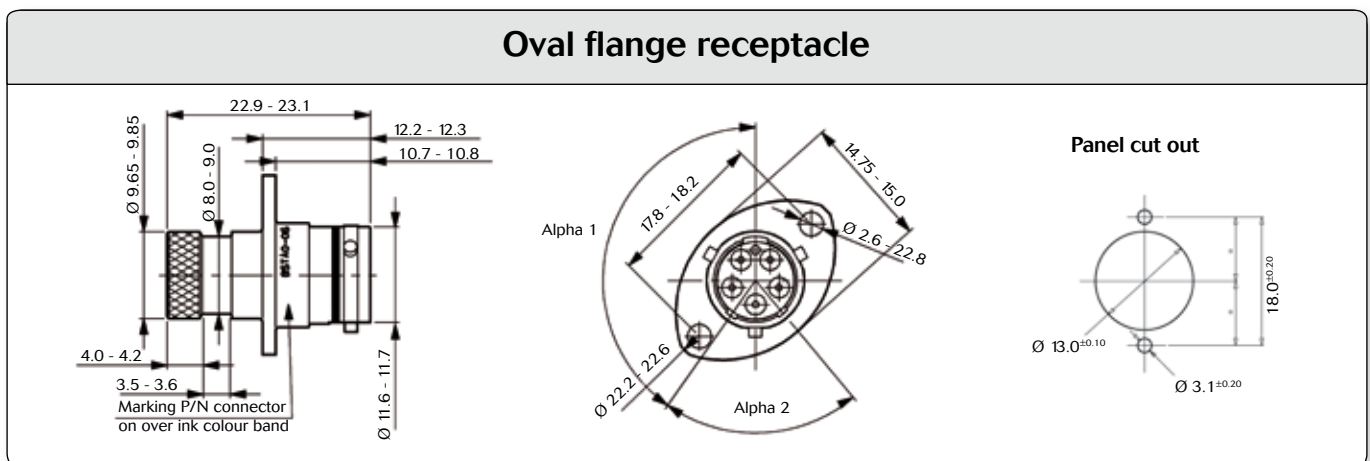
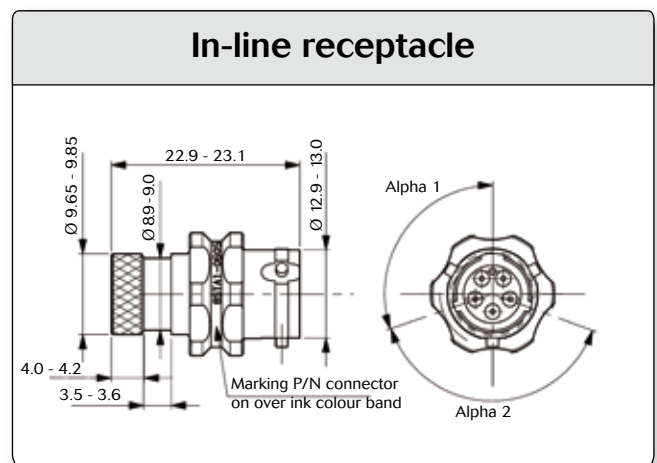
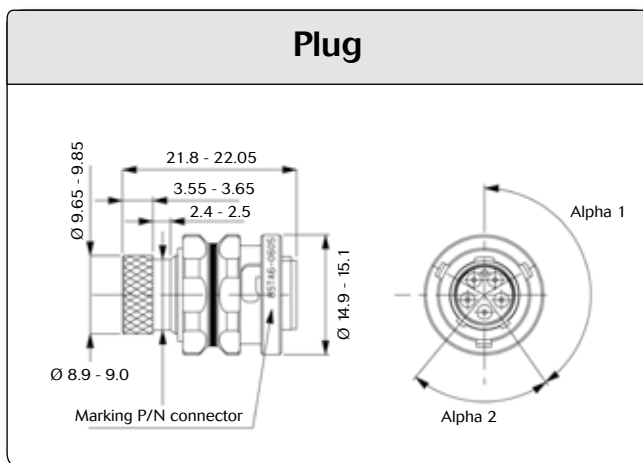


# 8STA shell size 06-05

## How to order

Basic series	8STA	0	06	05	P	N	-
Shell style	0: Oval flange receptacle (for front or rear mounting) 1: In-line receptacle 2: Oval flange receptacle with PCB contacts 6: Plug						
Shell size	06						
Contact layouts	05 (5 contacts #26)						
Type of contacts	P: Pin contacts S: Socket contacts						
Orientations	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal						
Specification	- : Standard version 528: Integrated nut on the flange - M2.5 insert (only for shell style 0 & 2) - for more details, please see page 45-48						

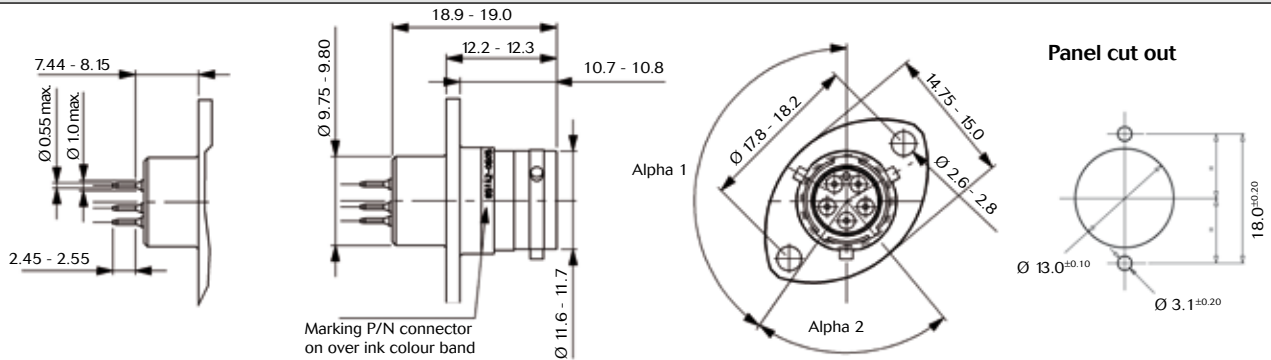
## Range presentation



# 8STA shell size 06-05



## Oval flange receptacle with PCB contacts



## Orientation

Key positions	Alpha 1	Alpha 2	Colour band
N	145°	75°	RED
A	130°	120°	YELLOW
B	110°	120°	BLUE
C	155°	115°	ORANGE
D	90°	115°	GREEN
U	NONE	NONE	NONE

# 8STA shell size 06-05



## Contacts

Crimped & PCB contacts									
Contact size	Contact type	Contact Ø	Part numbers	Admissible wire section				External dia. over insulation (mm)	
				AWG		mm <sup>2</sup>		Min.	Max.
				Min.	Max.	Min.	Max.		
Crimp contact				Min.	Max.	Min.	Max.	Min.	Max.
26	Male	0.50	8599-7922 LY	30	24	0.095	0.24	0.60	0.83
	Female		8599-7923 900						
PCB contact			Part numbers						
26	Male	0.50	F1P1P3C-0001ALY						
	Female		F1P1ES3-2601A00						

Crimping tools					
Contact size	Wire sizes	Type	Locator part number	Plier part number	
			SOURIAU	Spec.	SOURIAU
26	24 to 30	Male	8599-0048	M22520/2-01	8476-01
		Female	8599-0049		

## Accessories

Insertion & extraction tool				
Contact size	Part numbers		Colour	
	Spec.	SOURIAU	Insertion	Extraction
26	M81969/14-01	-	Green	White



Shrinkable termination detail

Metal protective cap	
<b>Plug cap</b> 8STA806	
<b>Receptacle cap</b> 8STA906	

# 8STA shell size 06-35



## Features & Benefits

- Rugged aluminium body to ensure long service life in the harshest environment
- 5 rugged gold plated MIL spec contact #22D
- PCB contacts option available
- The composite version will provide you the lightest and most reliable solution for applications with high salt spray level. The aluminium type is excellent for harshest environment or where additional mechanical strength is required.
- Environmental sealing from interfacial seal and rear grommet
- Positive locking mechanism with locked colour indicators
- 6 colour-coded keyway orientations
- Boot termination feature

## Technical characteristics

### Mechanical

- Shell
- Shell plating
- Insulator
- Grommet & seal
- Contact
- Contact plating
- Endurance
- Shock

- Vibration
- Contact retention

### Electrical

- Test voltage
- Contact resistance
- Insulation resistance at 500 Vdc
- Contact rating

### Climatic

- Temperature range
- Sealing mated connectors
- Salt spray

### Composite version

Glass fibre loaded plastic  
 No plating  
 Thermoplastic  
 Liquid silicone rubber  
 Copper alloy  
 Gold  
 500 matings/unmatings  
 300 g for 3 ms and  
 EIA-364-27  
 147 m/s<sup>2</sup>, 10 to 2000 Hz  
 45 N

1300 Vrms  
 < 14.6 mΩ  
 ≥ 5000 mΩ  
 5 A

-55°C to +175°C  
 IP67 (1 metre for 30 min. minimum)  
 500 hours

### Aluminium version

Aluminium alloy  
 Nickel or Conductive black zinc  
 Thermoplastic  
 Liquid silicone rubber  
 Copper alloy  
 Gold  
 500 matings/unmatings  
 300 g for 3 ms and  
 EIA-364-27  
 147 m/s<sup>2</sup>, 10 to 2000 Hz  
 45 N

1300 Vrms  
 < 14.6 mΩ  
 ≥ 5000 mΩ  
 5 A

-55°C to +175°C  
 IP67 (1 metre for 30 min. minimum)  
 48 hours

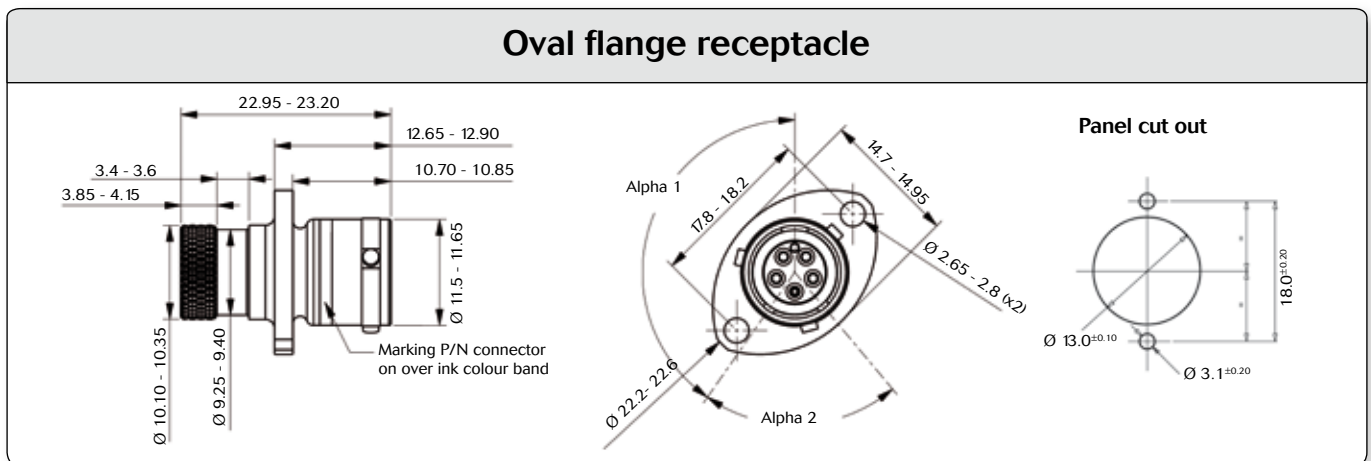
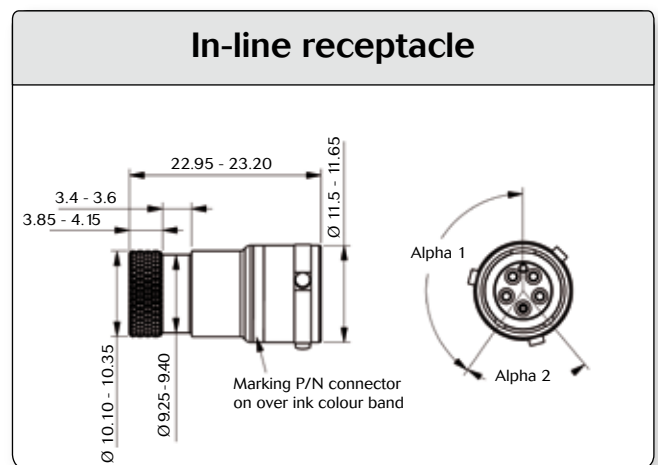
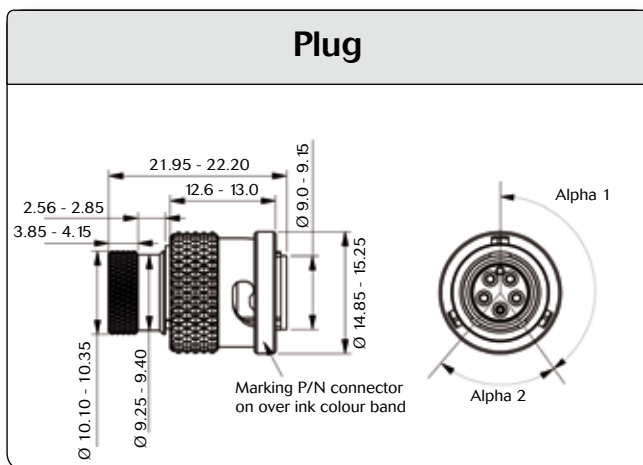
# 8STA shell size 06-35



## How to order

Basic series	8STA 0 X 06 35 P N -
Shell style	0: Oval flange receptacle (for front or rear mounting) 1: In-line receptacle 2: Oval flange receptacle with PCB contacts 6: Plug
Plating	- : Standard version X: Composite version F: Nickel version
Shell size	06
Contact layouts	35 (5 contacts #22D)
Type of contacts	P: Pin contacts S: Socket contacts
Orientations	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal (only in aluminium alloy)
Specification	- : Standard version 528: Integrated nut on the flange - M2.5 insert f (only for shell style 0 & 2) - for more details, please see page 45-48

## Range presentation





# 8STA shell size 06-35



## Contacts

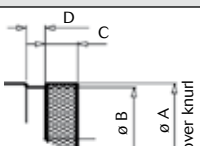
Crimped & PCB contacts									
Contact size	Contact type	Contact Ø	Part numbers	Admissible wire section				External dia. over insulation (mm)	
				AWG		mm <sup>2</sup>		Min.	Max.
Crimp contact				Min.	Max.	Min.	Max.	Min.	Max.
22D	Male	0.76	8599-0702 JJ	28	22	0.095	0.38	0.71	1.37
	Female		8599-0710 900						
PCB contact			Part numbers						
22D	Male	0.76	F1P1P3E-0002AJJ						
	Female		F1P1ES3-2202A00						

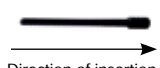
Crimping tools						
Contact size	Wire sizes	Type	Locator part number		Plier part number	
			Spec.	SOURIAU	Spec.	SOURIAU
22D	22 to 28	Male	M22520/2-09	8476-09	M22520/2-01	8476-01
		Female	M22520/2-06	8476-06		

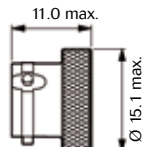
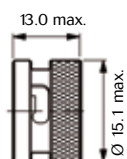
## Accessories

Insertion & extraction tool				
Contact size	Part numbers	Colour		
		Spec.	SOURIAU	Insertion
22D	M81969/14-01	-	Green	White



Shrinkable termination detail				
	Ø A	B <sup>±0.05</sup>	C <sup>±0.05</sup>	D <sup>±0.05</sup>
	9.90	9.25 - 9.40	4.20	3.50

Filler plug				
	Contact size	Part numbers		Colour
	22D	Spec.	SOURIAU	
		MS27488-22	8660-212	Black

Metal protective cap	
Plug cap 8STA8F06	
Receptacle cap 8STA9F06	

Note : all dimensions are in mm



# 8STA shell sizes 08 to 24



## Features & Benefits

- Derived from MIL-DTL-38999 (Eurofighter JN 1003 connector), 8STA connector utilises the extensive SOURIAU range of 38999 medium, high density, power, coaxial and triaxial contact layouts
- Rugged aluminium body to ensure long service life in the harshest environment
- The 8STA range covers connectors from shell sizes 08 to 24 in 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 colour-coded keyway orientations
  - . Boot termination feature

## Technical characteristics

### Mechanical

- |                     |   |
|---------------------|---|
| • Shell             | Aluminium alloy   |
| • Shell plating     | Conductive black zinc   |
| • Insulator         | Thermoplastic   |
| • Grommet & seal    | Liquid silicone rubber  |
| • Contact           | Copper alloy  |
| • Contact plating   | Gold  |
| • Endurance         | 500 matings/unmatings   |
| • Shock             | 300 g for 3 ms and EIA-364-27   |
| • Vibration         | 147 m/s <sup>2</sup> , 10 to 2000 Hz  |
| • Contact retention | Size 22D 45 N<br>Size 20 60 N<br>Size 16 100 N<br>Size 12 100 N<br>Size 8 110 N<br>Size 4 200 N |

### Climatic

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

### 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
---------

# 8STA shell sizes 08 to 24



## How to order

### Connector

Basic series	8STA	0	10	35	P	N	-
Shell style	0: Oval flange receptacle 1: In-line receptacle 2: Oval flange receptacle with PCB contacts 6: Plug 7: Jam nut receptacle						
Shell size	08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24						
Contact layouts	See page 6-8						
Type of contacts	P: Pin contacts S: Socket contacts						
Orientations	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal						
Specification	- : Standard version 499: Integrated nut on the flange - M3 insert (only for shell style 0 & 2) - for more details, please see page 45-48 523: Lightweight In-line receptacle (shell style 1) 022: Fuel immersible version - for more details, please see page 53-56						

### Protective cap

Basic series	8STA	8	10
Shell style	8: Plug protective cap 9: Receptacle protective cap		
Shell size	08 - 10 - 12 - 14 - 16 - 18 - 20 - 22 - 24		

## Range presentation

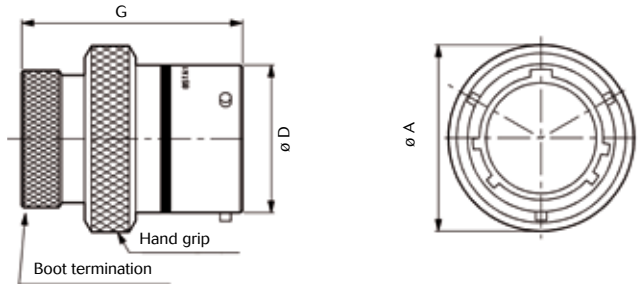
### Plug

Shell size	ø A max.	B max.	C max.
08	18.70	33.50	15
10	21.50		
12	25.10		
14	29.00		
16	32.20		
18	35.40		
20	38.20		
22	41.30		
24	44.50		

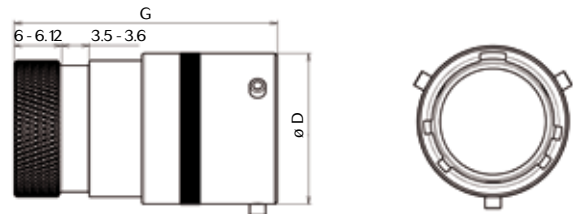
# 8STA shell sizes 08 to 24

## In-line receptacle

Standard version

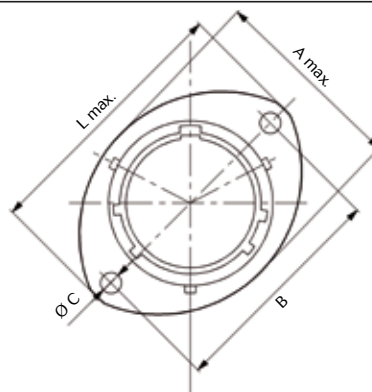
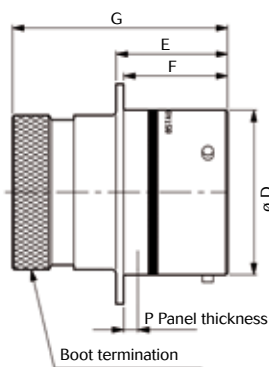


Lightweight version (specification 523)

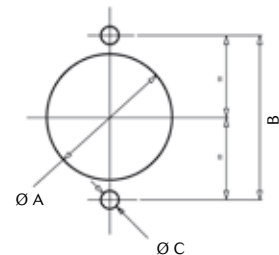


Shell size	ø A max.	ø D <sup>+0.20</sup> / <sub>-0.13</sub>	G max.
08	17.60	12.00	33.50
10	20.70	15.00	
12	25.10	19.05	
14	28.30	22.22	
16	31.40	25.40	
18	34.70	28.57	
20	38.10	31.75	
22	41.20	34.92	
24	44.70	38.10	

## Oval flange receptacle



PANEL CUT OUT

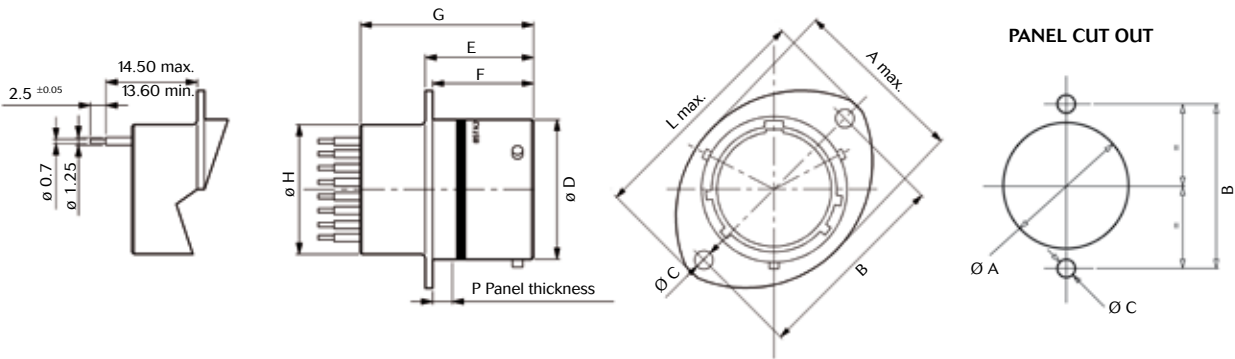


Shell size	A max.	B <sup>±0.20</sup>	ø C <sub>0,1</sub>	ø D <sup>+0.2</sup> / <sub>-0.13</sub>	E <sub>0,15</sub>	F <sub>0,13</sub>	G max.	L max.	P max.	PANEL CUT OUT		
										ø A <sup>±0.10</sup>	B <sup>±0.20</sup>	ø C <sup>±0.20</sup>
08	16.50	21.40	3.20	12.00	17.21	16.05	33.50	27.20	3.00	14.50	21.40	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	

# 8STA shell sizes 08 to 24

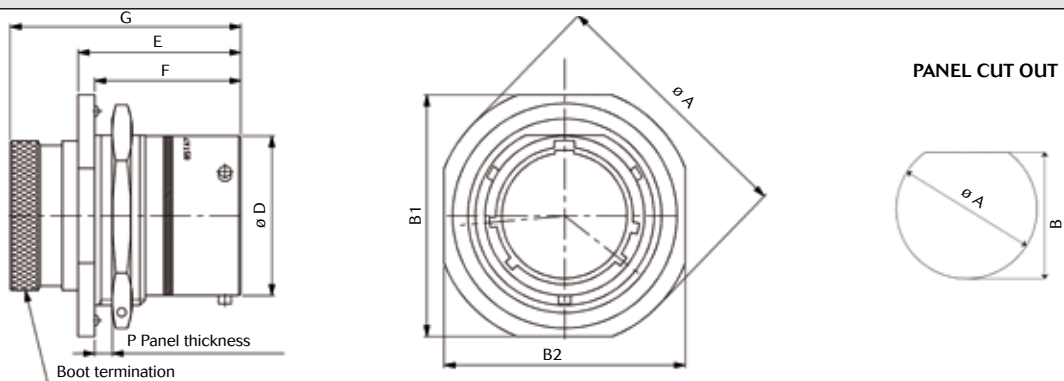


## Oval flange receptacle with PCB contacts



Shell size	A max.	B ±0.20	Ø C <sub>0,-0.1</sub>	Ø D <sub>-0.2,-0.13</sub>	E <sub>0,-0.15</sub>	F <sub>0,-0.13</sub>	G max.	Ø H max.	L max.	P max.	PANEL CUT OUT		
											Ø A ±0.10	B ±0.20	Ø C ±0.20
08	16.50	21.40	3.20	12.00	17.21	16.05	2765	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		

## Jam nut receptacle



Shell size	Ø A ±0.03	B1-B2 ±0.24	Ø D <sub>0,-0.12</sub>	E ±0.10	F ±0.24	G ±0.3	P max.	PANEL CUT OUT	
								Ø A ±0.10	B ±0.20
08	26.90	24.10	11.97	25.91	23.24	36.71	3.00	14.50	13.60
10	30.15	27.30	14.94					17.70	16.80
12	34.89	32.10	19.01					22.70	20.90
14	38.06	34.92	22.18					25.70	24.10
16	41.25	38.40	25.36					28.80	27.20
18	44.41	41.60	28.53	26.71	37.51			32.00	30.40
20	49.19	46.30	31.71					35.10	33.60
22	52.33	49.50	34.88					38.00	36.80
24	55.50	52.45	38.06					42.00	39.90

# 8STA shell sizes 08 to 24

## New versions

Lightweight In-line receptacle (specif. 523)

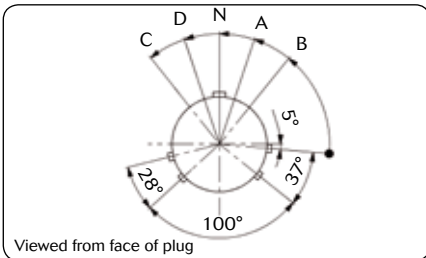
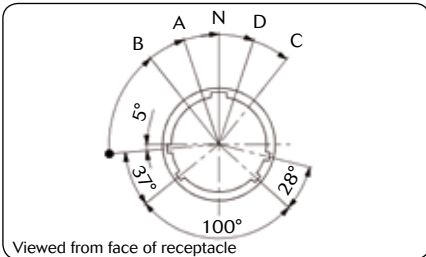


Version with integrated nut (specif 499)



See pages 45-48

## Orientation



Shell size	Orientations				
	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.

# 8STA shell sizes 08 to 24

## Contacts

Crimped & PCB contacts									
Contact size	Contact type	Contact Ø max.	Part numbers	Admissible wire section				External dia. over insulation (mm)	
				AWG		mm <sup>2</sup>		Min.	Max.
				Min.	Max.	Min.	Max.		
<b>Crimp contact</b>									
22D signal contact	Male	0.76	8599-0702 JJ	28	22	0.09	0.38	0.76	1.37
	Female		8599-0706 900						
20 signal contact	Male	1.00	8599-0703 SA	24	20	0.21	0.60	1.02	2.11
	Female		8599-0707 900						
16 signal contact	Male	1.60	8599-0704 MJ	20	16	0.60	1.34	1.65	2.77
	Female		8599-0708 900						
16 coaxial contact	Male	1.60	M39029/76 424	RG 174 RG 179 RG 316				1.65	2.60
	Female		M39029/77 428						
12 signal contact	Male	2.40	8599-0705 MJ	14	12	1.91	3.18	2.46	3.61
	Female		8599-0709 900						
12 coaxial contact	Male	2.40	M39029/28 211	RG 174 RG 179 RG 316				2.40	2.60
	Female		M39029/75 416						
08 power contact	Male	3.64	8599-7544	-	8	-	8.98	4.50	6.50
	Female		8599-7541						
	Boot		8599-4542						
	Reductor**		8599-7645						
08 coaxial contact	Male	3.64	M39029/59 366	RG 188A/U				-	2.80
	Female		M39029/60 367						
	Boot		8590-4571						
08 triaxial contact	Male	3.64	M39029/90-529	MIL-C 17/ 176 00002 FILECA F2703/ 14 RAYCHEM CHEMINAX 10612 FILOTEX M 17/ 176 00002				3.15	3.40
	Female		M39029/91-530						
	Boot		8590-4571						
04 power contact	Male	5.75	8599-7520A 900	7	10	According to wire used			
	Female		8599-7521A 900						
	Boot		8599-4590						
	Reductor*		8400-2351A						
	Male		8599-7520A 900	4	16				
	Female		8599-7521A 900						
	Boot		8599-4591						
Boot	8599-4591								

PCB contact***			Part numbers
22D signal contact	Male	0.76	F1P1P3E-0001ALY
	Female		F1P1ES3-2201A00
20 signal contact	Male	1.03	F1P1P3E0020ALY
	Female		F1P1ES32001A00

\* Reductor must be used for wire 8 & 10 mm<sup>2</sup>  
 \*\* Reductor must be used for wire 8 mm<sup>2</sup>  
 \*\*\* For shell type 2

# 8STA shell sizes 08 to 24

## Crimping tools

Contact size	Type	Pliers						
		M22520/1-01		M22520/2-01		M300BT	M22520/23-01*	
		Turret Part number		Locator Part number		Locator Part number	Die Part number	Locator Part number
		Spec.	SOURIAU	Spec.	SOURIAU	Spec.	Spec.	Spec.
22D	Male	-	-	M22520/2-09	8476-09			
	Female			M22520/2-07	8476-07			
20	Male	M22520/1-04	8365-04	M22520/2-10	8476-10			
	Female							
16	Male							
	Female							
12	Male							
	Female							
8	Male					SP 593	M22520/23-02	8599-9601
	Female							
4	Male						M22520/23-04	M22520/23-11
	Female							

\* Pneumatic pliers

M22520/1-01+ M22520/1-04



M22520/2-01 + M22520/2-09 & M22520/2-07



M22520/23-01



## Wire stripping

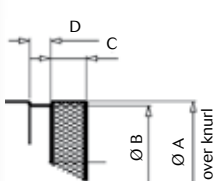


	Contact size						
	26	22D	20	16	12	8	4
L (mm)	4		6			12	

# 8STA shell sizes 08 to 24

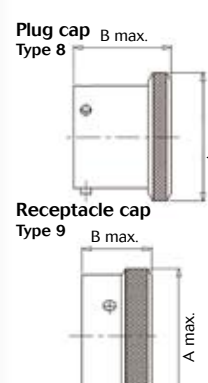
## Accessories

### Shrinkable termination detail




Shell size	øA	ø B <sup>+0.05</sup>	C <sup>+0.05</sup>	D
08	10.62	9.70	6	3.5
10	13.72	12.65		
12	17.26	16.02		
14	20.41	19.00		
16	23.60	22.23		
18	26.76	25.22		
20	29.93	28.37		
22	33.11	31.86		
24	36.30	34.67		

### Metal protective caps



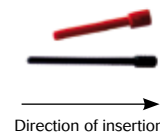
Shell size	Plug cap		Receptacle cap		
	ø A	B	øA	ø B	
08	17.50	21.00	19.00	14.20	
10	20.50		21.80		
12	24.50		26.10		
14	27.70		29.30		
16	30.90		32.50	15.00	
18	34.00		35.30		
20	37.20		38.80		
22	40.40		42.00		
24	43.50		45.10		15.85

### Insertion & extraction tools



Contact size	Material	Part numbers		Colour	
		Spec.	SOURIAU	Insertion	Extraction
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		-

### Filler plug



Contact size	Part numbers		Colour
	Spec.	SOURIAU	
22D	MS27488-22	8660-212	Black
20	MS27488-20	8522-389A	Red
16	MS27488-16	8522-390A	Blue
12	MS27488-12	8522-391A	Yellow





# 8STA High Density



## Features & Benefits

- **A reliable & robust solution**
  - Same well proven shell design as standard 8STA
  - Contact retention with metallic clip
- **Significant space saving**
  - Twice the number of contacts compared to size 12-35 with 22 contacts
  - Two shell sizes smaller than a partially populated size 16-35 with 55 cavities

## Technical characteristics

### Mechanical

- |                     |                             |
|---------------------|-----------------------------|
| • Shell             | Aluminium alloy             |
| • Shell plating     | Conductive black zinc       |
| • Insulator         | Thermoplastic               |
| • Grommet & seal    | Liquid silicone rubber      |
| • Contact           | Copper alloy                |
| • Contact plating   | Gold                        |
| • Endurance         | 500 matings/unmatings       |
| • Vibration         | -15 to -20g, 100 to 3000 Hz |
| • Contact retention | 35 N                        |

### Electrical

- |                         |                        |
|-------------------------|------------------------|
| • Test voltage          | 500 Vrms               |
| • Contact resistance    | 16mΩ                   |
| • Insulation resistance | ≥ 5000 mΩ (at 500 Vdc) |
| • Contact rating        | 3 A                    |
| • Shell continuity      | ≤10 mΩ                 |

### Climatic

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

# 8STA High Density



## How to order

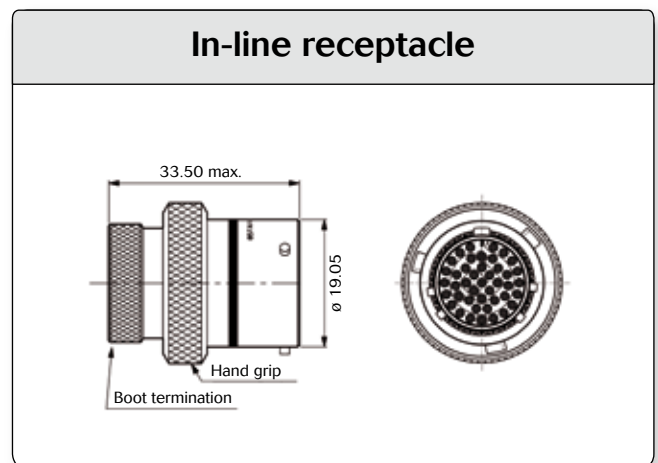
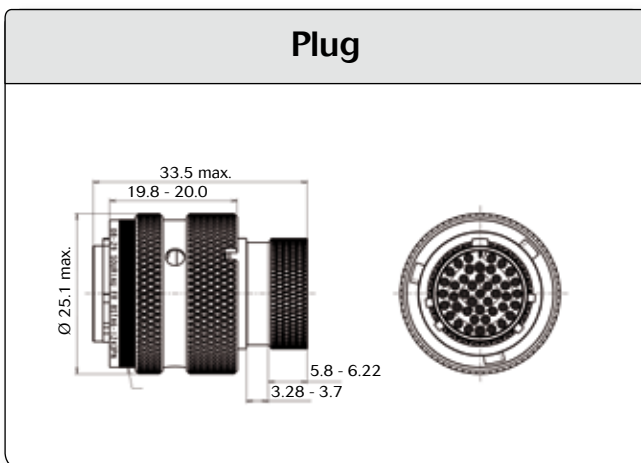
### Connector

Basic series	8STA	0	12	43	P	N	-
Shell style	0: Oval flange receptacle 1: In-line receptacle 2: Oval flange receptacle with PCB contacts 6: Plug 7: Jam nut receptacle						
Shell size	12						
Contact layouts	43 (43 contacts #26)						
Type of contacts	P: Pin contacts S: Socket contacts						
Orientations	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal						
Specification	- : Standard version 499: Integrated nut on the flange - M3 insert (only for shell style 0 & 2)- for more details, please see page 45-48 523: Lightweight In-line receptacle (shell style 1)						

### Protective cap

Basic series	8STA	8	12
Shell style	8: Plug protective cap 9: Receptacle protective cap		
Shell size	12		

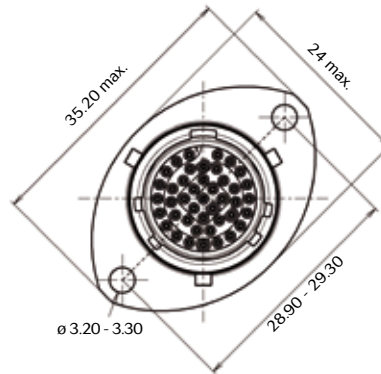
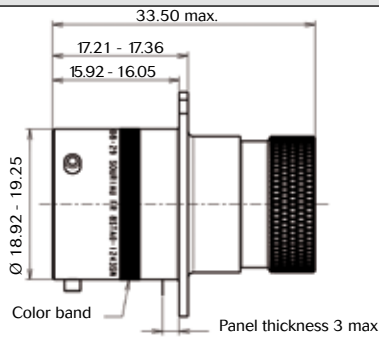
## Range presentation



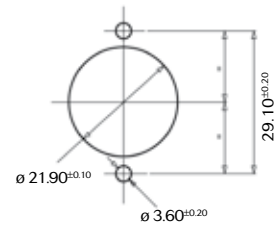


# 8STA High Density

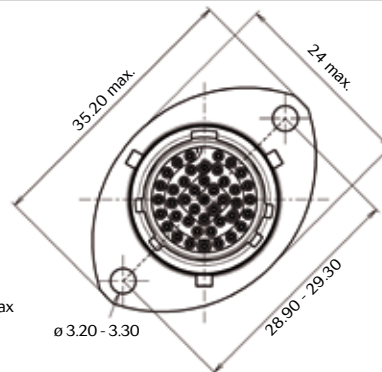
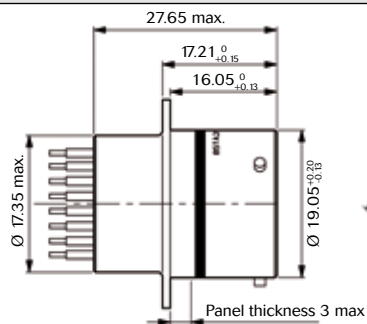
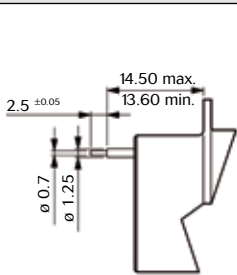
## Oval flange receptacle



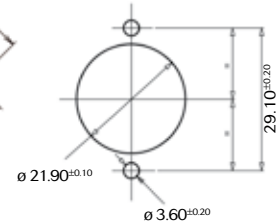
PANEL CUT OUT



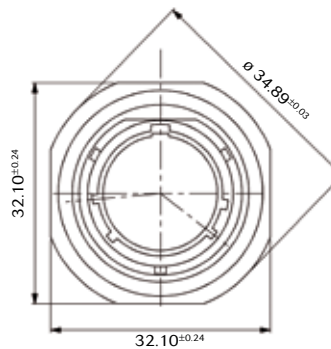
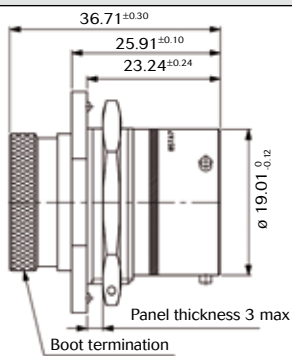
## Oval flange receptacle with PCB contacts



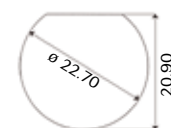
PANEL CUT OUT



## Jam nut receptacle



PANEL CUT OUT







# 8STA Power



## Features & Benefits

- **A wide power & mixed power/signal offer**
  - 6 power layouts with contacts gauge 4 and gauge 8
  - 6 mixed power/signal layouts
- **Space & cost saving with mixed connectors**
  - Only one connector instead of 2 to transmit signal & power

## Technical characteristics

### Mechanical

- Shell: Aluminium alloy
- Shell plating: Conductive black zinc
- Insulator: Thermoplastic
- Grommet & seal: Liquid silicone rubber
- Contact: Copper alloy
- Contact plating: Gold
- Endurance: 500 matings/unmatings
- Shock: 300 g for 3 ms and EIA-364-27
- Vibration: 147 m/s<sup>2</sup>, 10 to 2000 Hz
- 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

### Climatic

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

### 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



# 8STA Power

## How to order

### Connector

Basic series	8STA	0	10	35	P	N	-
Shell style	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 - 24						
Contact layouts	See page 6-8						
Type of contacts	P: Pin contacts S: Socket contacts						
Orientations	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal						
Specification	- : 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						

### Protective cap

Basic series	8STA	8	10
Shell style	8: Plug protective cap 9: Receptacle protective cap		
Shell size	10 - 12 - 16 - 18 - 20 - 24		

## Range presentation

### Power connectors



8STA 10-80 specif. 251 - 1 contact #8 power



8STA 12-01 specif.261 - 1 contact #4 power



8STA 16-75 specif. 251 - 2 contacts #8 power



8STA 20-48 - 4 contacts #8 power



# 8STA Power

## Mixed signal & power connectors



**8STA 16-02** *specif.251* - 1 contact #8 power & 38 #22D



**8STA 24-07** *specif. 251* - 2 contacts #8 power & 97 #22D



**8STA 24-44** - 4 contacts # 4 power & 4 #16

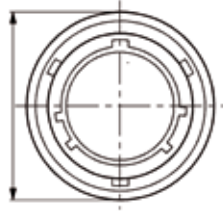
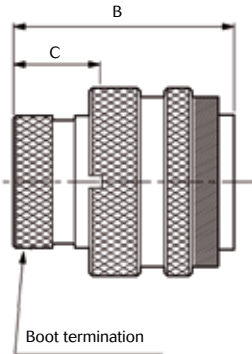


**8STA 24-46** *specif.251* - 2 contacts #8 power, 4 #16 & 40 #20



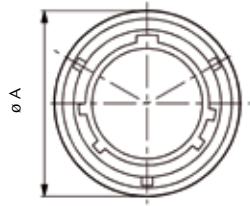
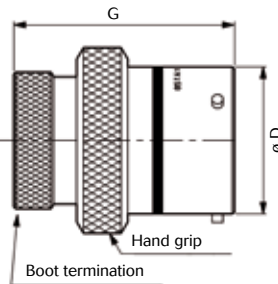
# 8STA Power

## Plug



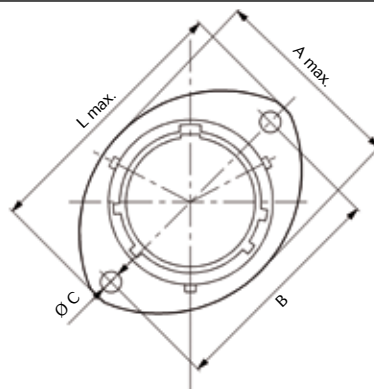
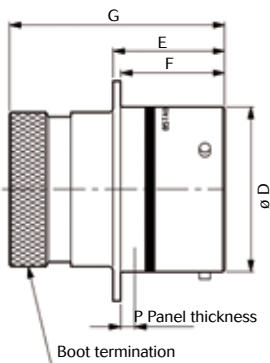
Shell size	ø A max.	B max.	C max.
10	21.50	33.50	15
12	25.10		
16	32.20		
18	35.40		
20	38.20		
24	44.50		

## In-line receptacle

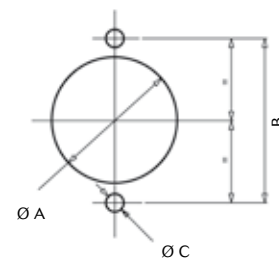


Shell size	ø A max.	ø D <sup>+0.20</sup> / <sub>-0.13</sub>	G max.
10	20.70	15.00	33.50
12	25.10	19.05	
16	31.40	25.40	
18	34.70	28.57	
20	38.10	31.75	
24	44.70	38.10	

## Oval flange receptacle



### PANEL CUT OUT



Shell size	A max.	B <sup>±0.20</sup>	ø C <sub>0.1</sub>	ø D <sup>+0.2</sup> / <sub>-0.13</sub>	E <sub>0.15</sub>	F <sub>0.13</sub>	G max.	L max.	P max.	PANEL CUT OUT		
										ø A <sup>±0.10</sup>	B <sup>±0.20</sup>	ø C <sup>±0.20</sup>
10	19.50	25.90	3.20	15.00	17.21	16.05	33.50	32.00	3.00	17.40	25.90	3.60
12	24.00	29.10		19.05				21.90		29.10		
16	30.30	34.80		25.40				28.20		34.80		
18	33.70	38.20		28.57				31.40		38.20		
20	37.00	41.60		31.75				34.60		41.60		
24	43.40	49.50		38.10				41.00		49.50		
			3.77	18.20	15.29		55.80			4.10		

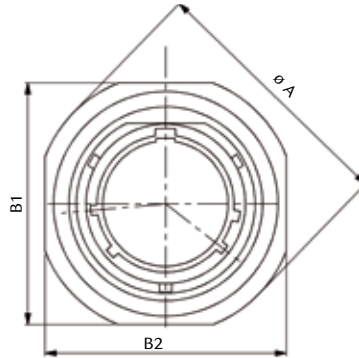
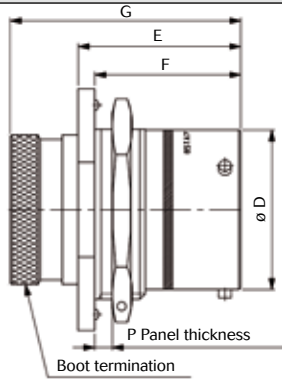
Note : all dimensions are in mm



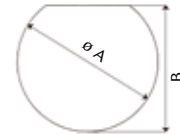


# 8STA Power

## Jam nut receptacle

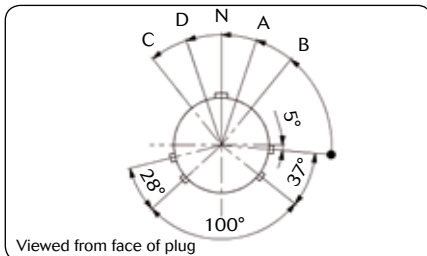
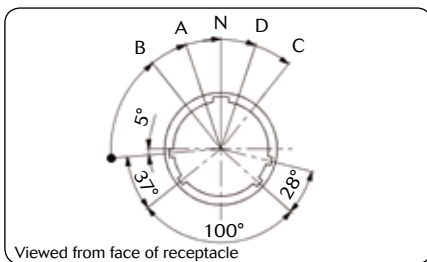


PANEL CUT OUT



Shell size	$\phi A^{\pm 0.03}$	$B1-B2^{\pm 0.24}$	$\phi D_{0.12}$	$E^{\pm 0.10}$	$F^{\pm 0.24}$	$G^{\pm 0.3}$	P max.	PANEL CUT OUT	
								$\phi A^{\pm 0.10}$	$B^{\pm 0.20}$
10	30.15	27.30	14.94	25.91	23.24	36.71	3.00	17.70	16.80
12	34.89	32.10	19.01					22.70	20.90
16	41.25	38.40	25.36					28.80	27.20
18	44.41	41.60	28.53	26.71	37.51			32.00	30.40
20	49.19	46.30	31.71					35.10	33.60
24	55.50	52.45	38.06					42.00	39.90

## Orientation



Shell size	Orientations				
	N Red	A Yellow	B Blue	C Orange	D Green
10	95°	81°	67°	123°	109°
12	95°	75°	63°	127°	116°
16	95°	77°	65°	125°	113°
20	95°	77°	65°	125°	113°
24	95°	80°	69°	121°	110°

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



# 8STA Power



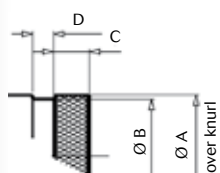
## Wire stripping



	Contact size				
	22D	20	16	8	4
L (mm)	4	6		12	

## Accessories

### Shrinkable termination detail



Shell size	ØA	Ø B <sup>±0.05</sup>	C <sup>±0.05</sup>	D
10	13.72	12.65	6	3.5
12	17.26	16.02		
16	23.60	22.23		
18	26.76	25.22		
20	29.93	28.37		
24	36.30	34.67		

## Insertion & extraction tools



Contact size	Material	Part numbers		Colour	
		Spec.	SOURIAU	Insertion	Extraction
22D	Plastic	M81969/14-01	-	Green	White
20	Plastic	M81969/14-10	-	Red	Orange
16	Plastic	M81969/14-03	-	Blue	White
8	Plastic	M81969/14-06	-	-	Red
	Metallic	-	8660-197		-
4	Plastic	M81969/14-07	-	-	Blue
	Metallic	-	8533-8175		-





# 8STA Integrated Clinchnut



## Features & Benefits

**A reliable solution**

- Same nut design & material as standard nut plates

**A convenient & time saving feature**

**Weight saving opportunities**

- Elimination of nut plates

**SOURIAU's Offer**

- 12 shell sizes available, from 02 to 24
- Available for standard crimp receptacles (shell style 0) & PCB receptacles (shell style 2)

**Respect for environment**

- RoHS compliant

**Current solution:**



Nut plate fixed on the rear connector side

**Connector + Nut plate**

**NEW solution:**



**Integrated clinchnut on the flange**

## Technical characteristics

**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 matings/unmatings
• Shock resistance	300 g for 3 ms and EIA-364-27
• Vibration resistance	147 m/s <sup>2</sup> , 10 to 2000 Hz
• Contact retention	Size 26    35 N
	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**

Please see details in each section concerned

**Climatic**

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

# 8STA Integrated Clinchnut



## How to order

Basic series	8STA	0	10	35	P	N	-
Shell style	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 layouts	all contact layouts - see page 6-8						
Type of contacts	P: Pin contacts S: Socket contacts						
Orientations	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal						
Specification*	499: Integrated nut on the flange - M2 insert for sizes 02 & 04 / M3 insert for sizes 08 to 24 528: Integrated nut on the flange - M2.5 insert for sizes 02 to 06						

\*Mandatory

## Range presentation

### Oval flange receptacle

Self locking nut (x2):

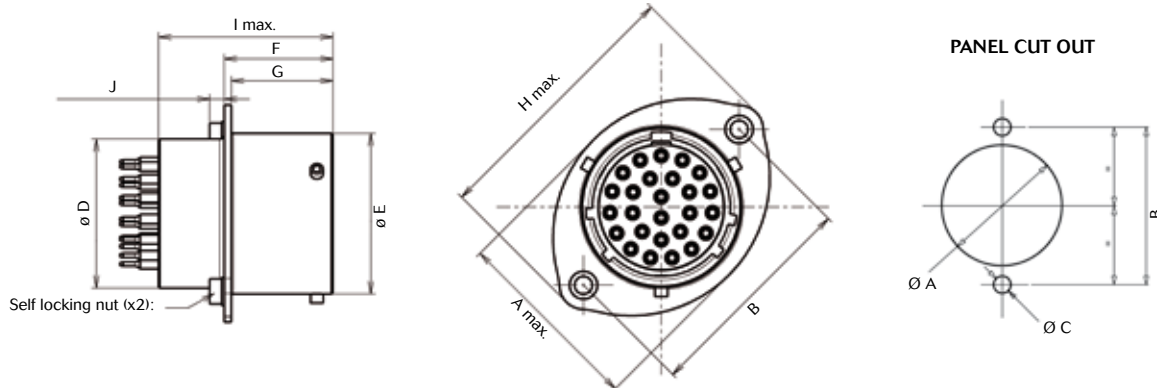
PANEL CUT OUT

Shell size	A max.	B <sup>+0.20</sup>	ø D	ø E	F	G	H	I	J	PANEL CUT OUT		
										ø A <sup>+0.10</sup>	B <sup>+0.20</sup>	ø C <sup>+0.20</sup>
02	10.50	15.4	7.20	8.30	10.15	8.80	21.4	16.30	3.22	9.30	15.30	3.10
04	13.2	16.4	8.6	10.2	10.7	9.2	22.3	18.30	3.37	12.00	16.20	
06	15.0	18.2	10.35	12.0	12.95	10.95	24.0	23.25	3.83	13.00	18.00	
08	16.50	21.40	10.62	12.00	17.21	16.05	29.25	33.4	3.32	14.50	21.40	3.60
10	19.50	25.90	13.72	15.00			33.75			17.40	25.90	
12	24.00	29.10	17.26	19.05			36.95			21.90	29.10	
14	27.00	32.50	20.41	22.22			40.35			25.00	32.50	
16	30.30	34.80	23.60	25.40			42.65			28.20	34.80	
18	33.70	38.20	26.76	28.57			46.05			31.40	38.20	
20	37.00	41.60	29.93	31.75			49.45			34.60	41.60	
22	40.40	45.00	33.11	34.90	15.29	52.85	37.60	45.00				
24	43.40	49.50	36.30	38.10		18.20	57.35	41.00	49.50	4.10		

# 8STA Integrated Clinchnut



## Oval flange receptacle with PCB contacts



Shell size	A max.	B $\pm 0.20$	Ø D max.	E	F	G	H max.	I max.	J	PANEL CUT OUT		
										Ø A $\pm 0.10$	B $\pm 0.20$	Ø C $\pm 0.20$
02	10.5	15.3	7.2	8.3	10.15	8.8	21.3	17.5	2.05	9.30	15.30	3.10
04	13.2	16.4	8.6	10.2	10.7	9.2	22.2	18.3		12.00	16.20	
06	15.0	18.2	10.35	12.0	12.95	10.95	24.0	23.25		13.00	18.00	
08	16.50	21.40	11.10	12.00	17.21	16.05	42.40	27.65	2.72	14.50	21.40	3.60
10	19.50	25.90	13.90	14.87						17.40	25.90	
12	24.00	29.10	17.35	19.05						21.90	29.10	
14	27.00	32.50	20.50	22.22						25.00	32.50	
16	30.30	34.80	23.70	25.40						28.20	34.80	
18	33.70	38.20	26.91	28.57						31.40	38.20	
20	37.00	41.60	30.11	31.77						34.60	41.60	
22	40.40	45.00	33.20	34.90	15.29	37.60	45.00					
24	43.40	49.50	36.40	38.10		18.20	41.00	49.50	4.10			

For gaskets, please see page 63 in Accessories section.





# 8STA Hermetic shell size 02



## Features & Benefits

- **The smallest hermetic circular 5 way PC tail connector on the market**
- **Lightweight 8STA connector**
  - Miniaturisation
  - Weight: 3 grammes
- **Suitable for welding directly to sensor bodies**
  - Designed for weld fixing
- **Excellent corrosion resistance**
  - Stainless steel body
- **Excellent hermeticity**
  - Hermetic glass bead ( $1.10^{-7} \text{ cm}^3/\text{s}$ )
- **Intermateable with standard 8STA plug size 02-05**
  - Standard plug 02-05
- **Easy identification with colour coded bands**
  - 7 visual keyway orientations
- **Rapid & secure locking system with audible click**
  - Bayonet connector

## Technical characteristics

### Mechanical

- |                        |                               |
|------------------------|-------------------------------|
| • Shell                | Stainless steel               |
| • Shell plating        | Passivated                    |
| • Insulator            | Glass bead                    |
| • Contact              | Iron-Nickel (NiFe2)           |
| • Contact plating      | Nickel                        |
| • Endurance            | 500 matings/unmatings         |
| • Shock resistance     | 300 g for 3 ms and EIA-364-27 |
| • Vibration resistance | 10 to 2000 Hz 30g             |

### Electrical

- |                         |                        |
|-------------------------|------------------------|
| • Test voltage          | 400 V (sea level)      |
| • Contact resistance    | 2 mΩ                   |
| • Insulation resistance | ≥ 5000 MΩ (at 500 Vdc) |
| • Contact rating        | 1.5 A                  |

### Climatic

- |                            |                                    |
|----------------------------|------------------------------------|
| • Temperature range        | -55°C to +175°C                    |
| • Sealing mated connectors | IP67 (1 metre for 30 min. minimum) |
| • Salt spray               | 48 hours                           |
| • Hermeticity              | $1.10^{-7} \text{ CM}^3/\text{S}$  |

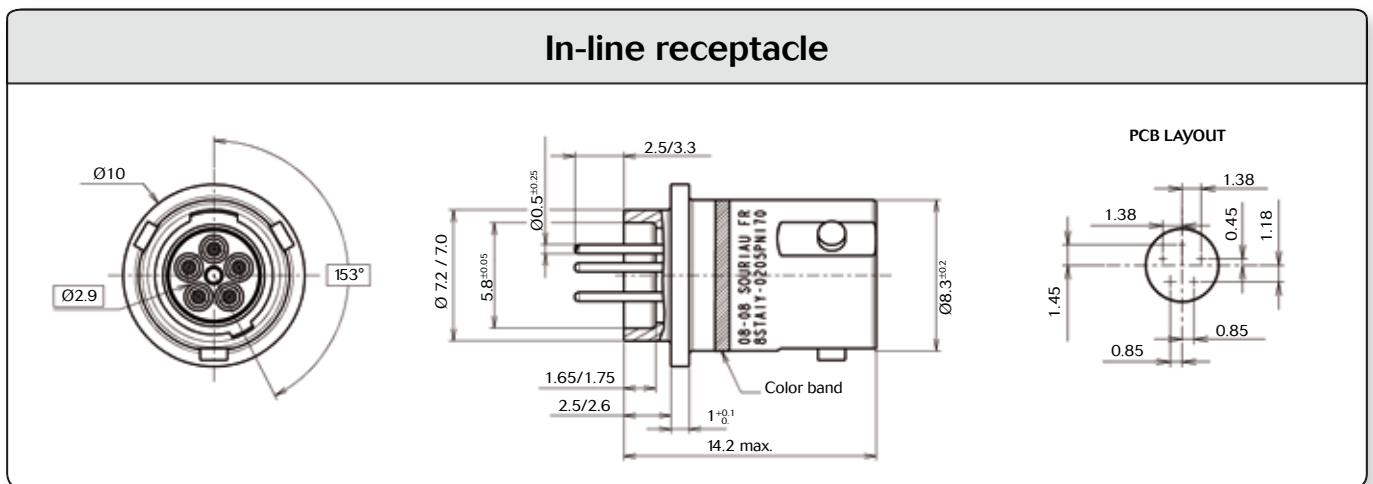
# 8STA Hermetic shell size 02

## How to order

Basic series	8STA	1	y	02	05	P	N	170
Shell style	1: In-line connector							
Class	y: Hermetic version							
Shell size	02							
Layout	05 (5 straight spill contacts #26 )							
Contact gender	P: Pin contacts							
Orientation	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / E: Grey / U: Universal							
Specification*	170							

\* Mandatory

## Range presentation





# 8STA Hermetic Fuel Tank



## Features & Benefits

- 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 characteristics

### Mechanical

- |                        |                               |
|------------------------|-------------------------------|
| • Shell                | Stainless steel               |
| • Shell plating        | Passivated                    |
| • Insulator            | Glass bead                    |
| • Contact              | Nickel Iron                   |
| • Contact plating      | Gold                          |
| • Endurance            | 500 matings/unmatings         |
| • Shock resistance     | 300 g for 3 ms and EIA-364-27 |
| • Vibration resistance | 10 to 2000 Hz 30g             |

### Electrical

- |                         |                                |
|-------------------------|--------------------------------|
| • Test voltage          | 1800 V / Service I (sea level) |
| • Contact resistance    | 2 mΩ                           |
| • Insulation resistance | ≥ 5000 MΩ (at 500 Vdc)         |
| • Contact rating        | Size 16: 10 A<br>Size 20: 5 A  |

### Climatic

- |                            |                                    |
|----------------------------|------------------------------------|
| • Temperature range        | -55°C to +175°C                    |
| • Sealing mated connectors | IP67 (1 metre for 30 min. minimum) |
| • Salt spray               | 48 hours                           |
| • Hermeticity              | $1.10^{-7} \text{ cm}^3/\text{s}$  |



# 8STA Hermetic Fuel Tank

## How to order

Basic series	8STA 7 y 10 98 P N 022
Shell style	7: Jam nut receptacle
Class	Y: Hermetic version
Shell size	10 - 12 - 14
Layouts	See layouts available below
Contact gender	P: Pin contacts
Orientation	N: Red / A: Yellow / D: Green
Specification*	022: Fuel immersible version

\* Mandatory

## Contact layouts

**Size 10**

**98**

6 #20  
Service I

**Size 12**

**04**

**98**

4 #16      10 #20  
Service I      Service I

**Size 14**

**97**

4 #16  
8 #20  
Service I

## Range presentation

**Jam nut receptacle**

PANEL CUT OUT

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

Note : all dimensions are in mm



# 8STA/8TA Fuel Immersible



## Features & Benefits

- Continuous immersion without loss of performance  
- Special fuel resistant insert
- Excellent connector sealing on panels by using the jam nut version

## Technical characteristics

	8STA		8TA
<b>Mechanical</b>		Aluminium alloy Conductive black zinc Thermoplastic Fluoroelastomer Copper alloy Gold	
<ul style="list-style-type: none"> <li>• Shell</li> <li>• Shell plating</li> <li>• Insulator</li> <li>• Grommet &amp; seal</li> <li>• Contact</li> <li>• Contact plating</li> <li>• Endurance</li> <li>• Shock</li> <li>• Vibration</li> <li>• Contact retention</li> </ul>	147 m/s <sup>2</sup> , 10 to 2000 Hz Size 22D: 45 N / Size 20: 60 N Size 16: 100 N / Size 12: 100 N	500 matings/unmatings 300 g for 3 ms and EIA-364-27	random 100 to 1000 Hz - 1G <sup>2</sup> /Hz Size 22D: 45 N
<b>Electrical</b>		1300 Vrms	
<ul style="list-style-type: none"> <li>• Test voltage</li> <li>• Contact resistance</li> <li>• Insulation resistance at 500 Vdc</li> <li>• Contact rating</li> <li>• Shell continuity</li> </ul>	Size 22D: 14.6 mΩ / Size 20: 7.3 mΩ Size 16: 3.8 mΩ / Size 12: 3.5 mΩ	≥ 5000 mΩ	Size 22D: 14.6 mΩ
	Size 22D: 5 A / Size 20: 7.5 A Size 16: 13 A / Size 12: 23 A	≤ 10 mΩ	Size 22D: 5 A
<b>Climatic</b>		-55°C to +175°C	
<ul style="list-style-type: none"> <li>• Temperature range</li> <li>• Sealing mated connectors</li> <li>• Salt spray</li> </ul>		IP67 (1 metre for 30 min. minimum) 48 hours	
<b>Resistance to fluids</b>		withstands most of Motorsport fluids	



# 8STA/8TA Fuel Immersible

## How to order

<b>Basici series</b>		<b>8STA</b>	<b>0</b>	<b>08</b>	<b>35</b>	<b>P</b>	<b>N</b>	<b>022</b>
		<b>8TA</b>	<b>0</b>	<b>08</b>	<b>35</b>	<b>P</b>	<b>N</b>	<b>022</b>
<b>Shell style</b>	<b>0:</b> Oval flange receptacle <b>1:</b> In-line receptacle <b>6:</b> Plug <b>7:</b> Jam nut receptacle							
<b>Shell size</b>	04 - 08 - 10 - 12 - 14 - 16							
<b>Layouts</b>	See layouts available below							
<b>Contact gender</b>	<b>P:</b> Pin contacts <b>S:</b> Socket contacts							
<b>Orientation</b>	<b>N:</b> Red / <b>A:</b> Yellow / <b>D:</b> Green							
<b>Specification*</b>	022							

\*Mandatory

## Contact layouts

<b>Size 04</b> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <b>05</b>              5 #26 Service R         </div> <div style="text-align: center;"> <b>35</b>              3 #22D Service S         </div> </div>	<b>Size 08</b> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <b>35</b>              6 #22D Service M         </div> <div style="text-align: center;"> <b>98</b>              3 #20 Service I         </div> </div>	<b>Size 10</b> <div style="display: flex; justify-content: space-around;"> <div style="text-align: center;"> <b>05</b>              5 #20 Service I         </div> <div style="text-align: center;"> <b>35</b>              13 #22D Service M         </div> <div style="text-align: center;"> <b>98</b>              6 #20 Service I         </div> </div>
<b>Size 12</b> <div style="text-align: center;"> <b>98</b>              10 #20 Service I         </div>	<b>Size 14</b> <div style="text-align: center;"> <b>35</b>              37 #22D Service M         </div>	<b>Size 16</b> <div style="text-align: center;"> <b>08</b>              8 #16 Service II         </div>

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



# 8STA/8TA Fuel Immersible

## Range presentation

### Plug

Shell size	ø A max.	B max.	C max.
04	13.55	18.50	7.9
08	18.70	33.50	15
10	21.50		
12	25.10		
14	29.00		
16	32.20		

### In-line receptacle

Shell size	ø A max.	ø D <sup>+0.20</sup>	G max.
04	-	10.20	18.15
08	17.60	12.00	33.50
10	20.70	15.00	
12	25.10	19.05	
14	28.30	22.22	
16	31.40	25.40	

### Oval flange receptacle

PANEL CUT OUT

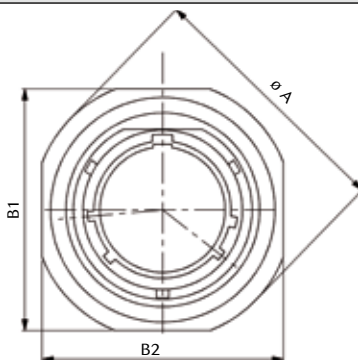
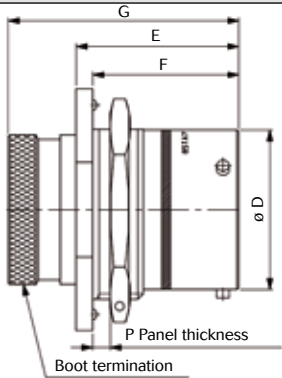
Shell size	A max.	B <sup>+0.20</sup>	ø C <sup>+0.1</sup> <sub>0</sub>	ø D <sup>+0.2</sup> <sub>-0.13</sub>	E <sub>-0.15</sub>	F <sub>-0.13</sub>	G max.	L max.	P max.	PANEL CUT OUT		
										ø A <sup>+0.10</sup>	B <sup>+0.20</sup>	ø C <sup>+0.20</sup>
04	13.20	16.40	2.65	10.20	10.70	9.20	18.30	20.85	2.00	12.00	16.20	3.10
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	

Note : all dimensions are in mm

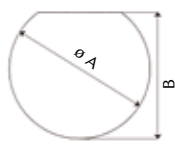


# 8STA/8TA Fuel Immersible

## Jam nut receptacle



PANEL CUT OUT



Shell size	$\phi A^{+0.03}$	B1-B2 $^{+0.24}$	$\phi D_{0,12}^0$	E $^{+0.10}$	F $^{+0.24}$	G $^{+0.3}$	P max.	PANEL CUT OUT	
								$\phi A \pm 0.10$	B $\pm 0.20$
04	18.00	20.20	10.20	18.15	16.20	25.75	1.5 to 5.0	13.50	12.80 - 13.00
08	26.90	24.10	11.97	25.91	23.24	36.71	3.00	14.50	13.60
10	30.15	27.30	14.94					17.70	16.80
12	34.89	32.10	19.01					22.70	20.90
14	38.06	34.92	22.18					25.70	24.10
16	41.25	38.40	25.36					28.80	27.20

For other shell sizes, please consult us.

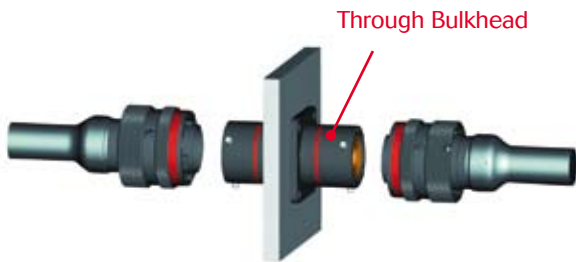


# 8STA Through Bulkhead



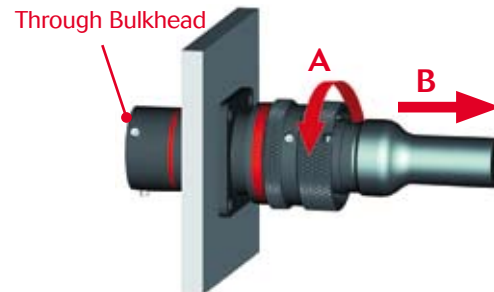
## Features & Benefits

- Easy mating/unmating on both sides of the bulkhead



- Significant time saving advantage over conventional plugs & receptacles
  - «Double receptacle» mounted on panel
- The smallest single way power through bulkhead connector on the market
  - Male / female single way power contact #4 in a shell size 12
- Easy identification with colour coded bands
  - 5 visual keyway orientations

- Simplified connection through a bulkhead, eliminating hard wiring to the panel on one side
- Simplifies maintenance procedures having a detachable connector on each side of the bulkhead



- Ideal for external use (dust, water etc.)
  - IP67 (Interfacial & mating seals)
- RoHS compliant
  - Respect for environment

## Technical characteristics

### 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 matings/unmatings
• Shock resistance	300 g for 3 ms and EIA-364-27
• Vibration resistance	147 m/s <sup>2</sup> , 10 to 2000 Hz
• Contact retention	200 N

### Electrical

• Test voltage	1300 Vrms (sea level)
• Contact resistance	2 mΩ
• Insulation resistance	≥ 5000 MΩ (at 500 Vdc)
• Contact rating	125 A (continuous)

### Climatic

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

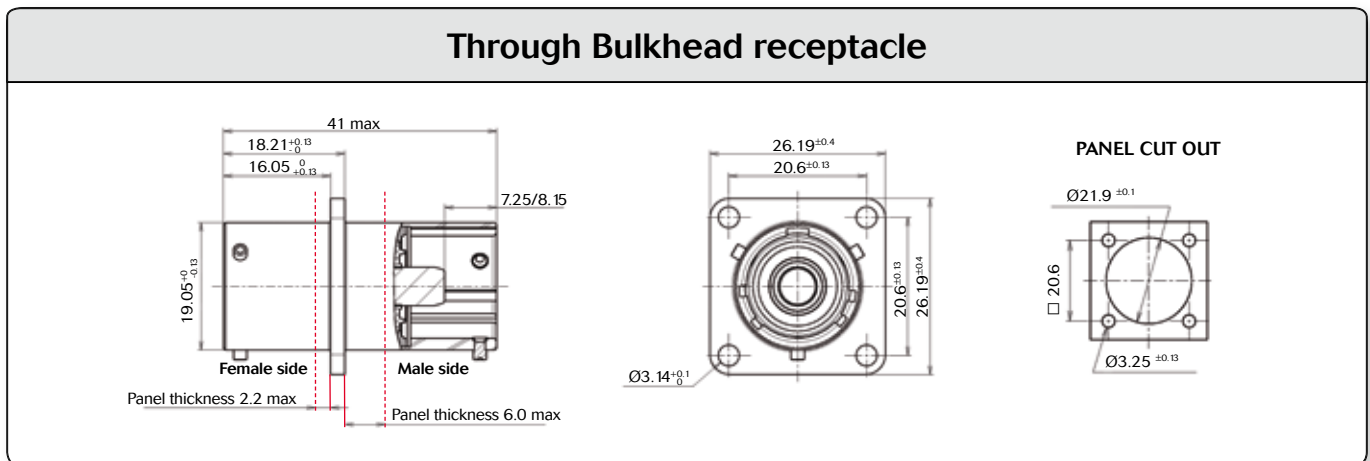
# 8STA Through Bulkhead

## How to order

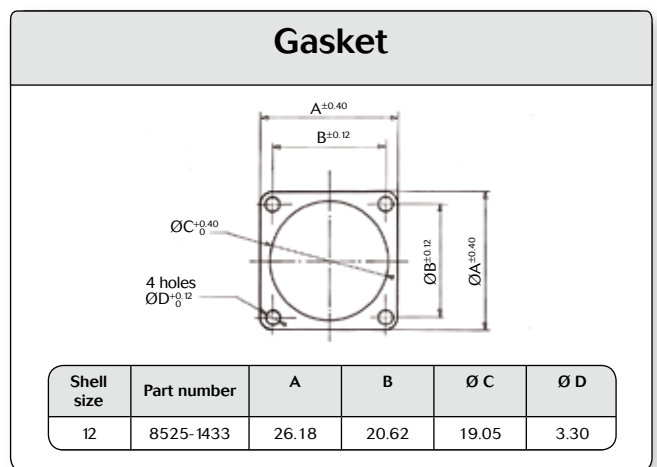
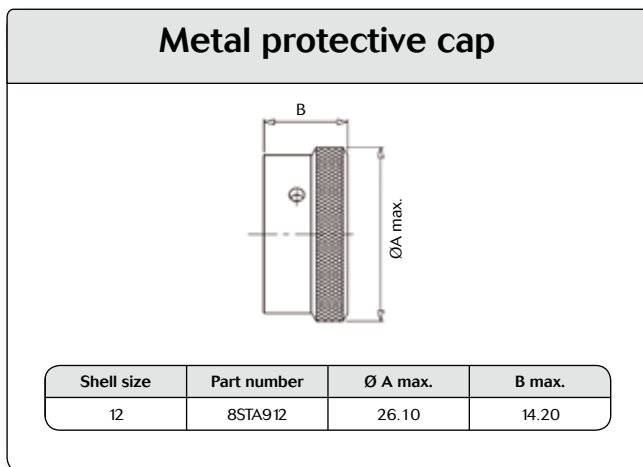
Basic series	8STA	0	12	01	PS	N	500
Shell style	0: Receptacle						
Shell size	12						
Layout	01 (1 power contact #4)						
Type of contact	P S: Pin + Socket contacts						
Orientation	N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal						
Specification*	500: Through Bulkhead connector						

\* Mandatory / Please consult us for other sizes & layouts

## Range presentation



## Accessories





# 8TA Connector



## Features & Benefits

- 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 colour indicators 3 keyway orientations
- Boot termination feature
- Conductive black zinc plating

## Technical characteristics

### Mechanical

- |                        |  |
|------------------------|--|
| • Shell                | Aluminium alloy                              |
| • Shell plating        | Conductive black zinc                        |
| • Insulator            | Thermoplastic                                |
| • Seal                 | Liquid silicone rubber                       |
| • Contact              | Copper alloy                                 |
| • Contact plating      | Gold   |
| • Endurance            | 500 matings/unmatings                        |
| • Shock resistance     | 300 g for 3 ms and EIA-367-27                |
| • Vibration resistance | random 100 to 1000 Hz - 1 g <sup>2</sup> /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        | 5 A                    |
| • Shell continuity      | <60 mΩ                 |

### Climatic

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



# 8TA Connector

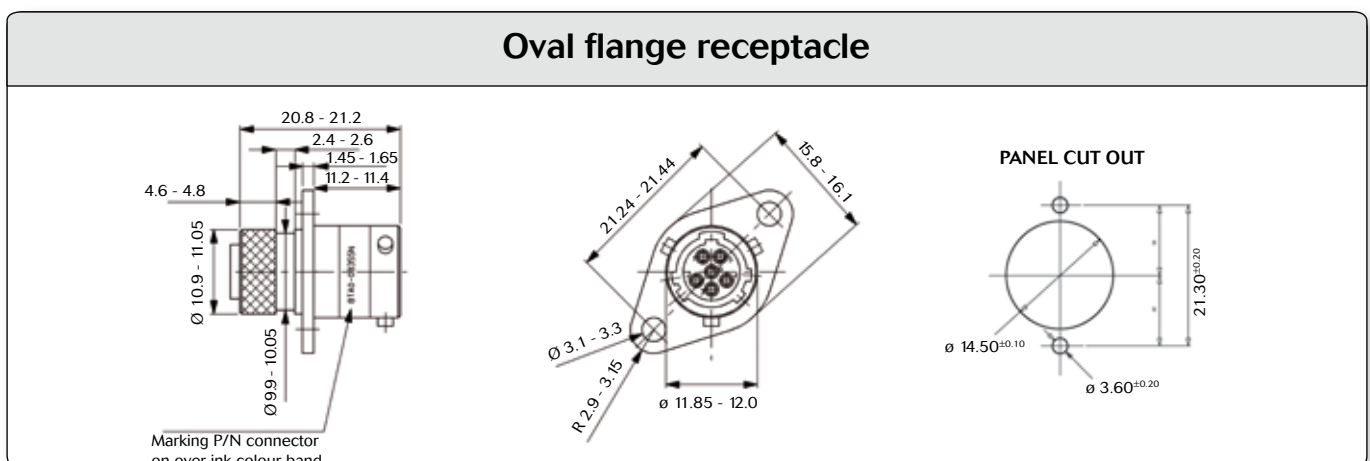
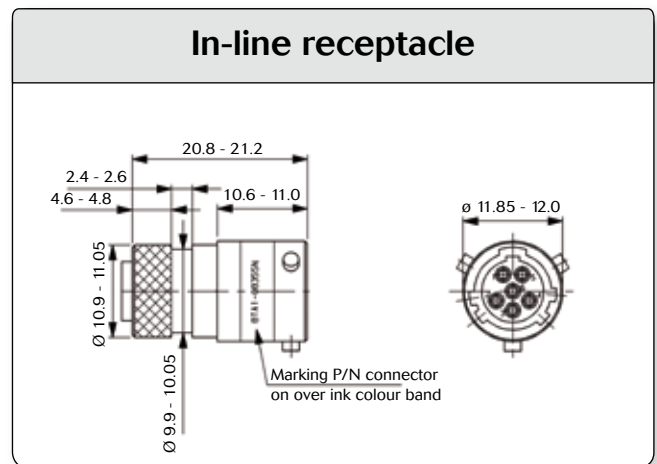
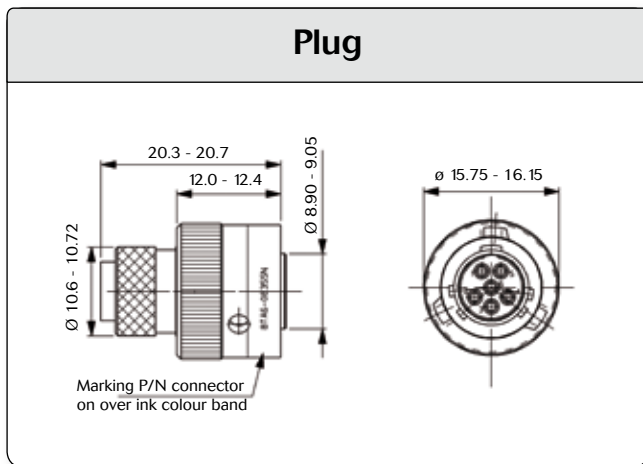
## How to order

Basic series	8TA	0	08	35	P	N
Shell style	0: Oval flange receptacle (for front or rear mounting) 1: In-line receptacle 6: Plug 7: Jam nut receptacle					
Shell size	08					
Layout	35 (6 contacts size 22D)					
Type of contact	P: Pin contacts S: Socket contacts					
Orientation	N: Red / A: Yellow / D: Green					

## Protective cap

Basic series	8TA	8	08
Shell style	8: Plug protective cap 9: Receptacle protective cap		
Shell size	08		

## Range presentation

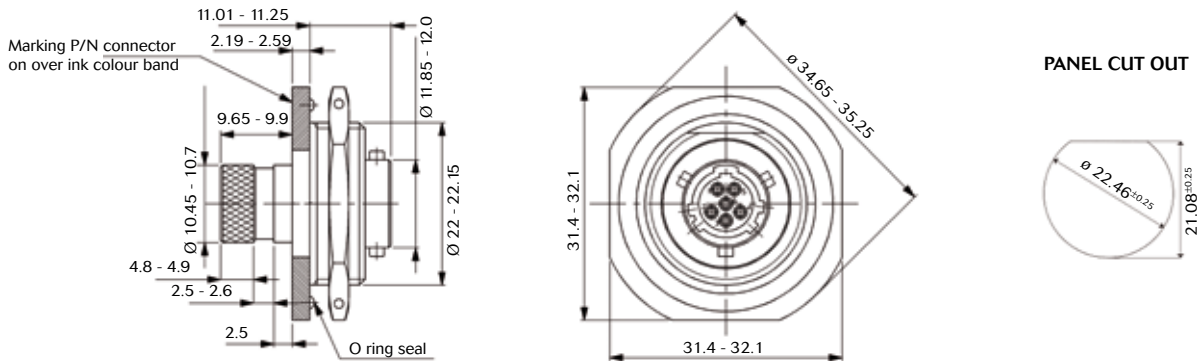


Note : all dimensions are in mm

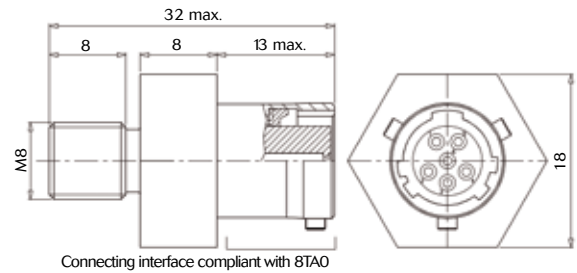


# 8TA Connector

## Jam nut receptacle

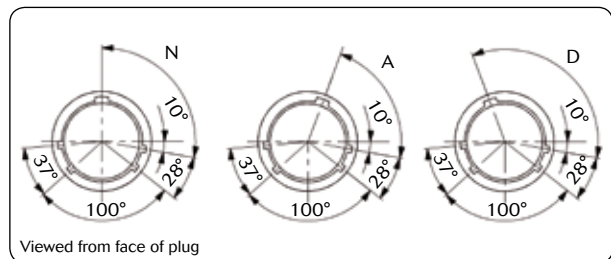
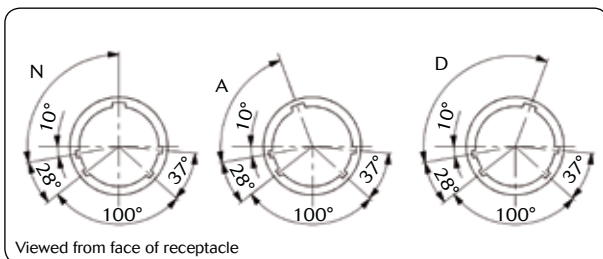


## Grounded receptacle



Please consult us for more information

## Orientation



Key positions	Alpha 1	Colour band
N	100°	Red
A	82°	Yellow
D	118°	Green




# 8TA Connector

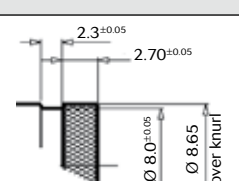
## Contacts


Crimped contacts									
Contact size	Contact type	Contact Ø max.	Part numbers	Admissible wire section				External dia. over insulation (mm)	
				AWG		mm <sup>2</sup>		Min.	Max.
Crimp contact				Min.	Max.	Min.	Max.		
22D signal contact	Male	0.76	8599-0702 JJ	28	22	0.095	0.38	0.71	1.37
	Female		8599-0710 900						

Crimping tools						
Contact size	Type	Wire sizes	Locator part number		Tool part number	
			Spec.	SOURIAU	Spec.	SOURIAU
22D	Male	22 to 28	M22520/2-09	8476-09	M22520/2-01	8476-01
	Female		M22520/2-06	8476-06		

## Accessories

Insertion & extraction tool				
	Part numbers		Colour	
	Spec.	SOURIAU	Insertion	Extraction
	22D	M81969/14-01	-	Green

Shrinkable termination detail


Filler plug			
 Direction of insertion →	Part numbers		Colour
	Spec.	SOURIAU	
	22D	MS27488-22	8660-212

# Accessories



## Nut plates



### Features & Benefits

- Nut plates are available for all 8STA (sizes 02 to 24) two hole flanges mounted connector receptacles. Their design was specially made for the Motorsport market.

P/N	Shell size	T (Thread)
8STA-02 M2.5	02	M2.5
8STA-02 M2.0	02	M2
8STA-04	04	M2
8STA-04 M2.5	04	M2.5
8STA-06	06	M2.5
8STA-08	08	M3
8STA-10	10	
8STA-12	12	
8STA-14	14	
8STA-16	16	
8STA-18	18	
8STA-20	20	
8STA-22	22	
8STA-24	24	

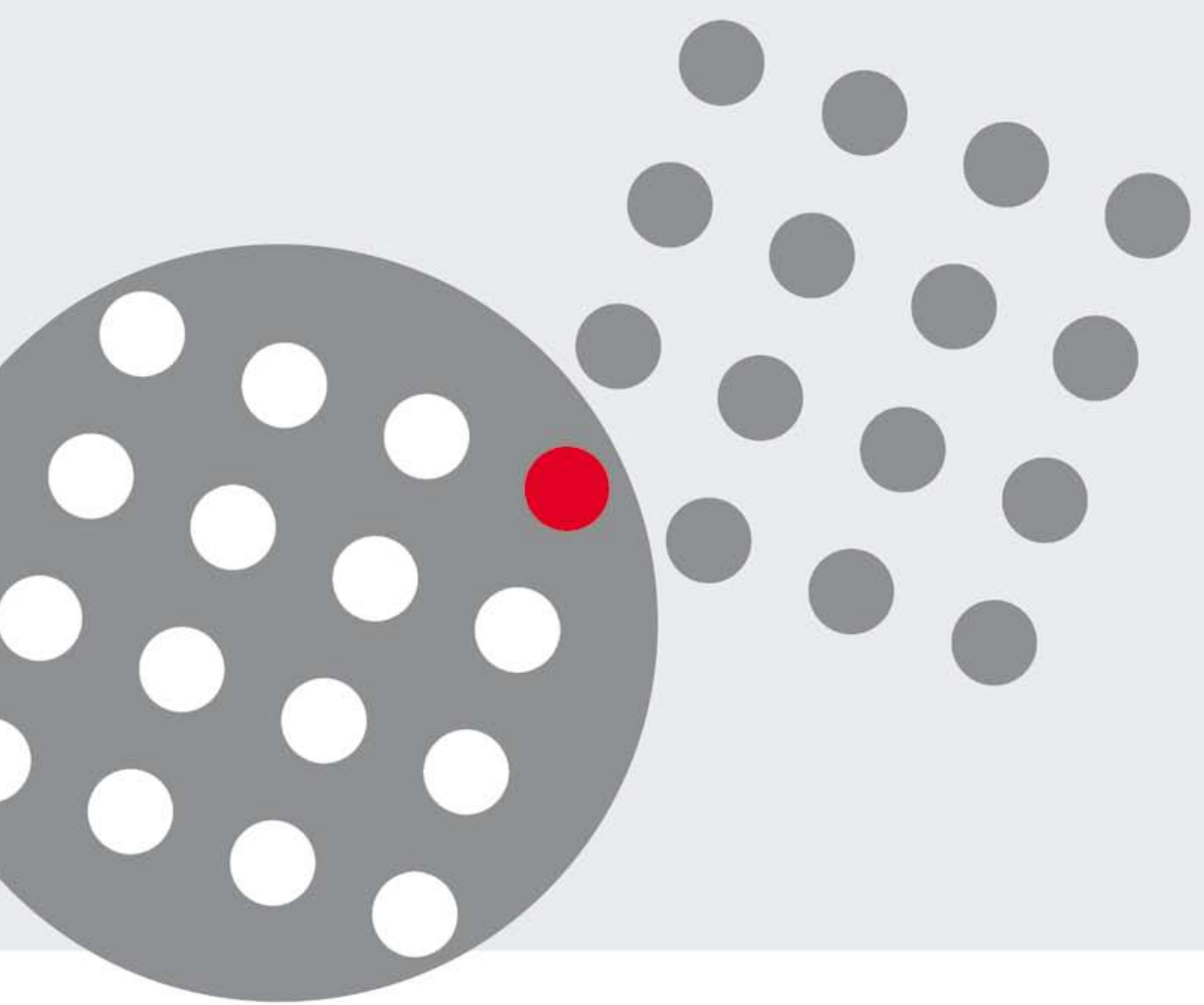
## Gaskets



### Features & Benefits

- Gaskets are available for all 8STA sizes (02 to 24)
- They are available in two versions:
  - Standard version: silicone
  - Fuel tank version: Fluorel
- Gaskets resist to all extreme conditions found in racing environment (temperature, vibration, fluids etc.)

Shell size	P/N Standard	P/N 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



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