



# 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)
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- 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
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## 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



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## 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

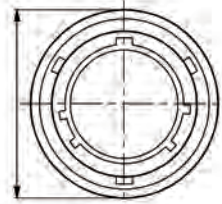
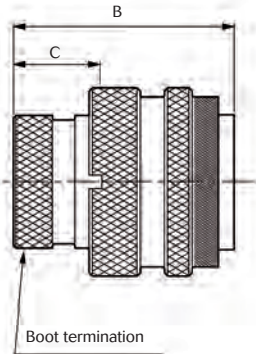


**8STA 24-46** specif.251 - 2 contacts #8 power, 4 #16 & 40 #20



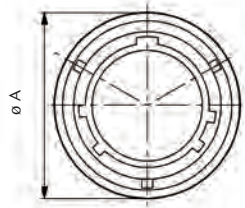
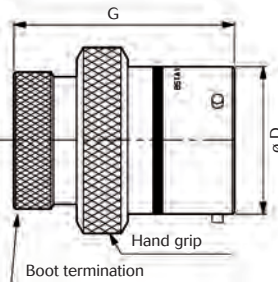
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## Plug



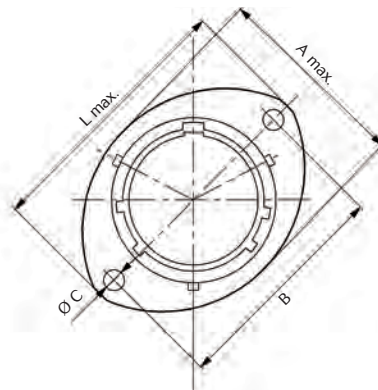
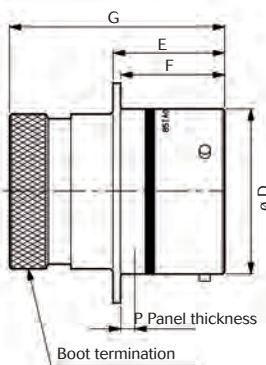
Shell size	ø A max.	B max.	C max.
10	21.50	33.50	15
12	25.10		
16	32.20		
18	35.40		
20	38.20		
24	44.50		

## In-line receptacle

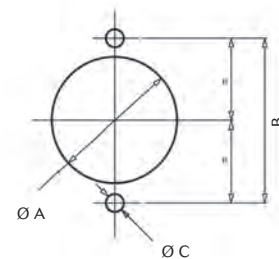


Shell size	ø A max.	ø D <sup>+0.20</sup> / <sub>-0.13</sub>	G max.
10	20.70	15.00	33.50
12	25.10	19.05	
16	31.40	25.40	
18	34.70	28.57	
20	38.10	31.75	
24	44.70	38.10	

## Oval flange receptacle



PANEL CUT OUT



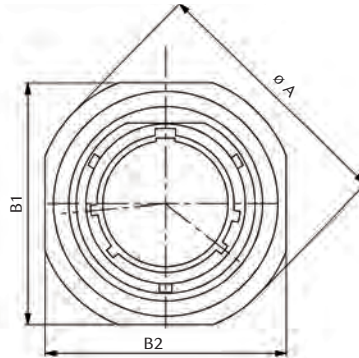
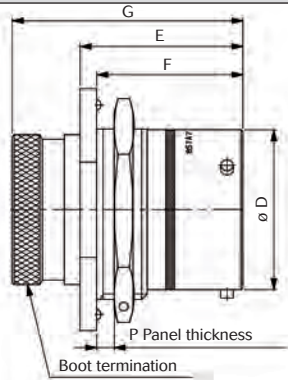
Shell size	A max.	B <sup>±0.20</sup>	ø C <sub>0,1</sub>	ø D <sup>+0.2</sup> / <sub>-0.13</sub>	E <sub>0,15</sub>	F <sub>0,13</sub>	G max.	L max.	P max.	PANEL CUT OUT		
										ø A <sup>±0.10</sup>	B <sup>±0.20</sup>	ø C <sup>±0.20</sup>
10	19.50	25.90	3.20	15.00	17.21	16.05	33.50	32.00	3.00	17.40	25.90	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	3.77	38.10	18.20	15.29	55.80	41.00	49.50	4.10		

Note : all dimensions are in mm

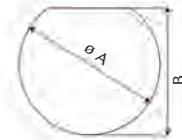


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## Jam nut receptacle

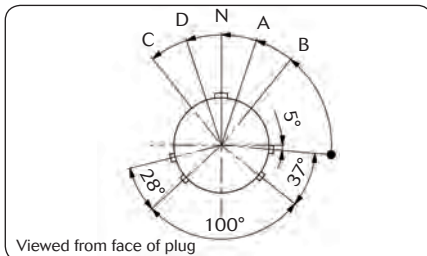
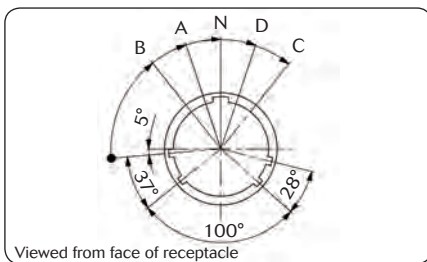


PANEL CUT OUT



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.

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## 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.
				Min.	Max.	Min.	Max.		
<b>Crimp contact</b>				Min.	Max.	Min.	Max.	Min.	Max.
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						
08 power contact	Male	3.64	8599-7544	-	8	-	8.98	4.50	6.50
	Female		8599-7541						
	Boot		8599-4542						
	Reductor**		8599-7645						
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						

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

## Crimping tools

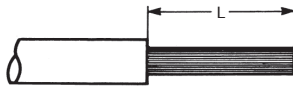
Contact size	Type	Pliers						
		M22520/1-01		M22520/2-01		M300BT	M22520/23-01*	
		Turret Part number		Locator Part number		Locator Part number	Die Part number	Locator Part number
		Spec.	SOURIAU	Spec.	SOURIAU			
22D	Male	-	-	M22520/2-09	8476-09			
	Female			M22520/2-07	8476-07			
20	Male	M22520/1-04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

\* Pneumatic pliers



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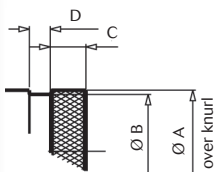
## Wire stripping



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

## Accessories

### Shrinkable termination detail



Shell size	$\varnothing A$	$\varnothing B^{\pm 0.05}$	$C^{\pm 0.05}$	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		-