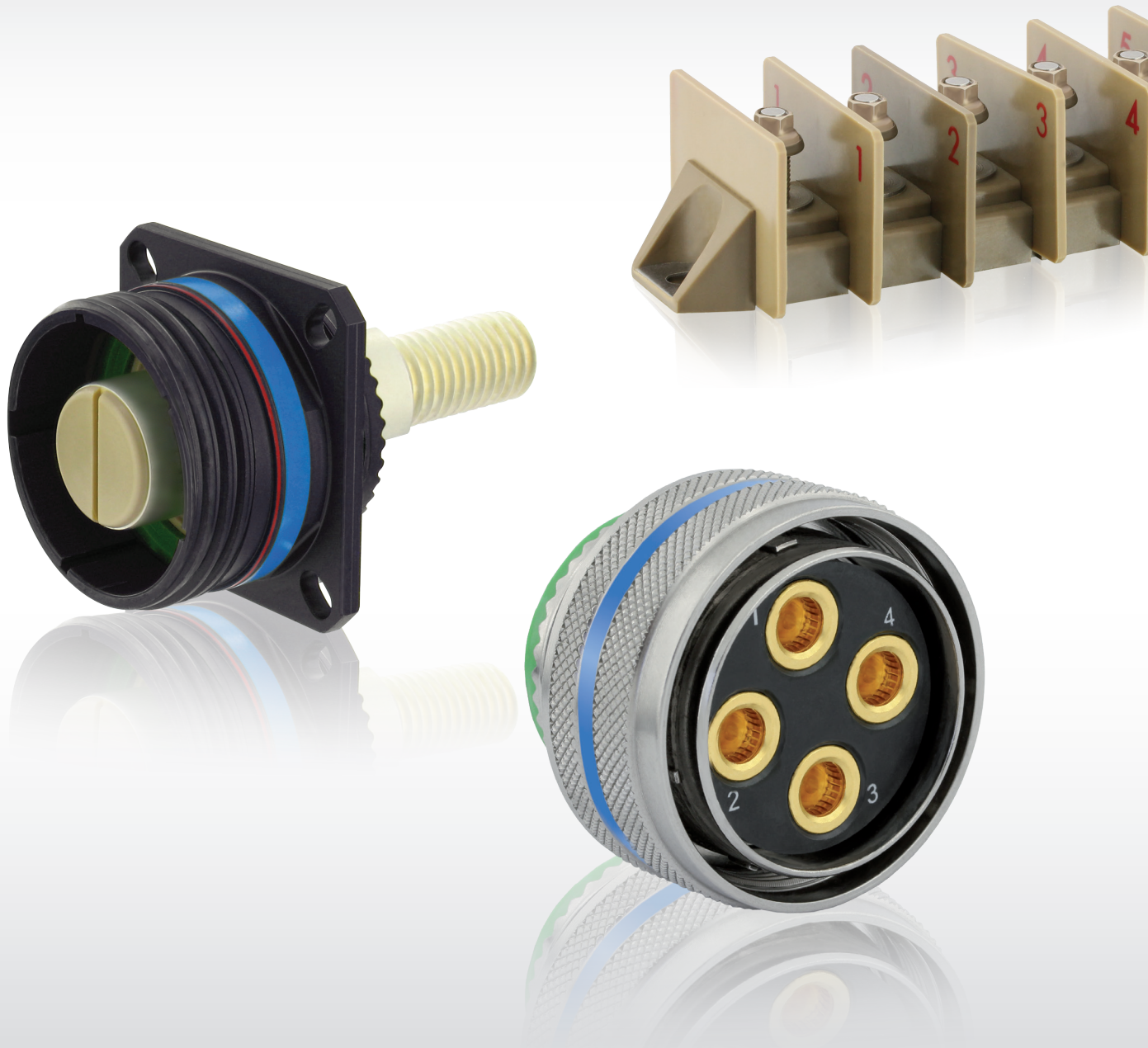


HIGH POWER



High Power Solutions Circular & Rectangular



SOURIAU
Connection Technologies

HIGH POWER

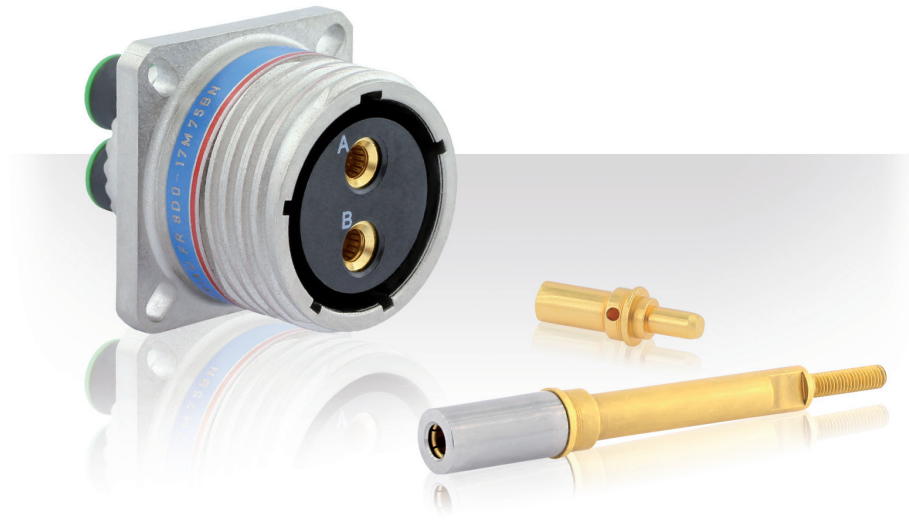
High Power Solutions

Product Ranges

■ 8D Series	04
■ 8STA Series	14
■ 8533 Series	17
■ 895 Series	21
■ SN236 Series	24
■ 208 Series	28
■ 209 Series	29

Description

- Quick screw coupling connector with removable crimp contact
- Shell available in aluminum, composite, Stainless steel, Titanium & Bronze
- Six layouts with different current rating
- Consult us for power hermetic version
- High Power offer available on demand
- Derating curves available for #4 and #8.



Technical features

Mechanical

- **Shell:** Aluminum alloy, Composite, Bronze, Stainless steel, Titanium
- **Plating:**
 - . Olive green cadmium (W/J)
 - . Nickel (F/M/TF/S)
 - . Without plating (X for composite, TT for titanium and JVS for Bronze)
 - . Passivated (K)
- **Grommet and seal:** Silicon elastomer
- **Insulator:** Thermoset
- **Contact body:** Copper Alloy
- **Contact retention:**
 - . #4 = 200N
 - . #8 = 111N
- **Shock:** 300g during 3ms
- **Endurance:** 500 mating / unmating operations
- **Vibration:** As per MIL DTL 38999

Electrical

- **Dielectric withstanding:** Test voltage rating (Vrms)

Service	Sea level	at 21 000 m
M	1 300	800
I	1 800	1 000

- **Insulation Resistance:** 5000 MΩ under 500 Vdc
- **Max current rating per contact:**
 - . #4 = 80A
 - . #8 = 45A
- **Contact resistance:**
 - . #4 = 2mΩ
 - . #8 = 3mΩ
- **Shielding:** As per MIL DTL 38999
- **Shell continuity:**
 - . W = 2.5 mΩ
 - . F = 1mΩ
 - . J, M = 3 mΩ
 - . JVS = 5 mΩ

Environmental

- **Temperature range:**
 - . W, J, X, JVS = - 65°C +175°C
 - . F, M, K, S, TT, TF = - 65°C +200°C
- **Sealing:** As per MIL DTL 38999
- **Damp Heat:** As per MIL DTL 38999
- **Salt Spray:**
 - . W, TT, TF, K, JVS = 500 hours
 - . F, S = 48 hours
 - . J, M, X = 2000 hours
- **Fire resistance:** As per EN 2591 - C 17 method A
- **Resistance to fluid:** As per MIL DTL 38999

Connector part numbers

Aluminum, Composite, Stainless steel & Titanium connector

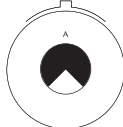
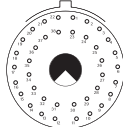
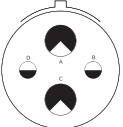
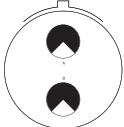
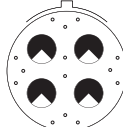
Basic Series	8D	0	-	11	W	80	P	N	251
Style:									
0: Square flange receptacle									
5: Plug with RFI shielding									
7: Jam nut receptacle									
Type: Crimp contact									
Shell size: 11 - 17 - 19 - 21 - 23 - 25									
Plating:									
Aluminum shell:									
W: Olive drab cadmium									
F: Nickel									
ZC: Green zinc cobalt									
Z: Black zinc nickel									
Composite shell:									
J: Olive green cadmium									
M: Nickel									
X: Without plating									
Stainless steel shell:									
K: Corrosion resistant									
S: Nickel									
Titanium shell:									
TT: Without plating									
TF: Nickel									
Contact layouts: See next page									
Contact style:									
P: Pin contact A: Male connector supplied without contact									
S: Socket contact B: Female connector supplied without contact									
Orientation: N - A - B - C - D - E									
Specification:									
251: Mandatory for some layouts supplied with power contacts (see next page)									


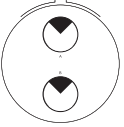
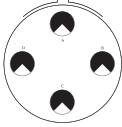
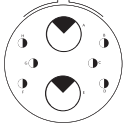

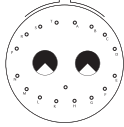
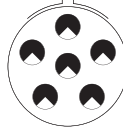
Bronze connector

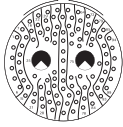
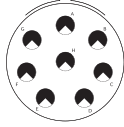
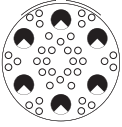




Basic Series	JVS	16	A	11	80	P	N	251
Style:								
00: Square flange receptacle								
07: Jam nut receptacle								
16: Plug								
Material:								
A: Bronze shell material								
Shell size: 11 - 17 - 19 - 21 - 23 - 25								
Contact layouts: See next page								
Contact style:								
P: Pin contact A: Male connector supplied without contact								
S: Socket contact B: Female connector supplied without contact								
Orientation: N - A - B - C - D - E								
Specification:								
251: Mandatory for some layouts supplied with power contacts (see next page)								

Contact layouts

-  Contact #22D
-  Contact #12
-  Contact #20
-  Contact #8 Power
-  Contact #16
-  Contact #4 Power

11				17				19
80 Spec 251				02 Spec 251	22 Spec 251	75 Spec 251		
								
1#8				38#22D 1#8	2#12 2#8	2#8		
						18 Spec 251		
								
						14#22D 4#8		

21						23
20 Spec 251	42*	48*	72*	75 Spec 251	77 Spec 251	06 Spec 251
						
18#20 2#8	2#4	4#8	6#16 2#4	4#8	17#22D 2#8	6#8

25						
07 Spec 251	08 Spec 251	17 Spec 251	20 Spec 251	41 Spec 251	44*	46 Spec 251
						
97#22D 2#8	8#8	36 #22D 6 #8	10#20 13#16 4#12 3#8	22#22D, 3#20 11#16, 2#12 3#8	4#16 4#4	40#20 4#16 2#8

* Power contacts on standard, no spec. 251 needed.

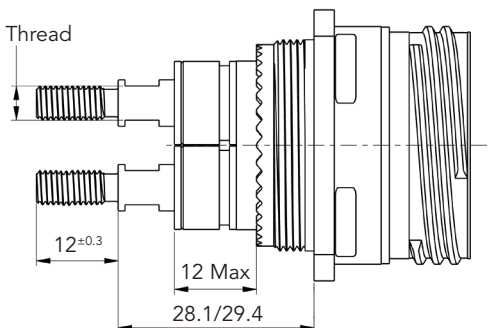
Power contacts

Contact size	Contact type	Part number	Reducer	Cable size max.		Boot
				AWG	mm ²	
#4	Male	85997598900*	Without	N/A	25 mm ²	N/A not sealed
	Female	85997599900*				
	Male	85997534		AWG 4	16 to 21 mm ²	85994594 for cable 16mm ²
	Female	85997535				
	Male	85997524		AWG8	9 mm ²	N/A not sealed
	Female	85997525				
	Male	85997534	84002352A	AWG6	10 mm ²	85994593
	Female	85997535	Without	AWG6	10 mm ²	
	Male	85997528900				
	Female	85997529900				
#8	Male	85997580	Without	AWG8	9 mm ²	85994542
	Female	85997581				
	Male	85997580	85997645	AWG10	6 mm ²	85994547
	Female	85997581				
#8 according to EN 3155	Male	85996215900	Without	AWG8	9 mm ²	85994542
	Female	85996217900				
	Male	85996216900		AWG10	6 mm ²	85994547
	Female	85996218900				
#8 JVS only	Male	85997544	Without	AWG8	9 mm ²	85994542
	Female	85997541				
	Male	85997544	85997645	AWG10	6 mm ²	85994547
	Female	85997541				

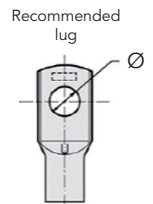
Cable section AWG	#22	#20	#16	#12	#10	#8	#4
mm ² maxi	0.34	0.6	1.34	3.18	5.8	9	21
mm ² mini	0.095	0.21	0.6	1.91	3.8	5.8	16

* Not included in connector P/N. Must be ordered separately.

Bus bar contact



Contact size	Thread	Part number			Lug Ø
		Male	Female	Boots	
#4	M5x0.8	85930873A900	85930875A900	85994594	5.2
#8	M3x0.5	85930872A900	85930874A900	85994542	3.2



Contacts available separately only. Lug: tin over copper recommended. Dimensions for indication only.

Note: All dimensions are in millimeters (mm)

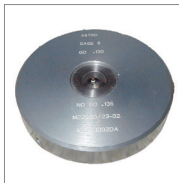
Power tools

Contact size	Contact type	Contact reference	Cable AWG	Crimping tool			Contact extraction tool (metallic)	Contact extraction tool (plastic)
				Automatic tool: M22520/23-01		Manual hand tool: M300 BT		
				Die set	Locator	Locator		
#4	Male	8599-7534	#4-5 or #10-16mm ²	M22520/23-04	M22520/23-11	N/A	8533-8175	M81969/14-07
	Female	8599-7535						
#8 JVS only	Male	8599-7544	#8 or #10	M22520/23-02	8599-9601	SP 593	8660-197	M81969/14-12
	Female	8599-7541						
#8	Male	8599-7580						
	Female	8599-7581						

Automatic tool for contacts #4 & #8



Crimping tool M22520/23-01



Die set



Locator

Manual hand tool for contacts #8



Crimping tool M300 BT



Locator

Extraction tool



Metallic tool

Description

- Threaded coupling connector with single power contact
- Aluminum shell
- 3 shell sizes available:
 - size 19: Up to 450 A at 40°C
 - size 23: Up to 650 A at 40°C
 - size 25: Up to 850 A at 40°C
- Silver plated contact
- Pin contact is equipped with a plastic cap to prevent electrical shock
- Modular design:
 - . Removable backshell: straight, right angle or threaded contact
 - . Backshell termination: shrink boot



Technical features

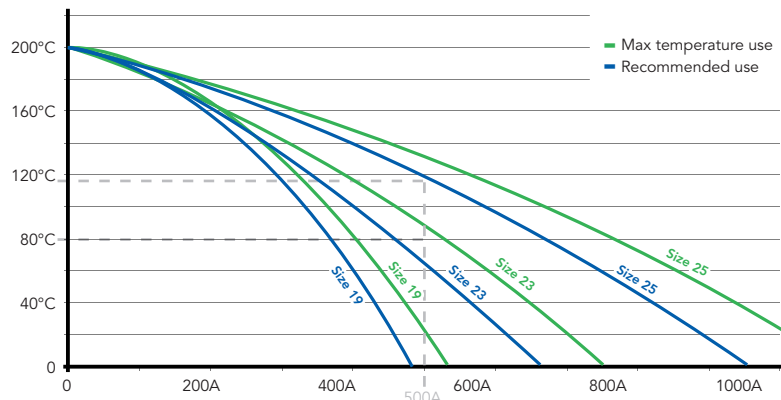
Mechanical

- **Shell:** Aluminum alloy
- **Shell plating:**
 - Black zinc nickel (Z)
 - Cadmium olive drab (W)
- **Insulator:** Thermoplastic
- **Grommet and interfacial seal:** Silicone elastomer
- **Contact body:** Copper alloy
- **Endurance:** 500 mating/unmating operations
- **Vibration:**
 - According Def Stan 00-35
 - 4.2 g rms vert - 6h/3 axes

Electrical

- **Test voltage** > 1500 V
- **Shell to shell continuity** (no backshell) < 2.5 mΩ
- **EMI** 85 dB @ 1GHz (F)

• Connector rating



Example for 500A:
 Shell size 25 with contact diameter 20: max temperature 135°C; recommended 120°C
 Shell size 23 with contact diameter 18: max temperature 90°C; recommended 80°C
 Shell size 19 with contact diameter 14: not recommended
 Wire must be compatible with current and temperature used for the connector.

Environmental

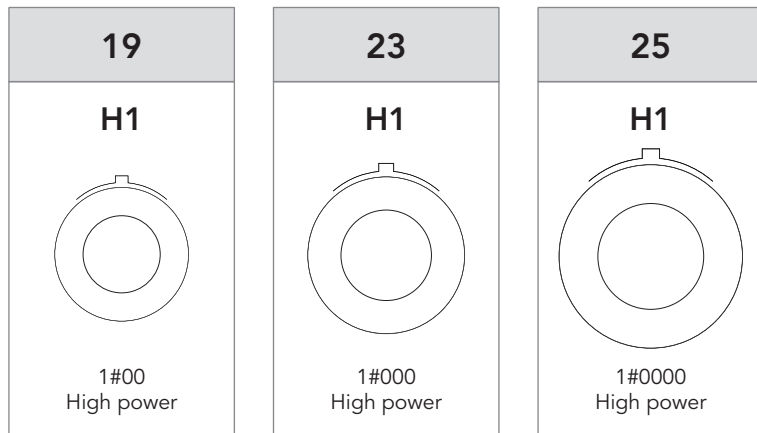
- **Temperature range:** -65°C +175°C
- **Sealing:** IP67 on mated connector (1 meter/30 min)
- **Salt spray:** 500 hours
- **Creepage and clearance:** Min length in mm according to IEC60664-1

Shell size	Creepage	Clearance
19	2.805	2.492
23	2.830	4.492
25	2.715	4.492

Resistance to fluids

- **According to MIL-DTL-38999 standard**
 - . Gasoline: JP5 (OTAN F44)
 - . Mineral hydraulic fluid: MIL-H-5606 (OTAN H515)
 - . Synthetic hydraulic fluid: Skydrol 500 B4
- **LD4 (SAE AS 1241)**
 - . Mineral lubricating: MIL-L-7870A (OTAN 0142)
 - . Synthetic lubricating: MIL-L-23699 (OTAN 0156), MIL-L-7808
 - . Cleaning fluid: MIL-C-87936 diluted
 - . De-icing fluid: MIL-A-8243
 - . Extinguishing fluid: Bromochloromethane
 - . Cooling fluid: Coolanol

Contact layouts



Other size: Please consult us.

Ordering information

Basic Series	8D	0	25	W	H1	P	N	R1	A
Style:									
0: Square flange receptacle									
5: Plug (available with backshell D1, R1, G0 & W0 Types)									
7: Jam nut receptacle									
Shell size: 19, 23, 25									
Plating:									
Z: Zinc Nickel									
W: Olive green cadmium									
H1: Single power									
Contact style:									
P: Pin contact									
S: Socket contact									
Orientation: N, A, B, C, D, E									
Backshell type:									
D1: Straight backshell shrink boot & EMI (crimp version)									
R1: Right angle backshell shrink boot & EMI (crimp version)									
G0: Backshell low profile (threaded termination)									
W0: Without backshell (threaded termination)									

Specification for backshells D1 & R1 Types (crimp version):

Specification	Shell size	Admissible cable (mm)		Barrel diameter (mm ± 0.05)
		Outer Ø max	Nominal core Ø	
A	19	17	10.15	10.8
B	19	17	11.1	11.8
C	19	17	12	12.5
D	23	22	14.05	15
E	23	22	16.3	17
	25	26.5		
F	25	26.5	19	20.5

Specification for backshells G0 & W0 Types (only threaded termination):

Specification	Shell size	Thread
C	19, 23 & 25	M12

Note: Plug not available with backshell W0 Type. Other thread, please consult us.

Note: For other configuration, please consult us.

Backshell type

Description		
D1: Straight backshell shrink boot & EMI (crimp version)	G0: Backshell low profile (threaded termination)	R1: Right angle backshell shrink boot & EMI (crimp version)
	W0: Without backshell (threaded termination)	

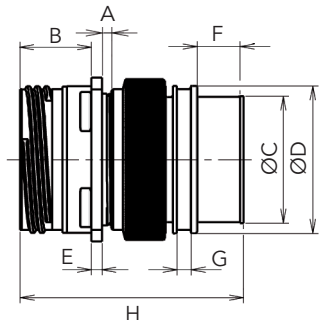
Dimensions

Plug & receptacles									
8D0 Square flange receptacle			8D5 Plug			8D7 Jam nut receptacle			
Shell size	A ± 0.1	B ± 0.1	C ± 0.1	D ± 0.1	E ± 0.1	F Max	ØG Max	H ± 0.25	ØJ ± 0.25
19	36.5	26.97	29.36	3.29	4.98	41	38.5	45.95	49.15
23	42.9	31.75	34.93	3.96	6.2	47	44.9	52.35	55.55
25	46	34.93	38.1			52	48	55.55	58.65

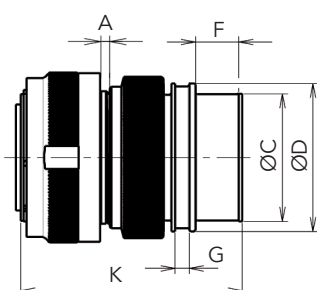
Note: All dimensions are in millimeters (mm)

Backshell D1 type

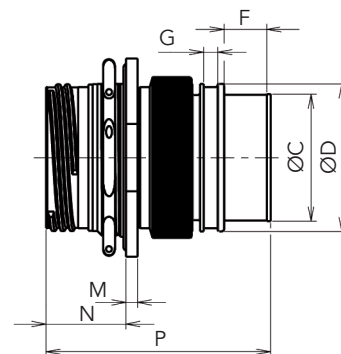
With 8D0
(square flange receptacle)



With 8D5
(plug)



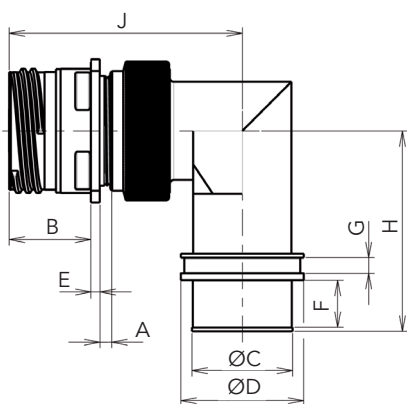
With 8D7
(jam nut receptacle)



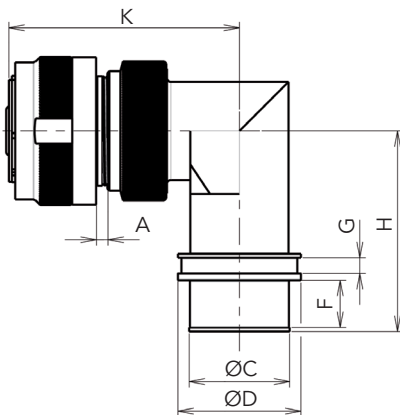
Shell size	A Max	B Max	ØC±0.1	ØD±0.1	E±0.1	F±0.2	G±0.2	H Max	K Max	M±0.25	N Max	P Max
19	2.65	20.9	25.6	31.6	2.26	12	4	62.5	62	3.25	22.8	63
23		20.1	32.4	38.6	2.97							
25		35.6	42.1	2.97								

Backshell R1 type

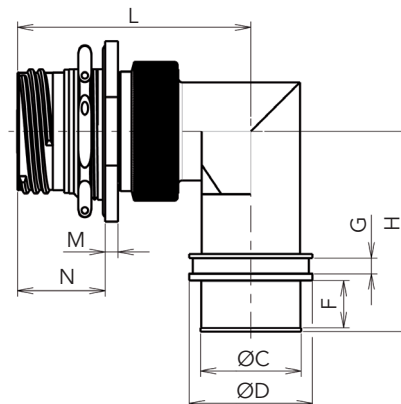
With 8D0
(square flange receptacle)



With 8D5
(plug)



With 8D7
(jam nut receptacle)

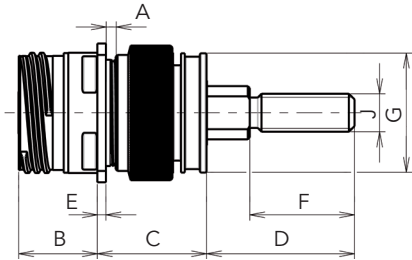


Shell size	A Max	B Max	ØC±0.1	ØD±0.1	E±0.1	F±0.2	G±0.2	H Max	J Max	K Max	L Max	M±0.25	N Max
19	2.85	20.9	25.6	31.3	2.26	12	4	51.1	59.8	59.3	59.8	3.25	22.8
23		20.1	32.4	38.1	2.97			54.4	63.2	62.7	63.2		
25		35.6	41.3	2.97	56.1			64.8	64.3	64.8			

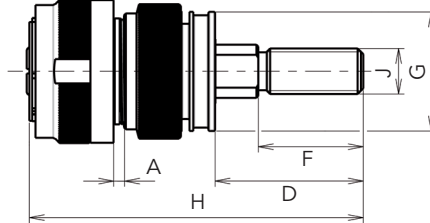
Note: All dimensions are in millimeters (mm)

Backshell G0 type

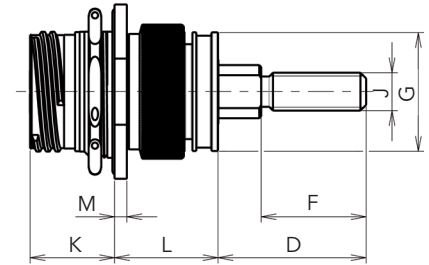
With 8D0
(square flange receptacle)



With 8D5
(plug)



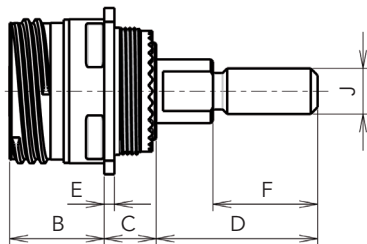
With 8D7
(jam nut receptacle)



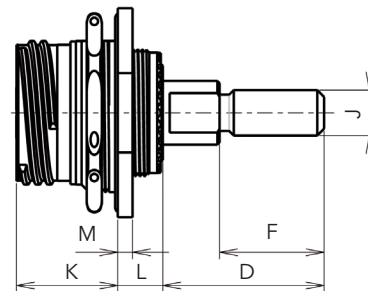
Shell size	A Max	B Max	C Max	D Max	E ± 0.1	F ± 0.2	$\varnothing G \pm 0.1$	H Max	J Max	K Max	L Max	M ± 0.25
19	2.65	20.9	29	39.4	2.26	25	31.3	88.1	M12 x 1.75	22.6	27.6	3.25
23		20.1	29.8		2.97		38.1				28.4	
25					2.97		41.3				28.4	

Backshell W0 type

With 8D0
(square flange receptacle)



With 8D7
(jam nut receptacle)



Shell size	B Max	C Max	D Max	E ± 0.1	F ± 0.2	J Max	K Max	L Max	M ± 0.25
19	20.9	14	40	2.26	25	M12 x 1.75	22.6	12	3.25
23	20.1			2.97					
25				2.97					

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:**

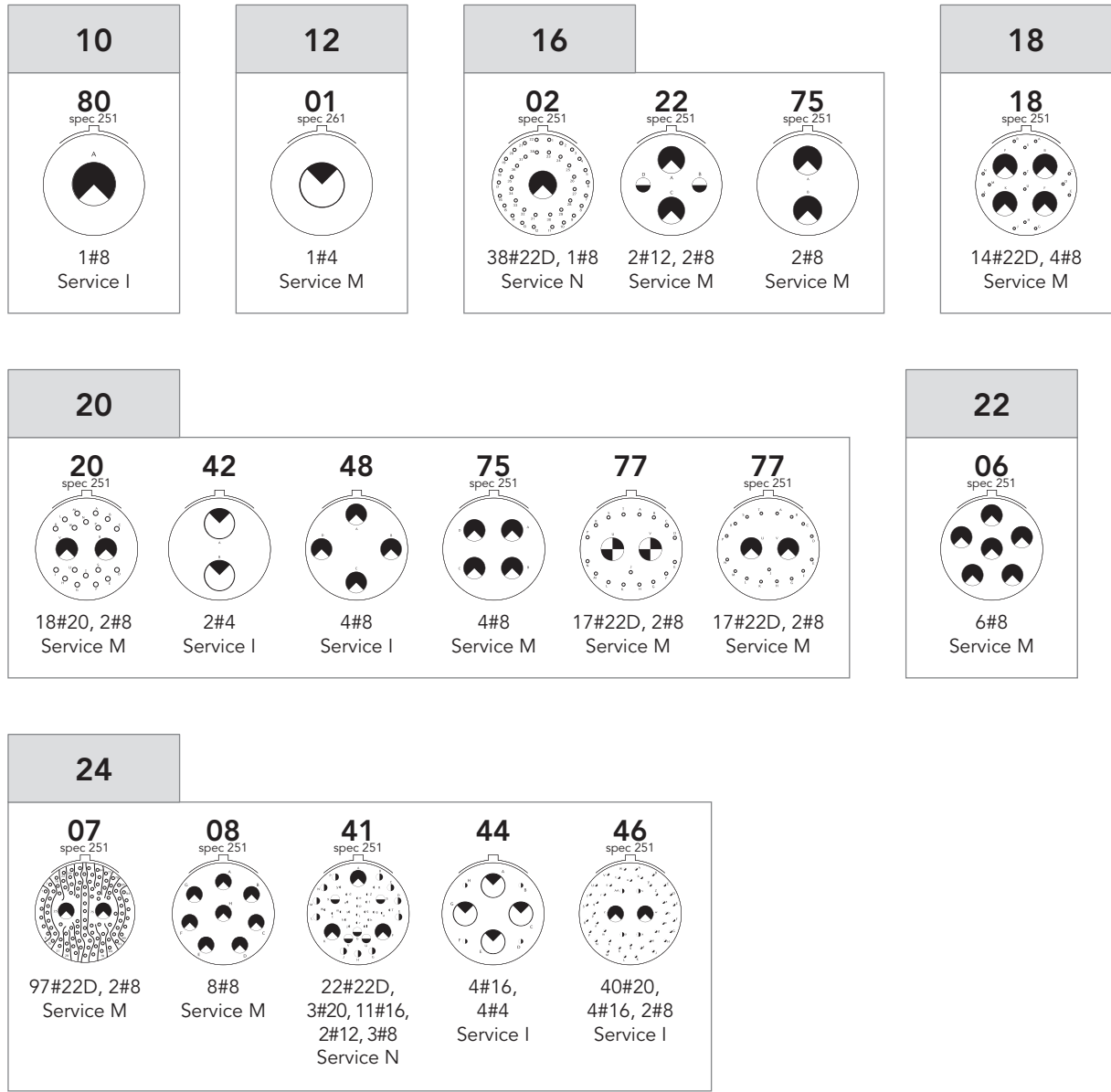
Size 22D:	5 A
Size 20:	7.5 A
Size 16:	13 A
Size 12:	23 A
Size 8:	45 A
Size 4:	80 A
- **Shell continuity:** ≤10 mΩ

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 A: without pin contacts (specifications 261 & 545 only)							
S: Socket B: without socket contacts (specifications 261 & 545 only)							
Orientation: N: Red / A: Yellow / B: Blue / C: Orange / D: Green / U: Universal							
Specification							
None: for contact layouts 20-48 & 24-44							
251: for contact layouts 10-80, 16-02, 16-75, 18-18, 20-75, 20-78, 24-07, 24-41 & 24-46							
261: only for 12-01 - see note below							
540: Layout 12-01 with protected socket							
545: Only for layout 24-44 - delivered with contacts #16 & without power contacts #4, power contact #4 to be ordered separately according wire section to be used (see table below)							

Note : Layout 12-01 specif. 261 only.

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

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

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

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

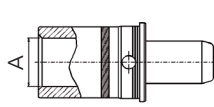
Power contacts

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

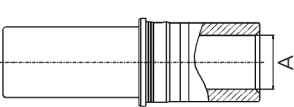
Specific wire dimensions

Power contact #4

Pin contact



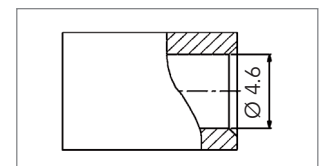
Socket contact



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

Reducer for wire 8 and 10 mm²

Compatible with pin and socket contact, wire 16 mm²



Note: All dimensions are in millimeters (mm)

Description

- The utmost solution to combine high vibrations, high temperatures and high power supply: up to 80 Amps continuous rating at 260°C ambient temperature with a 20% space-savings compared with other solutions.
- Two contact sizes - size 6 and size 4 - as well as the ability to use quadrax contacts in size 6 cavity layouts.
- Standard strain relief backshell or spacer accessory to adapt any specific backshell.
- Airbus ABS 1340-1343, 1426-1427, 1452 qualified.
- Electro mechanical actuator power supply, alternator, starter applications.



Technical features

Mechanical

- **Shell:**
 - . nickel plated aluminum (R class),
 - . passivated stainless steel (E & K classes).
- **Grommet and seal:**
 - . silicone elastomer.
- **Insulator:**
 - . thermoplastic.
- **Contact body:**
 - . copper alloy.
- **Contact plating:**
 - . gold over nickel.
- **Contact retention:**
 - . size 4: 200N . size 8: 130N
 - . size 6: 156N
- **Endurance:**
 - . 500 mating cycles (E & K classes),
 - . 250 mating cycles (R class).
- **Vibration & shock:**
 - . according to EN 2997.

Electrical

- **Dielectric withstanding:**

Altitude	Service I
Sea level	1500 Vrms
15 000 m	600 Vrms
21 000 m	400 Vrms
33 000 m	200 Vrms

- **Insulation resistance:**
 - . 5000 MΩ under 500 Vdc.

- **Max current rating per contact:**

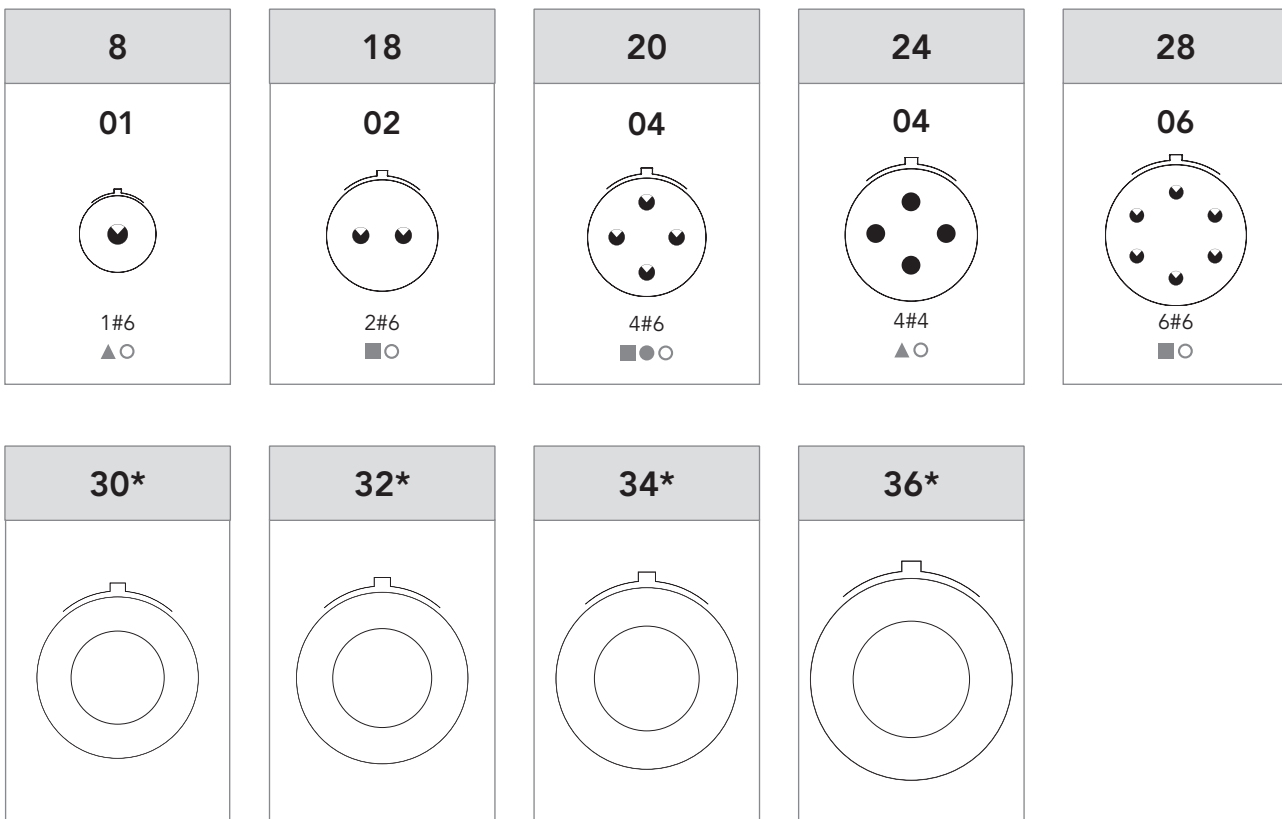
Contact size	6	4
Rating (A)	60	80

- **Contact resistance:**
 - . Initial < 0.4 mΩ.
- **Electrical continuity:**
 - . 5mΩ with RFI shielding.
- **Shielding:**
 - . to 100 MHz at 1 GHz attenuation 65 dB.

Environmental

- **Temperature range:**
 - . -60°C +200°C R & K classes,
 - . -60°C +260°C E class & #6 contact only.
- **Leakage:**
 - . as per 2591-312:
 - Method B differential pressure: 100kPa
 - Maximum leakage flow: 16x10⁻⁶ m³/h
- **Salt spray:**
 - . 48 hours (R class),
 - . 500 hours (E & K classes).
- **Fire resistance:**
 - . as per EN 2591-318:
 - 6 min under a 1100°C flame without electrical perturbation, plus 14 min with no flame propagation (ES class).
- **Resistance to fluids:**
 - . MIL-H 5606 - SKYDROL 500 B4 - LD4 - JP5 - MIL-L 7870A - MIL-L 23699 - MIL-L 7808 - MIL-C 25769 - MIL-A 8243

Contact layouts 8533 Series



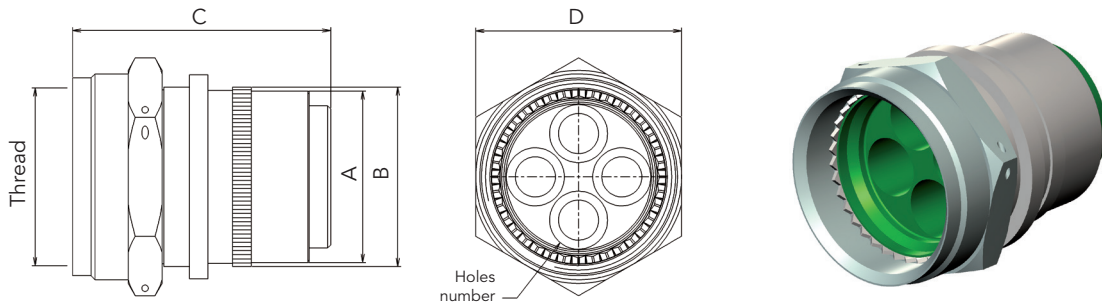
Connector type ▲ Class 200°C ■ Classes 200°C & 260°C ● Hermetic 200°C & 260°C (8533 only) ○ 8533 only (ABS) * Please consult us.		Contact size ● Contact #6 power ● Contact #4 power Coordinates information: please consult us.	
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Ordering information

SOURIAU part numbers

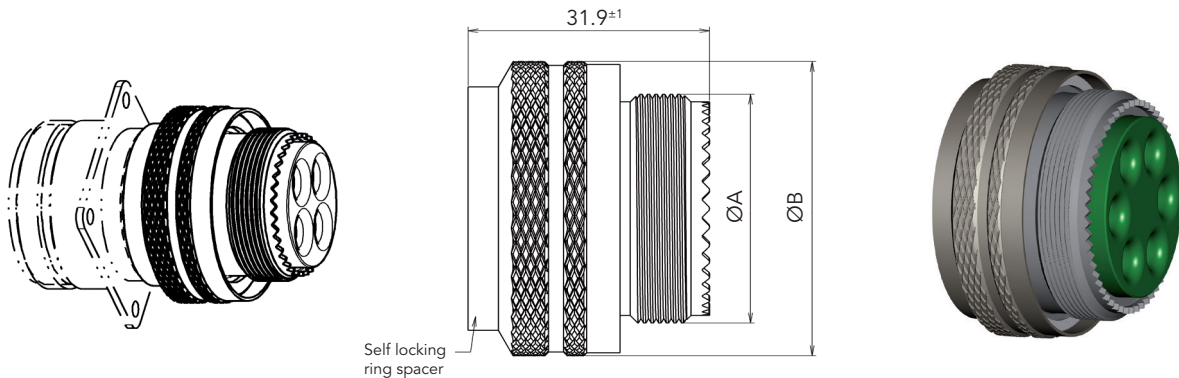
Basic series	8533	0	R	S	20	04	P	N	G	L
Shell type:										
0: Square flange receptacle										
3: Plug with RFI shielding										
7: Jam nut receptacle										
Shell class:										
R: Nickel plated aluminum shell (200°C)										
K: Stainless steel shell (200°C)										
E: Stainless steel shell (260°C - except layouts 08-01 & 24-04: 200°C)										
S: With 360° teeth										
Shell size:										
08, 18, 20, 24, 28										
Contact layout:										
See previous page										
Contact type:										
P: Pin										
S: Socket										
Orientation:										
N, 6, 7, 8, 9, Y										
Insert class:										
None: Not grounded										
G: Grounded - for Quadrax applications only										
Mandatory suffix for shells sizes 18, 20, 24 & 28 :										
109: With contact #4 for cable #6 + sealing boot										
115: With contact #4 for cable #8 + sealing boot										
126: With backshell, without contact and sealing boot										
136: With contact #6 for cable #6 + sealing boot										
138: With contact #6 for cable #8 + sealing boot										
143: With contact #6 for cable #10/12 + sealing boot										
231: With spacer, without contact and sealing boot (see next page for available layouts)										
L: Without contact and sealing boot										

Strain relief backshell



Layout	Material	Part number	Mass max (g)	A ± 0.1	B Max	C ± 0.12	D	Holes number	Thread Class 2B	Coupling torque N.m ± 0.5
18-02	Aluminum	85338342	40	24.90	29.45	41.78 ± 1.2	31.62	2	1.0625-18 UNEF	4.5
	Stainless steel	85338343	75							
20-04	Aluminum	85338250	40	27.72	30.12	41.78 ± 1.2	33.21	4	1.1875-18 UNEF	9
	Stainless steel	85338281	73							
24-04	Aluminum	85338223	53	33.71	37.26	48.95 Max	45	4	1.4375-18 UNEF	9
	Stainless steel	Consult us	-							
28-06	Aluminum	85338245	82	39.7	44.4	41.78	47.49	6	1.7500-18 UNS	10
	Stainless steel	85338288	146							

Spacer



Layout	Stainless steel		Aluminum		ØA	ØB Max
	Part number	Mass max (g)	Part number	Mass max (g)		
20-04	8533-8388	88	8533-8387	Consult us	1"3/16-18 UNEF 2A	40
24-04	8533-8390	115	8533-8389		1"7/16-18 UNEF 2A	45
28-06	8533-8392	140	8533-8391		1"3/4-18 UNS	53

Note: All dimensions are in millimeters (mm)

Description

- Screw coupling with self locking system
- Power crimp contacts size 4/0 gold plated
- 260A per contact at 120°C
- ASNE 0098 and ASNE 0378 compliant



Technical features

Mechanical

- **Mounting:** Screws
- **Shell:** Steel
- **Plating:** Yellow cadmium
- **Grommet and seal:** Silicon elastomer
- **Insulator:** Thermoset
- **Contact body:** Copper alloy
- **Contact plating:** Gold over nickel
- **Endurance:** 500 mating cycles
- **Shocks:** 300g during 3ms/ 3 directions
- **Vibrations:**
Random 100 to 2000Hz-1G2/Hz

Electrical

- **Number of contacts:** 4 (#4/0)
- **Test voltage:** 1500 Vrms
- **Insulation resistance:** $\geq 5000 \text{ M}\Omega$
- **Contact resistance:** $< 0.23 \text{ m}\Omega$
- **Contact rating:** 260A at 120°C
- **Contact termination:** Crimp

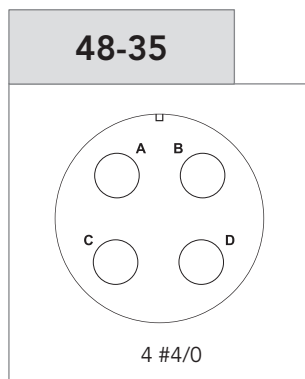
Environmental

- **Temperature range:** -65°C + 200°C
- **Fire proofness and flammability:**
As per EN2591
- **Sealing:** Low air pressure - 15000 m
- **Salt spray:** 48 hours
- **Damp heat:** 10 cycles/24 hours
- **Resistance to fluids:**
MIL-H 5606
MIL-L 7870A
MIL-L 23699
MIL-L 7808
MIL-A 8243
MIL-C 25769
JP5: Skydrol 500 B4; Skydrol 500 LD4
Coolanol: Chlorobromethane

Ordering information

Basic Series	895	00	K	48	35	P	N
Shell type	00: Square flange receptacle 26: Self locking plug						
Class	K: Fire resistant						
Shell size:	48						
Contact layout:	35						
Contact type	P: Male S: Female						
Orientation	N: Normal						
Specification	None: Connector supplied with contact without specification L: Connector supplied without contact						

Contact layouts



ASN-E Cross references

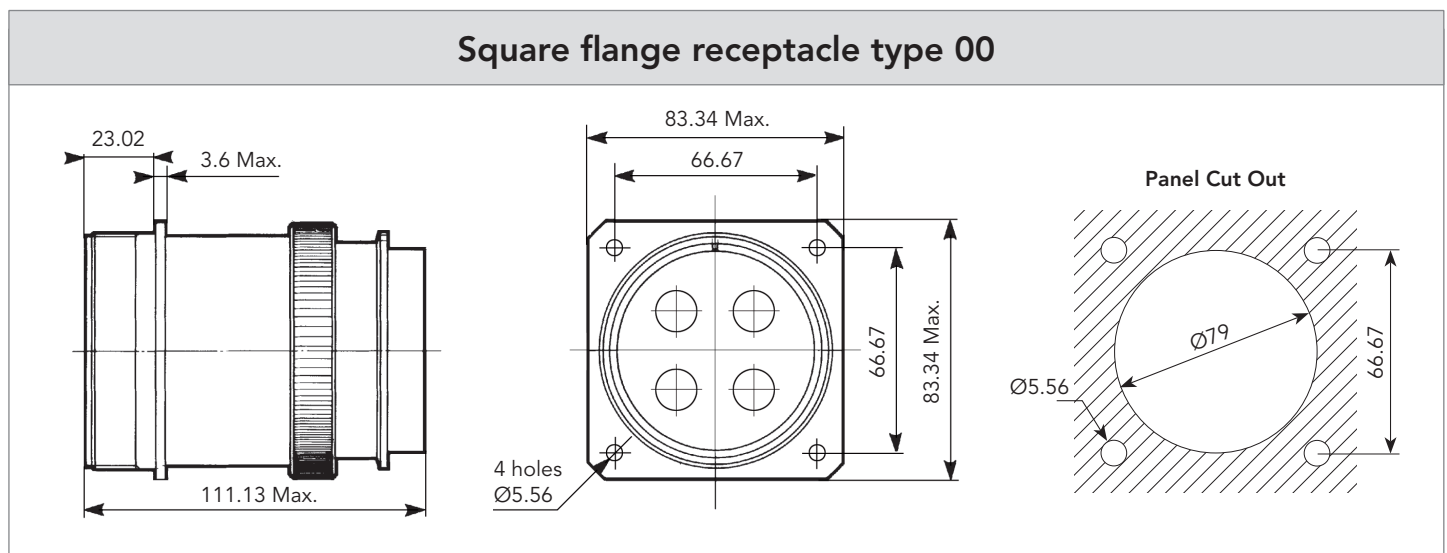
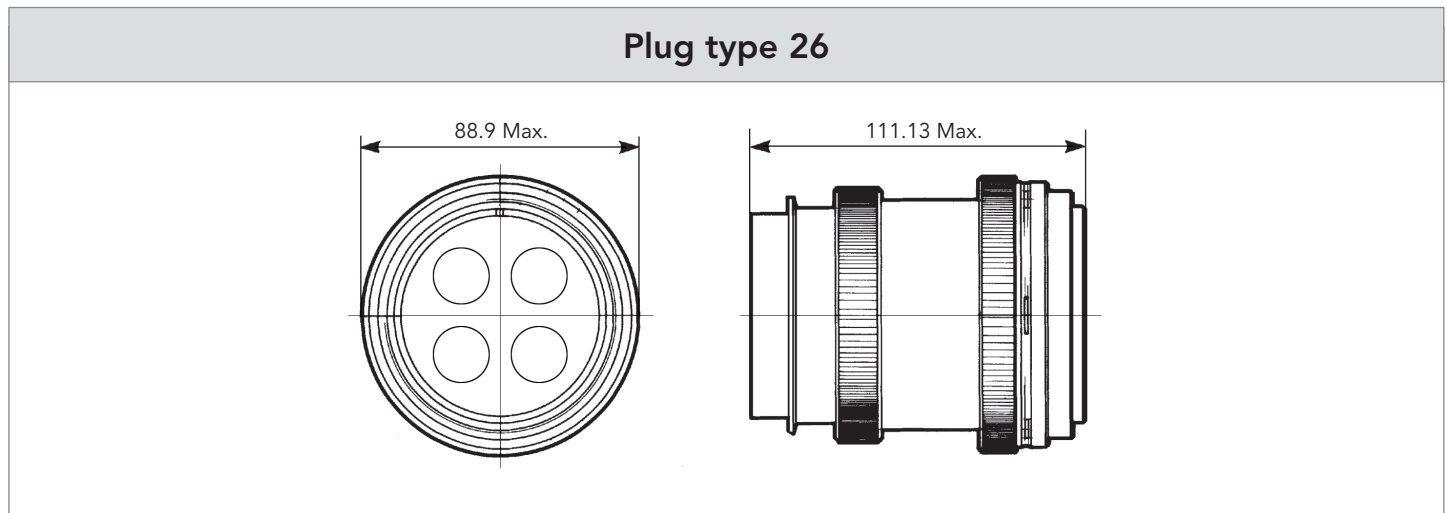
SOURIAU part numbers	AIRBUS part numbers
895 00K 48-35 PN	ASN-E 0098 A 48-35 P
895 00K 48-35 SN	ASN-E 0098 A 48-35 S
895 00K 48-35 PLN	-
895 00K 48-35 SNL	-
895 26K 48-35 PN	ASN-E 0378 A 48-35 P
895 26K 48-35 SN	ASN-E 0378 A 48.35 S
895 26K 48-35 PNL	-
895 26K 48-35 SNL	-

Contacts

Contact size	Contact type	Contact Ø (mm)	Part numbers	Admissible wire section AWG	External Ø over insulation		Profile
					Min.	Max.	
4/0	Male	12.7	8950-5883 NSA 938182 PT 4010	2/0	13.6	14.5	
	Female		8950-6022 NSA 938183 ST 4010				

Note: All dimensions are in millimeters (mm)

Dimensions



Tooling

Contact size	Barrel size AWG	Crimping tool	Head	Locator
4/0	2/0	M22520/23-01	M22520/23-07	M22520/23-16

Cable stripping: L Min: 22.86 mm
L Max: 27.94 mm

Note: All dimensions are in millimeters (mm)

Description

- Ideal for engine and APU applications
 - Fire protective power feedthrough
 - High temperatures resistant
 - High power lug terminations
 - Pressure resistant
- SN236HTFWC meets performances of the DO160 index G requirements.
- Exceptional water tightness
Feedthrough with protective boot completely immersed in water.
- Tailor-made design can be done to adapt your specific current, contacts orientation or temperature.



Technical features

Mechanical

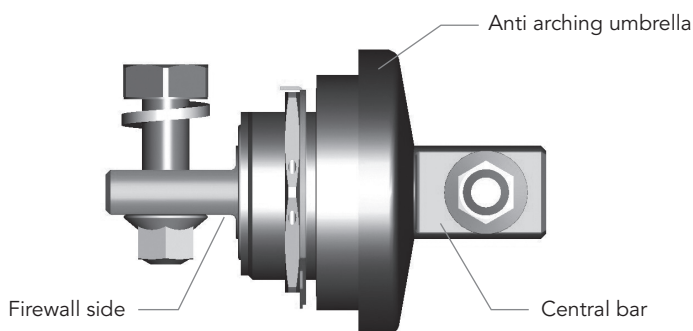
- **Shell:**
Stainless steel
- **Insulator and sleeve:**
Alumina and Peek 50% glass fiber
- **Central bar contact:**
Nickel
- **Tightening torque of screws:**
1.4 M.DaN
- **Terminal lugs:**
AWG #0 , #00, #000

Climatic

- **Operating Temperature:**
-55°C / +200°C
- **Fire resistance:**
1100°C during 15 minutes without flame penetration
- **Salt spray:**
48 h
- **Sealing:**
Leak rate <math> < 10^{-6}</math> atm.cm³/s with
Delta P=1bar (helium test)
- **Conformity:**
SN236HTFWC meets performances of the
DO160 Index G requirements

Electrical

- **Insulation resistance**
Normal conditions: IR > 500M Ω - 500V DC
High Operational T°: IR > 200M Ω - 500V DC
Humidity: IR > 50M Ω - 500V DC
Fireproof: IR > 100k Ω - 500V DC
- **Dielectric Withstanding Voltage**
DWV under 4.2 kVDC, leakage current <math> < 1\mu</math>A
- **Working voltage and current**
Normal use: U = 115V RMS
U_{Max} = 600V RMS
I_n = 350A
I_{peak} = 1043A during 5 sec. at beginning
- **Frequency**
From 360 to 800 Hz



Ordering information

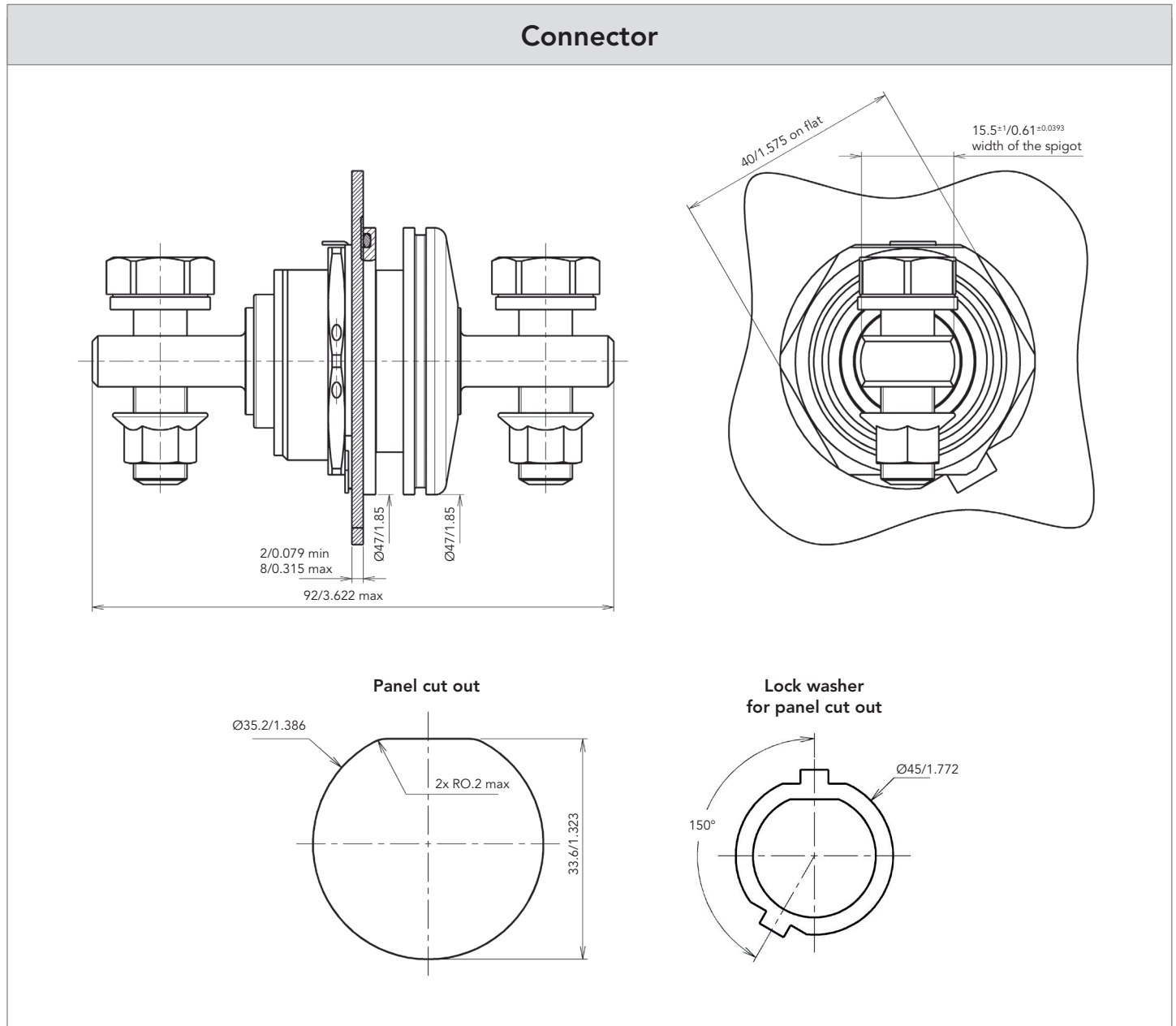
Part Number	Description
SN236HTFWC	Connector
SN236PB10	Protective boot for 1 cable
SN236PB20	Protective boot for 2 cables
SN236PBA	Protective boots adaptor
SN236PBAT	Protective boots adaptor tool



DO160 Index G requirements

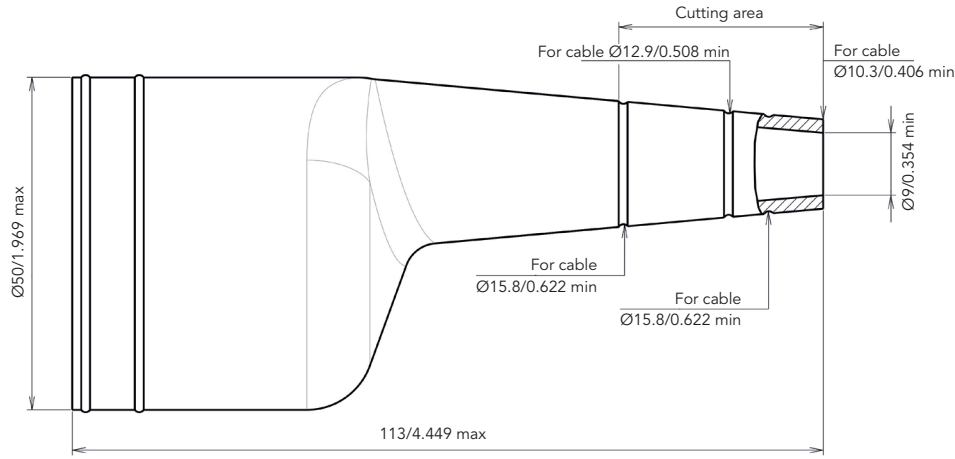
Characteristics	Level
Waterproofness	DO160 - Section 10, equipment category R: Spray Proof
Thermal shock and cycle	DO160 - Section 5, equipment category A: Temperature variation from -55°C (low operational temperature) to +148°C (high operational temperature) with slope of 10°C/min maxi
Operational shock and crash safety	DO160 - Section 7, equipment category B and E: · 18 shocks saw-tooth wave shape (6 orientations x3 shocks) to 6g/11ms (category B) and to 6g/20ms (category E). · Impulse test: 6 shocks saw-tooth wave shape (6 orientations x1 shock) to 20g/11ms (category B) and to 20g/20ms (category E). · Sustained test: 6 constant acceleration test (6 orientations) of 3s each to 20g max per orientation.
Vibrations	DO160 - Section 8, equipment category S(D), R(D&D1) and H(P): · Category S: 1 hour/axis, sine or random at performance level. 10-2000 Hz, 8.92g · Category R: Sine of 3 hours/axis less 30min/dwell (max 4 dwells) or random at performance level (minimum of 10 minutes) and 3 hours endurance level (repeat in all 3 axes). 10-2000 Hz, 12.61g · Category H: High g / low f, sine sweep each axis. 10-250 Hz, ±10g
Temperature and altitude	DO160 - Section 4, equipment category D2: · Ground survival low temperature test and short-time operating low temperature test: -60°C / 3h (not operating) then -60°C / 1h (operating) · Operating low temperature test : -55°C / 2h (operating) · Ground survival high temperature test and short-time operating high temperature test: +200°C / 3h (not operating) then +148°C / 1h (operating) · Operating high temperature test: +148°C / 2h (operating) · Altitude test: 50kft / 15.2km / 116mbar / 2h (operating)
Icing	DO160 - Section 24, equipment category A: 3 cycles from -55°C / HR ambient to +30°C / ambient pressure / 95% HR and return, to create frost on the piece, then checking good equipment operation at -10°C.
Humidity	DO160 - Section 6, equipment category B: 10 cycles of 24h, equipment non operational
Fireproof	DO160 - Section 26, equipment category A
Flammability	DO160 - Section 26, equipment category C
Salt fog	DO160 - Section 14, equipment category T
Fluids susceptibility	DO160 - Section 11, equipment category F: The liquids used for the tests are: fuels, hydraulic fluids, lubricating oils, solvents and cleaning fluids, de-icing fluids, insecticides
Sand and dust	DO160 - Section 12, equipment category D and S
Fungus resistance	DO160 - Section 13, equipment category F: Fungus application during 28 days
Explosive atmosphere	DO160 - Section 9, equipment category H: No feedthrough surfaces have to reach a temperature of 204°C during powering with 350A current.

Dimensions

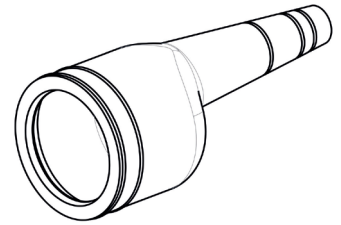


Note: All dimensions are in millimeters and inches (mm/inch).
 Dimensions are for information only. Please consult us for customer drawings.

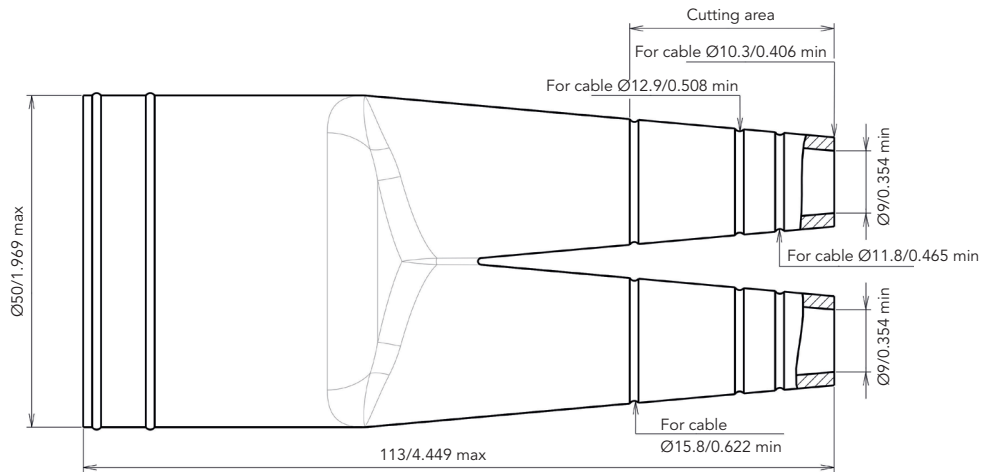
Protective boot for 1 cable



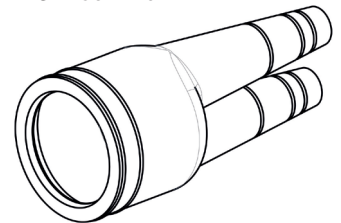
Part Number:
SN236PB10



Protective boot for 2 cables



Part Number:
SN236PB20



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

Description

- Bus bar allowing the connection of circuit breakers.
- Feeding through cables equipped with terminals.
- Distribution of electrical current for aircraft equipment.

Ordering information

- Part number: 208S001

Technical features

Mechanical

- **Shell:** thermoplastic UL 94V0
- **Phase bar:** copper
- **Coating resin:** black epoxy
- **Termination:** for breaker 8-32UNC3B

Electrical

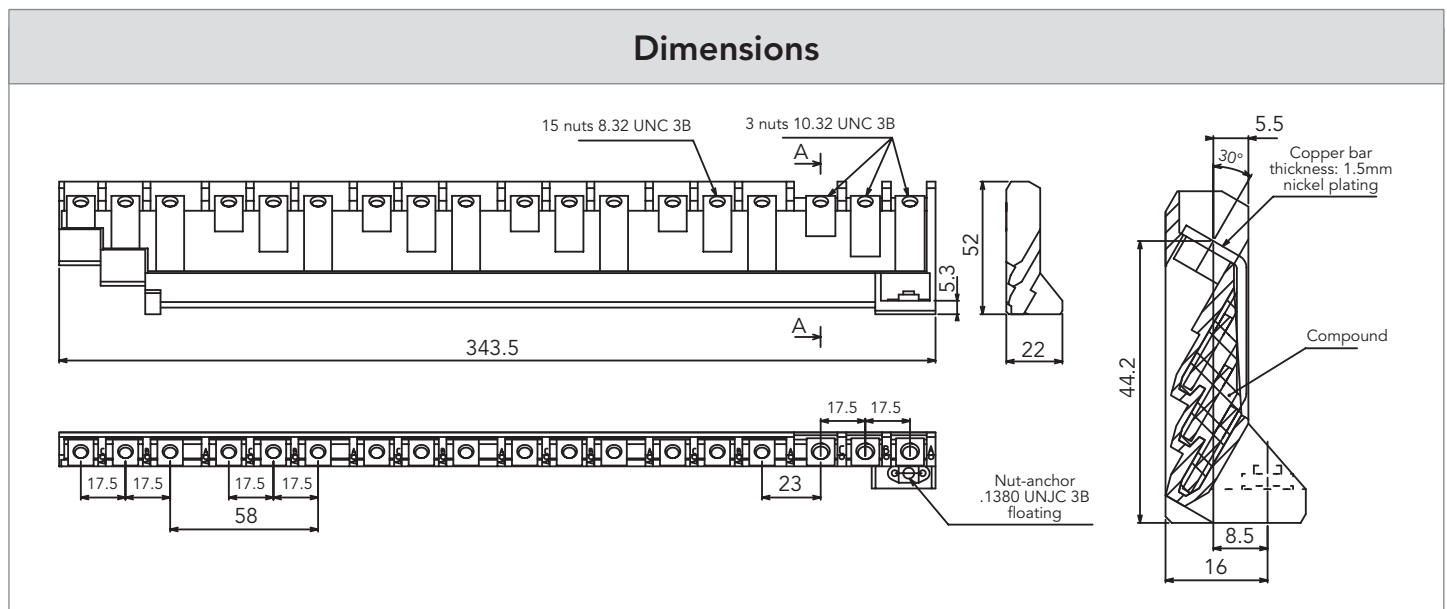
- **Current rating per phase:** 164 A
- **Withstanding voltage:** 1500 Vrms
- **Insulation resistance:** > 500 MΩ at 500 Vdc

Environmental

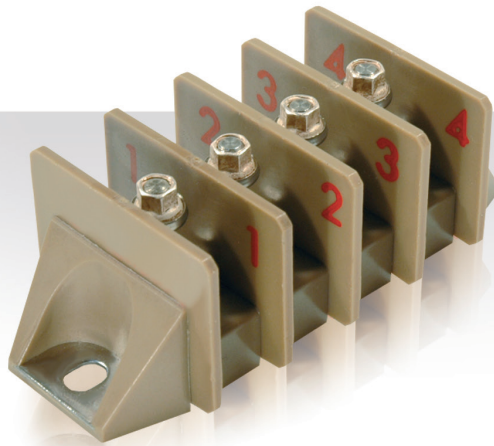
- **Working temperature:** -15°C to +75°C
- **Damp heat:** 21 days / 40°C / 93% RH
- **Resistance to salt spray:** 48 hours



Dimensions



Note: All dimensions are in millimeters (mm)



Description

- The terminal blocks 209 Series allow connection from 1 to 12 terminals
- A shunt can link the terminals
- Covers are available to electrically and mechanically protect the connections
- Technical characteristics following ASNE 0826

Technical features

Mechanical

- **Terminals:** stainless steel
- **Block:** thermoplastic UL 94V0
- **Insulator:** peek
- **Shunt:** nickel over brass
- **Cover:** PTFE
- **Pillar bolt:** stainless steel
- **Vibration:** 3g random 10 to 2000Hz

Electrical

Specification	Working voltage	Current
NSA 937903	400 V	25 A
NSA 937906	600V	100 A
NSA 937905	600V	100A
ASNE 0421	600V	125 A
ASNE 0647	600V	175 A
NSA 937904	600V	210 A
ASNE 0467	600V	210 A*

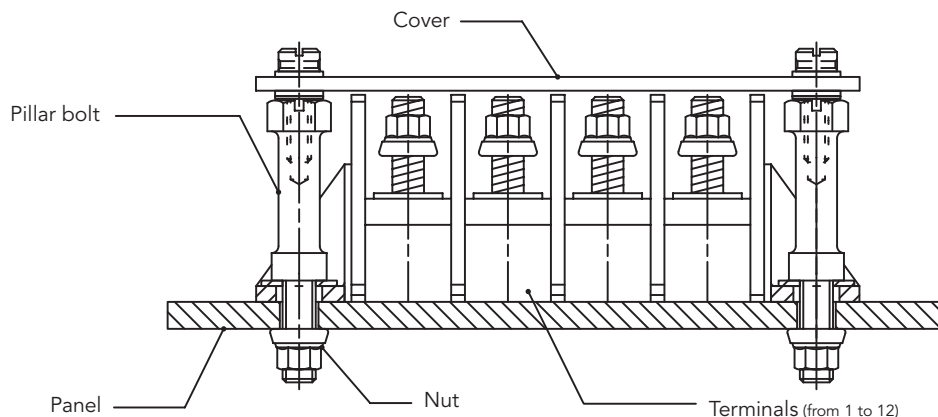
* Indicative current depending on cables and terminals

- **Insulation resistance:** 500 000 MΩ
- **Dielectric rigidity:** 5 kV rms

Environmental

- **Temperature range:**
-55°C to +210°C
+250°C during 4000 hours
Peak at +300°C
- **Resistance to fluids:** Fuel IPS-NATO F44
- **Synthetic hydraulic fluid:**
SAE-Skydrol 500B4
AS1241-Skydrol LD4
- **Mineral lubricant:**
MIL-L 7870A - NATO 0142
- **Synthetic lubricant:**
MIL-L 23699 - NATO 0156
- **Cleaning fluid:** MIL-C 25769 diluted
- **Propanol + white spirit:**
Azeotrope 113 + methanol de-icing fluid
NATO 5742

Terminal block assembly



Ordering information

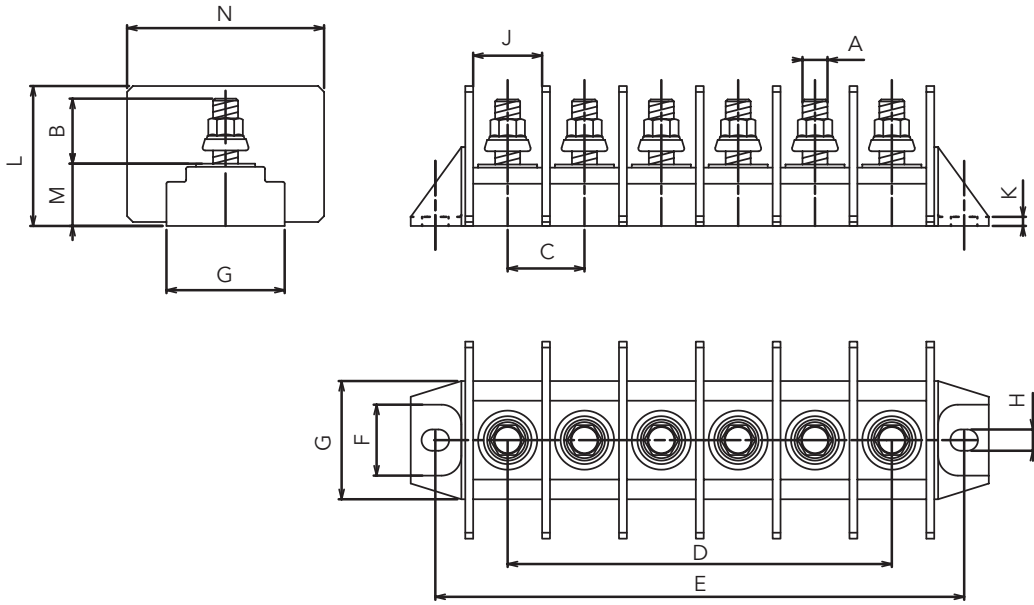
Number of terminals	Terminals			Part Numbers					
	Ø	Length	Pitch	Terminal blocks	Cover	Shunt	Pillar bolt	Washer (thickness)	Specification
1	9.52	17.70	28.00	209400U01002	209S4001	-	209D012	-	NSA937904
	9.52	24.00	28.00	209410U01002	209S4001	-	209D009	-	ASNE0467
	9.52	24.00	28.00	209410U01003 (with washer)	209S4001	-	209D009	-	ASNE0467
2	3.50	12.70	9.00	209100U02002	209S1002	209T120	209D008	209D113 (2mm) 209D114 (4mm)	NSA937903
3	9.52	17.70	28.00	209400U03002	209S4003	-	209D012	-	NSA937904
	4.82	23.00	14.50	209210U03002	209S2003	209T121 209T131	209D009	209D116 (9mm)	NSA937905
	9.52	24.00	28.00	209410U03003 (with washer)	209S4003	-	209D009	-	ASNE0467
4	9.52	17.70	28.00	209400U04002	209S4004	-	209D012	-	NSA937904
	4.82	14.00	14.50	209200U04002	209S2004	-	209D010	209D115 (2mm)	NSA937906
5	3.50	12.70	9.00	209100U05002	209S1005	209T120	209D008	209D113 (2mm) 209D114 (4mm)	NSA937903
6	4.82	23.00	14.50	209210U06002	209S2006	209T121 209T131	209D009	209D116 (9mm)	NSA937905
	6.35	16.50	19.50	209300U06002	209S3006	-	209D011	-	ASNE0421
	6.35	25.00	23.50	209311U06002	209S3106	-	209D009	-	ASNE0647
10	4.82	23.00	14.50	209210U10002	209S2010	209T121 209T131	209D009	209D116 (9mm)	NSA937905
12	4.82	23.00	14.50	209210U12002	209S2012	209T121 209T131	209D009	209D116 (9mm)	NSA937905

Cross reference

Designation	Souriau part number	NSA part number
Terminal block (without washer)	209 1 0 0 U 02 002	NSA 937903 A02
	209 1 0 0 U 05 002	NSA 937903 A05
	209 2 0 0 U 04 002	NSA 937906 A04
	209 2 1 0 U 03 002	NSA 937905 A03
	209 2 1 0 U 06 002	NSA 937905 A06
	209 2 1 0 U 10 002	NSA 937905 A10
	209 2 1 0 U 12 002	NSA 937905 A12
	209 3 0 0 U 06 002	ASNE 0421 A06
	209 3 1 1 U 06 002	ASNE 0647 A06
	209 4 0 0 U 01 002	NSA 937904 A01
	209 4 0 0 U 03 002	NSA 937904 A03
	209 4 0 0 U 04 002	NSA 937904 A04
	209 4 1 0 U 01 002	ASNE 0467 A01
	209 4 1 0 U 01 003	ASNE 0467 R01
	Terminal block (with washer)	209 4 1 0
209 S 1002		NSA 937903 CA02
Shunt	209 T 120	NSA 937903 SH02
	209 T 121	NSA 937905 SH02
	209 T 131	NSA 937905 SH03

Designation	Souriau part number	NSA part number
Cover	209 S 1005	NSA 937903 CA05
	209 S 2003	NSA 937905 C03
	209 S 2004	NSA 937906 C04
	209 S 2006	NSA 937905 C06
	209 S 2010	NSA 937905 C10
	209 S 2012	NSA 937905 C12
	209 S 3006	ASNE 0421 C06
	209 S 3106	ASNE 0647 C06
	209 S 4001	NSA 937904 C01
	209 S 4003	NSA 937904 C03
	209 S 4004	NSA 937903 C04
	Pillar bolt	209 D 008
209 D 009		ASNE 0647 E
209 D 010		NSA 937906 E
209 D 011		ASNE 0421E
209 D 012		NSA 937904 E
Washer	209 D 113 XE	NSA 937903 F02
	209 D 114	NSA 937903 F04
	209 D 115	NSA 937906 F
	209 D 116	NSA 937905 F

Dimensions



Terminal block Part number	Terminals					D	E	F	G	H	J	K	L	M	N
	Number of terminals	Thread	Ø	Length	Pitch										
			A	B	C										
209400U01002	1	.3750-24UNF	9.52	17.70	28.00	-	45.20	17.00	30.00	5.40	26.00	2.30	35.50	14.50	50.00
209410U01002		.3750-24UNF	9.52	24.00	28.00	-	45.20	17.00	30.00	5.40	26.00	2.30	41.50	14.50	50.00
209410U01003		.3750-24UNF	9.52	24.00	28.00	-	45.20	17.00	30.00	5.40	26.00	2.30	41.50	14.50	50.00
209100U02002	2	.1380-32UNC	3.50	12.70	9.00	9.00	30.50	10.00	14.00	4.00	8.00	1.70	22.50	9.00	17.00
209400U03002	3	.3750-24UNF	9.52	17.70	28.00	56.00	101.20	17.00	30.00	5.40	26.00	2.30	35.50	14.50	50.00
209210U03002		.1900-32UNF	4.82	23.00	14.50	23.00	60.70	17.00	30.00	5.40	12.50	2.30	41.80	15.80	40.00
209410U03003		.3750-24UNF	9.52	24.00	28.00	56.00	101.20	17.00	30.00	5.40	26.00	2.30	41.50	14.50	50.00
209400U04002	4	.3750-24UNF	9.52	17.70	28.00	84.00	129.20	17.00	30.00	5.40	26.00	2.30	35.50	14.50	50.00
209200U04002		.1900-32UNF	4.82	14.00	14.50	43.50	75.20	17.00	30.00	5.40	12.50	2.30	30.10	15.80	40.00
209100U05002	5	.1380-32UNC	3.50	12.70	9.00	36.00	57.50	10.00	14.00	4.00	8.00	1.70	22.50	9.00	17.00
209210U06002	6	.1900-32UNF	4.82	23.00	14.50	72.50	104.20	17.00	30.00	5.40	12.50	2.30	41.80	15.80	40.00
209300U06002		.2500-28UNF	6.35	16.50	19.50	97.50	134.20	17.00	30.00	5.40	17.50	2.30	35.50	15.80	50.00
209311U06002		.2500-28UNF	6.35	25.00	23.50	117.50	158.20	17.00	30.00	5.40	21.50	2.30	41.50	15.80	50.00
209210U10002	10	.1900-32UNF	4.82	23.00	14.50	130.50	162.20	17.00	30.00	5.40	12.50	2.30	41.80	15.80	40.00
209210U12002	12	.1900-32UNF	4.82	23.00	14.50	159.50	191.20	17.00	30.00	5.40	12.50	2.30	41.80	15.80	40.00

Note: All dimensions are in millimeters (mm)

853 SERIES

High Power Solutions

Range Extension

■ Power contacts for PCB	34
■ ARINC 600 Series	34
■ Hermetics	35



Product range extension

Power Contacts for PCB

Firewall connector for power supply, adapted to PCB solutions.

Safe & Quick Avoid soldering of contacts:

- . No heat applied: no risk of damaging the connector.
- . Quicker fit in the equipment.

Robust:

- . True mechanical link between PCB and contacts: no additional double flange needed. Power contacts are attached directly to the board with screws for an optimized connection.
- . Available in size 6 contact (Ø4.6mm) & size 4 contact (Ø5.74mm).

Compact:

- . Tapped contacts for direct and small sized connections, especially compared to standard lugs.



See «EN2997 Series Power Contacts for PCB» product news on www.souriau.com

ARINC 600 Series

Your calculators are also concerned by more power applications?

Souriau designed some power layouts up to #8 contacts.



See «ARINC 600 Series - Rack & Panel Rectangular Connectors» catalog on www.souriau.com

Product range extension

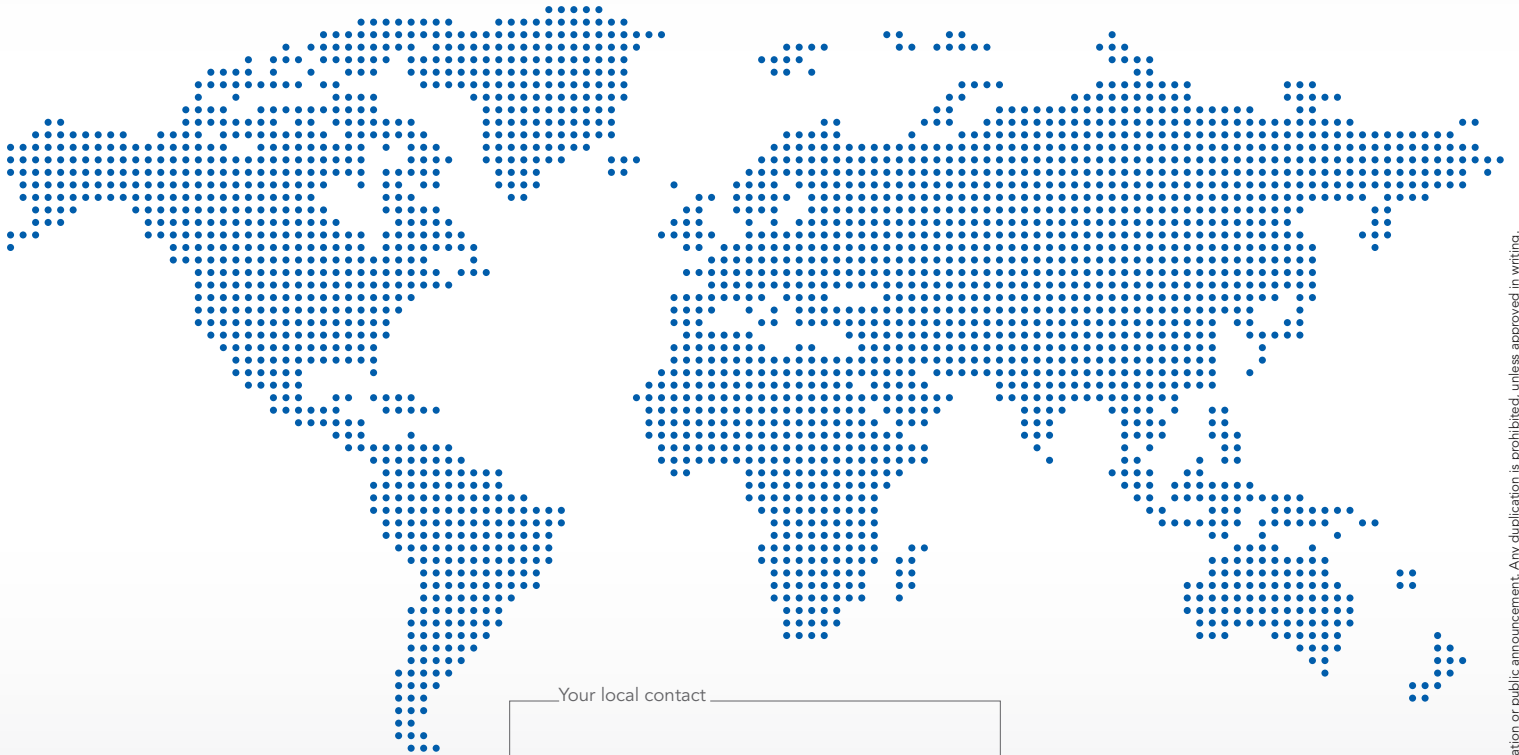
Hermetics

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Souriau can design and manufacture power hermetic connectors for your application.



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