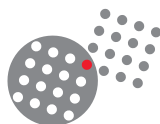




Miniature Product with a Break Away Release

Space saving with scoop proof connector for harsh and EMI applications.

- | | | |
|--------------------------------|---|--|
| A compact solution | ✓ | Diameter up to 45% smaller than size 9 (D38999).
Up to 50% shorter. |
| A high density solution | ✓ | With #26 contacts (according 39029).
5 layouts (size 3, 5 and 7 with #22 & #26). |
| Excellent features | ✓ | Designed for D38999 requirements.
IP67 sealing when mated, ballseal (EMI). |
| RoHS and Cadmium free | ✓ | Available in zinc nickel (RoHS) plating, as well as
nickel and olive drab cadmium. |
| Robustness | ✓ | Connector available with stainless steel (1500
matings) and aluminum shell (500 matings). |
| Integrated backshell | ✓ | Cost and space saving. |



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8BA Break Away



Description

- **A compact solution**
 - The smallest connector available on the market (shell size 3)
 - Break away: quick disconnect
 - Integrated backshell:
 - . Easy to wire and handle
 - . Compatible with heat shrink boot and braid retention band
 - . Compliant with overmolding
- **A versatile solution**
 - 3 shells sizes: 3, 5, 7
 - Plug; In line and jam nut receptacle
 - 2 materials, 3 platings
 - Crimp & PC tails (on request)
 - Removable contacts #22D & #26
 - 6 keyings
- **Harsh environment-resistant solution**
 - Scoop Proof (when sockets mounted into receptacle only)
 - Cavity to cavity sealed with interfacial seal and grommet
 - Fluid resistant

Technical Features

Mechanical

- **Shell:**
 - Aluminum alloy
 - Passivated stainless steel (for size 5 & 7)
- **Shell plating:**
 - Aluminum:
 - . Zinc nickel (RoHS)
 - . Nickel (RoHS)
 - . Olive drab cadmium
 - Passivated stainless steel (RoHS)
- **Insulator:** Thermoplastic
- **Contact body:** Copper alloy
- **Contacts plating:** Gold over nickel plated
- **Shell endurance:**
 - Aluminum:
 - 500 mating/unmating cycles
 - Passivated stainless steel:
 - 1000 mating/unmating cycles
- **Vibration:**
 - 30 grms ambient, 2 axes during 8 hours
- **Shock:**
 - 300g, 3 ms

Electrical

- **Wire size**

Layout	Wire (AWG)
03-05	24-30
03-35	22-28
05-06	24-30
05-35	22-28
07-09	24-30
07-35	22-28
- **Test voltage (at sea level):**
 - Size 22D: 1000 Vrms
 - Size 26: 400 Vrms
- **Contact resistance:**
 - Size 22D: <14.6 mΩ
 - Size 26: <16 mΩ
- **Contact rating:**
 - Size 22D: 5A
 - Size 26: 3A
- **Contact retention:**
 - Size 22D: 45N
 - Size 26: 30N
- **Shell to shell continuity**

Shell size	Aluminum version	Stainless steel version
03	< 10 mΩ	< 60 mΩ
05		
07		
- **EMI:**
 - Aluminum: -70dB @ 1GHz
 - Passivated stainless steel: -55 dB @ 1Ghz

Environmental

- **Temperature range:**
 - 55°C to +175°C
- **Water immersion:**
 - IP 67 on mated connector
 - 1 meter for 30 min minimum
 - > IP68 with appropriate cable termination
- **Salt spray:**
 - Zinc nickel: 500 hours
 - Nickel: 48 hours
 - Olive drab cadmium: 500 hours
 - Passivated stainless steel: 500 hours

Resistance to fluids

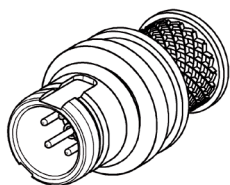
- **According to MIL-DTL-38999 standard**
 - Gasoline: JP5 (OTAN F44)
 - Mineral hydraulic fluid: MIL-H-5606 (OTAN H515)
 - Synthetic hydraulic fluid: Skydrol 500 B4
- **Compatible with de-icing fluids containing potassium acetate**

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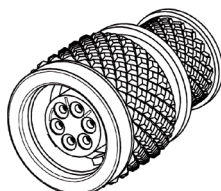
8BA Break Away



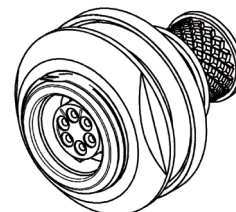
Shell type



Plug



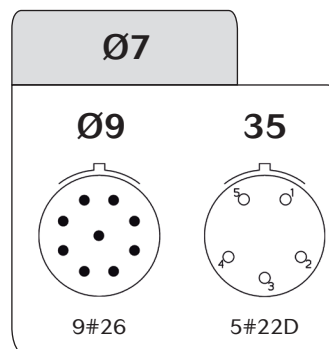
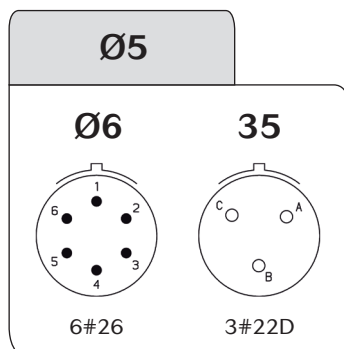
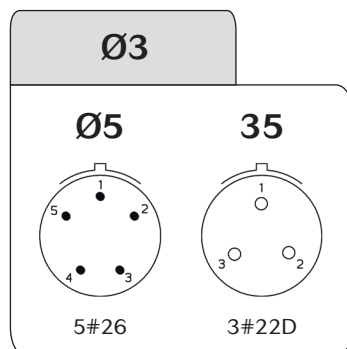
In line
receptacle



Jam nut
receptacle

For other configuration (PC tail, specific jam nut, ...) please consult us.

Contact layouts



Ordering information

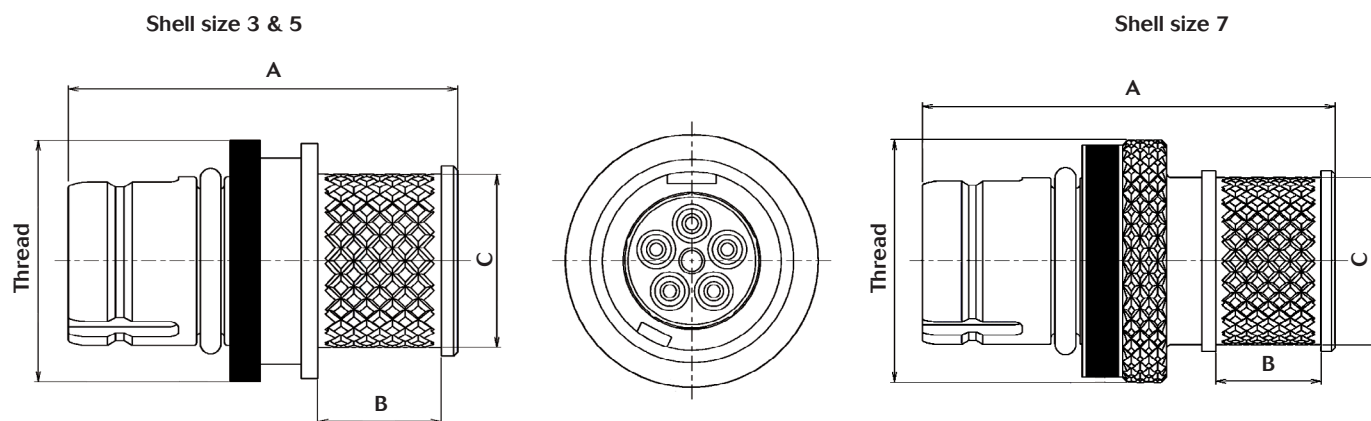
Basic Series	8BA	1	Ø3	W	Ø5	P	N
Shell type:							
1: In line receptacle							
6: Plug							
7: Jam nut receptacle							
Shell size: Ø3 - Ø5 - Ø7							
Plating :							
Z: Black zinc nickel							
F: Nickel							
W: Olive drab cadmium							
K: Passivated stainless steel (except for size 3)							
Contact layouts: See above							
Contact type:							
P: Pin							
S: Socket (Scoop proof only when socket contacts mounted in Type 1 & Type 7)							
Orientation:							
N, A, B, C, D, E							

Note: Ø = Zero



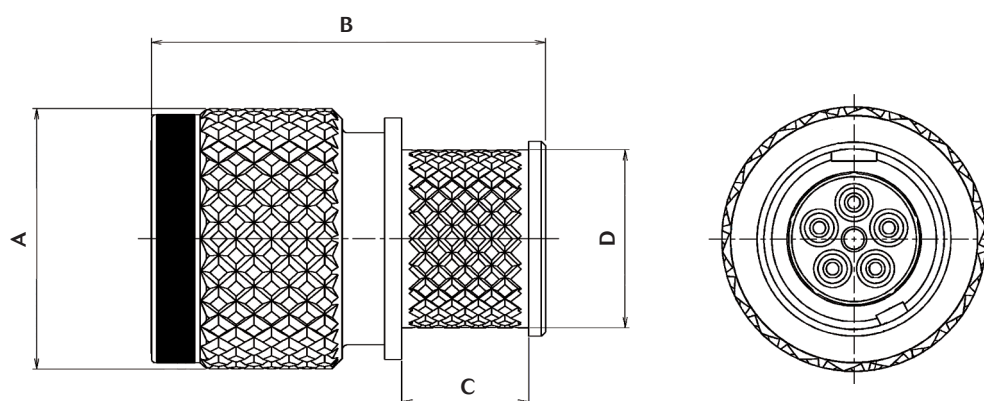
Dimensions

Plug - Shell type 6



Shell size	Thread	A Max	B Max	Ø C Max
3	10.3	18.4	6.1	7.3
5	12.2	19.4	6.1	8.9
7	14.3	24	6.1	10

In line receptacle - Shell type 1



Shell size	A	B Max	C Max	Ø D Max
3	11	17.7	6.1	7.3
5	12.8	19.1	6.1	9
7	14.3	24	6.1	10

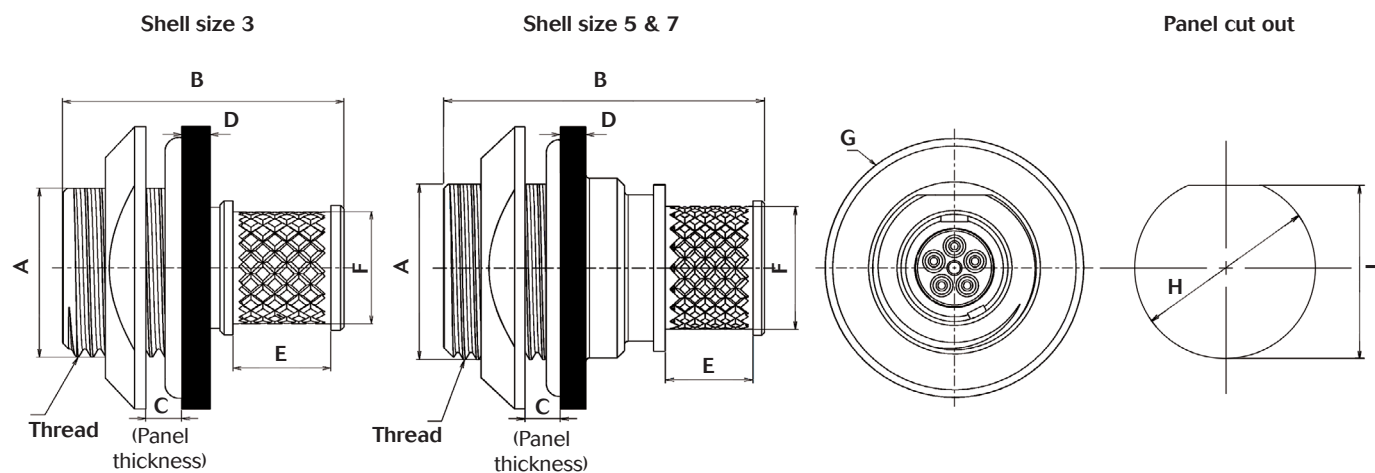
Note: All dimensions are in mm.

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8BA Break Away



Jam nut receptacle - Shell type 7



Shell size	Thread	A Max	B Max	C Max	D	E Max	Ø F Max	Ø G Max	Ø H	J
3	7/16"28 UNEF 2A	10.55	17.7	3.2	1.75 $\pm$ 0.3	6.1	7.3	17.5	11.3 $\pm$ 0.1	10.6 $\pm$ 0.05
5	1/2"28 UNEF 2A	12.2	22.5	3.2	1.75 $\pm$ 0.3	6.1	8.9	19.5	12.8 $\pm$ 0.1	12.3 $\pm$ 0.05
7	9/16"24 UNEF 2A	13.6	24	3.2	1.75 $\pm$ 0.3	6.1	10	21	14.5 $\pm$ 0.1	13.8 $\pm$ 0.05

Note: All dimensions are in mm.

Connector weights

Weight

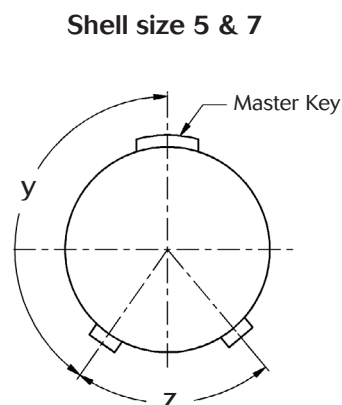
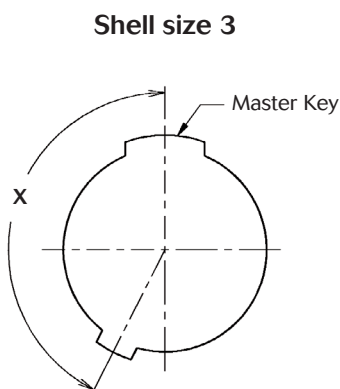
Aluminum version (in gram $\pm$ 10 %)

Shell size & layout	Plug		In line receptacle	
	Without contacts	With contacts	Without contacts	With contacts
3-05	1.7	1.8	1.3	1.4
5-06	2.6	2.8	2.9	3.1
7-09	4.3	4.7	4.7	5.1

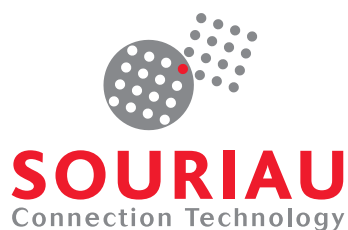


Orientations

Orientation - All shell types



Shell size	Angles	N	A	B	C	D	E
3	X °	153	51	102	204	255	306
5 & 7	Y °	145	130	110	155	90	90
	Z °	75	120	120	115	115	180



For further information contact us at contactmilaero@souriau.com
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