

8BA Series Break Away



Miniature Break Away Release Connector

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

A compact solution ■ Diameter up to 45% smaller than D38999 size 9.
Integrated backshell: up to 50% shorter.

A high density solution ■ With #26 contacts (according 39029).
6 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.

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

Electrical

- **Wire size**

Layouts	Wire (AWG)
03-05; 05-06; 07-09	24-30
03-35; 05-35; 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 (typical value)**

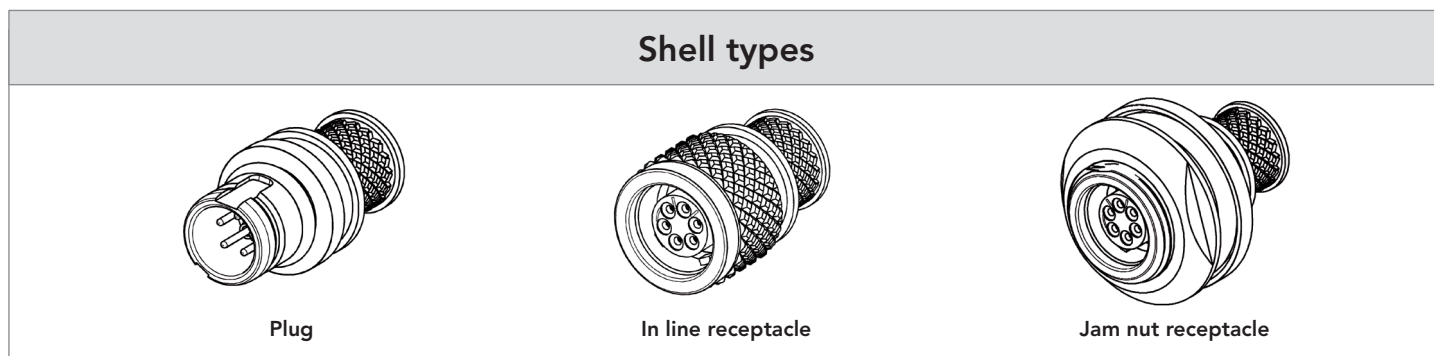
Shell size	Aluminum version
3	
5	
7	10 mΩ
- **EMI:** Aluminum: -70dB @ 1GHz

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

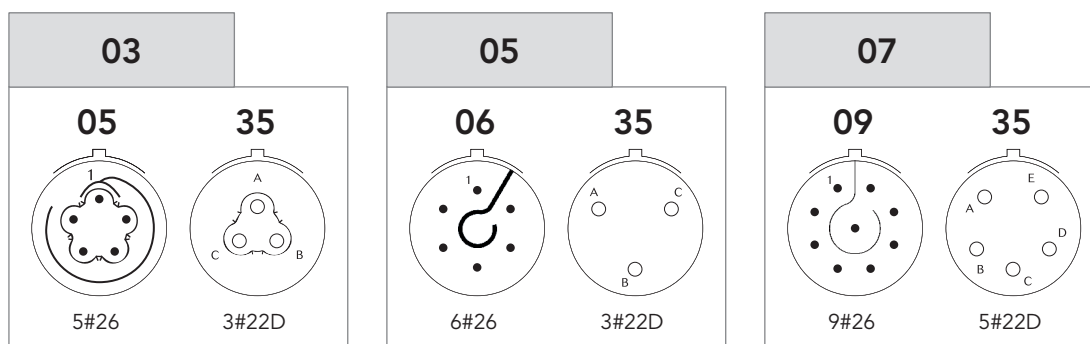
Resistance to fluids

- **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**



For other configuration or PC tail version, please consult us.

Contact layouts



Size 3: Marking on shell.
Rear view of receptacle for male and female insulator.
Opposite marking between plug and receptacle.

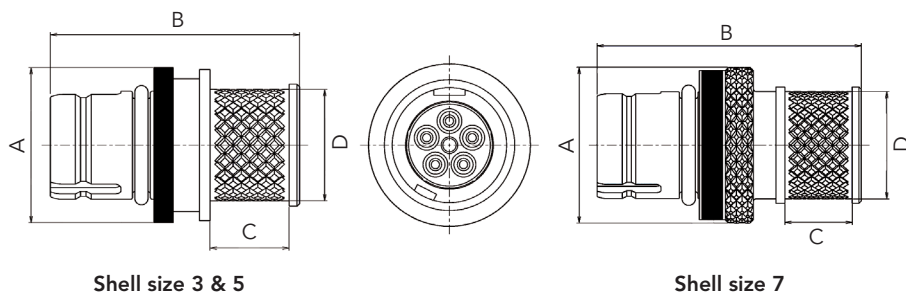
Sizes 5 and 7: Marking on insulator.
Rear view of male insulator for plug and receptacle.
Opposite marking between male and female insulator.

Ordering information

Basic Series	8BA	1	03	W	05	P	N
Shell type:							
1: In line receptacle							
6: Plug							
7: Jam nut receptacle							
Shell size: 03, 05, 07							
Plating :							
Z: Black zinc nickel							
F: Nickel							
W: Olive drab cadmium							
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 (see page 5)							

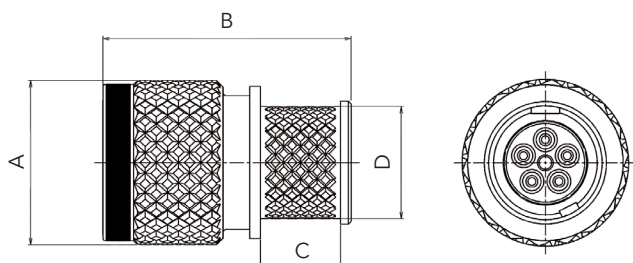
Dimensions

Plug - Shell type 6



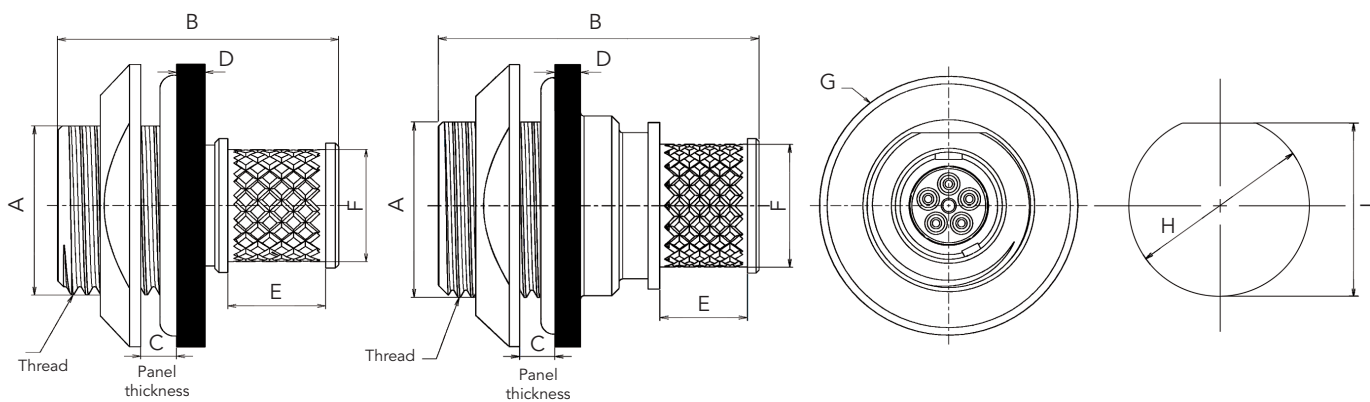
Shell size	A	B Max	C Max	ØD Max
3	10.3	18.4	6.1	7.3
5	12.2	19.4	6.1	8.9
7	14.3	24	6.1	10

In line receptacle - Shell type 1



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

Jam nut receptacle - Shell type 7



Shell size 3

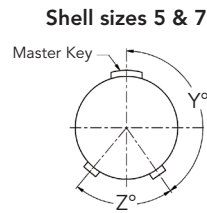
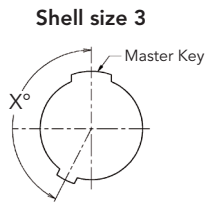
Shell size 5 & 7

Panel cut out

Shell size	Thread	A Max	B Max	C Max	D	E Max	ØF Max	ØG Max	ØH	J
3	7/16"28 UNEF 2A	10.55	17.7	3.2	1.75 ^{+0.3}	6.1	7.3	17.5	11.3 ^{+0.1}	10.6 ^{+0.05}
5	1/2"28 UNEF 2A	12.2	22.5	3.2	1.75 ^{+0.3}	6.1	8.9	19.5	12.8 ^{+0.1}	12.3 ^{+0.05}
7	9/16"24 UNEF 2A	13.6	24	3.2	1.75 ^{+0.3}	6.1	10	21	14.5 ^{+0.1}	13.8 ^{+0.05}

Note: All dimensions are in millimeters (mm)

Orientations



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

Viewed from front face of plug

Connector weights

Aluminum version - in gram $\pm 10\%$

Shell size & layout	Plug		In line receptacle	
	Without contacts	With crimp contacts	Without contacts	With crimp 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

For further information contact us at technical.emear@souriau.com (Europe - Asia - Africa)
technical.americas@souriau.com (North America)
 or visit our web site www.souriau.com