



## 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.

Not QPL listed.

## 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)**

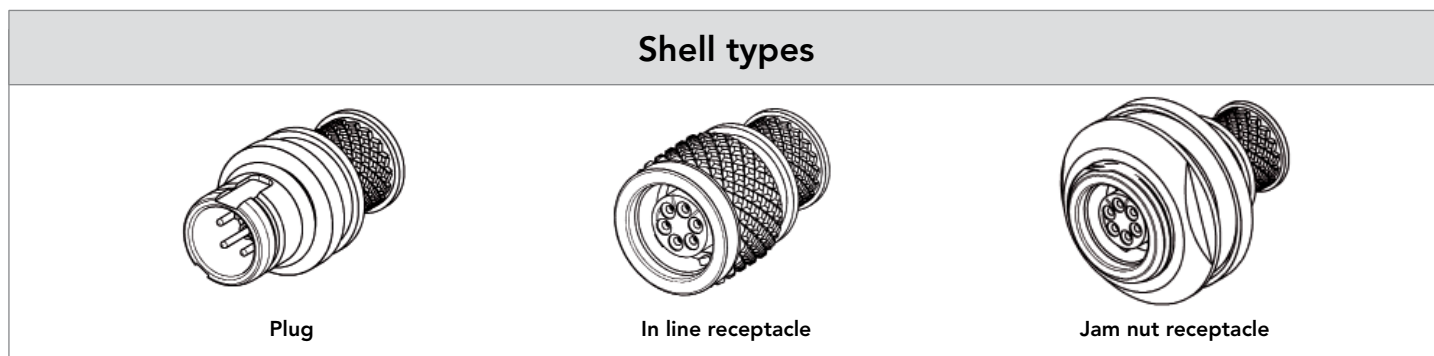
Shell size	Aluminum version
3	
5	
7	10 mΩ
- **EMI:** Aluminum: -70dB @ 1GHz

### 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

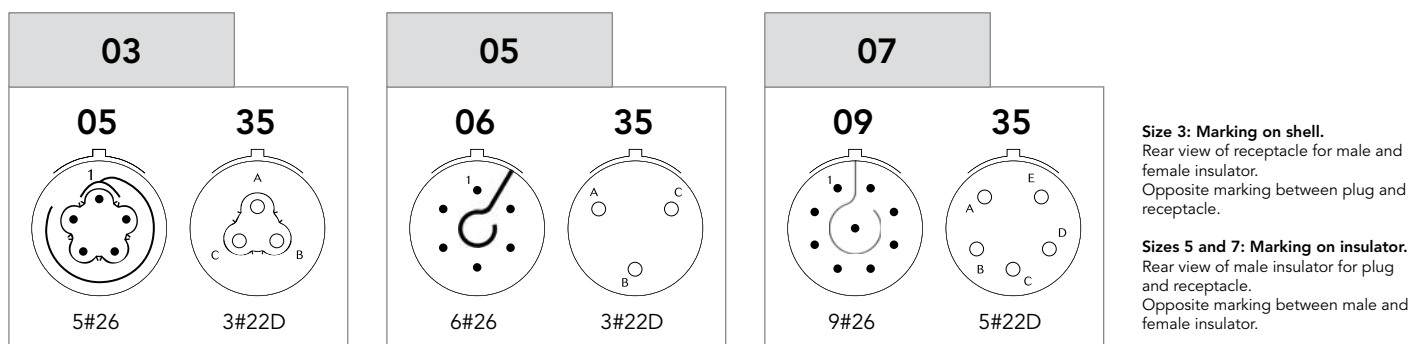
### Resistance to fluids

- **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

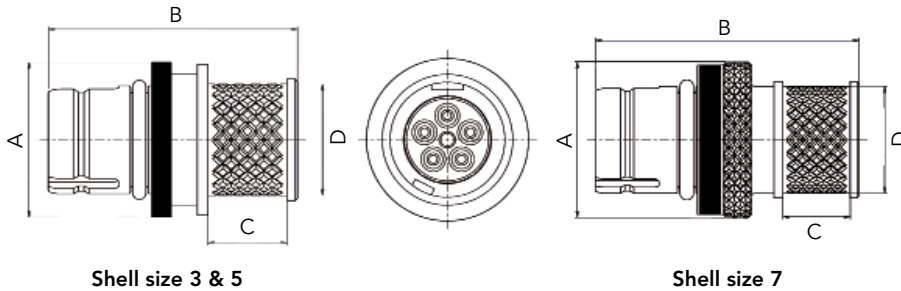


## Ordering information

<b>Basic Series</b>	8BA	1	03	W	05	P	N
<b>Shell type:</b>							
1: In line receptacle							
6: Plug							
7: Jam nut receptacle							
<b>Shell size: 03, 05, 07</b>							
<b>Plating :</b>							
Z: Black zinc nickel							
F: Nickel							
W: Olive drab cadmium							
<b>Contact layouts:</b> See above							
<b>Contact type:</b>							
P: Pin							
S: Socket (Scoop proof only when socket contacts mounted in Type 1 & Type 7)							
<b>Orientation:</b> N, A, B, C, D, E (see page 5)							

## Dimensions

### Plug - Shell type 6

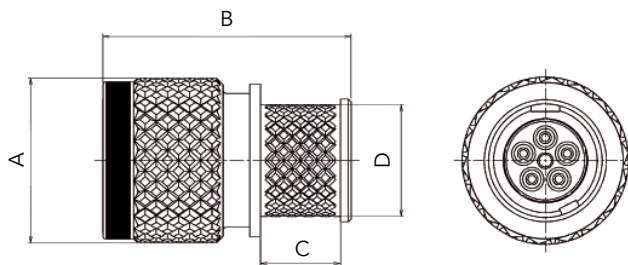


Shell size	A	B Max	C Max	ØD Max
3	10.3	18.4	6.1	7.3
5	12.2	19.4	6.1	8.9
7	14.3	24	6.1	10

Shell size 3 & 5

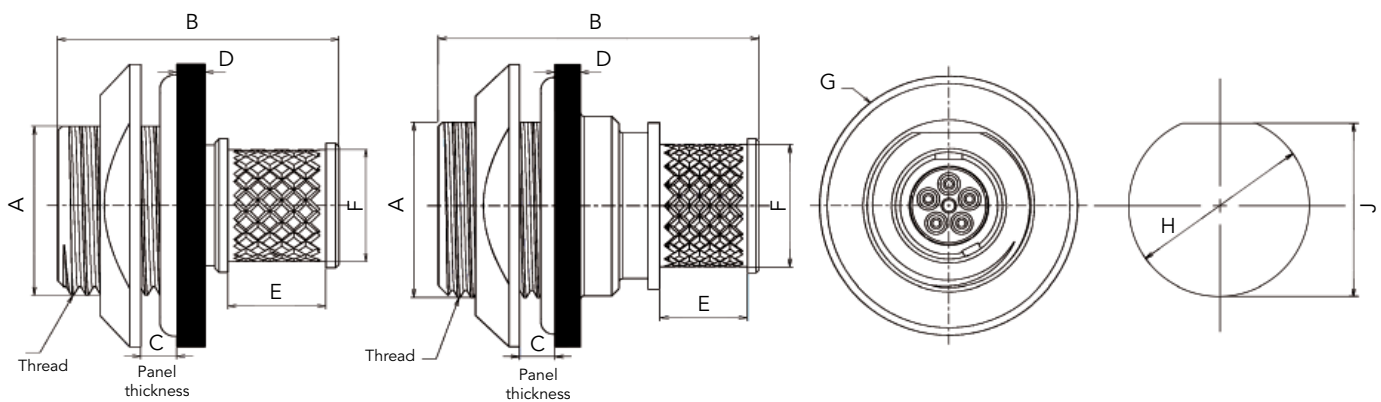
Shell size 7

### 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

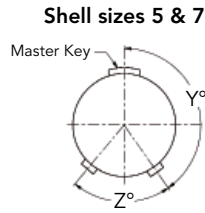
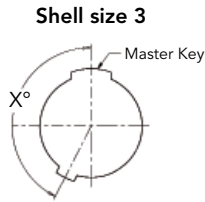
Shell size 5 & 7

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 <sup>±0.3</sup>	6.1	7.3	17.5	11.3 <sup>±0.1</sup>	10.6 <sup>±0.05</sup>
5	1/2"28 UNEF 2A	12.2	22.5	3.2	1.75 <sup>±0.3</sup>	6.1	8.9	19.5	12.8 <sup>±0.1</sup>	12.3 <sup>±0.05</sup>
7	9/16"24 UNEF 2A	13.6	24	3.2	1.75 <sup>±0.3</sup>	6.1	10	21	14.5 <sup>±0.1</sup>	13.8 <sup>±0.05</sup>

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

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