



## Miniature Product with a Threaded Coupling

Space saving with scoop proof connector designed for any harsh application where both size and EMI shielding are critical.

**A compact solution**

Diameter up to 45% smaller than size 9 (D38999).  
Up to 40% 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, EMI ring and ratcheting system.

**RoHS and Cadmium free**

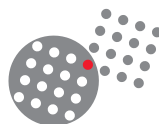
Available in zinc nickel (RoHS) plating, as well as nickel and olive drab cadmium.

**Robustness**

Connector available with stainless steel (1500 matings) and aluminum shell (500 matings).

**Integrated backshell**

Cost and space saving.





## Description

- **A compact solution**
  - The smallest connector available on the market (shell size 3)
  - Miniaturization of MIL-DTL-38999 Series III
  - Threaded coupling (between 1/2 and 3/4 turn to mate) with ratcheting system (size 5 & 7)
  - Integrated backshell:
    - . Easy to wire and handle
    - . Compatible with heat shrink boot and braid retention band
    - . Compliant with overmolding
  - Triple-start thread
- **A versatile solution**
  - 3 shells sizes: 3, 5, 7
  - Plug; In line, square flange 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
  - Cavity to cavity sealed with interfacial seal and grommet
  - EMI ring (for size 5 & 7)
  - 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:**
  - 44 grms @ 125°C, 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**

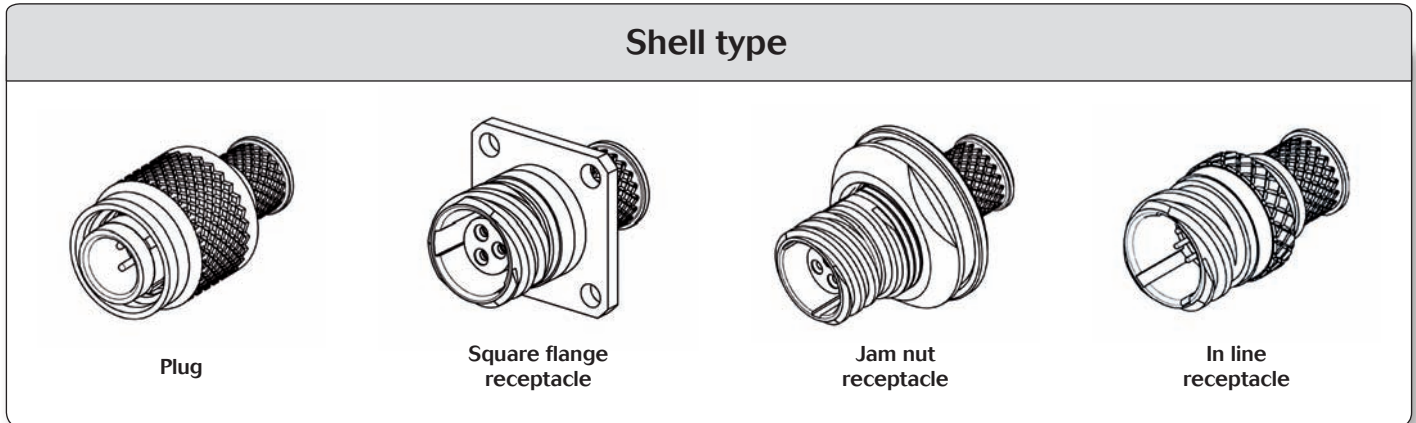
Shell size	Aluminum version	Stainless steel version
3	< 10 mΩ	< 60 mΩ
5		
7		
- **EMI:**
  - Aluminum: -70dB @ 1GHz
  - Passivated stainless steel: -55 dB @ 1Ghz

### 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

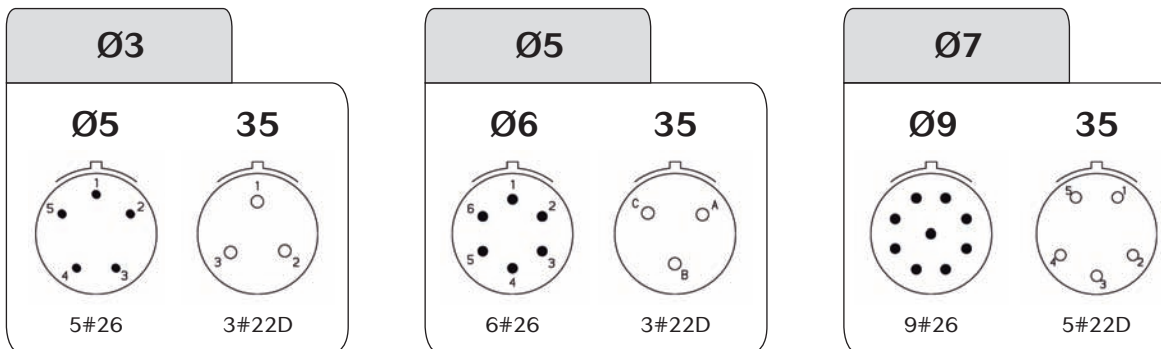
### Resistance to fluids

- **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**



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

## Contact layouts



## Ordering information

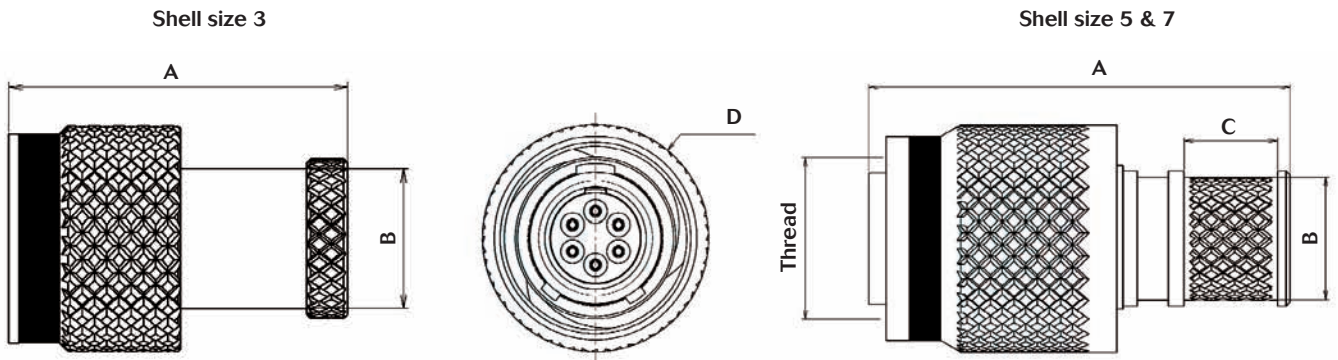
Basic Series	8DA	Ø	Ø3	W	Ø5	P	N
<b>Shell type:</b> Ø: Square flange receptacle 1: In line receptacle 5: Plug with EMI ring (Size 5 & size 7) 6: Plug without EMI ring (Size 3 only) 7: Jam nut receptacle							
<b>Shell size:</b> Ø3 - Ø5 - Ø7							
<b>Plating :</b> Z: Black zinc nickel F: Nickel W: Olive drab cadmium K: Passivated stainless steel (except for size 3)							
<b>Contact layouts:</b> See above							
<b>Contact type:</b> P: Pin (Shell size 3 scoop proof only when pin contacts mounted in Type 6) S: Socket (Shell size 3 scoop proof only when socket contacts mounted in Type 1 & Type 7)							
<b>Orientation:</b> N, A, B, C, D, E							

Note: Ø = Zero



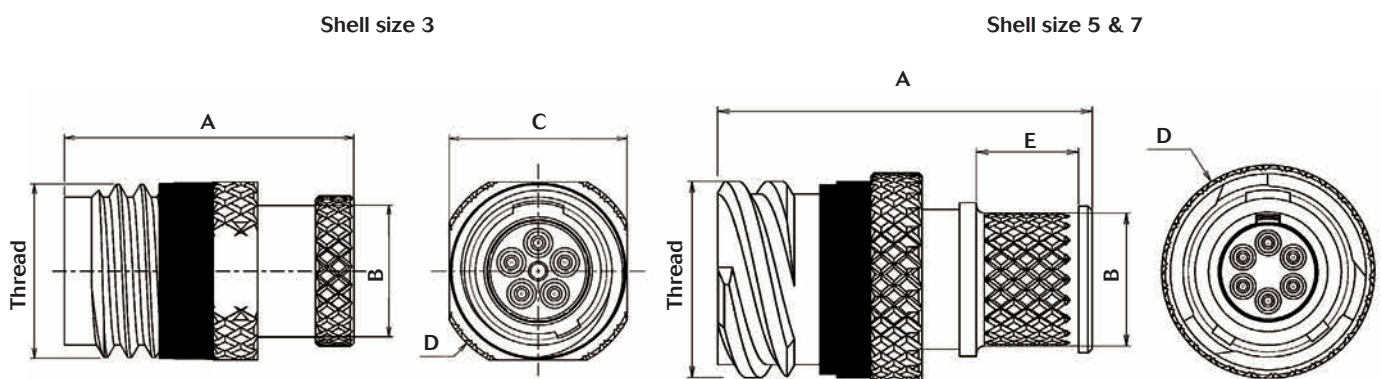
## Dimensions

### Plug - Shell type 5 & 6



Shell size	Thread	A Max	Ø B Max	C Max	Ø D Max
3	3-05	-	17	7	-
	3-35	-	17.5	7	-
5	5/11"-1P	28	8	6.1	15
7	1/2"-1P	28	9.5	6.1	16

### In line receptacle - Shell type 1

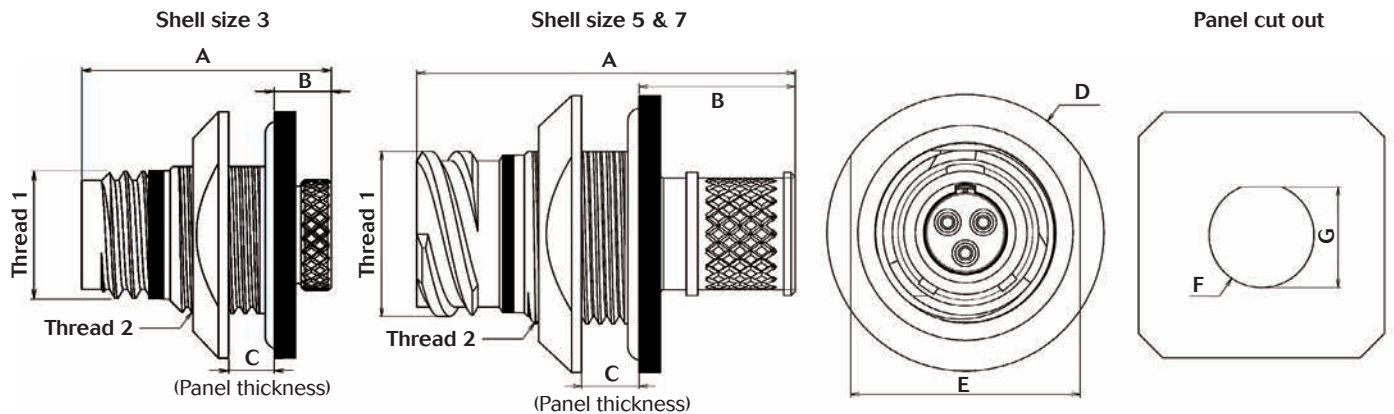


Shell size	Thread	A Max	B Max	C Max	Ø D Max	E Max
3	M9	15.5	7	9.3	11	-
5	5/11"-1P	23	8	-	13	6.1
7	1/2"-1P	25	9.5	-	13.5	6.1

Note: All dimensions are in mm.

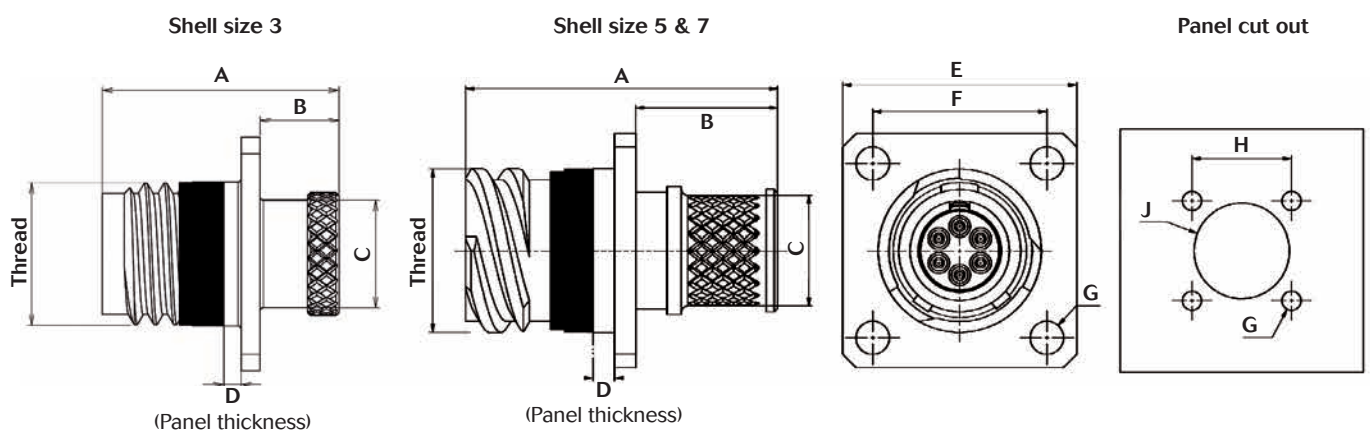


## Jam nut receptacle - Shell type 7



Shell size	Thread 1	Thread 2	A Max	B Max	C Max	Ø D Max	E Max	Ø F Max	G Max	
3	3-05	M9	7/16"28 UNEF 2A	18	4.5	3.2	18	14	11.3	10.6
	3-35	M9	7/16"28 UNEF 2A	20	4.5	3.2	17.5	14	11.3	10.6
5	5/11"-1P	1/2"28 UNEF 2A	27	11	3.2	19.5	16	12.8	12.3	
7	1/2"-1P	9/16"24 UNEF 2A	27	11.5	3.2	20.8	17	14.5	13.8	

## Square flange receptacle - Shell type 0



Shell size	Thread	A Max	B Max	Ø C Max	D Max	E Max	F Max	Ø G Max	H Max	Ø J Max
3	M9	15	5	6.8	2.5	15	10.5	2.35 <sup>±0.08</sup>	10.5	9.5
5	5/11"-1P	23	10.5	8	2.5	16.6	12.27	2.35 <sup>±0.08</sup>	12.27	11.75
7	1/2"-1P	25	13	10	2.5	18	13.84	2.35 <sup>±0.08</sup>	13.8	12.95

Note: All dimensions are in mm.



## Connector weights

Weight				
Aluminum version (in gram $\pm 10\%$ )				
Shell size & layout	Plug		Square flange receptacle	
	Without contacts	With contacts	Without contacts	With contacts
3-05	1.7	1.8	1.9	2.1
5-06	2.8	3	5.4	5.8
7-09	3.6	3.9	6	6.5

## Orientations

Orientation - All shell types							
<p><b>Shell size 3</b></p>				<p><b>Shell size 5 &amp; 7</b></p>			
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](mailto:contactmilaero@souriau.com)  
 or visit our web sites [www.souriau.com](http://www.souriau.com) & [www.micro38999.com](http://www.micro38999.com)