



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**

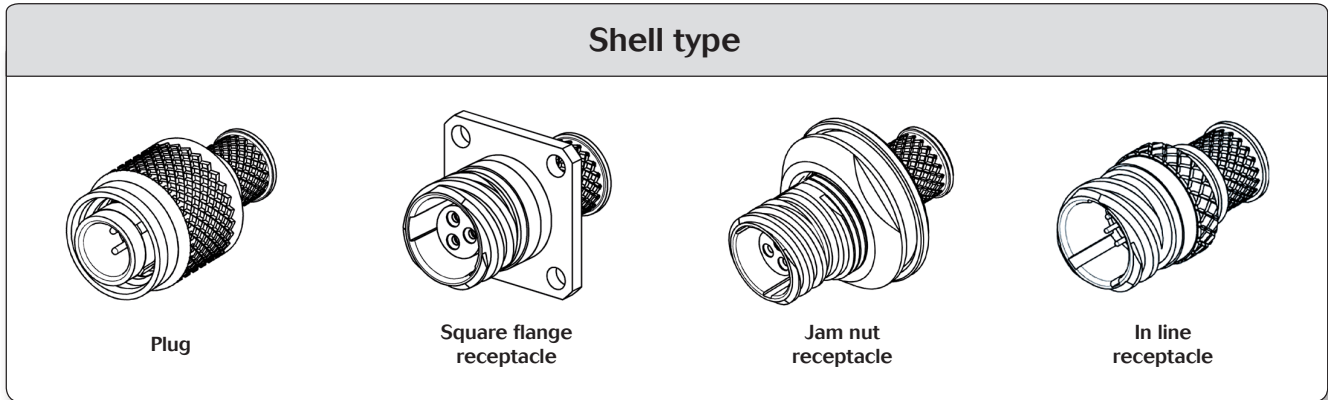
| Shell size | Aluminum version | Stainless steel version |
|------------|------------------|-------------------------|
| 3 | < 10 mΩ | < 60 mΩ |
| 5 | | |
| 7 | | |
- **EMI:**
 - Aluminum: -70dB @ 1GHz
 - Passivated stainless steel: -55 dB @ 1Ghz

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

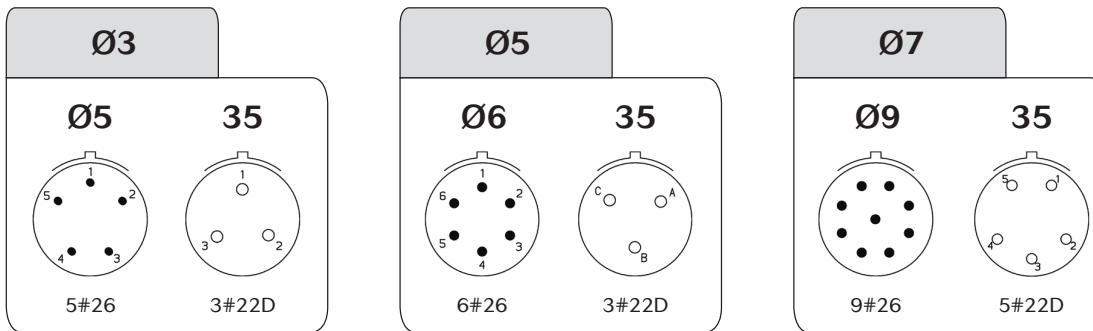
Resistance to fluids

- **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



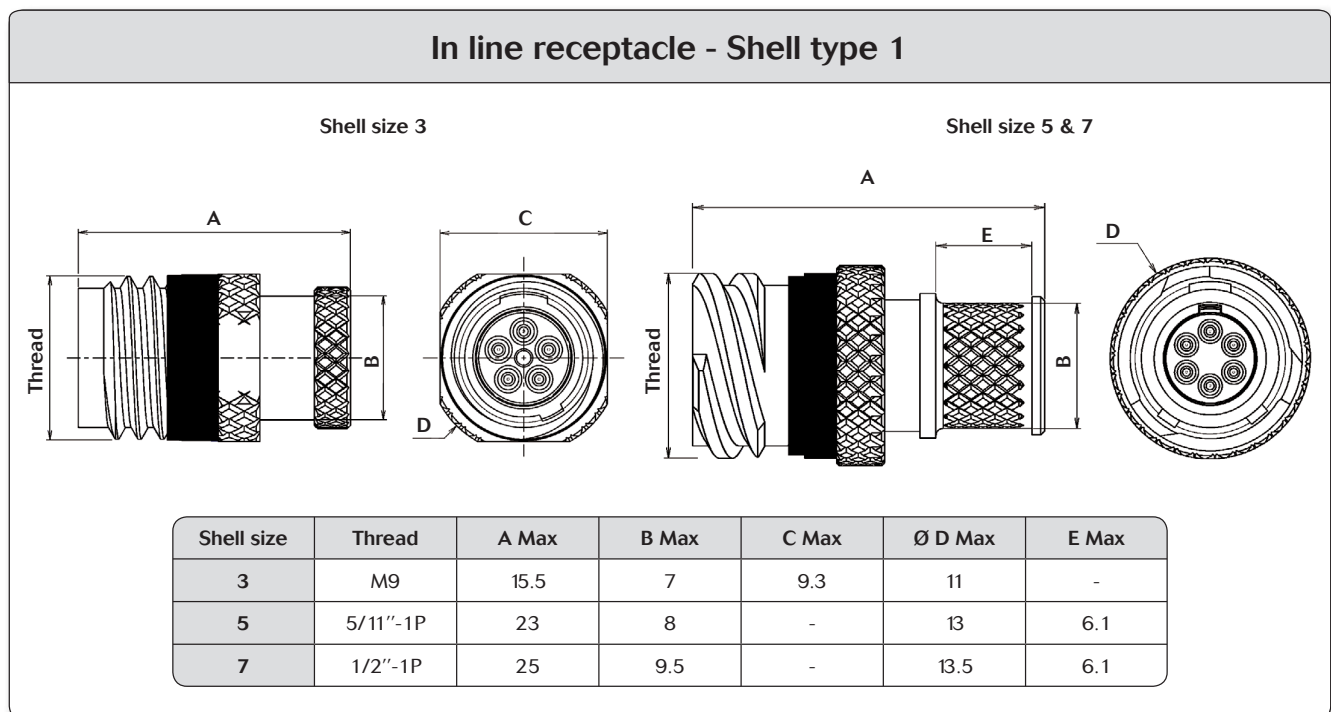
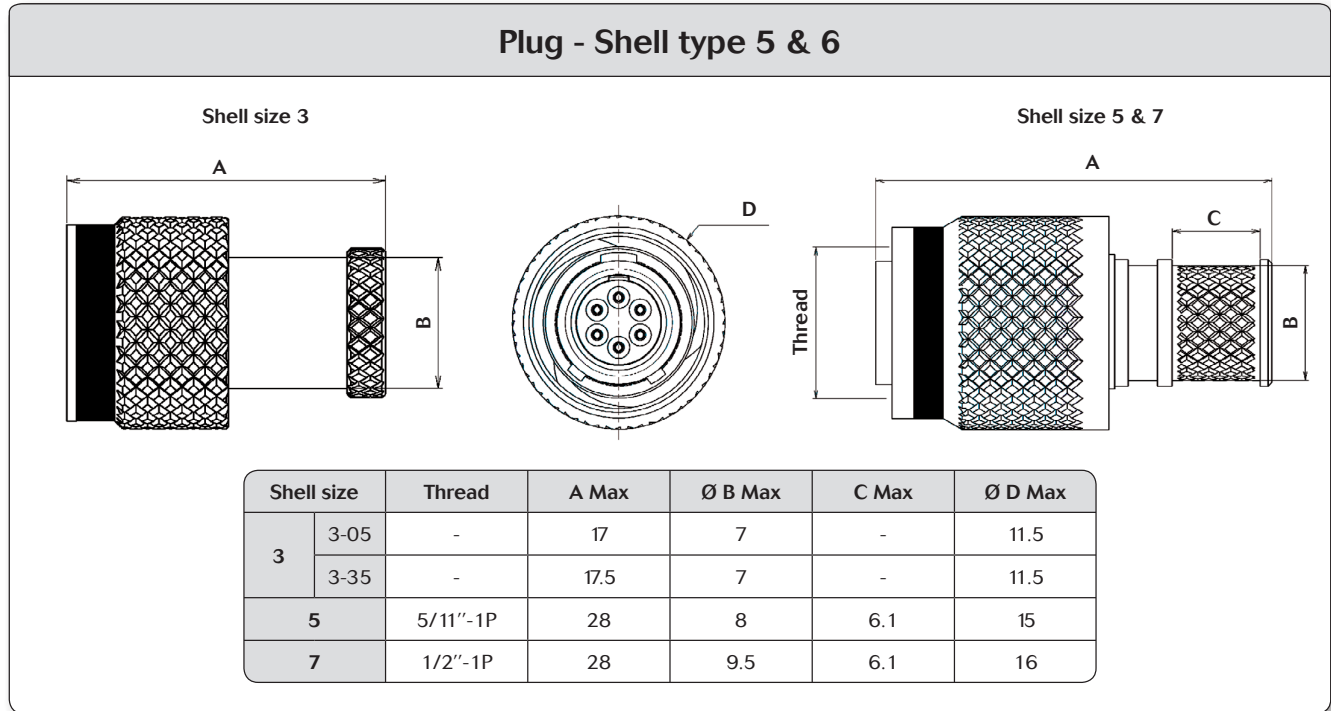
Ordering information

| | | | | | | | |
|---|-----|---|----|---|----|---|---|
| Basic Series | 8DA | Ø | Ø3 | W | Ø5 | P | N |
| Shell type: | | | | | | | |
| 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 | | | | | | | |
| 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 (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) | | | | | | | |
| Orientation: | | | | | | | |
| N, A, B, C, D, E | | | | | | | |

Note: Ø = Zero



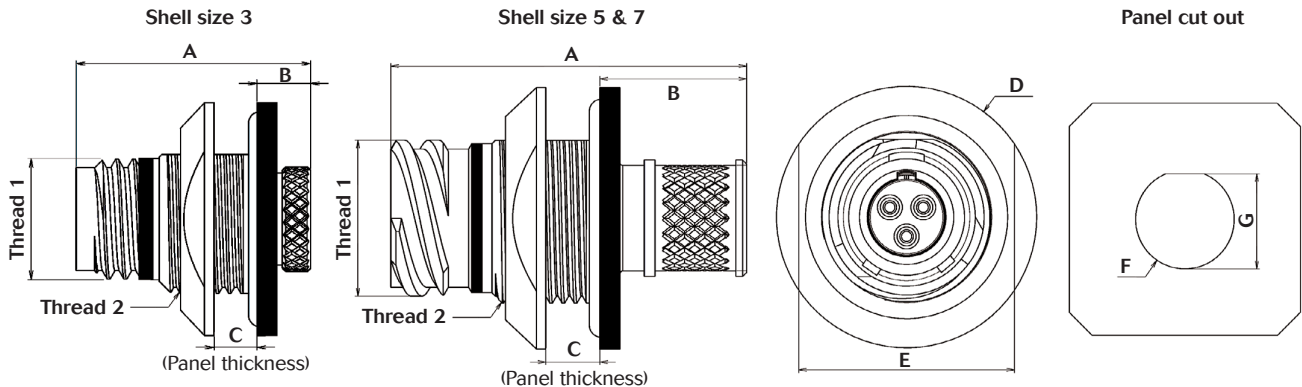
Dimensions



Note: All dimensions are in mm.

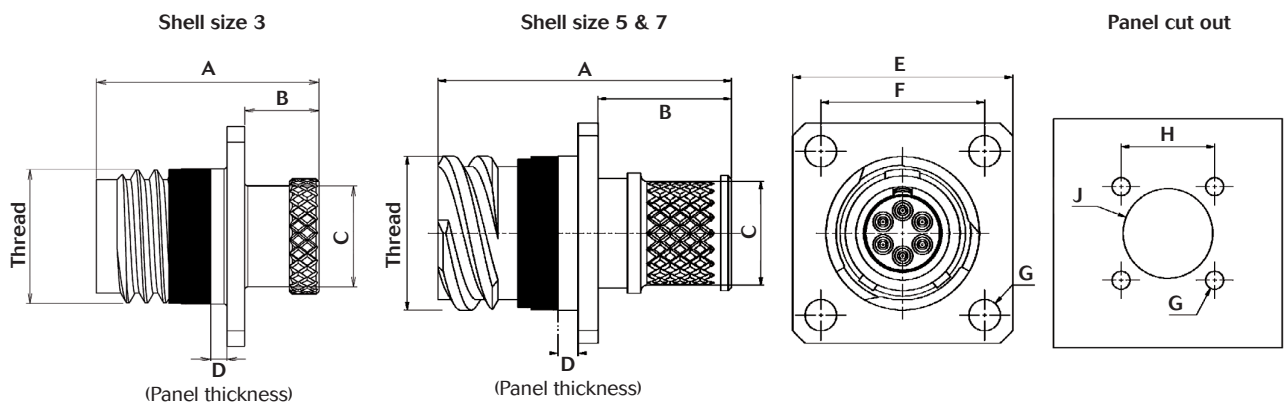


Jam nut receptacle - Shell type 7



| 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 ^{+0.08} | 10.5 | 9.5 |
| 5 | 5/11"-1P | 23 | 10.5 | 8 | 2.5 | 16.6 | 12.27 | 2.35 ^{+0.08} | 12.27 | 11.75 |
| 7 | 1/2"-1P | 25 | 13 | 10 | 2.5 | 18 | 13.84 | 2.35 ^{+0.08} | 13.8 | 12.95 |

Note: All dimensions are in mm.

micr⁺38999

8DA Threaded Coupling



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>Shell size 3</p> | | | | <p>Shell size 5 & 7</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 or visit our web sites www.souriau.com & www.micro38999.com