

# micro38999 Series High Vibration Miniature Connectors



## The Wild Children of D38999

A complete range of space saving compact connectors with all of the features and capabilities of D38999 for harsh applications.

**A compact and complete solution** ■ Diameter up to 45% smaller than D38999 size 9. Integrated backshell: up to 50% shorter. Threaded, break away and bayonet coupling.

**A high density solution** ■ With #26 contacts (according 39029). 6 layouts (size 3, 5 and 7 with #22 & #26).

**Excellent features** ■ Designed to meet D38999 requirements. IP67 sealing when mated. Scoop proof.

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

A wide product range of compact 38999

3  
coupling  
systems

5  
shell  
types

**Threaded coupling**  
8DA Series

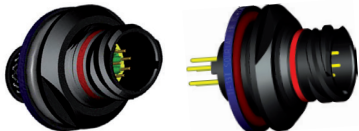


Plug

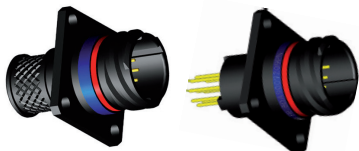
In Line Receptacle



Jam Nut Receptacle  
PC tail contacts available



Square Flange Receptacle  
PC tail contacts available

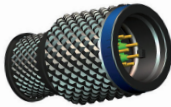


**Break away**  
8BA Series

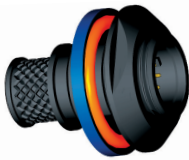


Plug

In Line Receptacle



Jam Nut Receptacle



**Bayonet coupling**  
8LTA Series



Plug

In Line Receptacle



Jam Nut Receptacle  
PC tail contacts available



Square Flange Receptacle  
PC tail contacts available



Oval Flange Receptacle  
PC tail contacts available



**A wide product range of compact 38999**

**2**  
materials,  
4 platings

- Aluminum**
- Black Zinc Nickel RoHS
  - Nickel RoHS
  - Cadmium
- Stainless Steel**
- Passivated RoHS

**2**  
removable  
contacts

- AWG 26**  
#26 Ø 1.29 mm
- AWG 22**  
#22D Ø 1.5 mm

**3**  
miniature  
shell sizes

- Shell size 3**  
Layouts 3-05; 3-35
- Shell size 5**  
Layouts 5-06; 5-35
- Shell size 7**  
Layouts 7-09; 7-35

**Smaller and more compact than D38999**

**More  
Compact  
Shell**

8DA Series, size 5  
with Integrated Backshells



8D Series, size 9  
+ Additional Backshells



**Smaller  
Contact  
Size**

#26  
Ø 0.5 mm



#22D  
Ø 0.76 mm

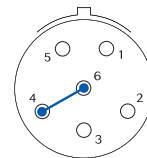


**Shorter  
Contact  
Pitch**

1.7 mm



2.28 mm



micro38999

D38999 Series III

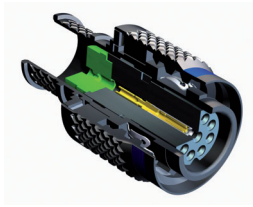
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D38999 Series III

Same number of contacts in a smaller connector!

**50% SHORTER LENGTH** | **33% SMALLER DIAMETER** | **3 TIMES LIGHTER**

Although smaller, all the features and excellence of D38999

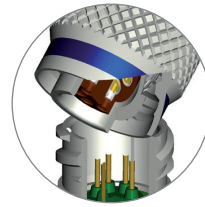


**High grade thermoplastic insert**

**Silicone elastomer grommet and sealing**  
-55° to +175°C  
as in D38999



**Ratcheting system**  
Vibration:  
44grms @125°C

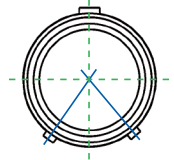


**Scoop proof**  
Contacts protected like D38999



**Triple-start thread**  
**Contact design according to M39029**

**EMI grounding**  
Connection as in D38999



**6 keyings**  
Same as D38999

Not QPL listed.

Always a solution to meet your application needs



**Tactical radio/ Network systems**  
Switch, docking station, power supply, ...



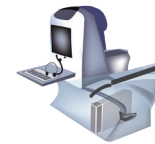
**Infantry/ Display**  
Battery charger, helmet, radio, ...



**Autonomous robot/Solar**  
Control unit, data transmission, ...



**UAV/On board equipment**  
Missile, civil & military aircraft, control unit, actuator, ...



**Cockpit/ Aircraft cabin**  
Lighting, interconnect, ...



**Industrial equipment**  
Instrumentation, small equipment for industry, ...



**Threaded**  
8DA Series



**Break away**  
8BA Series



**Bayonet**  
8LTA Series



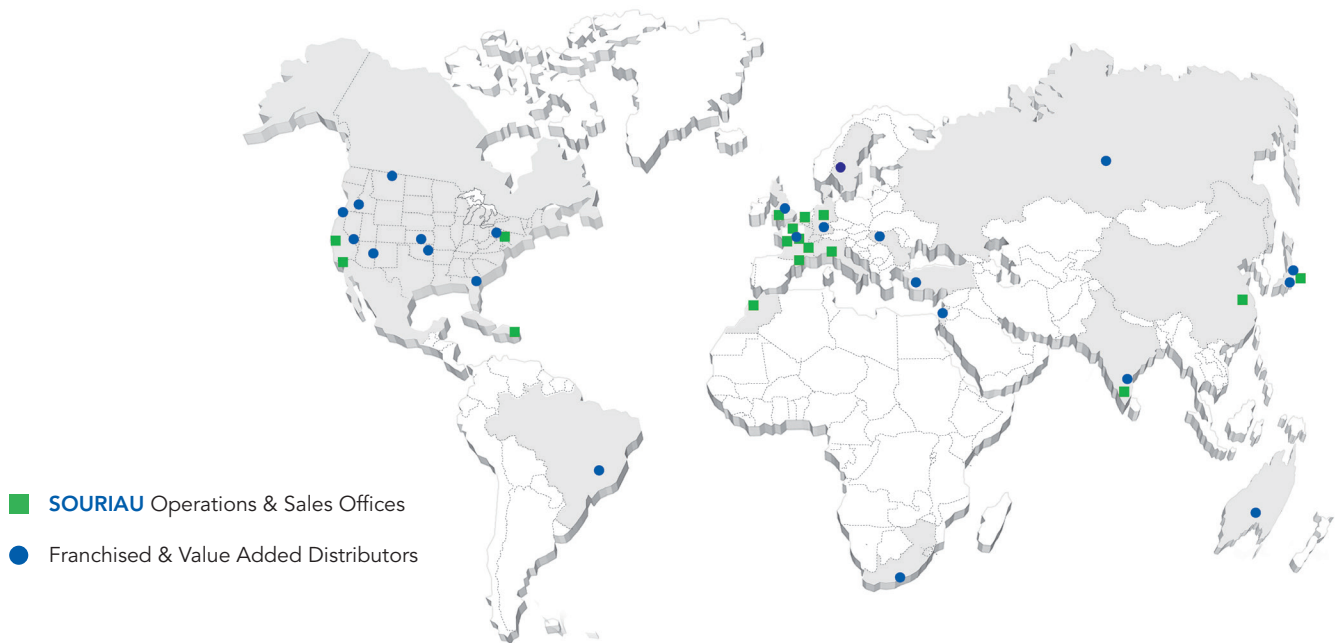
## Worldwide Sales Network

**SOURIAU** is recognized as one of the top international manufacturers of connectors for harsh environment and is continuously strengthening its leading position through its solid structure as an international group. Today the **SOURIAU** group has a strong global presence and operates 24 facilities (10 production sites and 14 offices) on 4 continents:

- 15 in Europe,
- 4 in Americas,
- 4 in Asia
- 1 in Africa.

Our international presence is reinforced by 26 franchised and value added distributors in 14 countries.

We also rely upon an extensive network of distributors and resellers worldwide. This coverage, together with a strong commitment towards service, ensures rapid responses to the specific needs of our customers.



## Multisourcing

**SOURIAU** have reached a partnership agreement in the manufacturing, qualification, and marketing of micro38999 connectors

This partnership will provide customers with two independent sources of manufacture, guaranteed interchangeability and intermateability, with all critical features including interfacial and mounting dimensions, based on common controlled shared drawings.

Please contact us for more information.

## Miniature sizes

- **A compact solution**
  - The smallest connector available on the market (shell size 3)
  - Miniaturization of MIL-DTL-38999
  - Threaded, break away or bayonet coupling
  - Integrated backshell:
    - . Easy to wire and handle
    - . Compatible with heat shrink boot and braid retention band
    - . Compliant with overmolding
- **A versatile solution**
  - 3 shell sizes (3, 5, 7)
  - 2 materials, 4 platings
  - Crimp & PC tails contacts
  - Removable contacts #22D & #26
  - 6 keyings
- **Harsh environment-resistant solution**
  - Scoop Proof
  - Cavity to cavity sealed with interfacial seal and grommet
  - Fluid resistant



## Technical features

### Mechanical

- **Shell:**
  - Aluminum alloy
  - Passivated stainless steel (consult us)
- **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:
    - Up to 1000 mating/unmating cycles
- **Vibration (2 axes during 8 hours):**
  - 8DA: 44 grms @125°C
  - 8BA & 8LTA: 30 grms ambient

### 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	8DA & 8BA		8LTA
	Aluminum	Stainless steel	All versions
3	NA		250 mΩ
5	10 mΩ	60 mΩ	
7	10 mΩ	60 mΩ	
- **EMI:**
  - 8DA & 8BA (aluminum): -70dB @ 1GHz
  - 8DA & 8BA (stainless steel): -55 dB @ 1Ghz
  - 8LTA (all versions): -55 dB @ 1Ghz

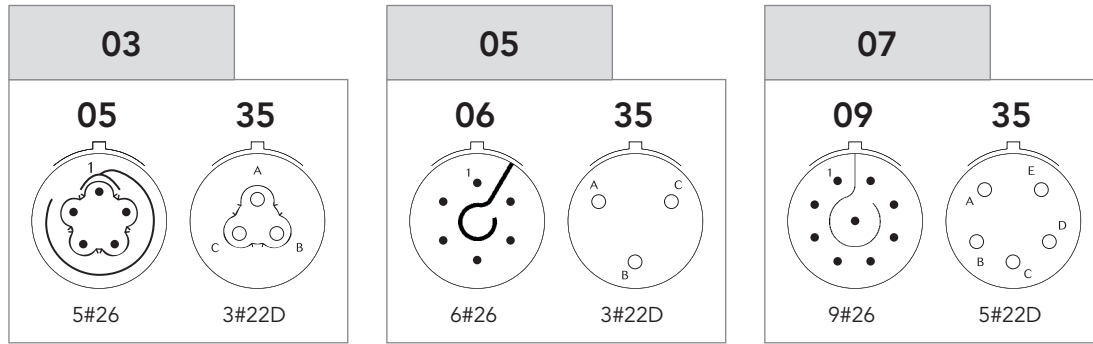
### Environmental

- **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: 250 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**

## 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

<b>Basic Series:</b> 8DA: Threaded coupling 8BA: Break away 8LTA: Bayonet coupling	8DA	0	03	Z	05	P	N
<b>Shell type:</b> 0: Square flange receptacle (8DA & 8LTA only) 1: In line receptacle 2: Oval flange receptacle (8LTA only) 5: Plug with EMI ring (8DA only - size 5 & size 7) 6: Plug without EMI ring 7: Jam nut receptacle							
<b>Shell size: 03, 05, 07</b>							
<b>Plating:</b> Z: Black zinc nickel F: Nickel W: Olive drab cadmium K: Passivated stainless steel (consult us)							
<b>Contact layouts:</b> See above							
<b>Contact type:</b> P: Pin (8DA shell size 3 scoop proof only when pin contacts mounted in Type 6) S: Socket (8DA shell size 3 scoop proof only when socket contacts mounted in Types 0, 1 or 7. 8BA scoop proof only when socket contacts mounted in Type 1 & Type 7)							
<b>Orientation:</b> N, A, B, C, D, E							

## More information

Dimensions, weights, orientations, large sizes, PC tail version, coordinates, accessories, tooling, ... Please consult SOURIAU «8DA, 8BA & 8LTA Series» catalog.

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

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