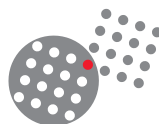




## Miniature Product with a Break Away Release

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

<b>A compact solution</b>	Diameter up to 45% smaller than size 9 (D38999). Up to 50% shorter.
<b>A high density solution</b>	With #26 contacts (according 39029). 5 layouts (size 3, 5 and 7 with #22 & #26).
<b>Excellent features</b>	Designed for D38999 requirements. IP67 sealing when mated, ballseal (EMI).
<b>RoHS and Cadmium free</b>	Available in zinc nickel (RoHS) plating, as well as nickel and olive drab cadmium.
<b>Robustness</b>	Connector available with stainless steel (1500 matings) and aluminum shell (500 matings).
<b>Integrated backshell</b>	Cost and space saving.



# micr 38999

## 8BA Break Away



## 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
  - 2 materials, 3 platings
  - Crimp & PC tails (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
  - 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:**
  - 30 grms ambient, 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
03	< 10 mΩ	< 60 mΩ
05		
07		
- **EMI:**
  - Aluminum: -70dB @ 1GHz
  - Passivated stainless steel: -55 dB @ 1Ghz

### Environmental

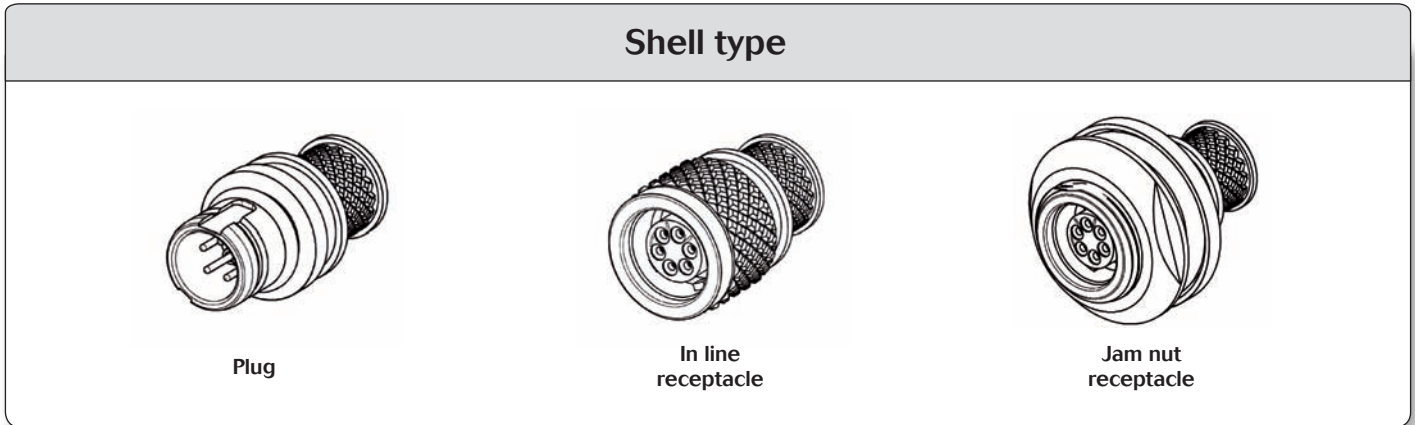
- **Temperature range:**
  - 55°C to +175°C
- **Water immersion:**
  - IP 67 on mated connector
  - 1 meter for 30 min minimum
  - > IP68 with appropriate cable termination
- **Salt spray:**
  - Zinc nickel: 500 hours
  - Nickel: 48 hours
  - Olive drab cadmium: 500 hours
  - Passivated stainless steel: 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**

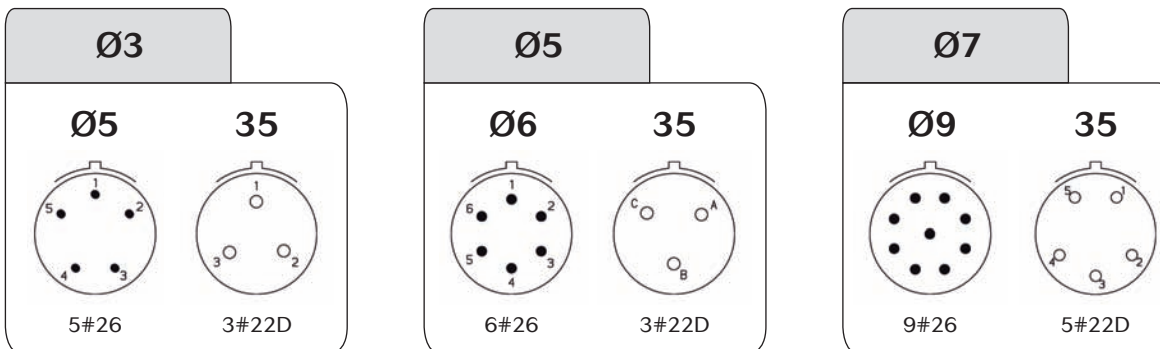
# micr 38999

## 8BA Break Away



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

### Contact layouts



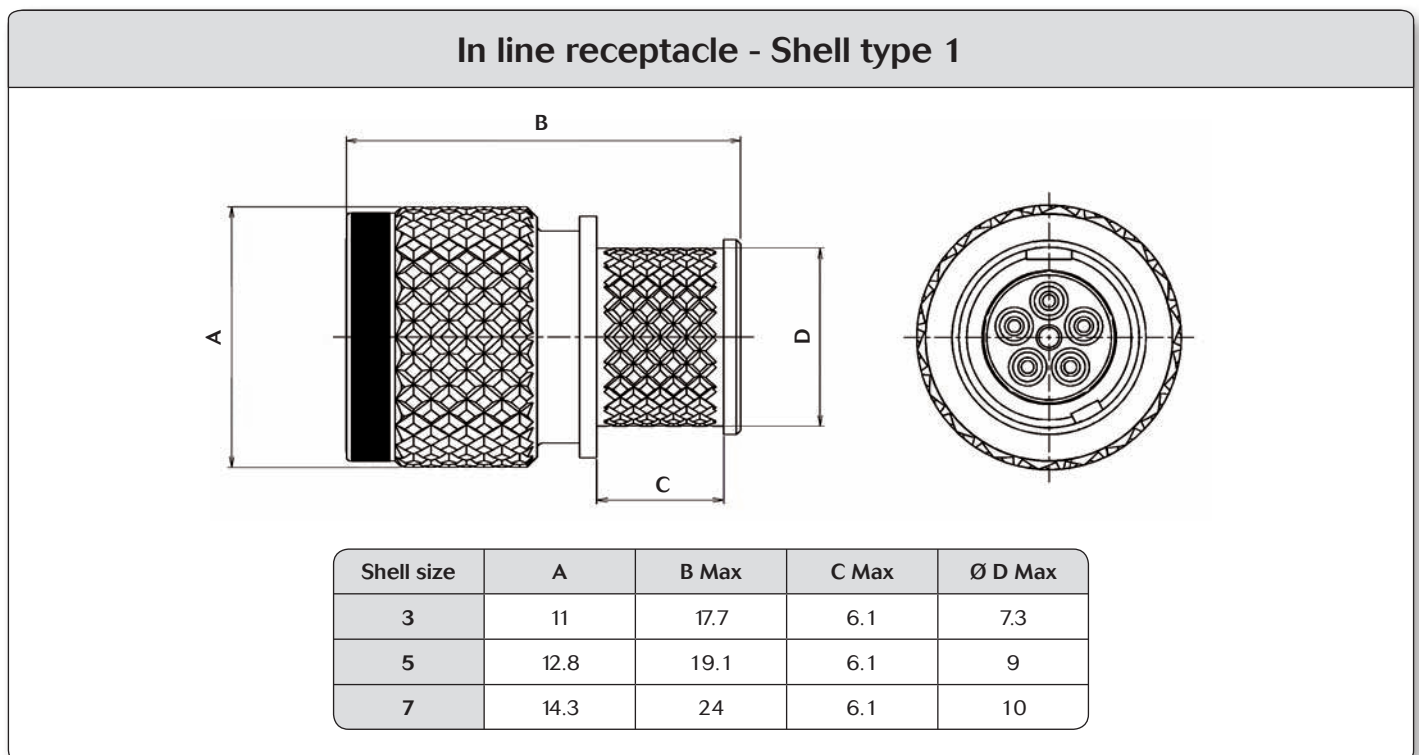
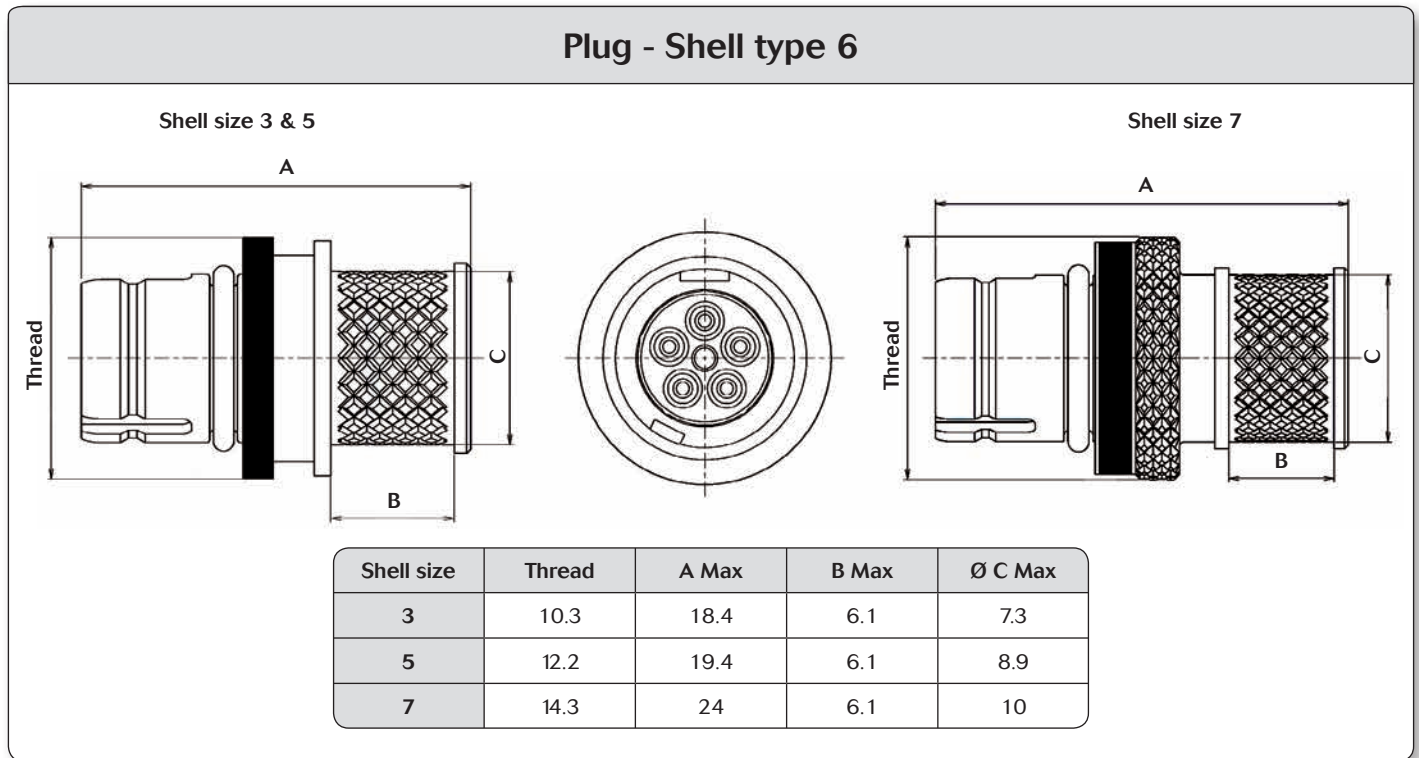
### Ordering information

Basic Series	8BA	1	Ø3	W	Ø5	P	N
Shell type:							
1: In line receptacle							
6: Plug							
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							
S: Socket (Scoop proof only when socket contacts mounted in Type 1 & Type 7)							
Orientation:							
N, A, B, C, D, E							

Note: Ø = Zero



## Dimensions



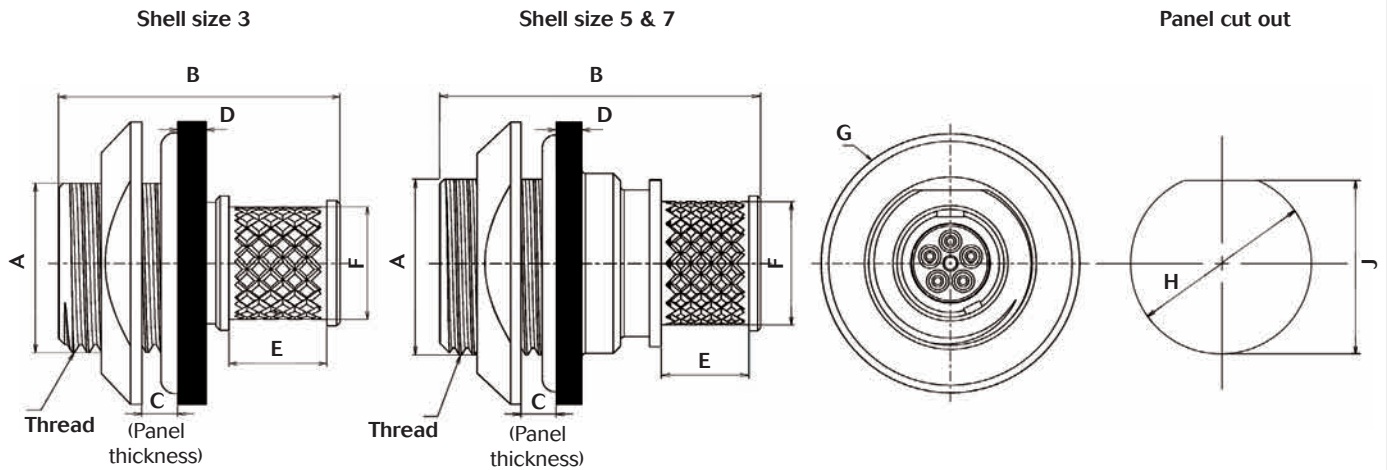
Note: All dimensions are in mm.

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## 8BA Break Away



### Jam nut receptacle - Shell type 7



Shell size	Thread	A Max	B Max	C Max	D	E Max	Ø F Max	Ø G Max	Ø H	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 mm.

## Connector weights

### Weight

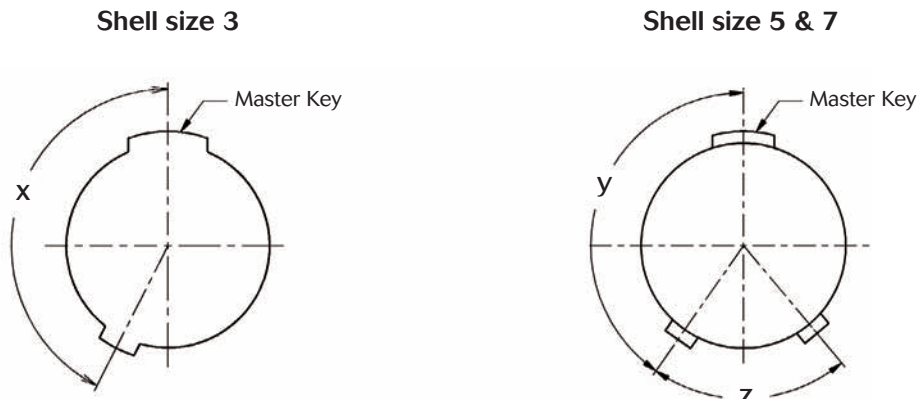
**Aluminum version** (in gram ±10 %)

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



## Orientations

### Orientation - All shell types



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)