



Miniature Product with a Break Away Release

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

- A compact solution** ✓ Diameter up to 45% smaller than size 9 (D38999). Up to 50% 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, ballseal (EMI).
- 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.

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 (typical value)**

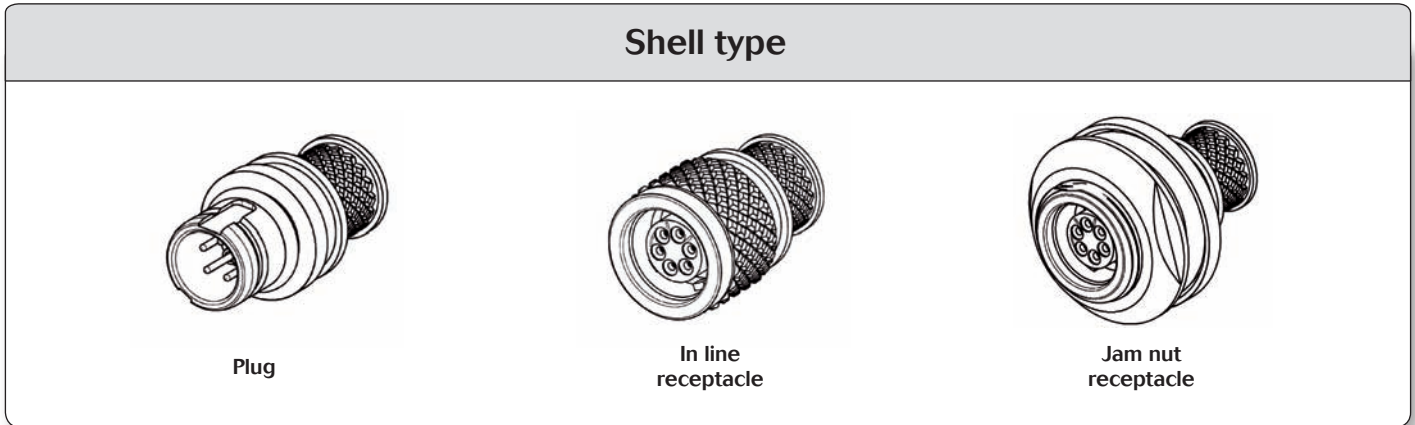
Shell size	Aluminum version	Stainless steel version
3		NA
5	10 mΩ	60 mΩ
7		
- **EMI:**
 - Aluminum: -70dB @ 1GHz
 - Passivated stainless steel: -55 dB @ 1Ghz

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

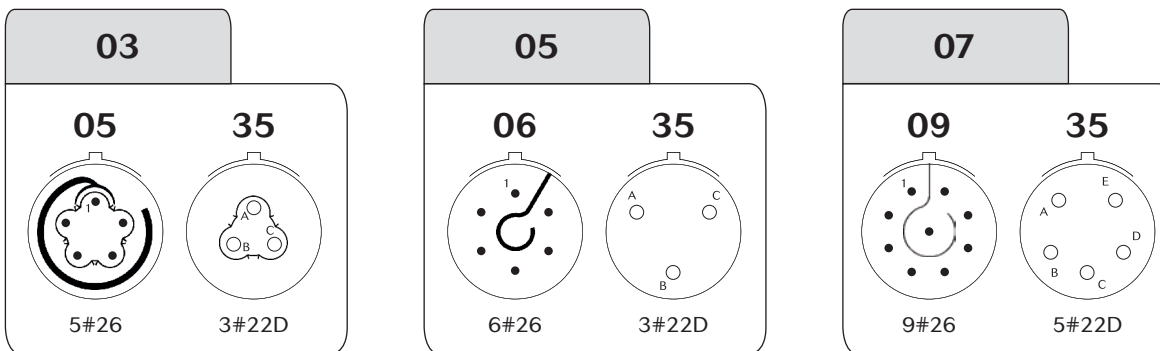
Resistance to fluids

- **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



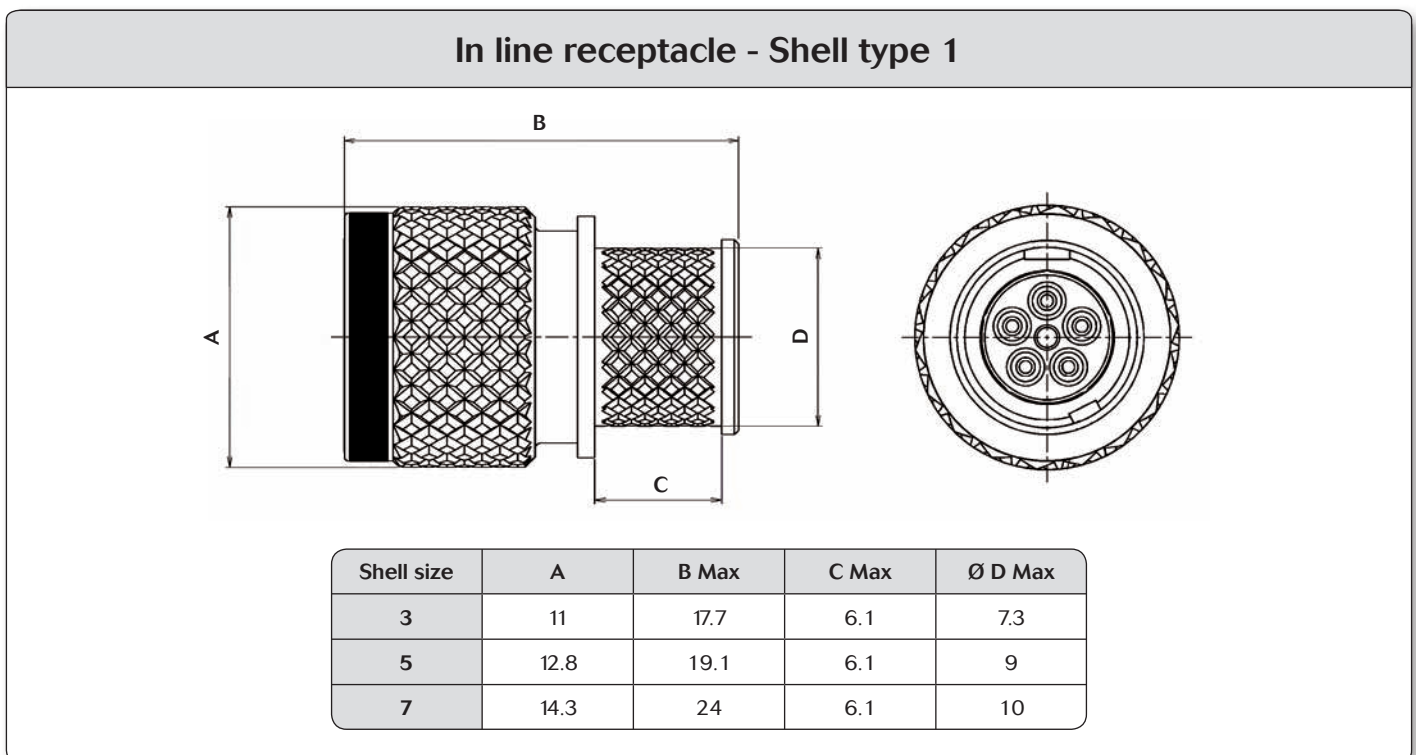
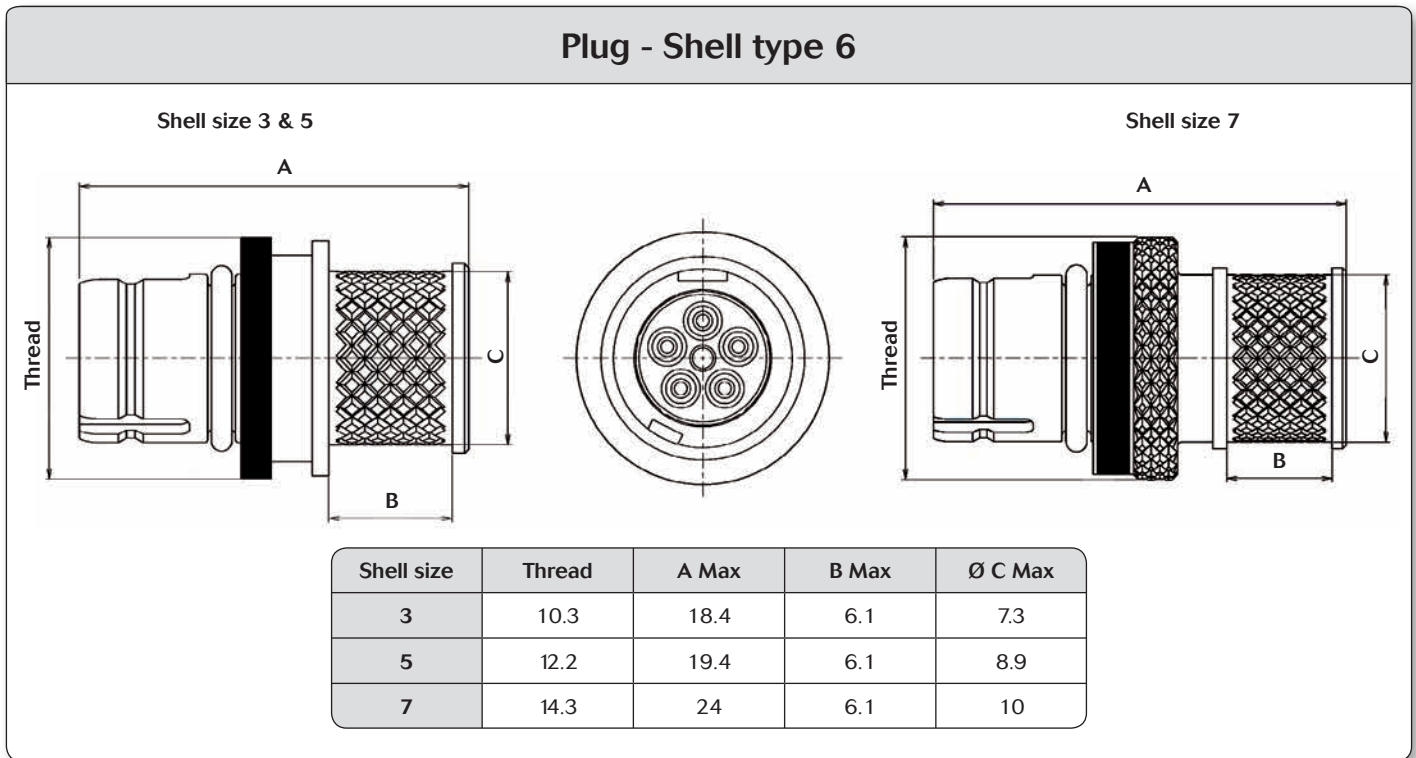
Note: For information only.

Ordering information

Basic Series	8BA	1	03	W	05	P	N
Shell type:							
1: In line receptacle							
6: Plug							
7: Jam nut receptacle							
Shell size: 03 - 05 - 07							
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							



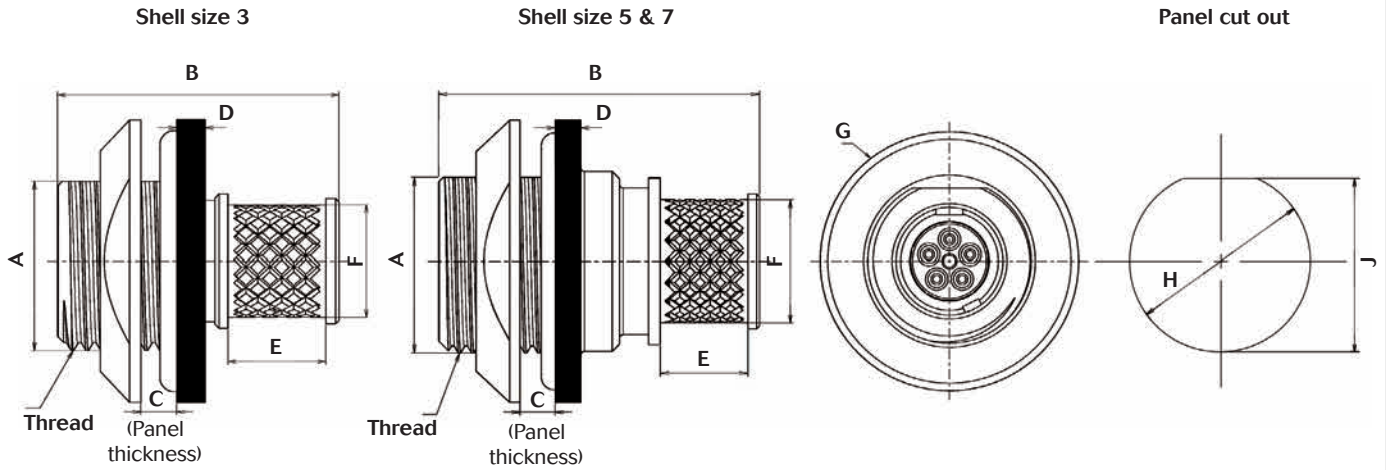
Dimensions



Note: All dimensions are in mm.



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

Note: All dimensions are in mm.

Connector weights

Weight

Aluminum version (in gram ±10 %)

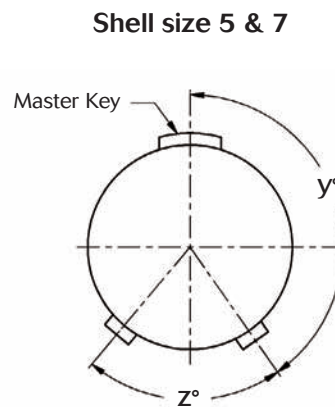
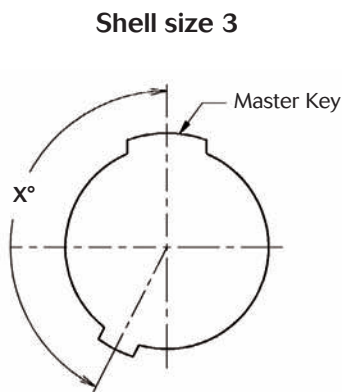
Shell size & layout	Plug		In line receptacle	
	Without contacts	With crimp contacts	Without contacts	With crimp contacts
03-05	1.7	1.8	1.3	1.4
05-06	2.6	2.8	2.9	3.1
07-09	4.3	4.7	4.7	5.1



Orientations

Orientation - All shell types

Plug front face view



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

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