



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
 - 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 (typical value)**

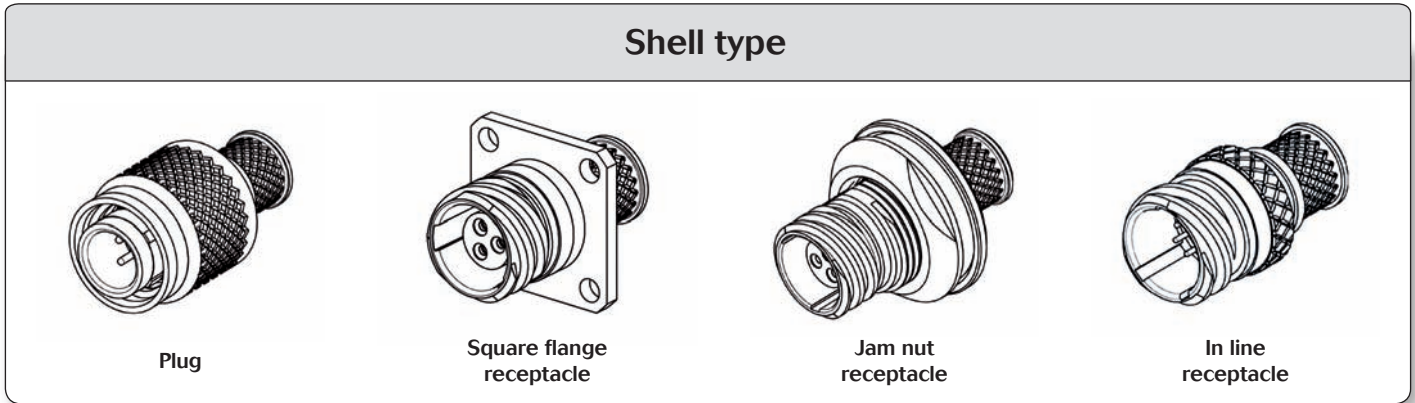
Shell size	Aluminum version	Stainless steel version
3		NA
5	10 mΩ	60 mΩ
7		
- **EMI:**
 - Aluminum: -70dB @ 1GHz
 - Passivated stainless steel: -55 dB @ 1Ghz

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

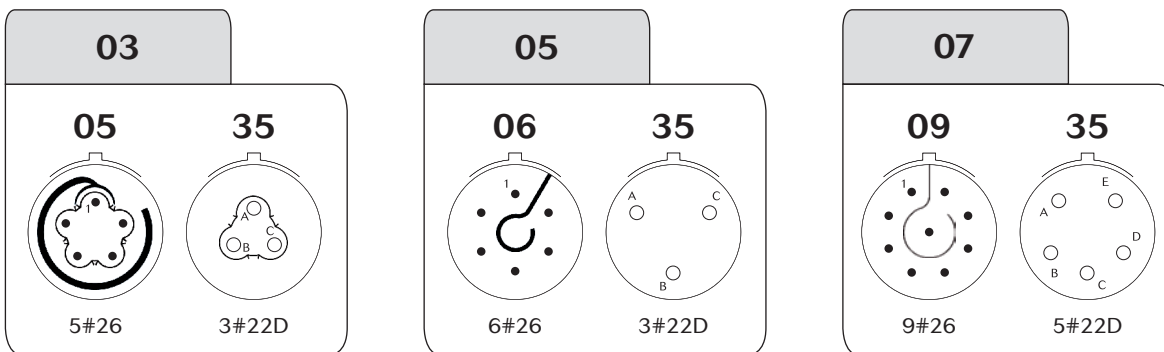
Resistance to fluids

- **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.

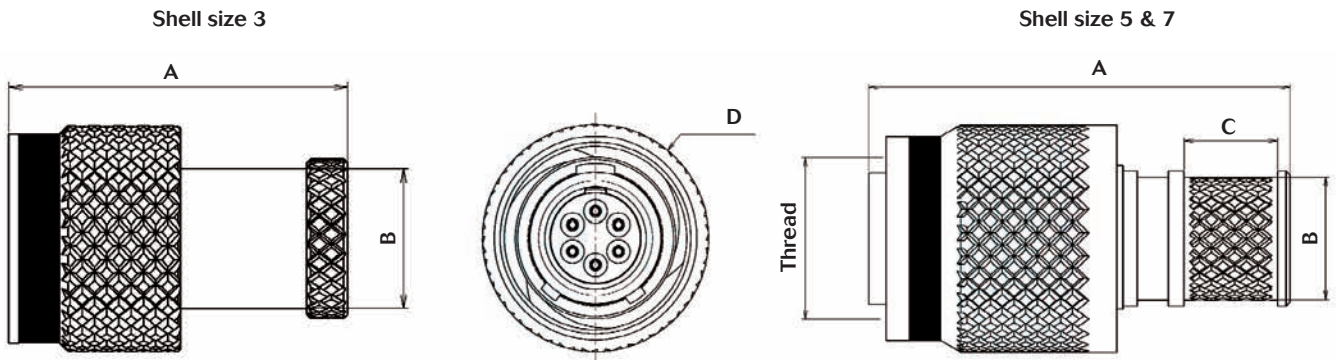
Ordering information

Basic Series	8DA	0	03	W	05	P	N
Shell type:							
0: 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							
90: Square flange receptacle with PCB contacts							
97: Jam nut receptacle with PCB contacts							
Contact type:							
None: Standard crimp contacts							
C: Short PC tail							
L: Long PC tail (consult us)							
Shell size: 03 - 05 - 07							
Plating :							
Z: Black zinc nickel							
F: Nickel							
W: Olive drab cadmium							
K: Passivated stainless steel (only for sizes 05 & 07 with standard crimp contacts)							
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 Types 0, 1 or 7) - not available for PCB version							
Orientation: N, A, B, C, D, E							



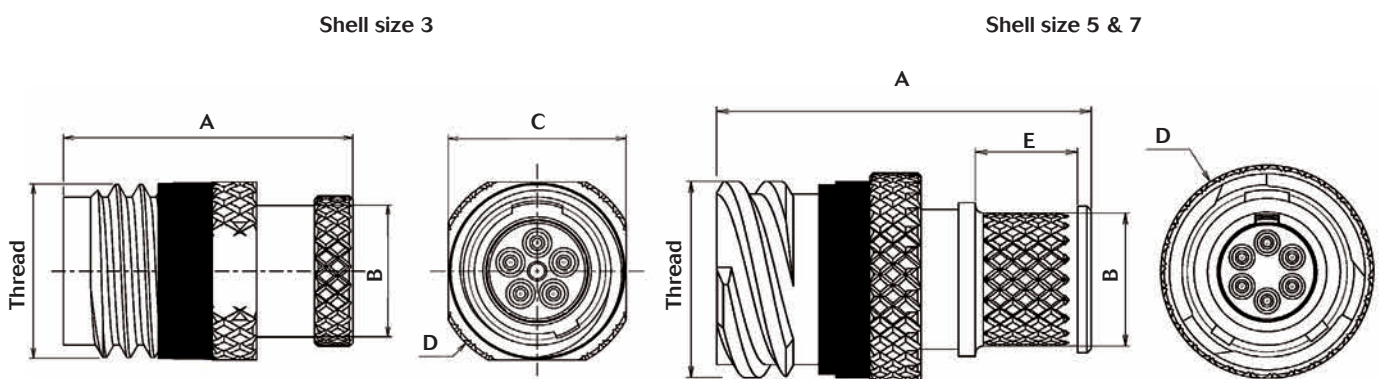
Dimensions

Plug - Shell type 5 & 6



Shell size	Thread	A Max	Ø B Max	C Max	Ø D Max
3	3-05	-	17	-	11.5
	3-35	-	17.5	-	11.5
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

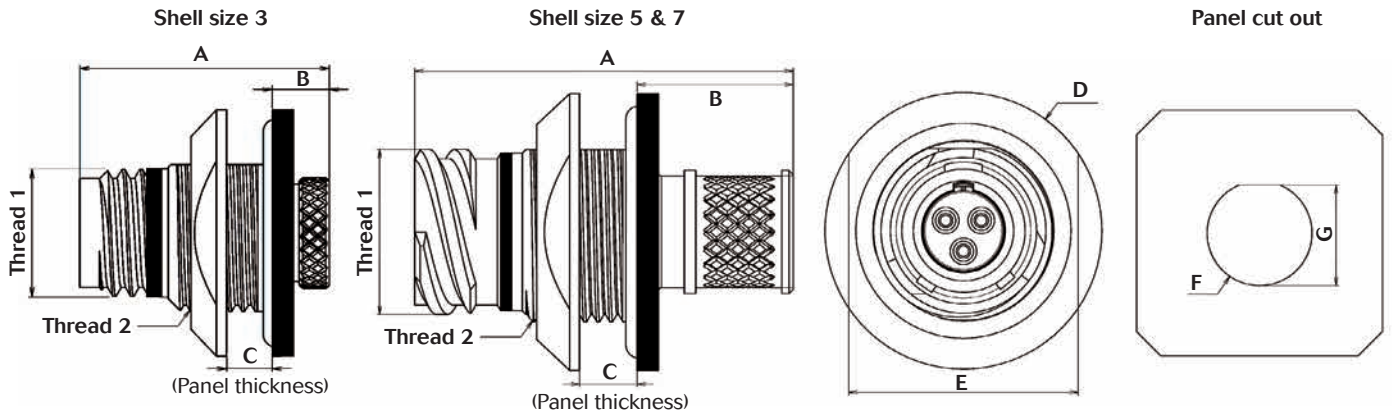


Shell size	Thread	A Max	B Max	C Max	Ø D Max	E Max
3	M9	15.5	7	9.3	11	-
5	5/11"-1P	23	8	-	13	6.1
7	1/2"-1P	25	9.5	-	13.5	6.1

Note: All dimensions are in mm.

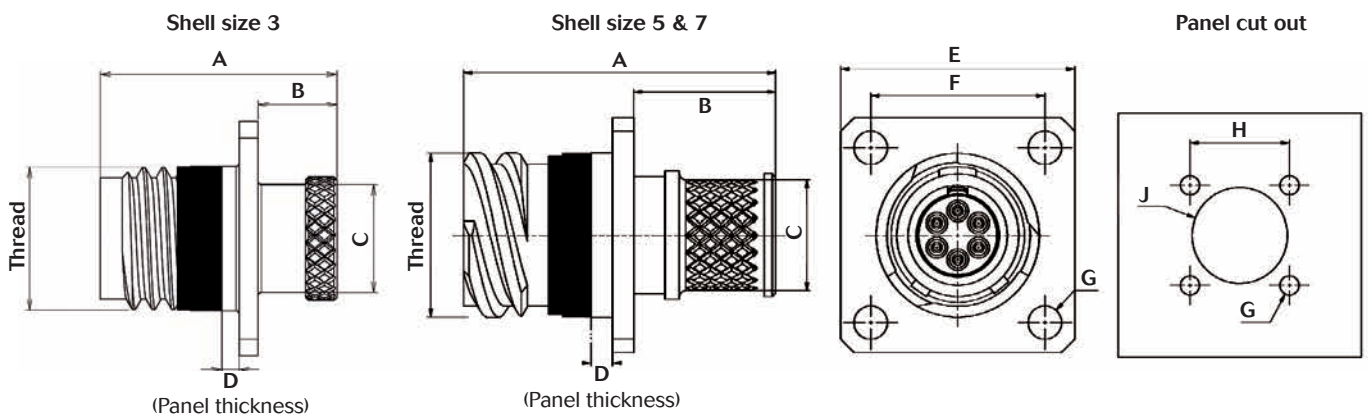


Jam nut receptacle - Shell type 7



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

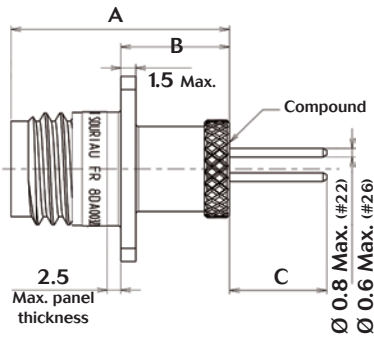


Shell size	Thread	A Max	B Max	Ø C Max	D Max	E Max	F Max	Ø G Max	H Max	Ø J Max	
3	3-05	M9	15	5	6.8	2.5	15	10.5	2.35 \pm 0.08	10.5	9.5
	3-35	M9	18	8	6.8	2.5	15	10.5	2.35 \pm 0.08	10.5	9.5
5	5/11"-1P	23	10.5	8	2.5	16.6	12.27	2.35 \pm 0.08	12.27	11.75	
7	1/2"-1P	25	13	10	2.5	18	13.84	2.35 \pm 0.08	13.8	12.95	

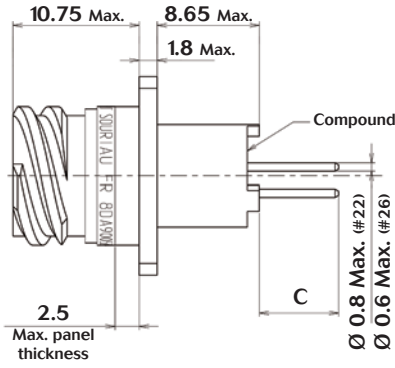
Note: All dimensions are in mm.



Square flange receptacle with PC tail contacts - Shell type 90



Shell size 3

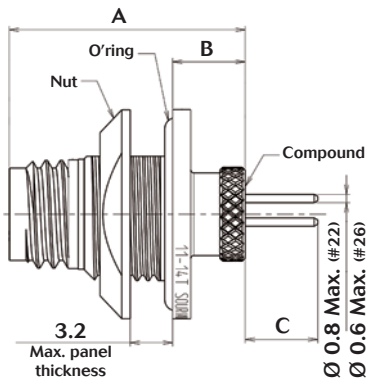


Shell size 5 & 7

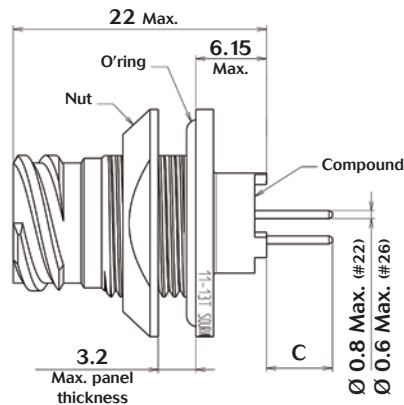
Layout	A Max.	B Max.	C Min.	C Max.
03-05	15	6.5	8.47	9.47
03-35	18	9	7.39	8.12
05-06	-	-	5.89	7
05-35	-	-	5.87	6.9
07-09	-	-	6.04	7
07-35	-	-	5.82	6.9

Shell design vary according to shell size.
For L contact (long PC tail) please consult us.

Jam nut receptacle with PC tail contacts - Shell type 97



Shell size 3



Shell size 5 & 7

Layout	A Max.	B Max.	C Min.	C Max.
03-05	18.5	4.2	5.87	6.97
03-35	20.5	6.2	5.19	6.02
05-06	-	-	4.86	5.95
05-35	-	-	4.82	5.85
07-09	-	-	4.99	5.95
07-35	-	-	4.77	5.85

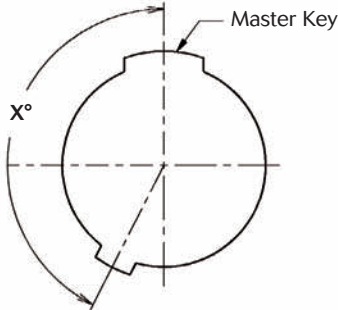
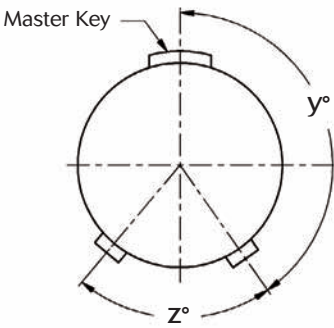
Shell design vary according to shell size.
For L contact (long PC tail) please consult us.



Connector weights

Weight				
Aluminum version (in gram $\pm 10\%$)				
Shell size & layout	Plug		Square flange receptacle	
	Without contacts	With crimp contacts	Without contacts	With crimp contacts
03-05	1.7	1.8	1.9	2.1
05-06	2.8	3	5.4	5.8
07-09	3.6	3.9	6	6.5

Orientations

Orientation - All shell types							
Plug front face view							
Shell size 3				Shell size 5 & 7			
							
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



Caps

Basic Series: 8DAC: Cap for 8DA Series	8DAC	32	Z	03	N
Cap type: 32: Cap for plug 33: Cap for receptacle					
Plating: Z: Black zinc nickel F: Nickel W: Olive drab cadmium					
Shell size: 03 - 05 - 07					
Style: N: Ring R: Eyelet					

Dimensions

Cap for 8DA plug

Cap for 8DA receptacle

Size	A	B	
		Plug	Receptacle
03	11.5	11	12.5
05	13.5	13	15
07	14.5	14	17

Note: for other lanyard length please consult us.

Gaskets

Shell size	8DA square flange receptacle
3	8DA0G03
5	8DA0G05
7	8DA0G07

Note: All dimensions are in millimeters (mm).

For further information contact us at contactmilaero@souriau.com or visit our web sites www.souriau.com & www.micro38999.com