

38999 Series III Double Flange

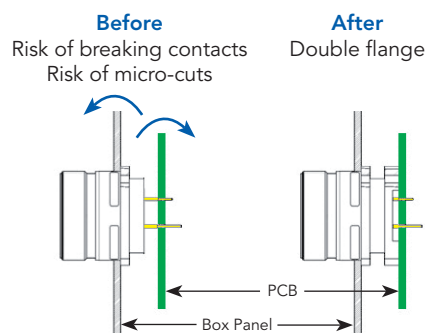


Double Flange Solution for PCB Mount

Connector specially designed for printed circuit board applications in harsh environments, decoupling vibration from the board.

Excellent mechanical performances

- Standoffs integrated into the connector. No risk of breaking contacts or micro-cuts.



Design flexibility

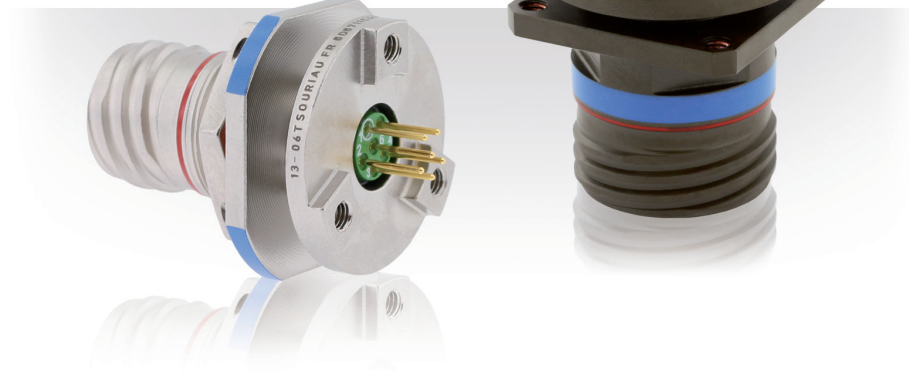
- Square flange or Jam nut versions available. Versatile contact length options.

A wide range

- Available in aluminum with a range of layouts from shell size 9 to 25.

User friendly

- Easy to assemble and time saving.



Description

- High level vibration resistance in harsh environments
- Offers the same level of performance as the MIL-DTL-38999 Series III connector
- Jam nut or square flange receptacle
- No risk of breaking contacts
- No risk of micro-cuts
- Allow direct grounding from PCB to the flange
- PC tails contacts without shoulder: #12, #16, #20 and #22
- Resin sealed version, please consult us

Technical features

Mechanical

- **Shell:** Aluminum
- **Shell plating:**
 - . Cadmium olive drab (W)
 - . Nickel (F)
 - . Black zinc nickel (Z)
- **Insulator:** Thermoplastic
- **Grommet and interfacial seal:** Silicone elastomer
- **Contacts:** Copper alloy
- **Contacts plating:** Gold over nickel plated
- **Endurance:** 500 mating cycles
- **Shock:** 300g, 3ms
- **Vibration:**
 - . Sinus:
 - . 10 à 2000 Hz, 3x12 hrs (60g, 140 - 2000 Hz) with T° cycling
 - . Random:
 - . 50 to 2000 Hz, 2x8 Hrs (1g2/ Hz, 100 - 2000Hz) at T° max.
 - . 25 to 2000 Hz, 2x8 Hrs (5g2/ Hz, 100 - 300Hz) at ambient T°
- **Contact retention:**

Contacts size	22	20	16	12
Min force in N	44	67	111	111

Electrical

- **Test voltage rating (Vrms)**

Service	sea level	at 21000 m
M	1 300	800
N	1 000	600
I	1 800	1 000
II	2 300	1 000

- **Contact resistance**

Contacts size	22	20	16	12
Resistance mΩ	14.6	7.3	3.8	3.5

- **Insulation resistance:** ≥ 5 000 MΩ (under 500 Vdc)

- **Contact rating:**

Contacts size	22	20	16	12
Rating (A)	5	7.5	13	23

- **Shell continuity:**

- . Cadmium olive drab (W): 2.5 Ωh
- . Nickel (F): 1 Ωh
- . Black zinc nickel (Z): 2.5 Ωh

- **Shielding:**

- . F: 65 db at 10 GHz; 85 db at 1 GHz
- . W: 50 db at 10 GHz
- . Z: Consult us

Environmental

- **Temperature range:**

- . W: -65°C +175°C
- . F: -65°C +200°C
- . Z: -65°C +200°C

- **Sealing:**

Mated connectors meet altitude immersion requirements of MIL-DTL-38999.

- **Salt spray:**

- . W: 500 Hrs
- . F: 48 Hrs
- . Z: 500 Hrs

Resistance to fluids

- **According to MIL-DTL-38999 standard**

- . Gasoline: JP5 (OTAN F44)
- . Mineral hydrolic fluid: MIL-H-5606 (OTAN H515)
- . Synthetic hydraulic fluid: Skydrol 500 B4

- **LD4 (SAE AS 1241)**

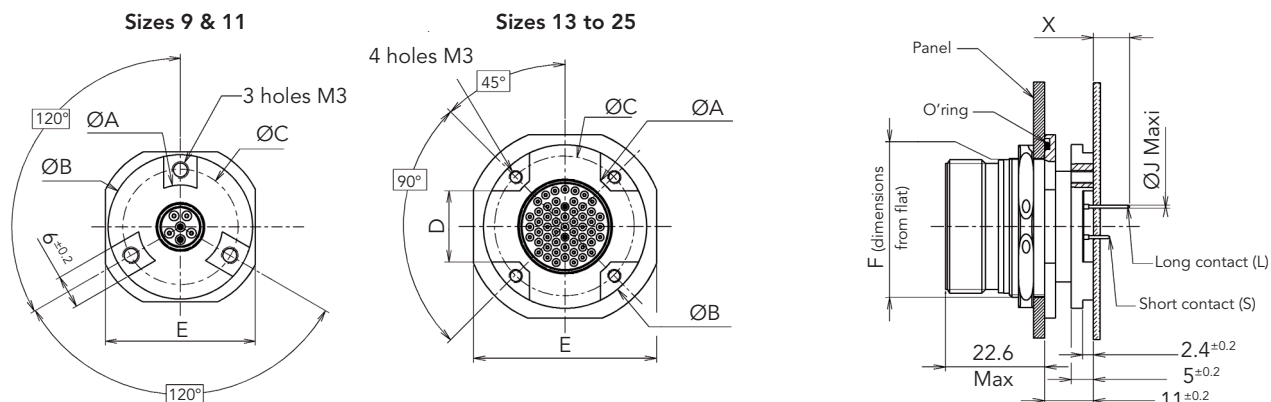
- . Mineral lubricating: MIL-L-7870A (OTAN 0142)
- . Synthetic lubricating: MIL-L-23699 (OTAN 0156), MIL-L-7808
- . Cleaning fluid: MIL-C-87936 diluted
- . De-icing fluid: MIL-A-8243
- . Extinguishing fluid: Bromochloromethane
- . Cooling fluid: Coolanol

Ordering information

Basic Series	8D	87	11	C	17	W	35	P	N	L
Shell type: 80: Square flange receptacle 87: Jam nut receptacle										
Length between panel & PCB (in mm) For other length, please consult us.										
Type: C: Receptacle with short PC tail L: Receptacle with long PC tail										
Shell size: 09, 11, 13, 15, 17, 19, 21, 23, 25										
Plating: W: Olive green cadmium F: Nickel (RoHS) Z: Black zinc nickel (RoHS)										
Contact layout: Consult us for available layouts										
Contact type: P: Pin S: Socket										
Orientation: N, A, B, C, D, E										
Specification: None: Standard L: Without contacts For other specification, please contact us										
046: Tin plated contact SnPb 046E: Tin plated contact Sn pure (RoHS) 046S: Tin plated contact SAC305 (RoHS)										

Dimensions

Jam nut receptacle (type 87)

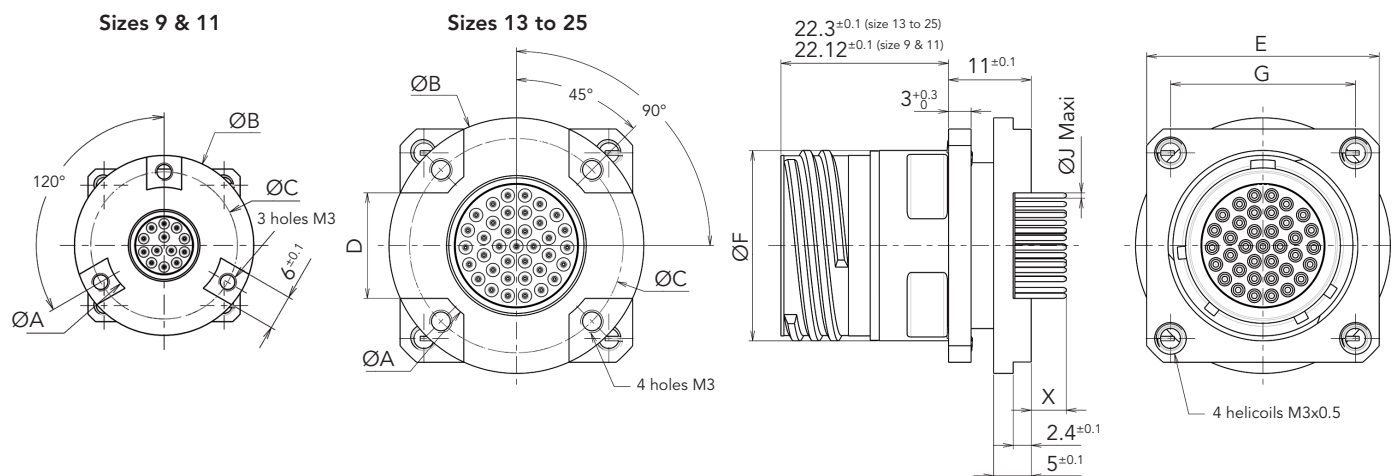


Shell size	ØA ±0.15	ØB ±0.15	ØC	D ^{+0.2} ₋₀	E ±0.4	F ^{+0.1} _{-0.15}
9	15.10	26.00	20.50	-	27.00	16.53
11	19.90	30.80	25.20	-	31.80	19.07
13	19.90	30.80	25.25	12	34.90	23.82
15	23.00	33.90	28.42	14	38.10	26.97
17	26.00	36.80	31.42	16	41.30	30.15
19	29.50	40.40	35.03	18	46.00	33.32
21	32.50	43.20	37.82	20	49.20	36.50
23	35.50	46.50	41.12	23	52.40	39.67
25	38.60	49.60	44.30	25	55.60	42.85

Contact size	Contact type	PC tail length	Size 09 & 11 X Min	Size 13 to 25 X Min	ØJ max
22D	M & F	Long	7.1	7.1	0.7
	M & F	Short	3.6	3.6	
20	M & F	Long	7.1	7.1	0.9
	M & F	Short	3.6	4.2	
16	M & F	Long	7.1	7.1	1.35
	M & F	Short	3.6	4.2	
12	M & F	Long	6.76	5.6	1.35
	M & F	Short	3.76	2.6	

Note: All dimensions are in millimeters (mm)

Square flange receptacle (type 80)



Shell size	$\varnothing A \pm 0.1$	$\varnothing B \pm 0.1$	$\varnothing C \pm 0.1$	$D \pm 0.1$	$E \pm 0.2$	$\varnothing F \pm 0.1$	$G \pm 0.1$
9	15.1	26	20.5	-	23.75	15.67	18.26
11	19.9	30.8	25.2	-	26.14	18.67	20.62
13	19.9	30.8	25.25	12	28.55	22.07	23.01
15	23	33.9	28.42	14	30.94	25.25	24.61
17	26	36.8	31.42	16	33.25	30	26.97
19	29.5	40.4	35.03	18	36.45	31.57	29.36
21	32.5	43.2	37.82	20	39.65	34.75	31.75
23	35.5	46.5	41.12	23	42.85	37.92	34.93
25	38.6	49.6	44.3	25	45.95	41.1	38.1

Contact size	Contact type	PC tail length	Size 09 & 11	Size 13 to 25	$\varnothing J$ max
			X Min	X Min	
22D	M	Long	7.39	7.21	0.70
		Short	4.39	4.21	
	F	Long	7.12	6.94	
		Short	4.12	3.94	
20	M	Long	7.39	7.21	0.90
		Short	4.39	4.21	
	F	Long	7.40	7.22	
		Short	4.40	4.22	
16	M	Long	7.39	7.21	1.35
		Short	4.39	4.21	
	F	Long	7.34	7.16	
		Short	4.34	4.16	
12	M	Long	7.40	7.22	1.35
		Short	4.40	4.22	
	F	Long	7.41	7.23	
		Short	4.41	4.23	

Note: All dimensions are in millimeters (mm)

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