



High Vibration Stainless Steel Connector

A stainless steel plug that guarantees conductivity and EMI protection even when it is exposed to the most harsh environments and the highest vibration levels.

Robustness ■ Suitable for high vibration applications.
Suitable for high shock environments.
Can be exposed to peak temperatures up to 260°C.
Mechanical and environmental characteristics exceeding standard MIL-DTL-38999 K class.

Comprehensive range ■ All D38999 Series III & EN3645 layouts available including optical fiber and quadrax.
Two platings available: passivated and nickel.
Fuel environment version available on demand.

Compatibility ■ Fully intermatable and interchangeable with all qualified D38999 Series III connectors.
Same dimensions as D38999 Series III stainless steel connectors.

Connector weight ■ Approximately the same mass as standard D38999 Series III stainless steel connectors.



Description

- Threaded coupling
- Shell sizes from 9 to 25
- Contact protection: 100% Scoop proof
- RFI - EMI shielding and shell-to-shell conductivity
- Contact fretting minimized
- Accessories available (protective caps, backshells, etc...)
- Intermatable with Standards:
 - . MIL-DTL-38999 Series III
 - . EN3645
 - . BACC63DC

Technical features

Mechanical

- **Shell:** Stainless steel
- **Shell plating:**
 - Passivated (K)
 - Nickel (S)
- **Insulator:** Thermoplastic
- **Grommet and interfacial seal:** Silicone elastomer
- **Contacts:** Copper alloy
- **Contacts plating:** Gold over nickel plated
- **Endurance:** 500 mating cycles
- **Shock:**
 - 300g, 3ms according EN2591-402 method A and EIA-364-27
- **Vibration:**
 - Sinusoidal:
 - . 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°
 - Test with accessories in accordance with EN2591-403 and EIA-364-28

Contact retention:

Contacts size	22	20	16	12	8	4
Min force in N	44	67	111	111	111	200

Electrical

Test voltage rating (Vrms):

Service	Sea level	21 000 m 70,000 ft
R	400	N/A
M	1 300	800
N	1 000	600
I	1 800	1 000
II	2 300	1 000

Contact resistance:

Contact size	22	20	16	12	8	4
Resistance mΩ	14.6	7.3	3.8	3.5	3	2

Insulation resistance:

≥ 5,000 MΩ (under 500 Vdc)

Contact rating:

Contact size	22	20	16	12	8	4
Rating (A)	5	7.5	13	23	45	80

Shell continuity:

K: 10 mΩ
S: 1 mΩ

Shielding:

K: 45 db at 10 GHz
S: 65 db at 10 GHz

Environmental

Temperature range:

K: -65°C +200°C
S: -65°C +200°C
Peak temperature: 260°C

Sealing:

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

Salt spray:

K: 500 Hrs
S: 500 Hrs

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

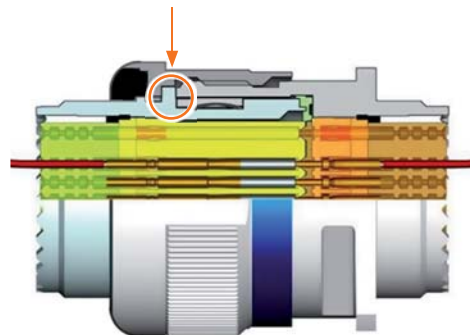
LD4 (SAE AS 1241):

- . Mineral lubricating: MIL-L-7870A (OTAN 0142)
- . Synthetic lubricating: MIL-L-23699 (OTAN 0156), MIL-L-7808
- . Cleaning fluid: MIL-DTL-25769 diluted
- . De-icing fluid: MIL-A-8243
- . Extinguishing fluid: Bromochloromethane
- . Cooling fluid: Coolanol

8DV overview

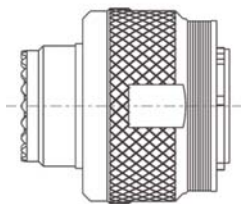
- Full stainless steel design giving the plug the necessary robustness for harsh environments: vibration, fire resistance, corrosion, temperature peak up to 260°C.
- Coupling with all types of D38999 receptacles and M85049 backshells.
- Reduced contact fretting, contact conductivity guaranteed.
- Security lock with vibration levels beyond D38999 standards values. The lock-on system increases the pressure force between plug and receptacle: excellent electrical conductivity between boxes coupled.
- Easy implementation of rear accessories at high temperatures when harnessed.
- Basic mechanical, electrical and environmental characteristics are identical to stainless steel D38999 connectors.

The metallic stop of plug to receptacle maintains the continuity of electrical ground regardless of the level of vibration.



8DV coupling possibilities

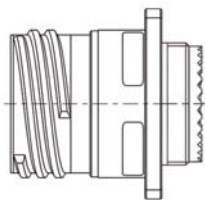
8DV Plug



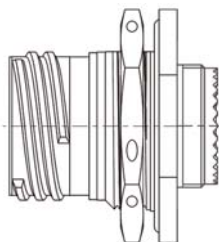
Type 5
Reinforced locking



Sealed receptacles



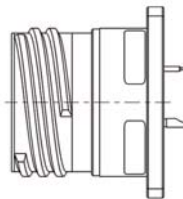
Type 0
Square flange



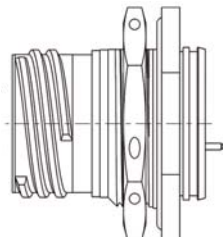
Type 7
Jam nut

or

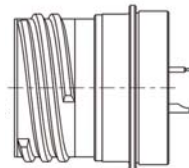
Hermetic receptacles



Type 21
Square flange



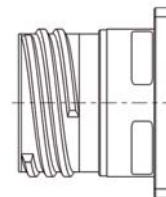
Type 23
Jam nut



Type 25
Solder mount

or

Dummy receptacle



Connector part numbers

Basic Series	8D	V5	11	K	35	P	N			L
Shell style: V5: Plug with RFI shielding & reinforced locking										
Shell size: 09, 11, 13, 15, 17, 19, 21, 23, 25										
Plating: K: Passivated S: Nickel										
Contact layout: See SOURIAU catalog "8D Series, MIL-DTL-38999 Series III"										
Contact type: P: Pin A: Connector supplied less pin contact or with specific contacts (connector marking: A + orientation) S: Socket B: Connector supplied less socket contact or with specific contacts (connector marking: B + orientation)										
Orientation: N, A, B, C, D, E										
Specification: 251: Connector provided with power contacts (layouts with contact #8) 022: Fuel tank										
Special custom: None: Standard plastic cap M: Anti-static plastic cap										
L: For P or S contact type only, connectors delivered without contacts, connectors marking P or S plus orientation.										

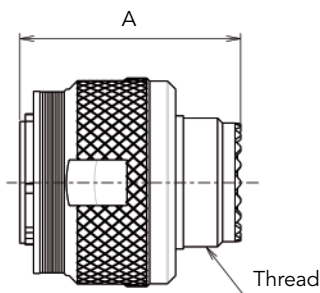
Connectors weight - in gram (±10%)

Layout	with contacts		without contacts	
	Male	Female	Male	Female
9-35	32.53	34.11	32.11	32.61
9-98	32.53	33.83	32.11	32.63
11-01	41.53	44.47	40.87	42.87
11-04	41.35	44.41	40.79	42.81
11-05	41.38	44.59	40.68	42.59
11-35	41.28	44.75	40.37	41.50
11-98	41.25	44.01	40.41	41.61
13-04	56.64	60.42	55.40	57.30
13-08	57.02	62.20	55.90	59.00
13-26	57.39	63.04	55.65	58.34
13-35	56.82	62.59	55.28	57.09
13-98	56.68	61.30	55.28	57.30
15-05	68.49	73.83	66.94	69.93
15-15	69.29	76.45	67.02	70.07
15-18	69.50	78.38	66.98	71.18
15-19	69.03	76.76	66.37	69.16
15-35	69.13	78.37	66.54	69.12
15-97	68.96	76.01	66.60	69.69
17-06	73.97	83.57	70.01	73.97
17-08	72.96	81.69	70.48	75.45
17-26	73.54	84.33	69.90	73.93
17-35	73.78	87.33	69.93	73.58
17-75	79.38	90.67	70.38	76.67
17-99	73.59	84.15	70.03	74.19

Layout	with contacts		without contacts	
	Male	Female	Male	Female
19-11	87.99	101.58	84.58	93.00
19-32	87.20	100.60	82.72	87.80
19-35	87.51	103.96	82.89	87.46
21-11	101.71	121.55	94.45	103.95
21-16	98.81	114.09	93.85	101.61
21-35	99.09	119.75	93.56	100.00
21-39	100.47	120.80	94.67	104.44
21-41	99.01	116.38	93.27	99.98
23-21	118.01	141.26	111.50	124.88
23-35	116.37	142.52	109.37	117.52
23-53	116.43	138.62	109.01	117.42
23-55	117.18	140.25	109.48	118.25
25-19	130.34	162.35	117.80	131.95
25-24	129.84	161.20	118.20	132.64
25-29	128.16	157.13	119.17	134.51
25-35	125.95	158.78	116.99	126.78
25-43	128.20	158.88	118.78	134.08
25-46	130.50	154.34	115.86	126.02
25-61	125.25	152.00	116.71	127.60
25-08	151.58	183.41	115.58	127.41
25-20	136.60	166.82	115.03	125.28
25-04	129.00	158.85	119.80	133.41

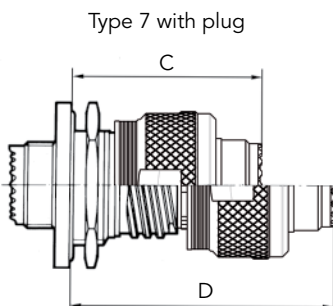
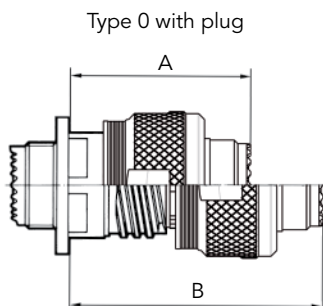
Dimensions

Plug type 5 reinforced locking (8DV)



Shell size	A Max	Thread	ØB Max
09 (A)	31.00	M12 x 1-6g	21.80
11 (B)		M15 x 1-6g	25.00
13 (C)		M18 x 1-6g	29.40
15 (D)		M22 x 1-6g	32.50
17 (E)		M25 x 1-6g	35.70
19 (F)		M28 x 1-6g	38.50
21 (G)		M31 x 1-6g	41.70
23 (H)		M34 x 1-6g	44.90
25 (J)		M37 x 1-6g	48.00

Mated connectors dimensions



Shell size	A Max	B Max	C Max	D Max
09 (A)	37.00	52.30	38.30	53.60
11 (B)			38.50	53.80
13 (C)				
15 (D)				
17 (E)				
19 (F)				
21 (G)	36.00	51.30	38.50	53.80
23 (H)				
25 (J)				

Note: All dimensions are in millimeters (mm)

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