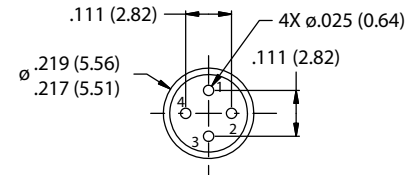


# 233-261 Bulkhead feed-thru with shielded contacts MIL-DTL-38999 Series III Type

Part Number Development	
<b>Sample Part Number</b>	<b>233-261</b> -H2    Z1    17    Q    -02    S    N    -01
<b>Series / Basic Part No.</b>	Series 23 SuperNine Bulkhead Feed-thru
<b>Connector Style</b>	H2 = Box Mount    H7 = Jam-Nut Mount DH7 = Dual O-ring, Jam-Nut Mount    H8 = Weld Mount
<b>Finish*</b>	Z1 = CRES, Passivated    ZL = CRES, Nickel Finish
<b>Shell Size</b>	Per MIL-DTL-38999
<b>Shielded Contact</b>	C = Coax    Q = Quadrax (Size 8 contacts only)    T = Concentric Twinax See Special RF contact arrangements beginning on page D-6 for more details
<b>Arrangement</b>	Per MIL-STD-1560
<b>Configuration</b>	P = Pin on Jam Nut Side    S = Socket on Jam Nut Side PP = Pin-Pin (See note 2)    SS = Socket-Socket (See note 2)
<b>Polarization*</b>	A, B, C, D, E, N = Normal; see section A for key position details
<b>Panel Thickness</b>	-01 = .125/.062    -02 = .250/.062    -03 = .500/.062; See Panel Thickness Table

**\*Refer to Section A for complete details, consult factory for additional options**  
Modification codes may be added directly to the end of any valid part number

Shell Size / Insert Arrangement Availability <sup>3</sup>										
Arr. No.	Size	Cntct Type	Size 20	Cntct Type	Size 16	Cntct Type	Size 12	Cntct Type	Size 8	Cntct Type
15-21	17	S/P	3	S/P	---	N/A	1	N/A	---	N/A
17-2*	38	S/P	---	N/A	---	N/A	---	N/A	1	TWINAX
17-3*	38	S/P	---	N/A	---	N/A	---	N/A	1	TWINAX
17-6	---	N/A	---	S/P	---	N/A	6	COAX	---	N/A
17-11	---	N/A	8	N/A	---	N/A	3	COAX	---	N/A
19-19	14	S/P	---	N/A	---	N/A	---	N/A	---	TWINAX
21-11	---	N/A	---	N/A	---	N/A	11	N/A	---	N/A
21-29	---	N/A	19	S/P	4	S/P	4	COAX	4	N/A
21-75‡	---	N/A	---	N/A	---	N/A	---	COAX	4	TWINAX
21-76‡	---	N/A	---	N/A	---	N/A	---	N/A	2	TWINAX
25-7†	---	S/P	---	N/A	---	N/A	---	N/A	8	TWINAX
25-80	97	N/A	---	N/A	---	N/A	---	N/A	2	TWINAX
25-9†	---	S/P	---	N/A	---	N/A	---	N/A	8	TWINAX
25-100	97	N/A	---	N/A	---	N/A	---	N/A	---	TWINAX
25-19	---	N/A	---	N/A	---	N/A	19	COAX	3	N/A
25-20#	---	N/A	10	S/P	13	S/P	4	COAX	3	TWINAX
25-21#	---	N/A	10	S/P	13	S/P	4	COAX	2	TWINAX
25-46@	---	N/A	40	S/P	4	S/P	---	N/A	2	COAX
25-47@	---	N/A	40	S/P	4	S/P	---	N/A	2	COAX
25-90+	---	N/A	40	S/P	4	S/P	---	N/A	2	TWINAX
25-91+	---	N/A	40	S/P	4	S/P	---	N/A	2	TWINAX



Quadrax Pin Interface  
(Cavity Id Refer. Only)  
For 100 Ohm Nominal Impedance

Contact Performance	
Size and Type	Frequency
#12 Coax	2 GHz
#8 Coax	1 GHz
#8 Twinax (Conc.)	20 MHz
#8 Quadrax	1 GHz

**NOTES**

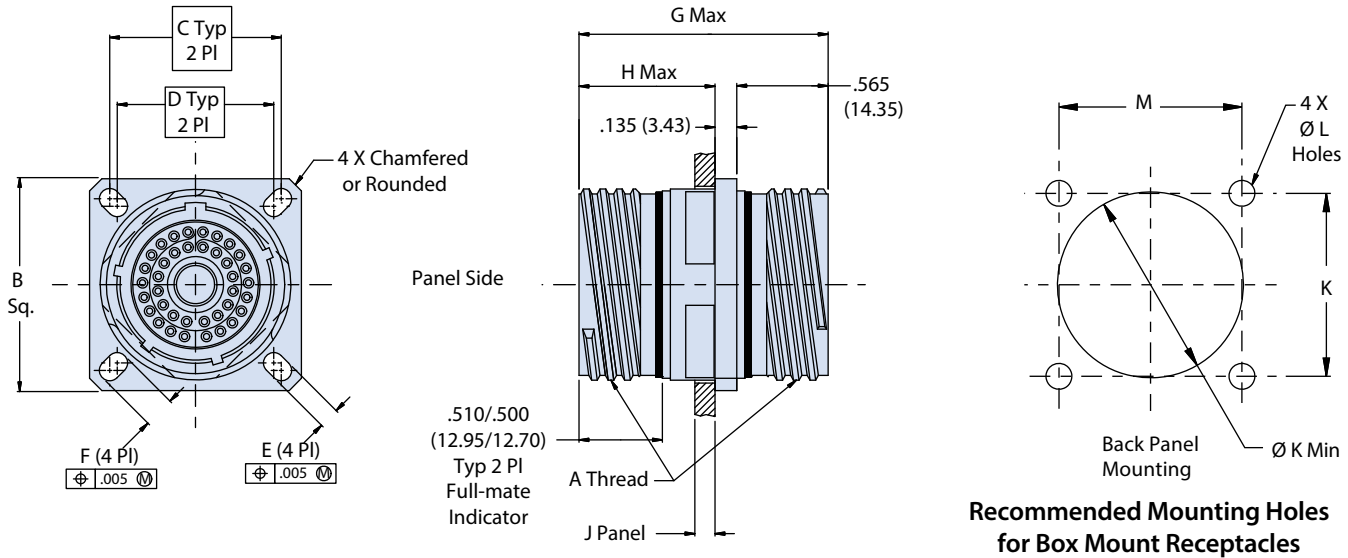
- Hermeticity: <math>1 \times 10^{-7}</math> ccHe/sec @ 1 atmosphere delta pressure
- For PP or SS style, only symmetrical layouts may be selected. Power applied to contact on one side will result in power to the opposite contact, regardless of marking
- Arrangements marked with like symbols (I.E. 17-2\* and 17-3\*) are identical. Environmental connectors use contact sealing boots
- For shell style H2, SS style, dimensions "G" and "H" will increase .100"
- For shell style H8, SS style, 01 dimensions "E" and "F" increase by .150"

**Material/Finish**

- Shell and jam-nut (H7 and DH7): 300 series CRES/per part number development
- Contact, pin: nickel-iron and nickel alloy/gold plate
- Contact, socket: copper alloy/gold plate
- Hoods, sockets: CRES/passivate
- Insulator, hermetic: full glass/N.A.
- Insulator, socket: rigid dielectric/N.A.
- Seals: fluorosilicone blend elastomer/N.A.

**233-261 Bulkhead feed-thru with shielded contacts**  
**MIL-DTL-38999 Series III Type**

**233-261-H2 BOX MOUNT FEED-THRU CONNECTOR**



**Recommended Mounting Holes for Box Mount Receptacles**

D

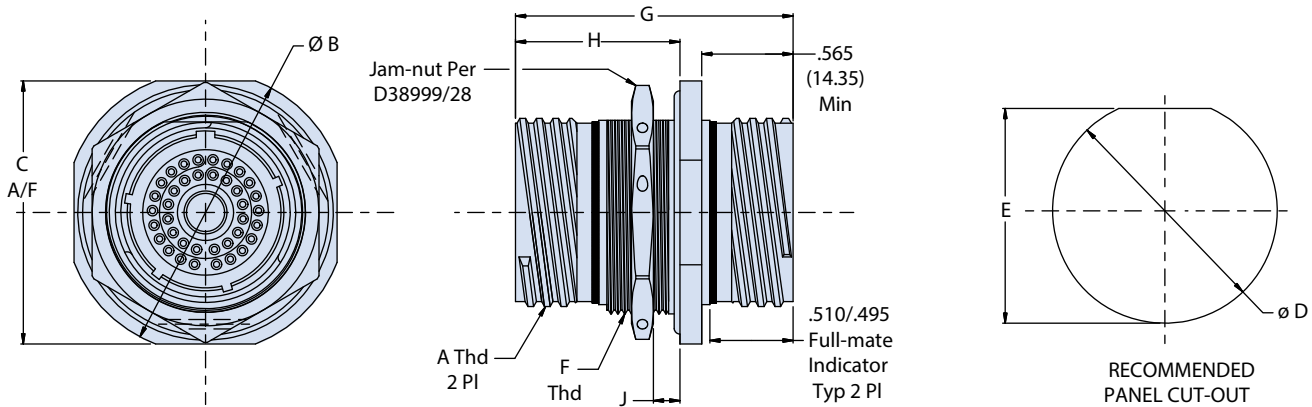
Dimensions						
Shell Size	A Thread	B SQ	C Bsc	D BSC	E	F
9	.6250 -1 P-0.3L-TS-2A	.949 (24.10) .925 (23.50)	.719 (18.26)	.594 (15.09)	.136 (3.45) .120 (3.05)	.224 (5.69) .208 (5.28)
11	.7500 -1 P-0.3L-TS-2A	1.043 (26.49) 1.019 (25.88)	.812 (20.62)	.719 (18.26)	.136 (3.45) .120 (3.05)	.202 (5.13) .186 (4.72)
13	.8750 -1 P-0.3L-TS-2A	1.138 (28.91) 1.114 (28.30)	.706 (17.93)	.812 (20.62)	.136 (3.45) .120 (3.05)	.202 (5.13) .186 (4.72)
15	1.0000 -1 P-0.3L-TS-2A	1.232 (31.29) 1.208 (30.68)	.969 (24.61)	.906 (23.01)	.136 (3.45) .120 (3.05)	.181 (4.60) .165 (4.19)
17	1.1875 -1 P-0.3L-TS-2A	1.323 (33.60) 1.299 (32.99)	1.062 (26.97)	.969 (24.61)	.136 (3.45) .120 (3.05)	.202 (5.13) .186 (4.72)
19	1.2500 -1 P-0.3L-TS-2A	1.449 (36.80) 1.425 (36.20)	1.156 (29.36)	1.062 (26.97)	.136 (3.45) .120 (3.05)	.202 (5.13) .186 (4.72)
21	1.3750 -1 P-0.3L-TS-2A	1.575 (40.00) 1.551 (39.40)	1.250 (31.75)	1.156 (29.36)	.136 (3.45) .120 (3.05)	.202 (5.13) .186 (4.72)
23	1.5000 -1 P-0.3L-TS-2A	1.701 (43.21) 1.677 (42.60)	1.375 (34.92)	1.250 (31.75)	.162 (4.11) .146 (3.71)	.250 (6.35) .234 (5.94)
25	1.6250 -1 P-0.3L-TS-2A	1.823 (46.30) 1.799 (45.69)	1.500 (38.10)	1.375 (34.92)	.162 (4.11) .146 (3.71)	.250 (6.35) .234 (5.94)

Box Mount Dimensions			
Shell Size	Ø K Min	Ø L Holes	M
9	.656 (16.66)	.133 (3.38) .123 (3.12)	.724 (18.39) .714 (18.14)
11	.781 (19.84)	.133 (3.38) .123 (3.12)	.817 (20.75) .807 (20.50)
13	.921 (23.39)	.133 (3.38) .123 (3.12)	.911 (23.14) .901 (22.89)
15	1.047 (26.59)	.133 (3.38) .123 (3.12)	.973 (24.71) .963 (24.46)
17	1.218 (30.94)	.133 (3.38) .123 (3.12)	1.067 (27.10) 1.57 (39.88)
19	1.296 (32.92)	.133 (3.38) .123 (3.12)	1.161 (29.49) 1.151 (29.24)
21	1.421 (36.09)	.133 (3.38) .123 (3.12)	1.255 (31.88) 1.245 (31.62)
23	1.546 (39.27)	.159 (4.04) .149 (3.78)	1.380 (35.05) 1.370 (34.80)
25	1.672 (42.47)	.159 (4.04) .149 (3.78)	1.505 (38.23) 1.495 (37.97)

Panel Thickness			
Shell Size	G Dim, OAL Max	H Dim, Max	J Dim, Panel
-01*	1.600 (40.64)	.843 (21.41)	.125 (3.17)/.062 (1.57)
-02	1.730 (43.94)	1.040 (26.42)	.250 (6.35)/.062 (1.57)
-03	2.000 (50.80)	1.290 (32.77)	.500 (12.70)/.062 (1.57)

# 233-261 Bulkhead feed-thru with shielded contacts MIL-DTL-38999 Series III Type

## 233-261-H7 JAM-NUT MOUNT FEED-THRU CONNECTOR AND 233-261-DH7 DUAL O-RING JAM-NUT MOUNT FEED-THRU CONNECTOR



Dimensions				
Shell Size	A Thread	D BSC	E	F
9	.6250 -1 P-0.3L-TS-2A	.703 (17.86)	.661 (16.79)	M17 x 1.0-6g
		.693 (17.60)	.665 (16.89)	
11	.7500 -1 P-0.3L-TS-2A	.835 (21.21)	.771 (19.58)	M20 x 1.0-6g
		.825 (20.95)	.761 (19.33)	
13	.8750 -1 P-0.3L-TS-2A	1.020 (25.91)	.955 (24.26)	M25 x 1.0-6g
		1.010 (25.65)	.945 (24.00)	
15	1.0000 -1 P-0.3L-TS-2A	1.145 (29.08)	1.085 (27.56)	M28 x 1.0-6g
		1.135 (28.83)	1.075 (27.30)	
17	1.1875 -1 P-0.3L-TS-2A	1.270 (32.26)	1.210 (30.73)	M32 x 1.0-6g
		1.260 (32.00)	1.200 (30.48)	
19	1.2500 -1 P-0.3L-TS-2A	1.395 (35.43)	1.335 (33.91)	M35 x 1.0-6g
		1.385 (35.18)	1.325 (33.65)	
21	1.3750 -1 P-0.3L-TS-2A	1.520 (38.61)	1.460 (37.08)	M38 x 1.0-6g
		1.510 (38.35)	1.450 (36.83)	
23	1.5000 -1 P-0.3L-TS-2A	1.645 (41.78)	1.585 (40.26)	M41 x 1.0-6g
		1.635 (41.53)	1.575 (40.00)	
25	1.6250 -1 P-0.3L-TS-2A	1.770 (44.96)	1.710 (43.43)	M44 x 1.0-6g
		1.760 (44.70)	1.700 (43.18)	



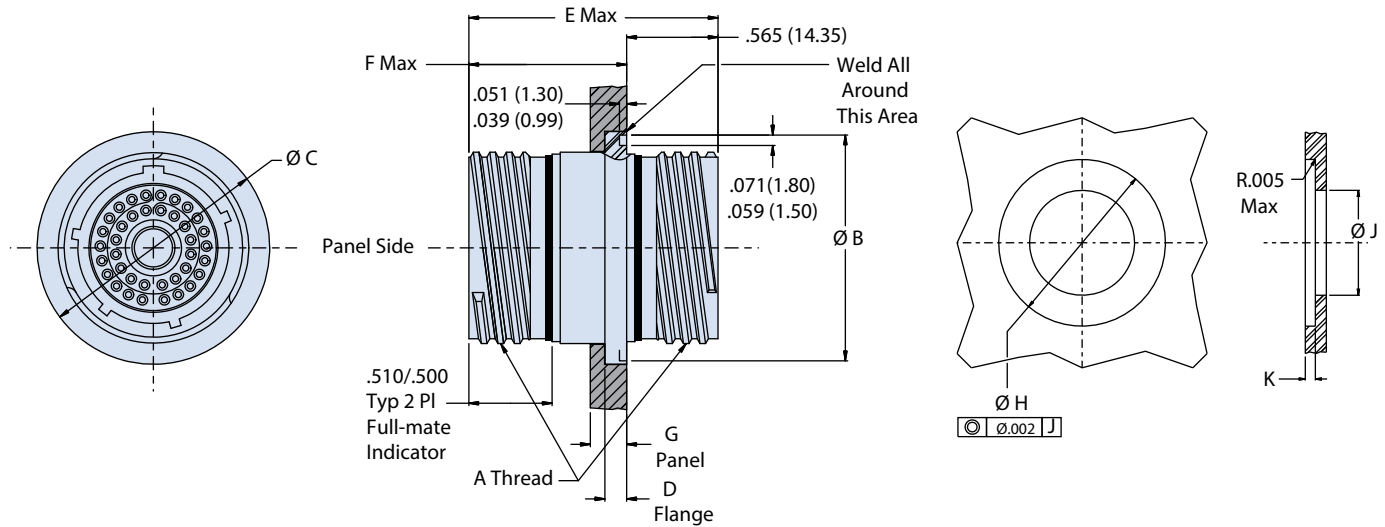
Jam-Nut Mount (H7) Dimension		
Shell Size	B DIA	C MAX
9	1.189 (30.20)	1.063 (27.00)
11	1.375 (34.92)	1.252 (31.80)
13	1.500 (38.10)	1.375 (34.92)
15	1.626 (41.30)	1.500 (38.10)
17	1.752 (44.50)	1.626 (41.30)
19	1.937 (49.20)	1.811 (46.00)
21	2.063 (52.40)	1.937 (49.20)
23	2.189 (55.60)	2.063 (52.40)
25	2.311 (58.70)	2.189 (55.60)

Dual O-ring, Jam-Nut (DH7) Mount Dimension		
Shell Size	B DIA	C MAX
9	1.189 (30.20)	1.063 (27.00)
11	1.375 (34.92)	1.252 (31.80)
13	1.500 (38.10)	1.375 (34.92)
15	1.626 (41.30)	1.500 (38.10)
17	1.752 (44.50)	1.626 (41.30)
19	1.937 (49.20)	1.811 (46.00)
21	2.063 (52.40)	1.937 (49.20)
23	2.189 (55.60)	2.063 (52.40)
25	2.311 (58.70)	2.189 (55.60)

Panel Thickness			
Shell Size	G Dim, OAL Max	H Dim, Max	J Dim, Panel
-01	1.670 (42.42)	.889 (22.58)	.125 (3.17)
			.062 (1.57)
-02	1.800 (45.72)	1.090 (27.69)	.250 (6.35)
			.062 (1.57)
-03	2.050 (52.07)	1.340 (34.04)	.500 (12.70)
			.062 (1.57)

**233-261 Bulkhead feed-thru with shielded contacts**  
**MIL-DTL-38999 Series III Type**

**233-261-H8 WELD MOUNT FEED-THRU CONNECTOR**



D

Panel Thickness			
SHELL SIZE	E DIM, OAL MAX	F DIM, MAX	G DIM, PANEL
-01 <sup>5</sup>	1.520 (38.61)	.960 (24.38)	.125 (3.17)/.062 (1.57)
-02	1.670 (42.42)	1.110 (28.19)	.250 (6.35)/.062 (1.57)
-03	1.920 (48.77)	1.350 (34.29)	.500 (12.70)/.062 (1.57)

Recommended Panel Cutout			
Shell Size	Ø H	Ø J ±.005	DEPTH K ±.005
9	.990/.985 (25.15/ 25.02)	0.635 (16.13)	0.126 (3.20)
11	1.112/1.107 (28.24/28.12)	0.760 (19.30)	0.126 (3.20)
13	1.238/1.233 (28.12/ 31.32)	0.885 (22.48)	0.126 (3.20)
15	1.364/1.359 (34.65/34.52)	1.010 (25.65)	0.126 (3.20)
17	1.451/1.446 (36.86/ 36.73)	1.195 (30.35)	0.126 (3.20)
19	1.597/1.592 (40.56/ 40.44)	1.260 (32.00)	0.126 (3.20)
21	1.738/1.733 (44.15/ 44.02)	1.385 (35.18)	0.126 (3.20)
23	1.894/1.899 (48.11/48.23)	1.510 (38.35)	0.157 (3.99)
25	1.990/1.985 (50.55/ 50.42)	1.635 (41.53)	0.157 (3.99)

Dimensions				
Shell Size	A Thread	Ø B	Ø C	Ø D
9	.6250	.941 (23.90)	.984 (24.99)	.134 (3.40)
	-.1 P-0.3L-TS-2A	.929 (23.60)	.972 (24.69)	.118 (3.00)
11	.7500	1.063 (27.00)	1.106 (28.09)	.134 (3.40)
	-.1 P-0.3L-TS-2A	1.051 (26.70)	1.094 (27.79)	.118 (3.00)
13	.8750	1.189 (30.20)	1.232 (31.29)	.134 (3.40)
	-.1 P-0.3L-TS-2A	1.177 (29.90)	1.220 (30.99)	.118 (3.00)
15	1.0000	1.315 (33.40)	1.358 (34.49)	.134 (3.40)
	-.1 P-0.3L-TS-2A	1.303 (33.10)	1.346 (34.19)	.118 (3.00)
17	1.1875	1.402 (35.61)	1.445 (36.70)	.134 (3.40)
	-.1 P-0.3L-TS-2A	1.390 (35.31)	1.433 (36.40)	.118 (3.00)
19	1.2500	1.547 (39.29)	1.591 (40.41)	.134 (3.40)
	-.1 P-0.3L-TS-2A	1.535 (38.99)	1.579 (40.11)	.118 (3.00)
21	1.3750	1.689 (42.90)	1.732 (43.99)	.134 (3.40)
	-.1 P-0.3L-TS-2A	1.677 (42.60)	1.720 (43.69)	.118 (3.00)
23	1.5000	1.854 (47.09)	1.898 (48.21)	.165 (4.19)
	-.1 P-0.3L-TS-2A	1.842 (46.79)	1.886 (47.90)	.149 (3.78)
25	1.6250	1.941 (49.30)	1.984 (50.39)	.165 (4.19)
	-.1 P-0.3L-TS-2A	1.929 (49.00)	1.972 (50.09)	.149 (3.78)

1. Crimp removable socket contacts to conform to M39029/57-359 (size 12) M39029/57-358 (size 16), M39029/57-357 (size 20) and M39029/57-354 (size 22D) contacts required to fully populate rear, plus spares as required by mil-spec, are shipped loose with the connector.