

**233-103 Bulkhead feed-thrus**  
**MIL-DTL-38999 Series III**

Part Number Development									
<b>Sample Part Number</b>	233-103			-H2	Z1	17-35	S	N	-02
<b>Series / Basic Part No.</b>	Series 23 SuperNine Hermetic Bulkhead Feed-thru								
<b>Connector Style</b>	H2 = Box Mount    H7 = Jam-Nut Mount    DH7 = Dual O-ring Jam-Nut Mount H8 = Weld Mount    H9 = Jam Nut Mount, Gender Changer								
<b>Finish*</b>	Z1 = CRES, Passivated ZL = CRES, Nickel Finish								
<b>Shell Size-Insert Arrangement*</b>	Per MIL-DTL-38999/MIL-STD-1560								
<b>Contact Type</b>	P = Pin on panel side    S = Socket on panel side PP = Pin-Pin (See note 1)    SS = Socket-Socket (See note 1) PP and SS contacts not available for Jam-Nut Mount, Gender Changer (H9) connector style								
<b>Polarization*</b>	A, B, C, D, E, N = Normal								
<b>Panel Thickness</b>	01, 02, 03; See panel thickness table per connector style								

**\*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

Hermetic Leak Rate Mod Codes	
Designator	Required Leak Rate
-585A	1 x 10 <sup>-10</sup> cc Helium per second
-585B	1 x 10 <sup>-9</sup> cc Helium per second
-585C	1 x 10 <sup>-8</sup> cc Helium per second

**NOTES**

1. For PP or SS style, only symmetrical layouts may be selected. Power to a given contact on one end will result in power to contact directly opposite, regardless of identification letter.
2. Glenair 233-103 will mate with any QPL manufacturer's 38999 Series III plug of same shell size, polarization and opposite contact gender.
3. Hermeticity: less than 1 x 10<sup>-7</sup> ccHe/sec at 1 atmosphere differential.
4. For weld mount (H8) connector style, "SS" style, -01 dimensions "E" and "F" increase by .150"
5. Electrical safety limits must be established by user. Peak voltage, switching surge, transient, etc should be used to determine safe application

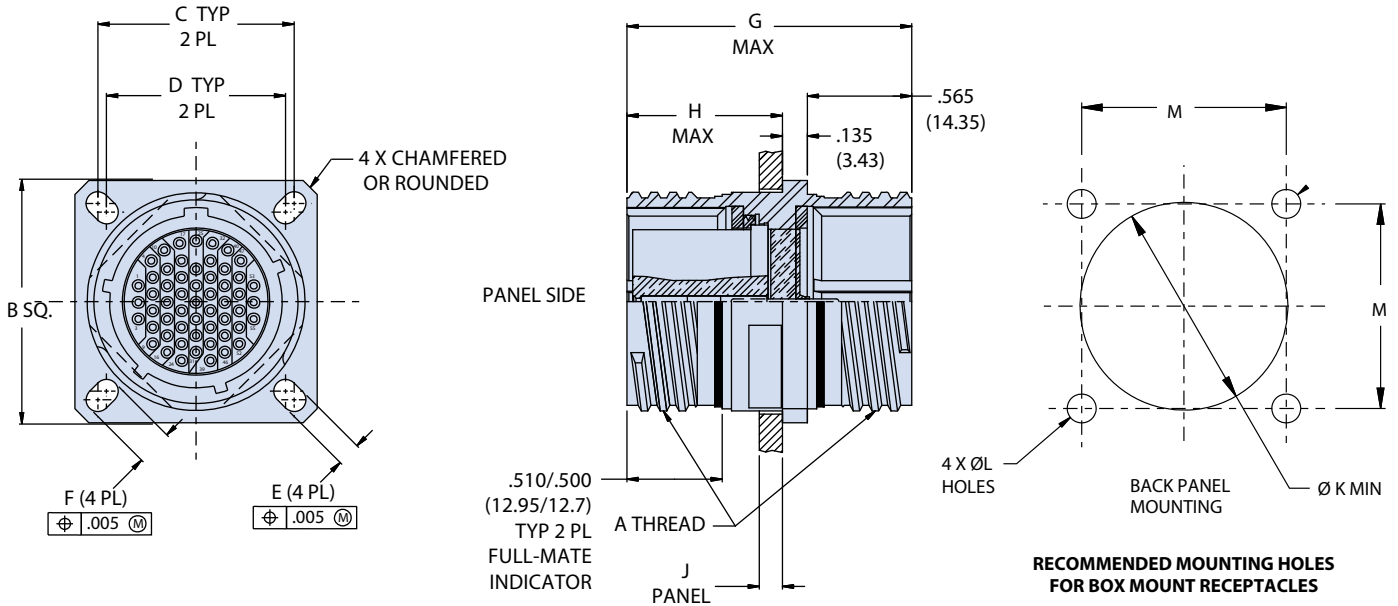
**Material / Finish**

- Shell and jam-nut (H7): CRES/passivate or CRES/nickel plate
- Contacts pin: nickel/iron alloy/gold plate
- Contacts sockets: copper alloy/gold plate insulator
- Insulator hermetic: vitreous glass/N.A
- Insulator socket: rigid dielectric/N.A
- Seals: fluorosilicone blend/N.A.

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**233-103-H2 BOX MOUNT RECEPTACLE**



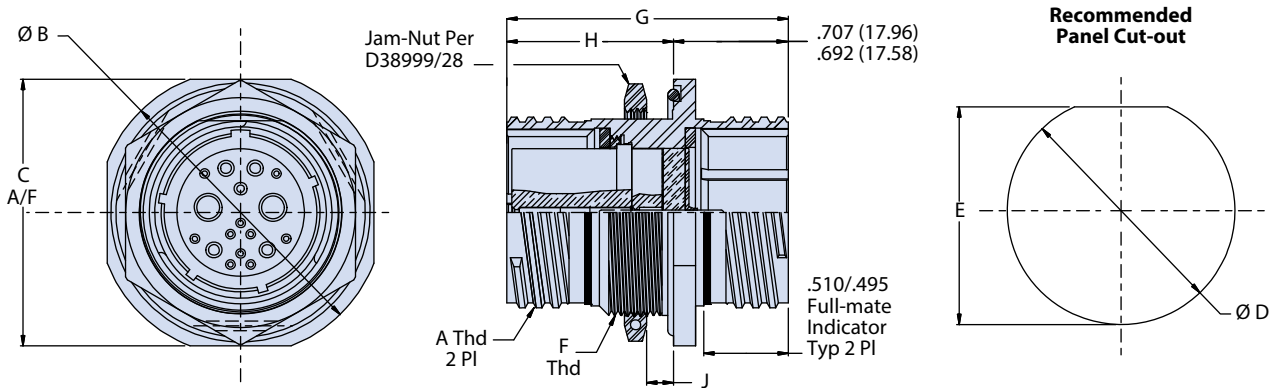
Dimensions						
SHELL SIZE	A THREAD	B SQ.	C BSC.	D BSC.	E	F
9	.6250	0.949 (24.10)	0.719	0.594	0.136 (3.45)	0.224 (5.69)
	.1 P-.3L-TS-2A	0.925 (23.50)	(18.26)	(15.09)	0.120 (3.05)	0.208 (5.28)
11	.7500	1.043 (26.49)	0.812	0.719	0.136 (3.45)	0.202 (5.13)
	.1 P-.3L-TS-2A	1.019 (25.88)	(20.62)	(18.26)	0.120 (3.05)	0.186 (4.72)
13	.8750	1.138 (28.91)	0.906	0.812	0.136 (3.45)	0.202 (5.13)
	.1 P-.3L-TS-2A	1.114 (28.30)	(23.01)	(20.62)	0.120 (3.05)	0.186 (4.72)
15	1.0000	1.232 (31.29)	0.969	0.906	0.136 (3.45)	0.181 (4.60)
	.1 P-.3L-TS-2A	1.208 (30.68)	(24.61)	(23.01)	0.120 (3.05)	0.165 (4.19)
17	1.1875	1.323 (33.60)	1.062	0.969	0.136 (3.45)	0.202 (5.13)
	.1 P-.3L-TS-2A	1.299 (32.99)	(26.97)	(24.61)	0.120 (3.05)	0.186 (4.72)
19	1.2500	1.449 (36.80)	1.156	1.062	0.136 (3.45)	0.202 (5.13)
	.1 P-.3L-TS-2A	1.425 (36.20)	(29.36)	(26.97)	0.120 (3.05)	0.186 (4.72)
21	1.3750	1.575 (40.00)	1.250	1.156	0.136 (3.45)	0.202 (5.13)
	.1 P-.3L-TS-2A	1.551 (39.40)	(31.75)	(29.36)	0.120 (3.05)	0.186 (4.72)
23	1.5000	1.701 (43.21)	1.375	1.25	0.162 (4.11)	0.250 (6.35)
	.1 P-.3L-TS-2A	1.677 (42.60)	(34.92)	(31.75)	0.146 (3.71)	0.234 (5.94)
25	1.6250	1.823 (46.30)	1.500	1.375	0.162 (4.11)	0.250 (6.35)
	.1 P-.3L-TS-2A	1.799 (45.69)	(38.10)	(34.92)	0.146 (3.71)	0.234 (5.94)

Recommended Mounting Holes			
SHELL SIZE	Ø K MIN	Ø L HOLES	M
9	0.656 (16.66)	0.133 (3.38)	0.724 (18.39)
		0.123 (3.12)	0.714 (18.14)
11	0.781 (19.84)	0.133 (3.38)	0.817 (20.75)
		0.123 (3.12)	0.807 (20.50)
13	0.921 (23.39)	0.133 (3.38)	0.911 (23.14)
		0.123 (3.12)	0.901 (22.89)
15	1.047 (26.59)	0.133 (3.38)	0.973 (24.71)
		0.123 (3.12)	0.963 (24.46)
17	1.218 (30.94)	0.133 (3.38)	1.067 (27.10)
		0.123 (3.12)	1.057 (26.85)
19	1.296 (32.92)	0.133 (3.38)	1.161 (29.49)
		0.123 (3.12)	1.151 (29.24)
21	1.421 (36.09)	0.133 (3.38)	1.255 (31.88)
		0.123 (3.12)	1.245 (31.62)
23	1.546 (39.27)	0.159 (4.04)	1.380 (35.05)
		0.149 (3.78)	1.370 (34.80)
25	1.672 (42.47)	0.159 (4.04)	1.505 (38.23)
		0.149 (3.78)	1.495 (37.97)

Box Mount (H2) Panel Thickness			
DASH NO.	G DIM, OAL MAX	H DIM, MAX	J DIM, PANEL
-01	1.600 (40.64)	.843 (21.41)	.125 (3.18) .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)

**233-103 Bulkhead feed-thrus**  
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**233-103-H7 JAM-NUT MOUNT AND**  
**233-103-DH7 DUAL O-RING JAM-NUT RECEPTACLE**

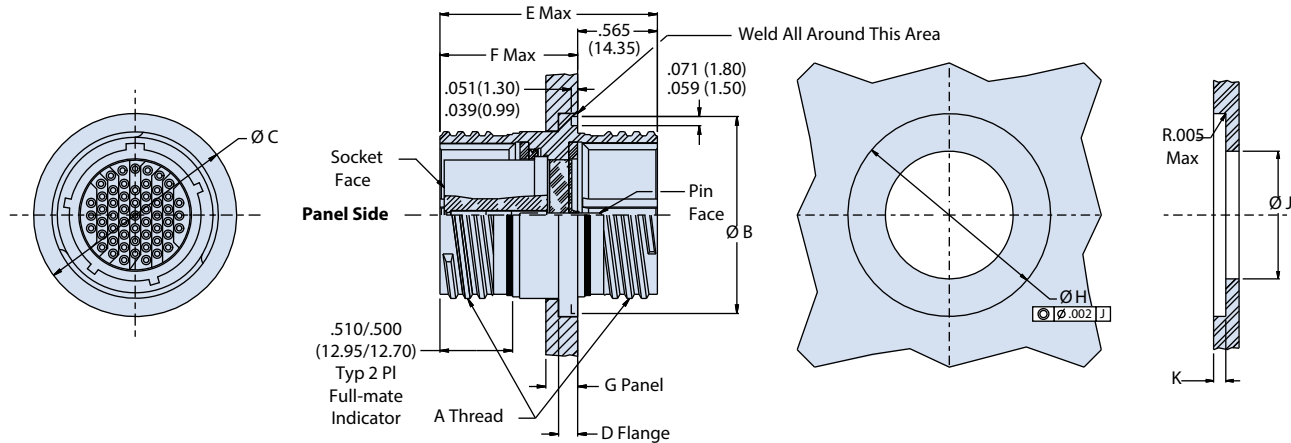


Dimensions								
SHELL SIZE	A THREAD 0.1 P-0.3L- TS-2	H7 Jam-Nut		DH7 Dual O-Ring Jam-Nut		D DIA	E DIM	F THREAD METRIC X 1.0-6G
		B DIA	C	B DIA	C			
9	.6250	1.189 (30.20)	1.063 (27.00)	1.500 (38.10)	1.375 (34.92)	.703 (17.86) .693 (17.60)	.661 (16.79) .655 (16.64)	M17
11	.7500	1.375 (34.92)	1.252 (31.80)	1.625 (41.28)	1.500 (38.10)	.835 (21.21) .825 (20.96)	.771 (19.58) .761 (19.33)	M20
13	.8750	1.500 (38.10)	1.374 (34.90)	1.752 (44.50)	1.626 (41.30)	1.020 (25.91) 1.010 (25.65)	.955 (24.26) .945 (24.00)	M25
15	1.0000	1.626 (41.30)	1.500 (38.10)	1.937 (49.20)	1.811 (46.00)	1.145 (29.08) 1.135 (28.83)	1.085 (27.56) 1.075 (27.30)	M28
17	1.1875	1.752 (44.50)	1.626 (41.30)	2.063 (52.40)	1.937 (49.20)	1.270 (32.26) 1.260 (32.00)	1.210 (30.73) 1.200 (30.48)	M32
19	1.2500	1.937 (49.20)	1.811 (46.00)	2.189 (55.60)	2.063 (52.40)	1.395 (35.43) 1.385 (35.18)	1.335 (33.91) 1.325 (33.65)	M35
21	1.3750	2.063 (52.40)	1.937 (49.20)	2.311 (58.70)	2.189 (55.60)	1.520 (38.61) 1.510 (38.35)	1.460 (37.08) 1.450 (36.83)	M38
23	1.5000	2.189 (55.60)	2.063 (52.40)	2.500 (63.50)	2.300 (58.42)	1.645 (41.78) 1.635 (41.53)	1.585 (40.26) 1.575 (40.00)	M41
25	1.6250	2.311 (58.70)	2.189 (55.60)	2.625 (66.68)	2.400 (60.96)	1.770 (44.96) 1.760 (44.70)	1.710 (43.43) 1.700 (43.18)	M44

Jam-Nut Mount (H7) Panel Thickness			
DASH NO.	G DIM, OAL MAX	H DIM, MAX	J DIM, PANEL
-01	1.670 (42.42)	.890 (22.61)	.125 (3.18) .062 (1.57)
-02	1.780 (45.21)	1.090 (27.69)	.250 (6.35) .062 (1.57)
-03	2.030 (51.56)	1.340 (34.04)	.500 (12.70) .062 (1.57)

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**233-103-H8 WELD MOUNT RECEPTACLE**



Dimensions					
Shell Size Code	Shell Size	A Thread	Ø B	Ø C	D
A	9	.6250-.1P-.3L-TS-2A	.941 (23.90) .929 (23.60)	.984 (24.99) .972 (24.69)	.134 (3.40) .118 (3.00)
B	11	.7500-.1P-.3L-TS-2A	1.063 (27.00) 1.051 (26.70)	1.106 (28.09) 1.094 (27.79)	.134 (3.40) .118 (3.00)
C	13	.8750-.1P-.3L-TS-2A	1.189 (30.20) 1.177 (29.90)	1.232 (31.29) 1.220 (30.99)	.134 (3.40) .118 (3.00)
D	15	1.0000-.1P-.3L-TS-2A	1.315 (33.40) 1.303 (33.10)	1.358 (34.49) 1.346 (34.19)	.134 (3.40) .118 (3.00)
E	17	1.1875-.1P-.3L-TS-2A	1.402 (35.61) 1.390 (35.31)	1.445 (36.70) 1.433 (36.40)	.134 (3.40) .118 (3.00)
F	19	1.2500-.1P-.3L-TS-2A	1.547 (39.29) 1.535 (38.99)	1.591 (40.41) 1.579 (40.11)	.134 (3.40) .118 (3.00)
G	21	1.3750-.1P-.3L-TS-2A	1.689 (42.90) 1.677 (42.60)	1.732 (43.99) 1.720 (43.69)	.134 (3.40) .118 (3.00)
H	23	1.5000-.1P-.3L-TS-2A	1.854 (47.09) 1.842 (46.79)	1.898 (48.21) 1.886 (47.90)	.165 (4.19) .149 (3.78)
J	25	1.6250-.1P-.3L-TS-2A	1.941 (49.30) 1.929 (49.00)	1.984 (50.39) 1.972 (50.09)	.165 (4.19) .149 (3.78)

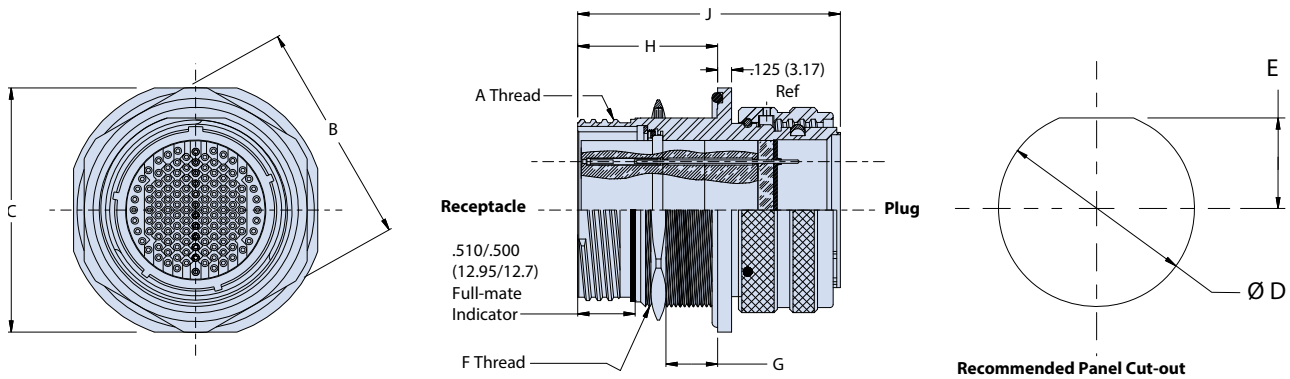
Recommended Panel Cutout			
Shell Size	Ø H	Ø J ±.005 (0.13)	Depth K ±.005 (0.13)
9	.990/.985 (25.15/ 25.02)	.635 (16.13)	.126 (3.20)
11	1.112/1.107 (28.24/ 28.12)	.760 (19.30)	.126 (3.20)
13	1.238/1.233 (31.45/ 31.32)	.885 (22.48)	.126 (3.20)
15	1.364/1.359 (34.65/34.52)	1.010 (25.65)	.126 (3.20)
17	1.451/1.446 (36.86/ 36.73)	1.195 (3.35)	.126 (3.20)
19	1.597/1.592 (40.56/ 40.44)	1.260 (32.00)	.126 (3.20)
21	1.738/1.733 (44.15/ 44.02)	1.385 (35.18)	.126 (3.20)
23	1.894/1.899 (48.11/ 48.23)	1.510 (38.35)	.157 (3.99)
25	1.990/1.985 (50.55/ 50.42)	1.635 (41.53)	.157 (3.99)

Weld Mount (H8) Panel Thickness			
Dash no	E Dim, OAL Max	F Dim, Max	G Dim, Panel
-01	1.630 (41.40)	1.060 (26.92)	.250 (6.35) .175 (4.44)
-02	1.750 (44.45)	1.180 (29.97)	4.25 (107.95) .175 (4.44)
-03	1.920 (48.77)	1.350 (34.29)	.600 (15.24) .175 (4.44)



**233-103 Bulkhead feed-thrus**  
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**233-103-H9 JAM-NUT MOUNT GENDER CHANGER**



Dimensions						
SHELL SIZE	A THREAD	B MAX	C DIM MAX	D DIA	E DIA	F THREAD
9	.6250 0.1 P-0.3L-TS-2	.945(24.0)	1.09 (27.7)	0.703 (17.9) 0.693 (17.6)	0.661 (16.8) 0.653 (16.6)	M17X1-6G-0.100R
11	.7500 0.1 P-0.3L-TS-2	1.063(27.0)	1.28 (32.5)	0.835 (21.2) 0.825 (21.0)	0.771 (19.6) 0.761 (19.3)	M20X1-6G-0.100R
13	.8750 0.1 P-0.3L-TS-2	1.260(32.0)	1.40 (35.6)	1.020 (25.9) 1.010 (25.7)	0.955 (24.3) 0.945 (24.0)	M25X1-6G-0.100R
15	1.0000 0.1 P-0.3L-TS-2	1.417(36.0)	1.53 (38.9)	1.145 (29.1) 1.135 (28.8)	1.085 (27.6) 1.075 (27.3)	M28X1-6G-0.100R
17	1.1875 0.1 P-0.3L-TS-2	1.457(37.0)	1.66 (42.2)	1.270 (32.3) 1.260 (32.0)	1.210 (30.7) 1.200 (30.5)	M32X1-6G-0.100R
19	1.2500 0.1 P-0.3L-TS-2	1.614(41.0)	1.84 (46.7)	1.395 (35.4) 1.385 (35.2)	1.335 (33.9) 1.325 (33.7)	M35X1-6G-0.100R
21	1.3750 0.1 P-0.3L-TS-2	1.811(46.0)	1.97 (50.5)	1.520 (38.6) 1.510 (38.4)	1.460 (37.1) 1.450 (36.8)	M38X1-6G-0.100R
23	1.5000 0.1 P-0.3L-TS-2	1.968(50.0)	2.09 (53.1)	1.645 (41.8) 1.635 (41.5)	1.585 (40.3) 1.575 (40.0)	M41X1-6G-0.100R
25	1.6250 0.1 P-0.3L-TS-2	2.017(51.2)	2.21 (56.1)	1.770 (45.0) 1.760 (44.7)	1.710 (43.4) 1.700 (43.2)	M44X1-6G-0.100R

Panel Thickness			
DASH NO.	G	H MAX	J MAX
-01	.062 - .125 (1.6 - 3.2)	.890 (22.6)	2.000 (50.8)
-02	.062 - .250 (1.6 - 6.4)	1.150 (29.2)	2.225 (56.5)
-03	.062 - .500 (1.6 - 12.7)	1.400 (35.6)	2.450 (62.2)

Panel Thickness			
DASH NO.	G	H MAX	J MAX
-01	.062 - .125 (1.6 - 3.2)	.890 (22.6)	2.000 (50.8)
-02	.062 - .250 (1.6 - 6.4)	1.150 (29.2)	2.225 (56.5)
-03	.062 - .500 (1.6 - 12.7)	1.400 (35.6)	2.450 (62.2)

DWV Voltage Levels at Sea Level	
SERVICE RATING	VOLTAGE AC RMS 60HR
M	1300 VAC
I	1800 VAC
II	2300 VAC
N	1000 VAC