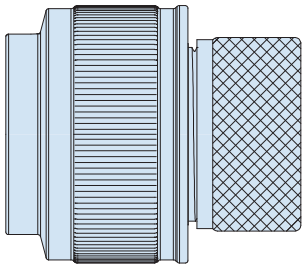
SuperNine® Series IV Environmental

MIL-DTL-38999 Series IV Type
250-104 Shorting connectors, plug and receptacles



"BETTER-THAN-QPL" FEATURES AND BENEFITS

- Secure breech-lock mating connector meets D38999 shock and vibe
- Improved plug ground fingers deliver outstanding EMI performance—equal to D38999 Series III
- Glenair Signature Tin Zinc finish class is RoHS compliant and cadmium compatible
- Precision-machined key/keyway polarization for reliable mismating protection
- Scoop-proof design prevents pin damage and short circuits
- Fully tooled for all MIL-STD-1560 insert arrangements
- Contact options include size #22D, #20, #16, and #12 (see High-Speed series for Size #8)
- 500 mating cycles exceeds MIL-DTL-38999 specification

HOW TO ORDER

Sample Part Number	250-104	-G6	NF	17	-35	P	N
Basic Part Number	**250-104** Plug and receptacle connector, shorting						
Connector Style	**G6** = Plug Connector **D0** = Wall-Mount Thru Hole **07** = Receptacle, Jam Nut						
Material / Finish	See Table I						
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**						
Insert Arrangement	MIL-STD-1560						
Insert Designator	**P** = Pin Contacts **S** = Socket Contacts						
Polarization	**A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**, **N** = Normal, **U** = Universal						

TABLE I - MATERIAL/FINISH

Equiv Class	Sym	Material	Finish
W	**NF**	Aluminum Alloy	Cad/O.D. over Electroless Nickel
G*	**MA****		Electroless Nickel, Matte
T*	**MT**		Nickel-PTFE
F	**ME**		Electroless Nickel
AA	**MN**		MegaNickel
V	**TZ**		Tin-Zinc
Z*	**ZR**		Zinc Ni, Black (Tri-Valent CR)
K*	**Z1**	Stainless Steel	Passivate
L*	**ZL**		Electrodeposited Nickel

* = Glenair Equivalent Only

** = Connectors for space applications must be ordered with "MA" finish and mod code "-186T" to conform to the thermal vacuum outgassing requirements of class G.

TABLE II - POLARIZING POSITIONS

	N	A	B	C	D	K	L	M	R	U
X	110°	100°	90°	80°	70°	120°	120°	120°	120°	N/A
Y	250°	260°	270°	280°	290°	255°	265°	275°	285°	N/A

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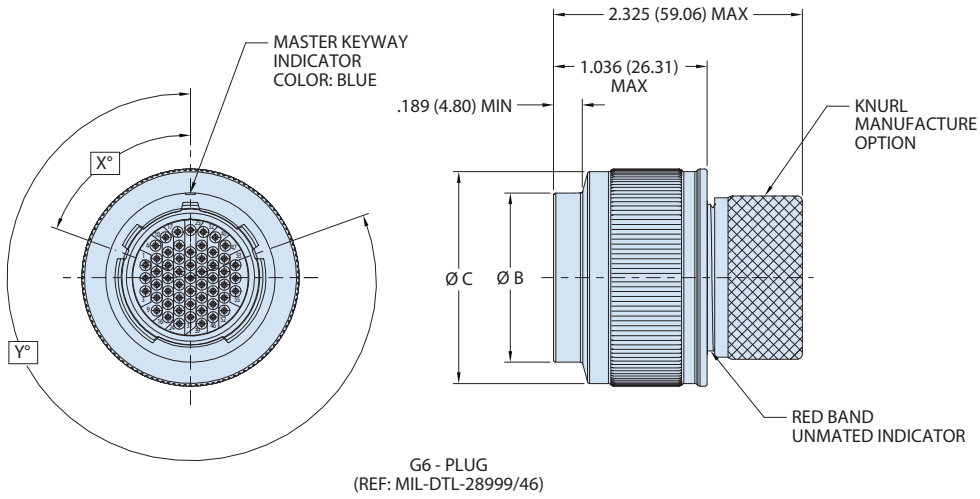
TABLE III - PLUG REF: MIL-DTL-38999/46 OR 47



G6 - PLUG
(REF: MIL-DTL-28999/46)

Shell Size	Shell Size Code	ØB Max	ØC Max
11	B	.776 (19.7)	1.047 (26.6)
13	C	.902 (22.9)	1.220 (31.0)
15	D	1.039 (26.4)	1.346 (34.2)
17	E	1.150 (29.2)	1.472 (37.4)
19	F	1.276 (32.4)	1.583 (40.2)
21	G	1.402 (35.6)	1.705 (43.3)
23	H	1.528 (38.8)	1.831 (46.5)
25	J	1.650 (41.9)	1.957 (49.7)

NOTES

1. Material/finish:
   - Shell, barrel, coupling nut, jam nut - see Table I
   - Insulator - high grade rigid dielectric / N.A.
   - Seals, O-ring - fluorosilicone blend/ N.A
   - Contact - copper alloy
2. Glenair environmental connectors are designed to mate with any QPL manufacturer's MIL-DTL-38999, Series IV mating plug or receptacle having the same shell size, insert arrangment, and polarization.
3. Insert arrangement is in accordance with MIL-STD-1560.
4. Insert arrangement is shown for reference only. Pin interface shown.
5. Alternate polarization 'U' (universal) is a non-standard MIL-SPEC option which allows for mating to any QPL manufacturer's MIL-DTL-38999, Series III connector having the same shell size, insert arrangement, and mating contact size. Universal connectors are intended for use in testing facilities only and should be highly evaluated before consideration in another environment.
6. All contacts are shorted to each other and to the shell. The maximum resistance as measured from any contact to the shell shall be 10 miliohms.
7. Connector temperature range: -55°C to 175°C. Contact manufacturer for additional options.

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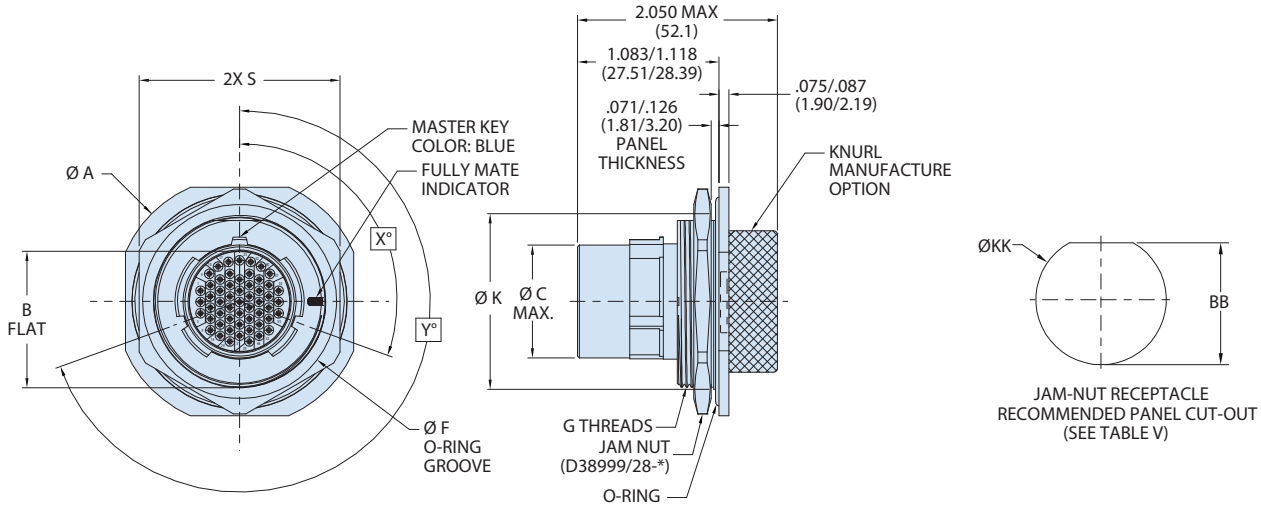
250-104 Plug and receptacle connector, shorting

TABLE IV - JAM NUT RECEPTACLE (REF: MIL-DTL-38999/44)



07 - JAM NUT RECEPTACLE
(REF: MIL-DTL-38999/44)

Shell Size	Shell Size Code	ØA	B (Flat)	ØC Max	ØF	G Thread	ØJ	ØK	S	O-Ring P/N
11	B	1.520 (38.6) 1.480 (37.6)	.942 (23.93) .935 (23.74)	.509 (12.93)	1.096 (27.84) 1.085 (27.55)	M25 X 1.0-6g 0.100R	.804 (20.42) .794 (20.17)	1.000 (25.40) .990 (25.15)	1.394 (35.4) 1.354 (34.4)	AS3582-024
13	C	1.642 (41.7) 1.602 (40.7)	1.066 (27.08) 1.059 (26.89)	.634 (16.10)	1.221 (31.02) 1.210 (30.73)	M28 X 1.0-6g 0.100R	.928 (23.57) .918 (23.32)	1.125 (28.58) 1.115 (28.33)	1.520 (38.6) 1.480 (37.6)	AS3582-026
15	D	1.768 (44.9) 1.728 (43.9)	1.191 (30.26) 1.184 (30.07)	.759 (19.28)	1.346 (34.19) 1.335 (33.90)	M31 X 1.0-6g 0.100R	1.046 (26.56) 1.036 (26.31)	1.250 (31.75) 1.240 (31.50)	1.642 (41.7) 1.602 (40.7)	AS3582-028
17	E	1.957 (49.7) 1.917 (48.7)	1.321 (33.56) 1.314 (33.37)	.885 (22.48)	1.483 (37.67) 1.472 (37.38)	M34 X 1.0-6g 0.100R	1.182 (30.02) 1.172 (29.77)	1.375 (34.92) 1.365 (34.67)	1.799 (45.7) 1.760 (44.7)	AS3582-029
19	F	2.035 (51.7) 1.996 (50.7)	1.441 (36.61) 1.434 (36.42)	1.009 (25.63)	1.608 (40.85) 1.597 (40.56)	M38 X 1.0-6g 0.100R	1.296 (32.91) 1.286 (32.66)	1.500 (38.10) 1.490 (37.85)	1.909 (48.5) 1.870 (47.5)	AS3582-030
21	G	2.157 (54.8) 2.118 (53.8)	1.566 (39.78) 1.559 (39.59)	1.134 (28.80)	1.733 (44.02) 1.722 (43.73)	M41 X 1.0-6g 0.100R	1.422 (36.11) 1.412 (35.86)	1.625 (41.28) 1.615 (41.03)	2.035 (51.7) 1.996 (50.7)	AS3582-031
23	H	2.283 (58.0) 2.244 (57.0)	1.691 (42.96) 1.684 (42.77)	1.259 (31.98)	1.858 (47.20) 1.847 (46.91)	M44 X 1.0-6g 0.100R	1.546 (39.26) 1.536 (39.01)	1.750 (44.45) 1.740 (44.20)	2.157 (54.8) 2.118 (53.8)	AS3582-032
25	J	2.409 (61.2) 2.370 (60.2)	1.816 (46.13) 1.809 (45.94)	1.384 (35.15)	1.983 (50.37) 1.972 (50.08)	M47 X 1.0-6g 0.100R	1.672 (42.46) 1.662 (42.21)	1.875 (47.63) 1.865 (47.38)	2.283 (58.0) 2.244 (57.0)	AS3582-033

TABLE V

Shell Size	Shell Size Code	ØKK	BB
11	B	1.020 / 1.010	.955 / .945
13	C	1.145 / 1.135	1.085 / 1.075
15	D	1.270 / 1.260	1.210 / 1.200
17	E	1.395 / 1.385	1.335 / 1.325
19	F	1.520 / 1.510	1.460 / 1.450
21	G	1.645 / 1.635	1.585 / 1.575
23	H	1.770 / 1.760	1.710 / 1.700
25	J	1.895 / 1.885	1.835 / 1.825

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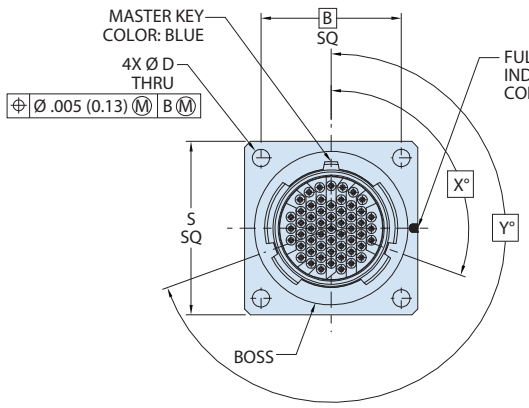
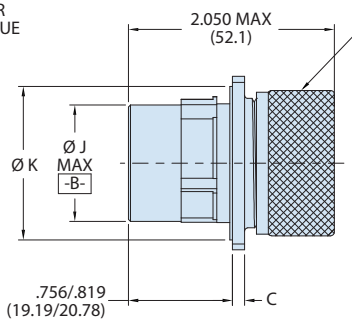
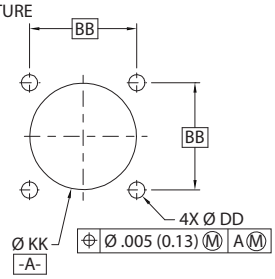
TABLE VI - WALL MOUNT RECEPTACLE REF: MIL-DTL-38999/40



DO - WALL MOUNT RECEPTACLE
(REF: MIL-DTL-38999/40)





WALL MOUNT RECEPTACLE
RECOMMENDED PANEL CUTOUT
.125 MAX PANEL THICKNESS
BACK PANEL MOUNT
(SEE TABLE VII)

Shell Size	Shell Size Code	B Bsc	C	ØD	ØJ Max	ØK	S
11	B	.812 (20.62)	.102 (2.6) .083 (2.1)	.138 (3.5) .122 (3.1)	.509 (12.93)	.793 (20.15) .778 (19.76)	1.051 (26.7) 1.008 (25.6)
13	C	.906 (23.02)	.102 (2.6) .083 (2.1)	.138 (3.5) .122 (3.1)	.634 (16.10)	.913 (23.35) .904 (22.96)	1.146 (29.1) 1.102 (28.0)
15	D	.969 (24.61)	.102 (2.6) .083 (2.1)	.138 (3.5) .122 (3.1)	.759 (19.28)	1.044 (26.52) 1.029 (26.13)	1.240 (31.5) 1.197 (30.4)
17	E	1.062 (26.98)	.102 (2.6) .083 (2.1)	.138 (3.5) .122 (3.1)	.885 (22.48)	1.170 (29.72) 1.155 (29.33)	1.335 (33.9) 1.291 (32.8)
19	F	1.156 (29.36)	.102 (2.6) .083 (2.1)	.138 (3.5) .122 (3.1)	1.009 (25.63)	1.294 (32.87) 1.279 (32.48)	1.461 (37.1) 1.417 (36.0)
21	G	1.250 (31.76)	.134 (3.4) .114 (2.9)	.138 (3.5) .122 (3.1)	1.134 (28.80)	1.419 (36.05) 1.404 (35.66)	1.583 (40.2) 1.539 (39.1)
23	H	1.375 (34.93)	.134 (3.4) .114 (2.9)	.157 (4.0) .142 (3.6)	1.259 (31.98)	1.544 (39.22) 1.529 (38.83)	1.709 (43.4) 1.665 (42.3)
25	J	1.500 (38.10)	.134 (3.4) .114 (2.9)	.157 (4.0) .142 (3.6)	1.384 (35.15)	1.669 (42.40) 1.654 (42.01)	1.835 (46.6) 1.791 (45.5)

TABLE VII

Shell Size	Shell Size Code	ØKK Min	BB Bsc	ØDD
11	B	0.796	0.812	.133/.123
13	C	0.922	0.906	
15	D	1.047	0.969	
17	E	1.219	1.062	
19	F	1.297	1.156	
21	G	1.422	1.250	
23	H	1.547	1.375	.159/.149
25	J	1.672	1.500	.155/.145