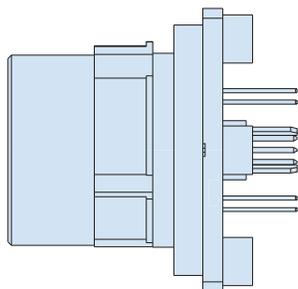


MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail

ENVIRONMENTAL CONNECTORS



HOW TO ORDER	
<b>Sample Part Number</b>	234-218 -00 NF 17 E - 2 P N -909CP
<b>Basic Part Number</b>	234-218
<b>Connector Style</b>	00 = Receptacle, wall-mount through holes HM = Receptacle, wall-mount w/metric helicoil HS = Receptacle, wall-mount w/standard helicoil CM = Receptacle, wall-mount with metric clinch nut CS = Receptacle, wall-mount with standard clinch nut
<b>Material/Finish</b>	(See Table I)
<b>Shell Size</b>	11, 13, 15, 17, 19, 21, 23, 25
<b>Contact Type</b>	(See Table II)
<b>Ground Option</b>	G = Common Ground - = None
<b>Insert Arrangement</b>	PER MIL-STD-1560
<b>Insert Designator</b>	P = Pin Contacts S = Socket Contact
<b>Alternate Key Positions</b>	A, B, C, D, K, L, M, R, N = Normal, U = Universal (Glenair equivalent only)
<b>Optional Mod Code</b>	909** = Supplies connector with contacts 1213 = Supplies connector with contacts per MIL-STD-1560

**"BETTER-THAN-QPL" FEATURES AND BENEFITS**

- Secure breech-lock mating connector meets D38999 shock and vibrate
- Glenair Signature Tin Zinc finish class is RoHS compliant and cadmium compatible
- Precision-machined key/keyway polarization for reliable mismatching 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

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
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 - CONTACT STYLE	
Sym	Description
C	Coax, 50 Ohm
C1	Coax, 75 Ohm
D	Differential Twinax
E*	El Ochito
P	Power
Q	Quadrax
T	Triax/Concentric Twinax
OMIT	Per Mil-Std-1560

MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail

TABLE III - OCHITO POSITIONS B = BLUE, R = RED, W = WHITE								
SYM	Contact 1	Contact 2	Contact 3	Contact 4	Contact 5	Contact 6	Contact 7	Contact 8
E	W	W	W	W	W	W	W	W
E2	B	W	W	W	W	W	W	W
E3	R	W	W	W	W	W	W	W
E4	B	B	W	W	W	W	W	W
E5	R	B	W	W	W	W	W	W
E6	R	R	W	W	W	W	W	W
E7	B	B	B	W	W	W	W	W
E8	R	B	B	W	W	W	W	W
E9	R	R	B	W	W	W	W	W
E10	R	R	R	W	W	W	W	W
E11	B	B	B	B	W	W	W	W
E12	R	B	B	B	W	W	W	W
E13	R	R	B	B	W	W	W	W
E14	R	R	R	B	W	W	W	W
E15	R	R	R	R	W	W	W	W
E16	B	B	B	B	B	W	W	W
E17	R	B	B	B	B	W	W	W
E18	R	R	B	B	B	W	W	W
E19	R	R	R	B	B	W	W	W
E20	R	R	R	R	B	W	W	W
E21	R	R	R	R	R	W	W	W
E22	B	B	B	B	B	B	W	W
E23	R	B	B	B	B	B	W	W
E24	R	R	B	B	B	B	W	W
E25	R	R	R	B	B	B	W	W
E26	R	R	R	R	B	B	W	W
E27	R	R	R	R	R	B	W	W
E28	R	R	R	R	R	R	W	W
E29	B	B	B	B	B	B	B	W
E30	R	B	B	B	B	B	B	W
E31	R	R	B	B	B	B	B	W
E32	R	R	R	B	B	B	B	W
E33	R	R	R	R	B	B	B	W
E34	R	R	R	R	R	B	B	W
E35	R	R	R	R	R	R	B	W
E36	R	R	R	R	R	R	R	W
E37	B	B	B	B	B	B	B	B
E38	R	B	B	B	B	B	B	B
E39	R	R	B	B	B	B	B	B
E40	R	R	R	B	B	B	B	B
E41	R	R	R	R	B	B	B	B
E42	R	R	R	R	R	B	B	B
E43	R	R	R	R	R	R	B	B
E44	R	R	R	R	R	R	R	B
E45	R	R	R	R	R	R	R	R

TABLE IV - EL OCHITO MATING CONTACT		
Mating Part Number	Protocols	
WHITE-PIN	858-003	Use for gb ethernet and 10gb ethernet protocols
WHITE-SKT	858-004	Use for gb ethernet and 10gb ethernet protocols
BLUE-PIN	858-028	Use for USB 3.0 (90 Ohm)
BLUE-SKT	858-029	Use for USB 3.0 (90 Ohm)
RED-PIN	858-030	Use for all high-bandwidth 100 ohm differential lines
RED-SKT	858-031	Use for all high-bandwidth 100 ohm differential lines

TABLE V - 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

TABLE VI	
Contact Size	Pc Tail ØM
#23	.020 (0.51) .018 (0.46)
#22	.020 (0.51) .018 (0.46)
#20	.030 (0.76) .028 (0.71)
#16	.040 (1.02) .038 (0.97)
#12	.072 (1.83) .070 (1.78)

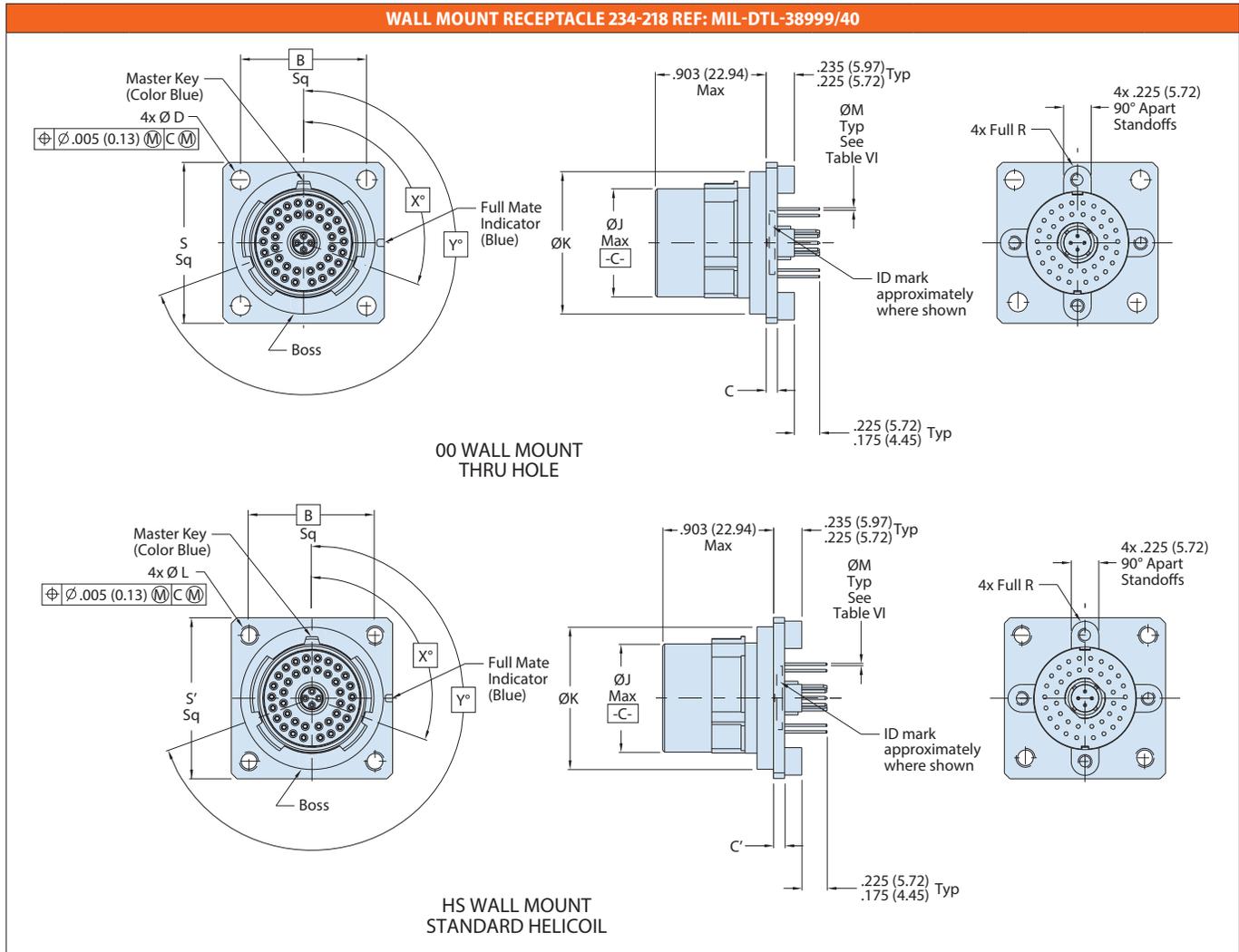
TABLE VII - PANEL CUTOUT				
Shell Size	Shell Size Code	ØKK Min	BB Bsc	ØDD
11	B	0.796 (20.22)	0.812 (20.62)	.133 (3.38)/.123 (3.12)
13	C	0.922 (23.42)	0.906 (23.01)	
15	D	1.047 (26.59)	0.969 (24.61)	
17	E	1.219 (30.96)	1.062 (26.97)	
19	F	1.297 (32.94)	1.156 (29.36)	
21	G	1.422 (36.12)	1.250 (31.75)	.159 (4.04)/.149 (3.78)
23	H	1.547 (39.29)	1.375 (34.93)	
25	J	1.672 (42.47)	1.500 (38.10)	

ENVIRONMENTAL CONNECTORS

MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail

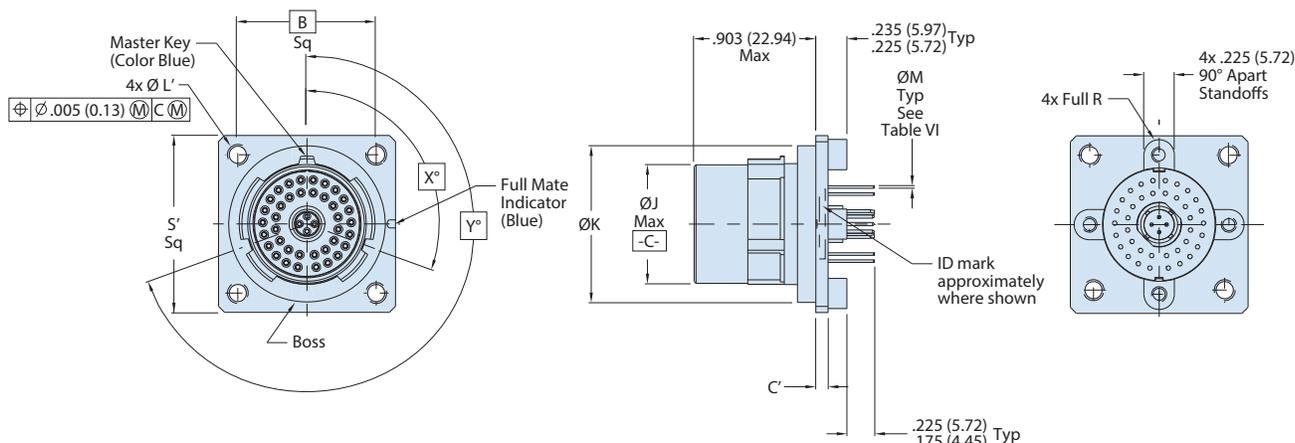
ENVIRONMENTAL CONNECTORS



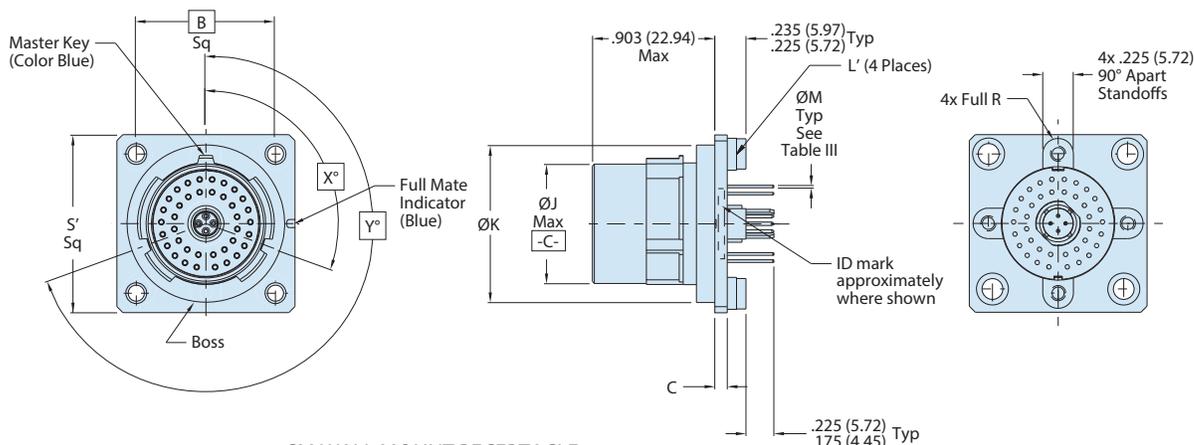
Shell Size	Shell Size Code	B Bsc	C	C'	Ø D	Ø J Max	Ø K	L Thread	L' Thread	S	S'	Ø T
11	B	.812 (20.62)	.102 (2.6) .083 (2.1)	.179 (4.5) .140 (3.6)	.138 (3.5) .122 (3.1)	.509 (12.93)	.793 (20.15) .778 (19.76)	.112-40 UNC	M3 X 0.5	1.051 (26.7) 1.008 (25.6)	1.202 (30.5) 1.162 (29.5)	.585 (14.9)
13	C	.906 (23.02)	.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)	1.296 (32.8) 1.256 (31.9)	.704 (17.9)
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)	1.359 (34.5) 1.319 (33.5)	.861 (21.9)
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)	1.452 (36.9) 1.412 (35.9)	.980 (24.9)
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)	1.546 (39.3) 1.506 (38.3)	1.097 (27.9)
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)	1.640 (41.7) 1.600 (40.6)	1.215 (30.9)
23	H	1.375 (34.93)	.134 (3.4) .114 (2.9)	.190 (4.8) .170 (4.3)	.157 (4.0) .142 (3.6)	1.259 (31.98)	1.544 (39.22) 1.529 (38.83)	.138-32 UNC	M4 X 0.7	1.709 (43.4) 1.665 (42.3)	1.765 (44.8) 1.725 (43.8)	1.332 (33.8)
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)	1.890 (48.0) 1.850 (47.0)	1.451 (36.9)

MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail

WALL MOUNT RECEPTACLE 234-218 REF: MIL-DTL-38999/40



HS WALL MOUNT  
METRIC HELICOIL

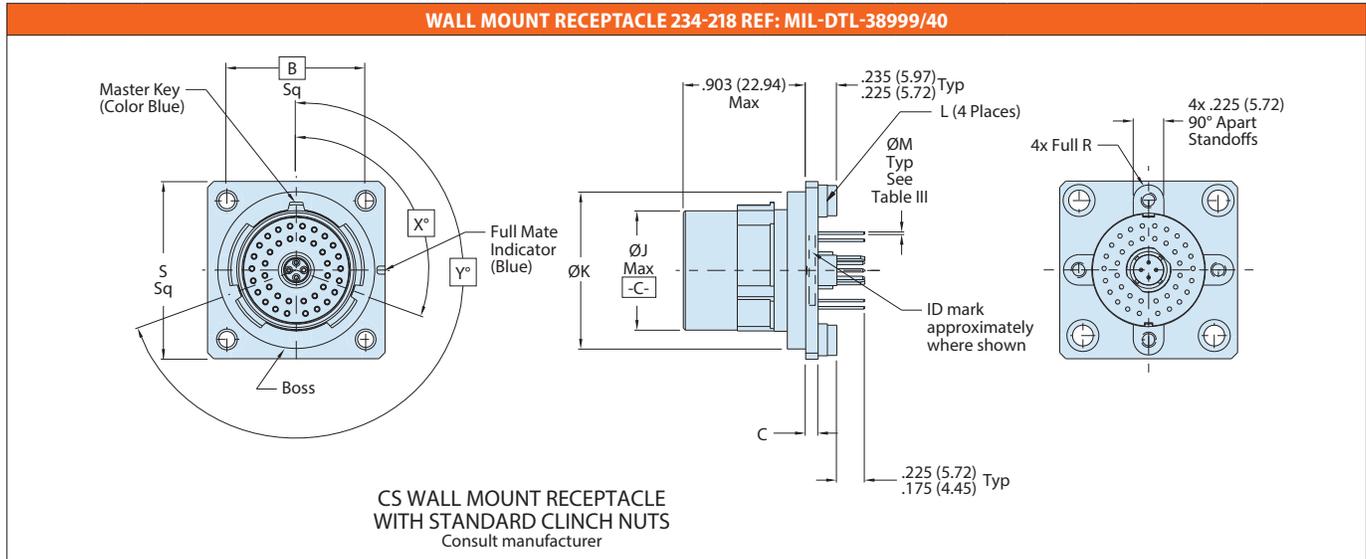


CM WALL MOUNT RECEPTACLE  
WITH METRIC CLINCH NUTS  
Consult manufacturer

Shell Size	Shell Size Code	B Bsc	C	C'	Ø D	Ø J Max	Ø K	L Thread	L' Thread	S	S'	Ø T
11	B	.812 (20.62)	.102 (2.6) .083 (2.1)	.179 (4.5) .140 (3.6)	.138 (3.5) .122 (3.1)	.509 (12.93)	.793 (20.15) .778 (19.76)	.112-40 UNC	M3 X 0.5	1.051 (26.7) 1.008 (25.6)	1.202 (30.5) 1.162 (29.5)	.585 (14.9)
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)	1.296 (32.8) 1.256 (31.9)	.704 (17.9)
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)	1.359 (34.5) 1.319 (33.5)	.861 (21.9)
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)	1.452 (36.9) 1.412 (35.9)	.980 (24.9)
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)	1.546 (39.3) 1.506 (38.3)	1.097 (27.9)
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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)	1.765 (44.8) 1.725 (43.8)	1.332 (33.8)
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)	1.890 (48.0) 1.850 (47.0)	1.451 (36.9)			

MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail

ENVIRONMENTAL CONNECTORS



Shell Size	Shell Size Code	B Bsc	C	C'	Ø D	Ø J Max	Ø K	L Thread	L' Thread	S	S'	Ø T
11	B	.812 (20.62)	.102 (2.6) .083 (2.1)	.179 (4.5) .140 (3.6)	.138 (3.5) .122 (3.1)	.509 (12.93)	.793 (20.15) .778 (19.76)	.112-40 UNC	M3 X 0.5	1.051 (26.7) 1.008 (25.6)	1.202 (30.5) 1.162 (29.5)	.585 (14.9)
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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)	1.359 (34.5) 1.319 (33.5)	.861 (21.9)
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)	1.452 (36.9) 1.412 (35.9)	.980 (24.9)
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)	1.546 (39.3) 1.506 (38.3)	1.097 (27.9)
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)	1.640 (41.7) 1.600 (40.6)	1.215 (30.9)
23	H	1.375 (34.93)	.134 (3.4) .114 (2.9)	.190 (4.8)	.157 (4.0) .142 (3.6)	1.259 (31.98)	1.544 (39.22) 1.529 (38.83)	.138-32 UNC	M4 X 0.7	1.709 (43.4) 1.665 (42.3)	1.765 (44.8) 1.725 (43.8)	1.332 (33.8)
25	J	1.500 (38.10)	.134 (3.4) .114 (2.9)	.170 (4.3)	.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)	1.890 (48.0) 1.850 (47.0)	1.451 (36.9)

MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail insert arrangements

FIGURE 1 - INSERT ARRANGEMENTS

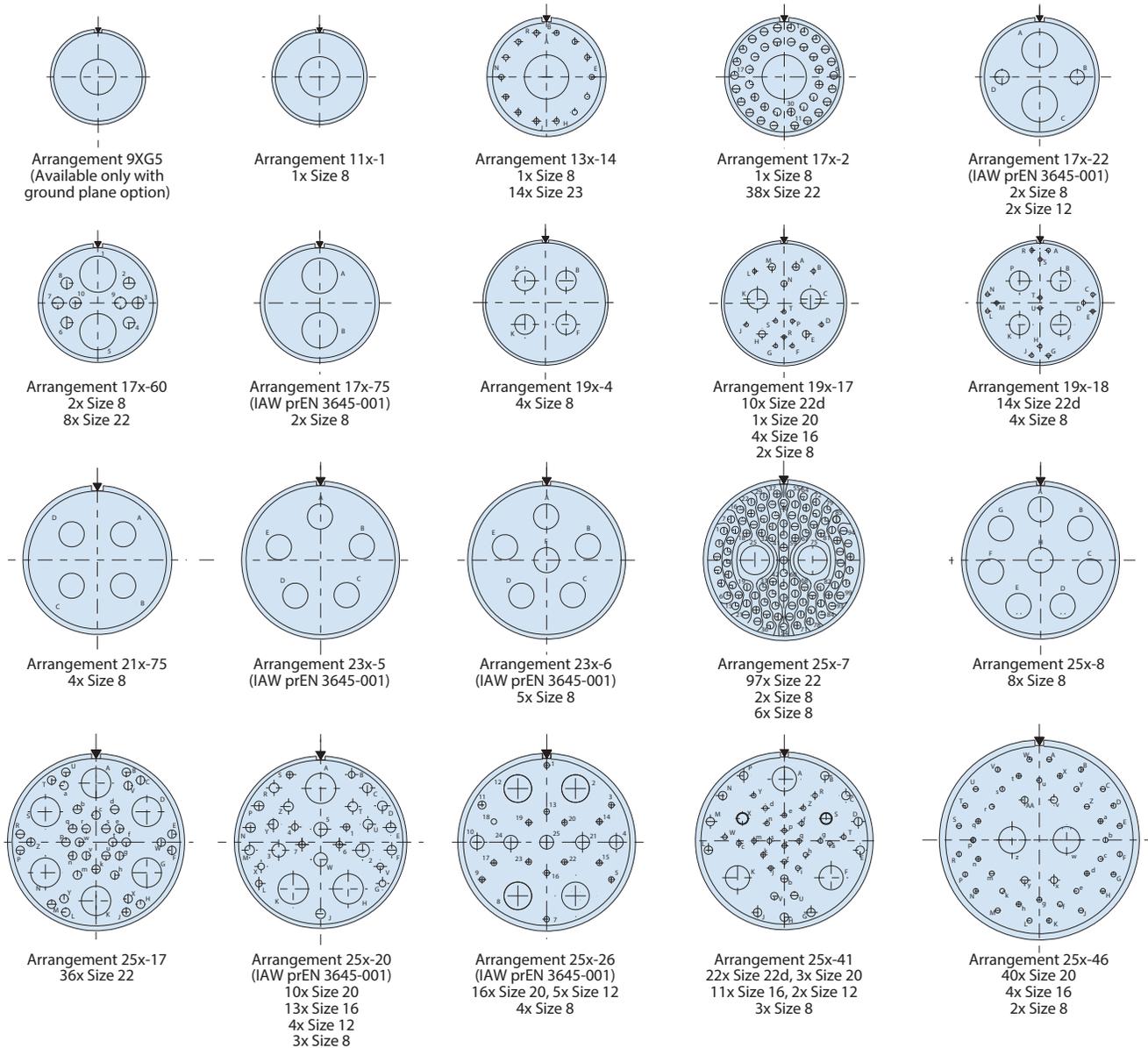
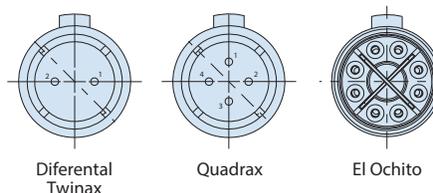


Figure 1  
Insert arrangements, mating face of pin insert shown.  
Replace X with C, D, E, Q or T  
(See Table VI)

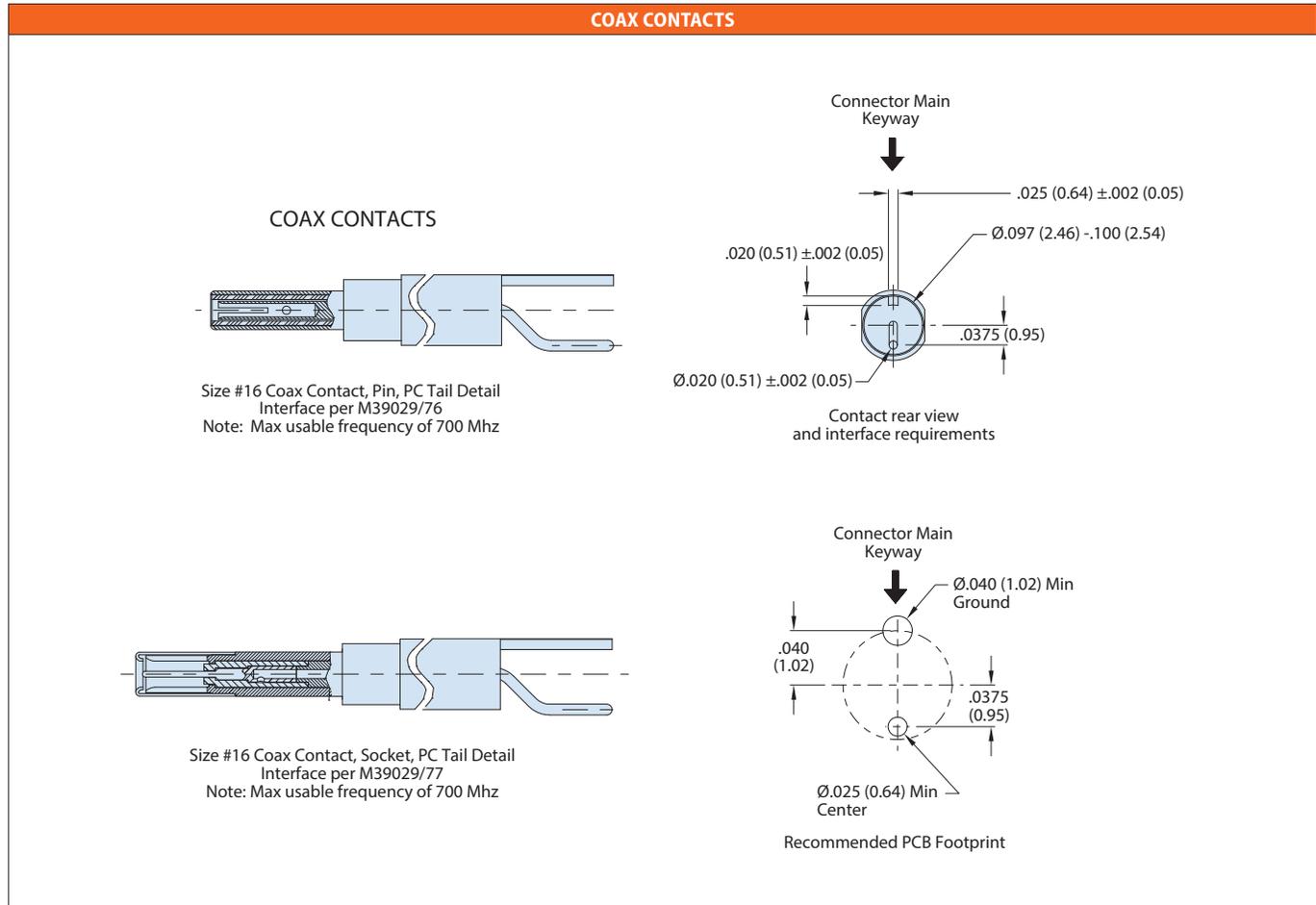
FIGURE 2 - CONTACT INNER PIN ORIENTATION



ENVIRONMENTAL CONNECTORS

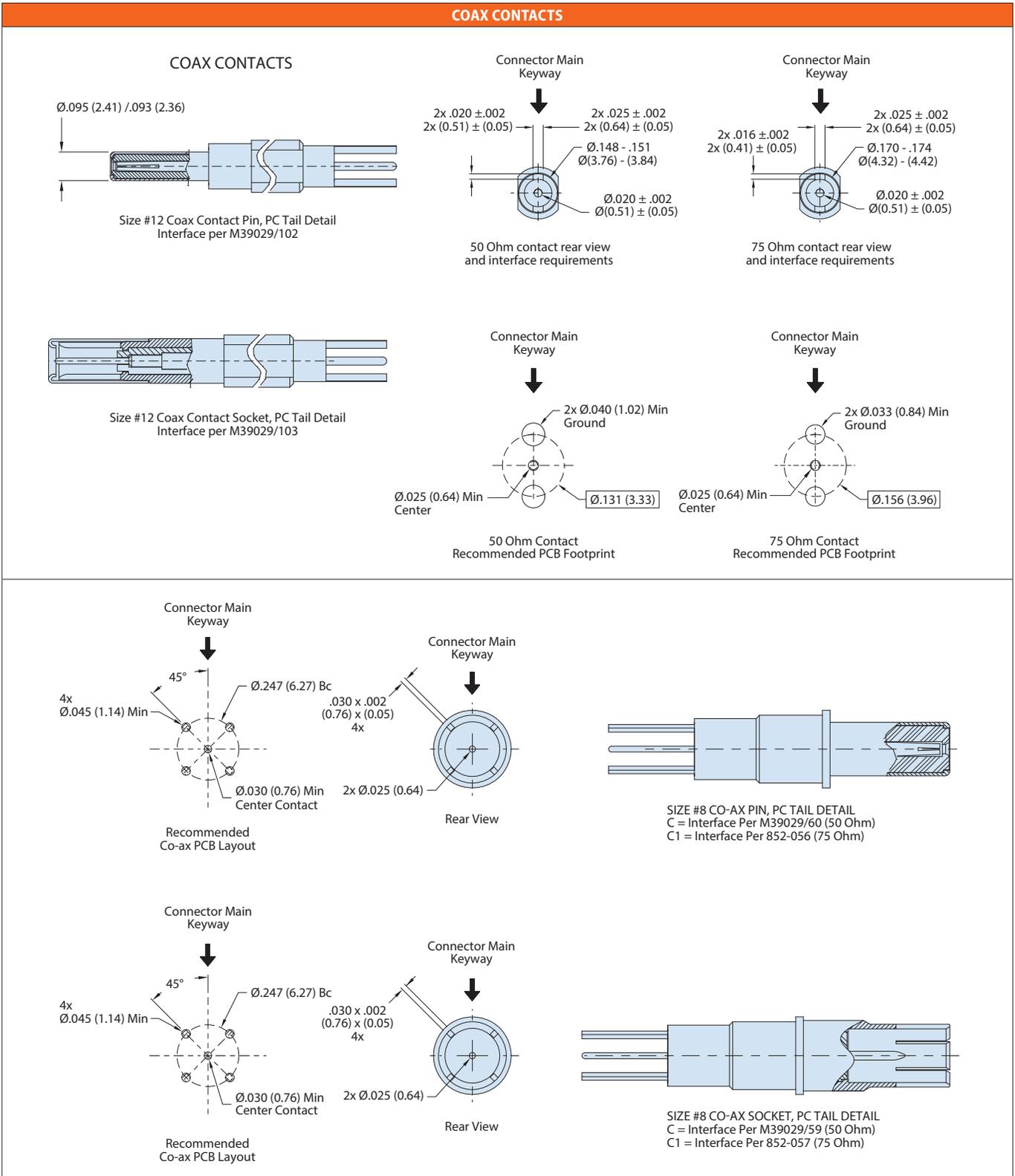
MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail contact options

ENVIRONMENTAL CONNECTORS



- NOTES**
1. Material/Finish
    - Shell - See Table I
    - Contacts - Copper Alloy / Gold Plated
    - Insulators - High Grade Rigid Dielectric for common ground option - Al Alloy/ Mfg Option
    - Seals - Fluorosilicone Blend.
    - Potting - Epoxy.
  2. Glenair's 234-218 receptacle connector is designed to meet or exceed the applicable mechanical, dimensional, electrical, and environmental requirements of MIL-DTL-38999, D38999/20, and MIL-STD-1560 except as shown and/or noted. Receptacle mates with any QPL manufacturer's MIL-DTL-38999, Series III plug connector, D38999/26, having the same shell size, insert arrangement, polarization and mating contact.
  3. Glenair's 233-218 receptacle connector should be mated to Glenair's 233-217 plug with appropriate contacts to optimize performance.
  4. Insert arrangement is in accordance with MIL-STD-1560 and figure 1. Contact manufacturer for additional arrangement options.
  5. Insert arrangement is shown for reference only. Pin interface shown.
  6. See figure 2 for reference orientation of the inner pins relative to connector main keyway.
  7. Ground plane option only available for insert arrangements where all contacts are shielded type.
  8. Coax contact mating interfaces shall be in accordance with the following:
    - Size #16 Per M39029/76 & /77
    - Size #12 Per M39029/102 & 103
    - Size #8, 50 Ohm Per M39029/59 & 60
    - Size #8, 75 Ohm Per 852-056 & -057
  9. El Ochito mating contact shall be in accordance with Table III. El Ochito color type configuration position shall be per Table III.
  10. For optimal performance, see Glenair application note AN0002.

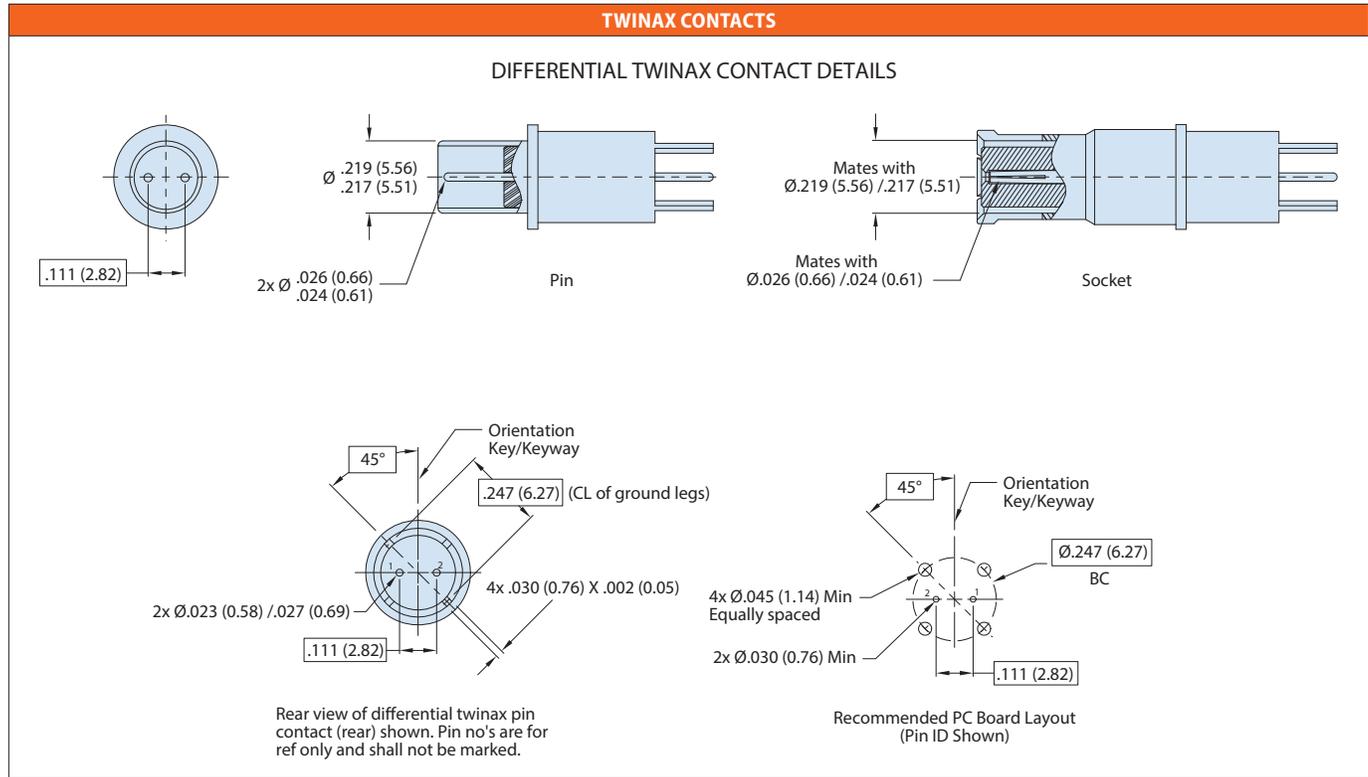
MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail contact options



MIL-DTL-38999 Series IV Type

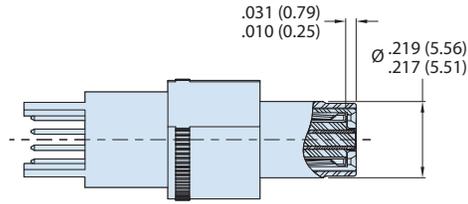
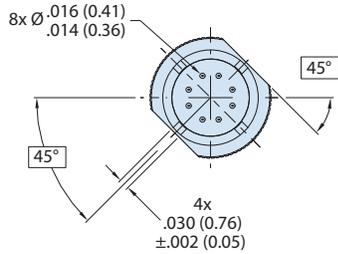
234-218 High-speed panel mount receptacles, PC tail contact options

ENVIRONMENTAL CONNECTORS

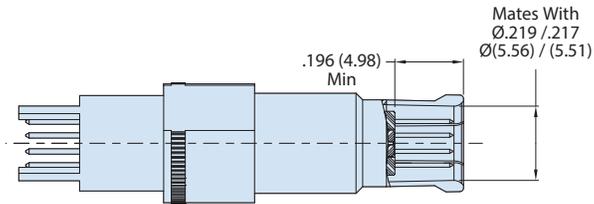
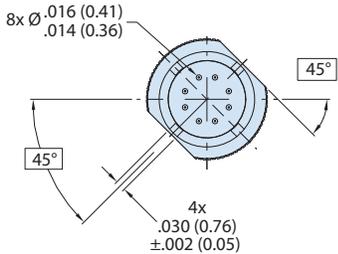


MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail contact options

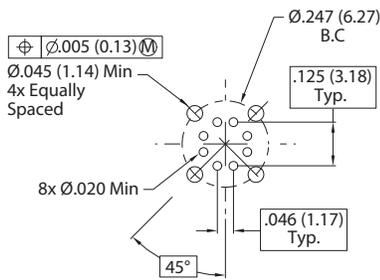
EL OCHITO CONTACTS



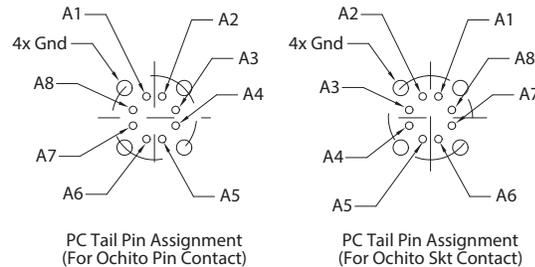
Size #8 El Ochito Pin, Pc Tail Detail  
White Insert - For Ethernet Applications



Size #8 El Ochito Socket, PC Tail Detail  
White Insert - For Ethernet Applications



Recommended PC Board Layout  
(See Detail A for pin assignment)  
For optimal performance, see  
Glenair application note AN0002

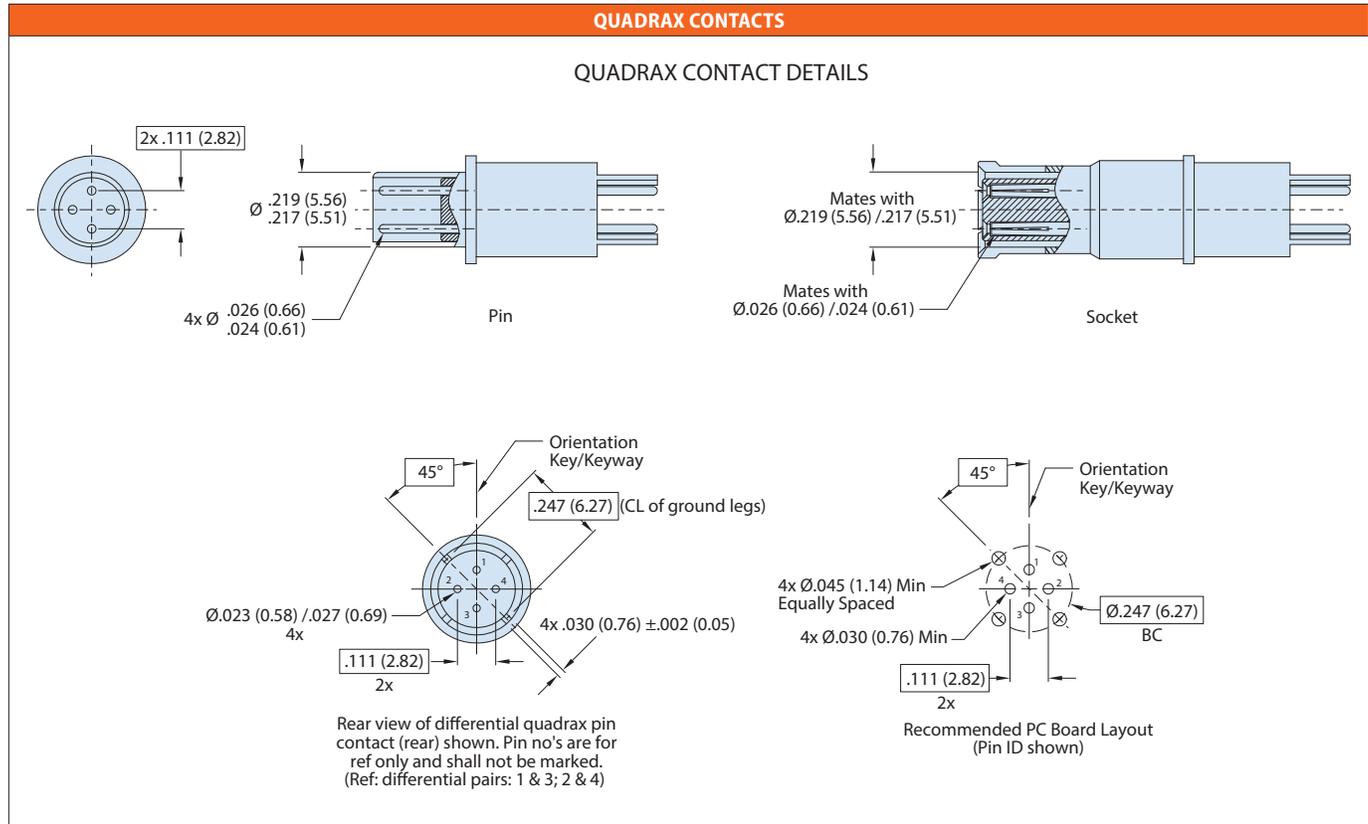


DETAIL A (TYP)

ENVIRONMENTAL CONNECTORS

MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail contact options

ENVIRONMENTAL CONNECTORS



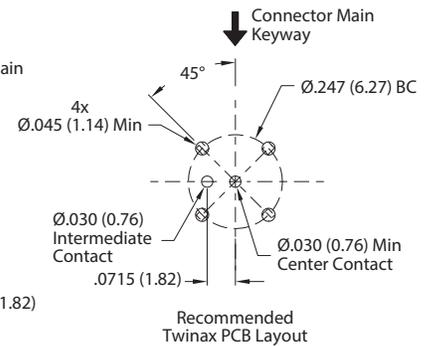
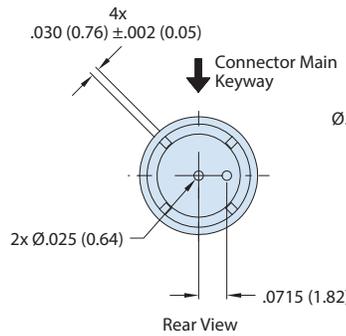
MIL-DTL-38999 Series IV Type  
234-218 High-speed panel mount receptacles, PC tail contact options

**TRIAX / CONCENTRIC TWINAX CONTACTS**

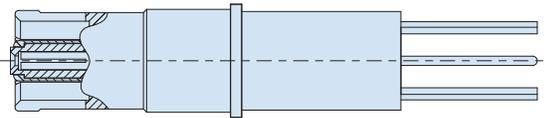
**TRIAX / CONCENTRIC TWINAX PIN**



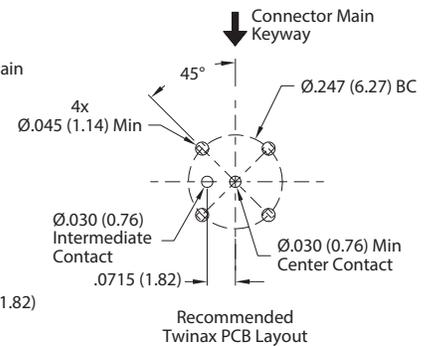
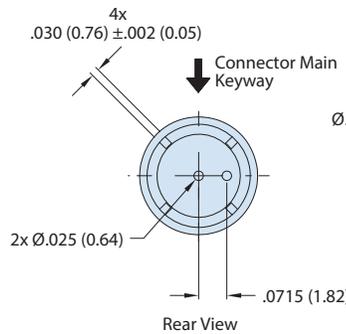
Size #8 Concentric Twinax Pin, PC Tail Detail  
Interface per M39029/90 and/113



**TRIAX / CONCENTRIC TWINAX SOCKET**



Size #8 Concentric Twinax Socket, PC Tail Detail  
Interface per M39029/91 and/114



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