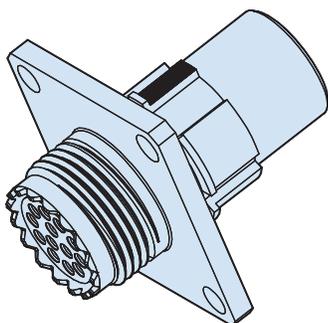


MIL-DTL-38999 Series IV Type  
234-217 High-speed plug, and panel mount and jam nut receptacles



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

- Secure breech-lock mating connector meets D38999 shock and vibrate
- 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 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

HOW TO ORDER	
<b>Sample Part Number</b>	234-217 G6 NF 25 - 8 A N -909CP
<b>Basic Part Number</b>	234-217
<b>Connector Style</b>	(See Table II)
<b>Material/Finish</b>	(See Table I)
<b>Shell Size</b>	11, 13, 15, 17, 19, 21, 23, 25
<b>Ground Option</b>	G = Common Ground - = None
<b>Insert Arrangement</b>	PER MIL-STD-1560
<b>Insert Designator</b>	A = Pin Insert, less contacts B = Socket Insert, less contacts
<b>Alternate Polarization</b>	A, B, C, D, E, N = Normal, U = Universal
<b>Optional Mod Code</b>	909** = Supplies connector with contacts 1213 = Supplies connector with contacts per MIL-STD-1560

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 B - 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

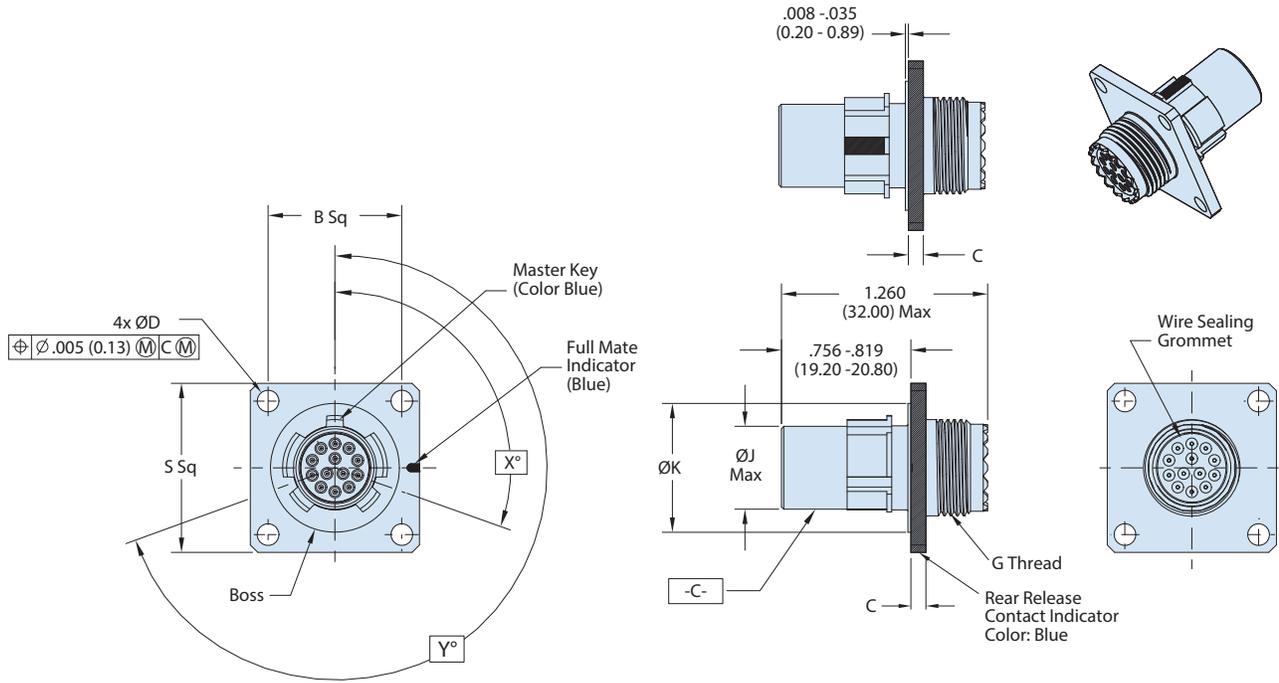
TABLE II - CONNECTOR STYLE	
Sym	Description
<b>D0</b>	Receptacle wall-mount thru hole MIL-DTL-38999/40
<b>07</b>	Receptacle Jam Nut MIL-DTL-38999/44
<b>G6</b>	Plug connector EMI spring MIL-DTL-38999/46
<b>CM</b>	Receptacle, wall-mount with metric clinch nut
<b>CS</b>	Receptacle, wall-mount with standard clinch nuts
<b>HM</b>	Receptacle, wall-mount with metric helicoils
<b>HS</b>	Receptacle, wall-mount with standard helicoils

ENVIRONMENTAL CONNECTORS

MIL-DTL-38999 Series IV Type  
234-217 High-speed plug, and panel mount and jam nut receptacles

ENVIRONMENTAL CONNECTORS

WALL MOUNT RECEPTACLE 234-105-40 REF: MIL-DTL-38999/40

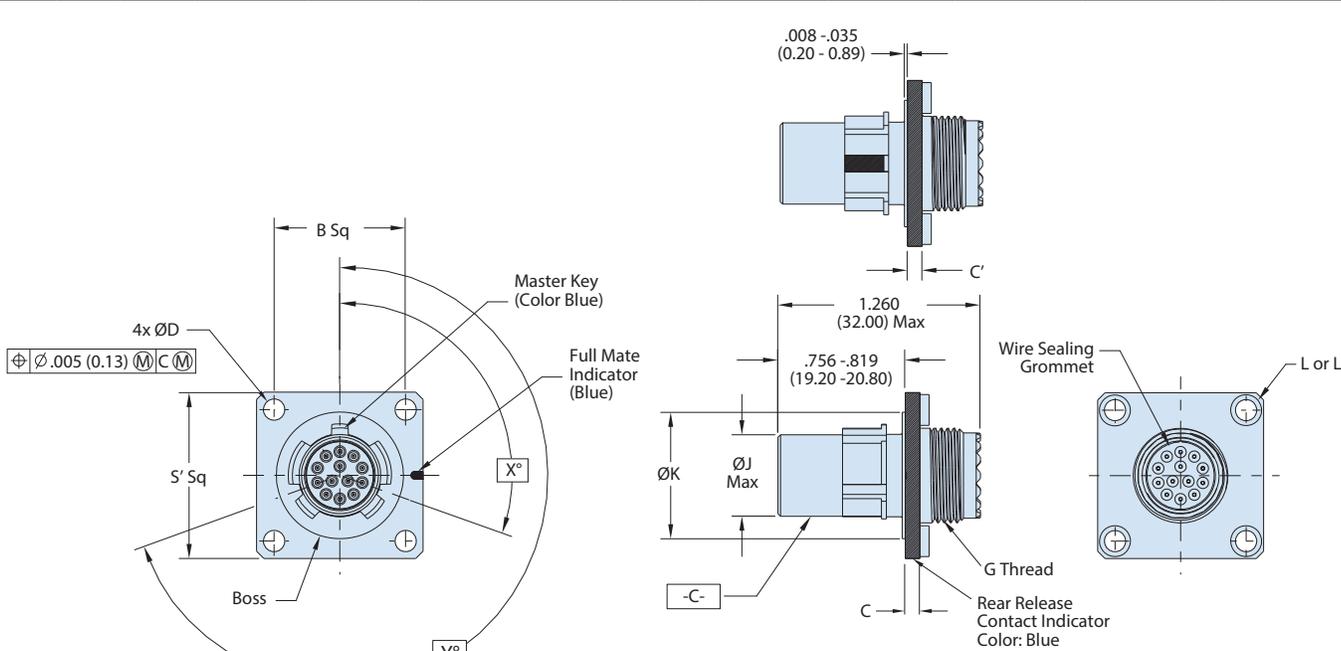


D0 WALL MOUNT RECEPTACLE  
(REF: MIL-DTL-38999/40)

Shell Size	Shell Size Code	B Bsc	C	ØD	G Thread	ØJ Max	ØK	S
11	B	.812 (20.62)	.102 (2.6) .083 (2.1)	.138 (3.5) .122 (3.1)	M15 X 1.0-6g 0.100R	.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)	M18 X 1.0-6g 0.100R	.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)	M22 X 1.0-6g 0.100R	.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)	M25 X 1.0-6g 0.100R	.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)	M28 X 1.0-6g 0.100R	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)	M31 X 1.0-6g 0.100R	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)	M34 X 1.0-6g 0.100R	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)	M37 X 1.0-6g 0.100R	1.384 (35.15)	1.669 (42.40) 1.654 (42.01)	1.835 (46.6) 1.791 (45.5)

MIL-DTL-38999 Series IV Type  
234-217 High-speed plug, and panel mount and jam nut receptacles

WALL MOUNT RECEPTACLE 234-105-40 REF: MIL-DTL-38999/40



CS - WALL MOUNT RECEPTACLE WITH STANDARD CLINCH NUTS OR CM - WALL MOUNT RECEPTACLE WITH METRIC CLINCH NUTS

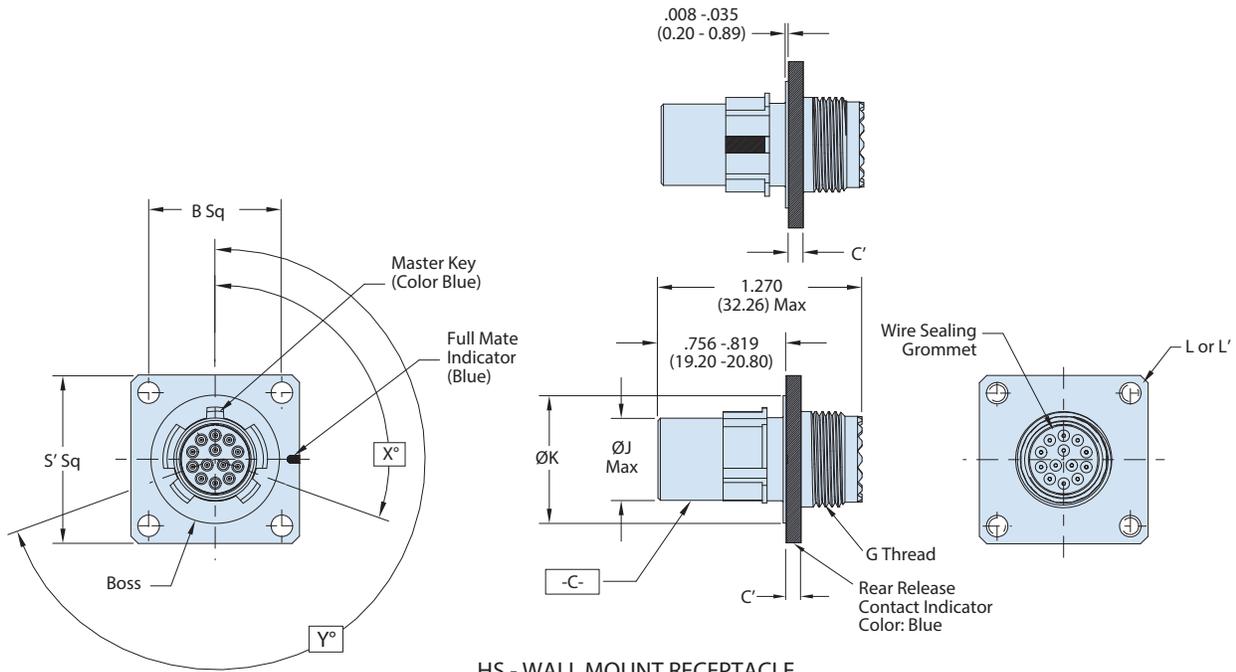
Shell Size	Shell Size Code	B Bsc	C	C'	G Thread	ØJ Max	ØK	L Thread	L' Thread	S	S'
11	B	.812 (20.62)	.102 (2.6) .083 (2.1)	.179 (4.5) .140 (3.6)	M15 X 1.0-6g 0.100R	.509 (12.93)	.793 (20.15) .778 (19.76)	.112-40 UNC	M3 X 0.5	1.051 (26.7) 1.008 (25.6)	1.202 (30.5) 1.162 (29.5)
13	C	.906 (23.02)	.102 (2.6) .083 (2.1)		M18 X 1.0-6g 0.100R	.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)
15	D	.969 (24.61)	.102 (2.6) .083 (2.1)		M22 X 1.0-6g 0.100R	.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)
17	E	1.062 (26.98)	.102 (2.6) .083 (2.1)		M25 X 1.0-6g 0.100R	.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)
19	F	1.156 (29.36)	.102 (2.6) .083 (2.1)		M28 X 1.0-6g 0.100R	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)
21	G	1.250 (31.76)	.134 (3.4) .114 (2.9)		M31 X 1.0-6g 0.100R	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)
23	H	1.375 (34.93)	.134 (3.4) .114 (2.9)	.190 (4.8) .170 (4.3)	M34 X 1.0-6g 0.100R	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)
25	J	1.500 (38.10)	.134 (3.4) .114 (2.9)		M37 X 1.0-6g 0.100R	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)

ENVIRONMENTAL CONNECTORS

MIL-DTL-38999 Series IV Type  
234-217 High-speed plug, and panel mount and jam nut receptacles

ENVIRONMENTAL CONNECTORS

WALL MOUNT RECEPTACLE 234-105-40 REF: MIL-DTL-38999/40

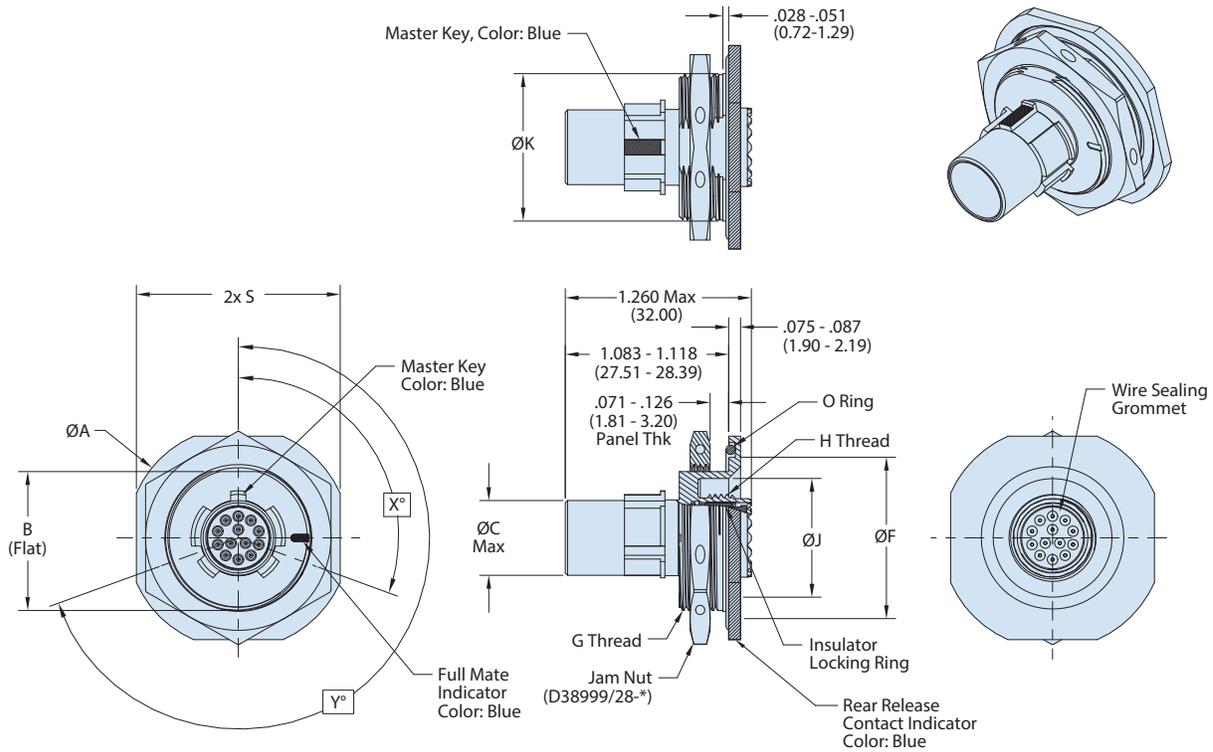


HS - WALL MOUNT RECEPTACLE WITH STANDARD HELICOIS OR HM - WALL MOUNT RECEPTACLE WITH METRIC HELICOIS

Shell Size	Shell Size Code	B Bsc	C	C'	G Thread	$\varnothing J$ Max	$\varnothing K$	L Thread	L' Thread	S	S'
11	B	.812 (20.62)	.102 (2.6) .083 (2.1)	.179 (4.5) .140 (3.6)	M15 X 1.0-6g 0.100R	.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)
13	C	.906 (23.02)	.102 (2.6) .083 (2.1)		M18 X 1.0-6g 0.100R	.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)
15	D	.969 (24.61)	.102 (2.6) .083 (2.1)		M22 X 1.0-6g 0.100R	.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)
17	E	1.062 (26.98)	.102 (2.6) .083 (2.1)		M25 X 1.0-6g 0.100R	.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)
19	F	1.156 (29.36)	.102 (2.6) .083 (2.1)		M28 X 1.0-6g 0.100R	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)
21	G	1.250 (31.76)	.134 (3.4) .114 (2.9)		M31 X 1.0-6g 0.100R	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)
23	H	1.375 (34.93)	.134 (3.4) .114 (2.9)	.190 (4.8) .170 (4.3)	M34 X 1.0-6g 0.100R	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)
25	J	1.500 (38.10)	.134 (3.4) .114 (2.9)		M37 X 1.0-6g 0.100R	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)

MIL-DTL-38999 Series IV Type  
234-217 High-speed plug, and panel mount and jam nut receptacles

JAM NUT RECEPTACLE 234-105-44 (REF: MIL-DTL-38999/44)



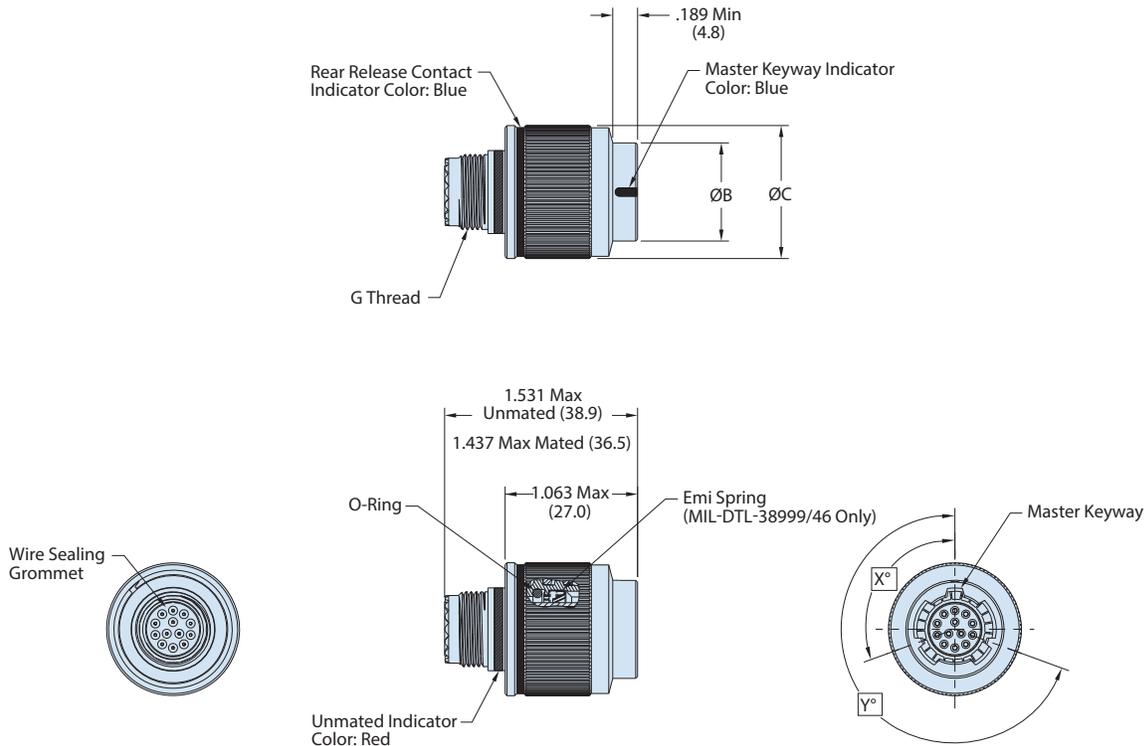
07 JAM-NUT RECEPTACLE  
(REF: MIL-DTL-38999/44)

Shell Size	Shell Size Code	Øa	B (Flat)	Øc Max	Øf	G Thread	H 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	M15 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	M18 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	M22 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	M25 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	M28 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	M31 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	M34 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	M37 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

MIL-DTL-38999 Series IV Type  
234-217 High-speed plug, and panel mount and jam nut receptacles

ENVIRONMENTAL CONNECTORS

PLUG 234-105-46 OR 47 REF: MIL-DTL-38999/46 OR 47

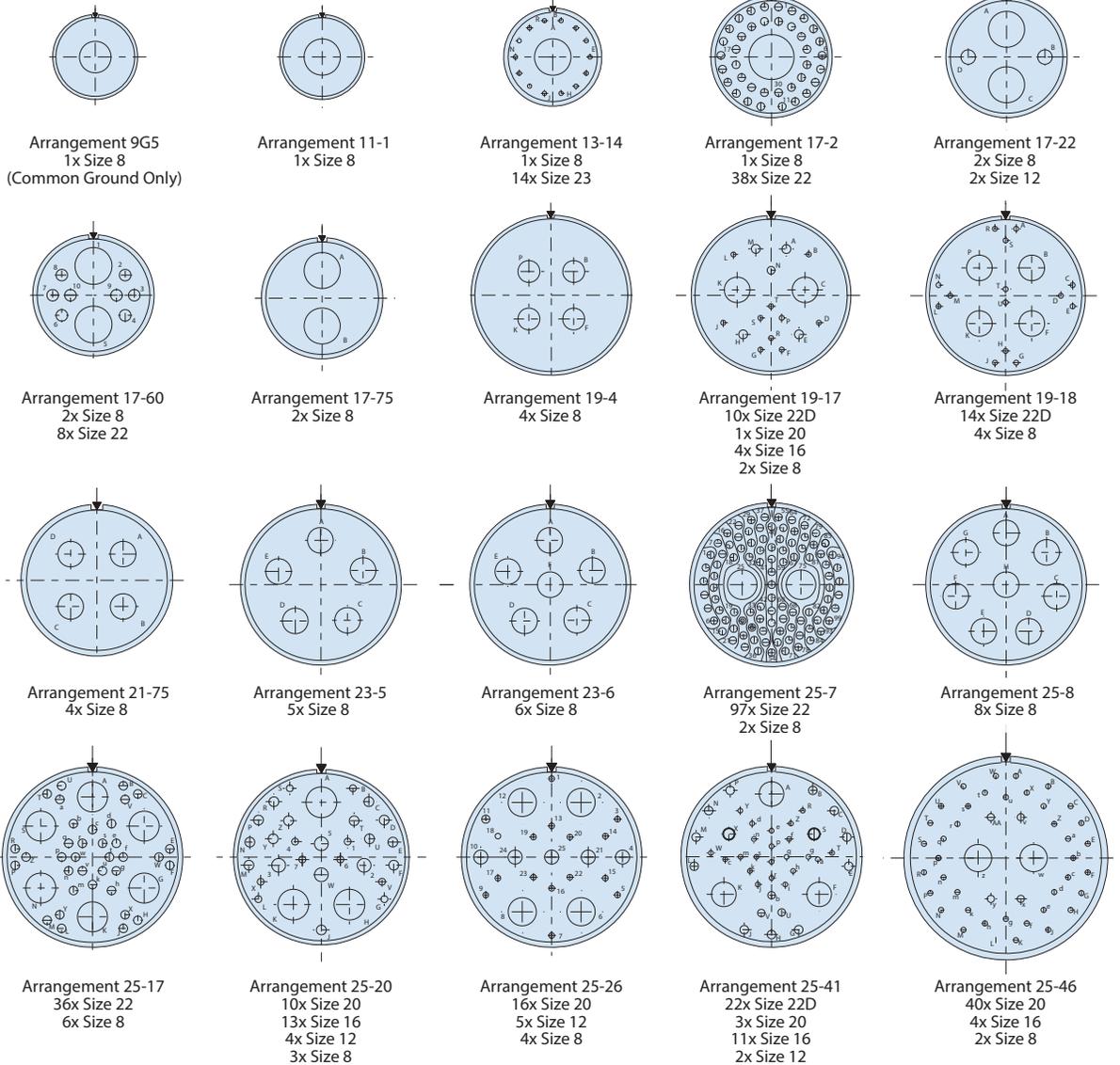


PLUG  
(REF: MIL-DTL-38999/46 AND /47)

Shell Size	Shell Size Code	ØB Max	ØC Max	G Thread
11	B	.776 (19.7)	1.047 (26.6)	M15 X 1.0-6g 0.100R
13	C	.902 (22.9)	1.220 (31.0)	M18 X 1.0-6g 0.100R
15	D	1.039 (26.4)	1.346 (34.2)	M22 X 1.0-6g 0.100R
17	E	1.150 (29.2)	1.472 (37.4)	M25 X 1.0-6g 0.100R
19	F	1.276 (32.4)	1.583 (40.2)	M28 X 1.0-6g 0.100R
21	G	1.402 (35.6)	1.705 (43.3)	M31 X 1.0-6g 0.100R
23	H	1.528 (38.8)	1.831 (46.5)	M34 X 1.0-6g 0.100R
25	J	1.650 (41.9)	1.957 (49.7)	M37 X 1.0-6g 0.100R

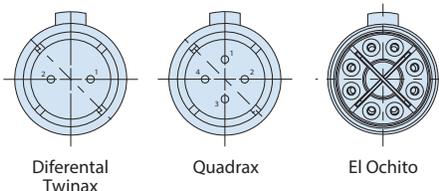
MIL-DTL-38999 Series IV Type  
234-217 High-speed plug, and panel mount and jam nut receptacles ins. arrangements

**HIGH-SPEED AND HYBRID INSERT ARRANGEMENTS**



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

**CONTACT INNER PIN ORIENTATION**



ENVIRONMENTAL CONNECTORS

MIL-DTL-38999 Series IV Type

234-217 High-speed plug, and panel mount and jam nut receptacles contact ref.

ENVIRONMENTAL CONNECTORS

**TABLE III - CONTACT REFERENCE GUIDE**

Symbol	Description	Glenair P/N	Contact Size	Accommodates AWG Size	Wire Type	Grommet Follower P/N	Application Notes
C	Coax Per M39029/76 M39029/77	Pin: 852-008-16-424 Socket: 852-009-16-428	16	Coax Cable	RG174, RG316, RG179	N/A	Analog Radio Frequency Or Microwave Applications
	Coax Per M39029/102 M39029/103	Pin: 852-004-12-558 Socket: 852-005-12-559	12	Coax Cable	RG174, RG316, RG179	N/A	
	Coax Per M39029/59 M39029/60	Pin: 852-007-08-367 Socket: 852-006-08-366	8	Coax Cable	M17/95-RG180	859-042-02	
C1	Coax, 75 Ohm	Pin: 852-056-01f Socket: 852-057-01f	8	Coax Cable	V73263, V75268, V76261	859-042-01	Analog Radio Frequency Or Microwave Applications
D	Differential Twinax	Pin: 853-014-05 Socket: 853-013-05	8	24 AWG Twinax Cable	M17/176-00002	859-042-01	1553 Databus/ Differential Signal
E*	El Ochito	Pin: 858-003-02 Socket: 858-004-02	8	26 AWG	963-003-26 963-033-26	687-643-8-2	1g/10g Base-T Ethernet (White)
		Pin: 858-028-02 Socket: 858-029-02		24\26-30 AWG	963-110 & 963-118	687-643-8-2	Usb 3.0 (Blue)
		Pin: 858-030-02 Socket: 858-031-02		26-30 AWG	963-033-26	687-643-8-2	Sata 3.0 General High Speed (Red)
P	Power	Pin: 850-014 Socket: 850-013	8	8 AWG	M22759/11 or equiv	859-042-03	Power
Q	Quadrax	Pin: 854-001-02 Socket: 854-002-02	8	24 AWG Quadrax	963-020	859-042-02	10/100base-T Ethernet
T	Triax/ Concentric Twinax	Pin: 853-003-08-625 Socket: 853-004-08-628	8	Twinax Cable	M17/176-00002	859-042-01	1553 Databus

**TABLE C - PANEL CUTOUT**

	Shell Size	Shell Size Code	ØKK	BB
<p>Jam-Nut Receptacle Recommended panel cut-out</p>	11	B	1.020 (25.91) 1.010 (25.65)	0.955 (24.26) 0.945 (24.00)
	13	C	1.145 (29.08) 1.135 (28.83)	1.085 (27.56) 1.075 (27.31)
	15	D	1.270 (32.26) 1.260 (32.00)	1.210 (30.73) 1.200 (30.48)
	17	E	1.395 (35.43) 1.385 (35.18)	1.335 (33.91) 1.325 (33.66)
	19	F	1.520 (38.61) 1.510 (38.35)	1.460 (37.08) 1.450 (36.83)
	21	G	1.645 (41.78) 1.635 (41.53)	1.585 (40.26) 1.575 (40.01)
	23	H	1.770 (44.96) 1.760 (44.70)	1.710 (43.43) 1.700 (43.18)
	25	J	1.895 (48.13) 1.885 (47.88)	1.835 (46.61) 1.825 (46.36)

MIL-DTL-38999 Series IV Type  
234-217 High-speed plug, and panel mount and jam nut receptacles panel cutout/notes

TABLE D - PANEL CUTOUT					
Shell Size	Shell Size Code	ØKK Min	BB Bsc	ØDD	ØLL Min
11	B	0.796 (20.22)	0.812 (20.62)	.133 (3.38)/.123 (3.12)	0.625 (15.88)
13	C	0.922 (23.42)	0.906 (23.01)		0.750 (19.05)
15	D	1.047 (26.59)	0.969 (24.61)		0.906 (23.01)
17	E	1.219 (30.96)	1.062 (26.97)		1.016 (25.81)
19	F	1.297 (32.94)	1.156 (29.36)		1.141 (28.98)
21	G	1.422 (36.12)	1.250 (31.75)		1.266 (32.16)
23	H	1.547 (39.29)	1.375 (34.93)	.159 (4.04)/.149 (3.78)	1.375 (34.93)
25	J	1.672 (42.47)	1.500 (38.10)	.155 (3.94)/.145 (3.68)	1.484 (37.69)

-A-  $\pm 0.005 (0.13) \text{ (M) (A) (M)}$

Wall Mount Receptacle  
Recommended Panel Cutout  
.125 Max Panel Thickness  
Back Panel Mount

-B-  $\pm 0.005 (0.13) \text{ (M) (B) (M)}$

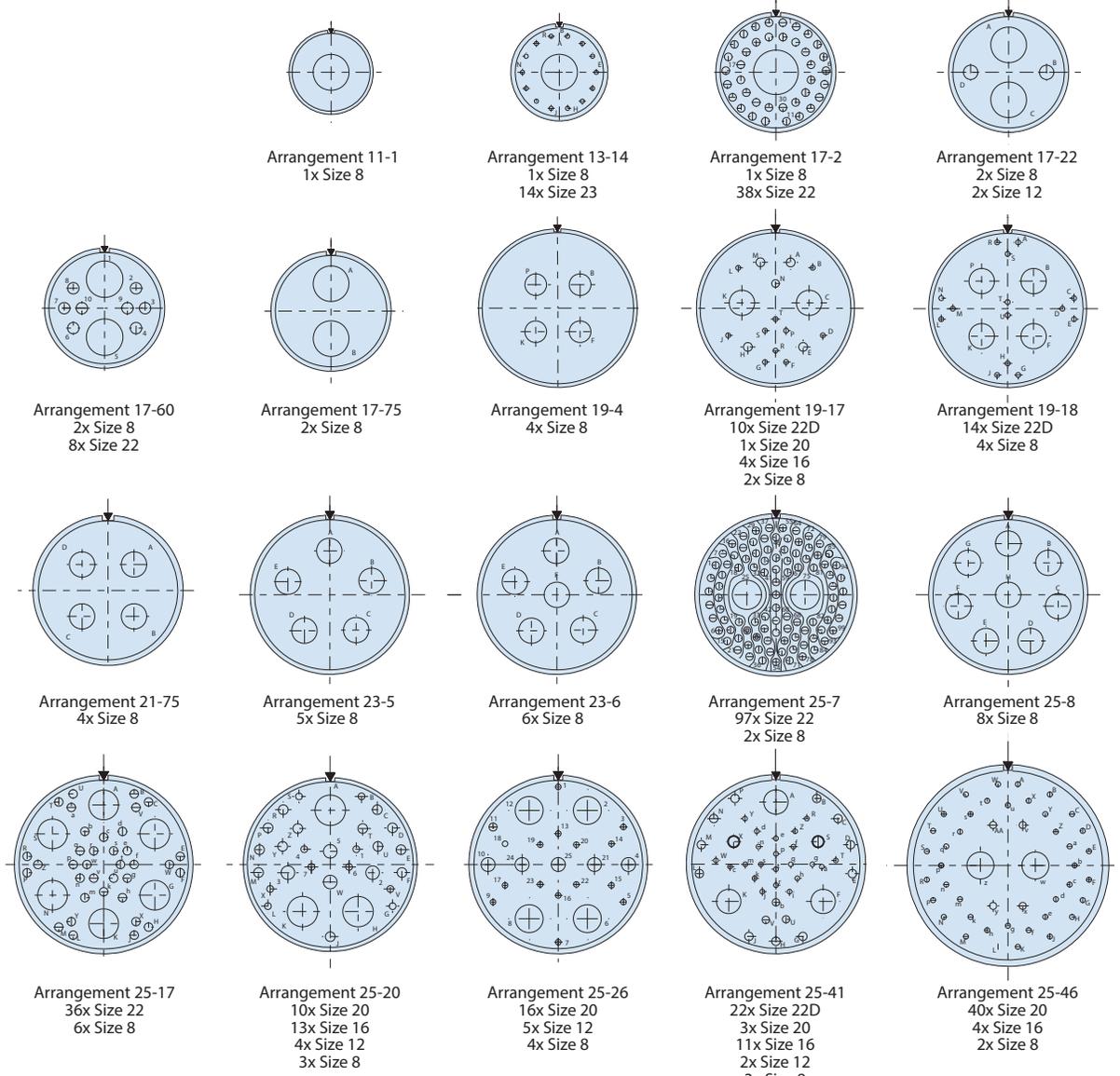
Wall Mount Receptacle  
Recommended Panel Cutout  
.125 Max Panel Thickness  
Front Panel Mount

**NOTES**

- Materials And Finishes (As Applicable):
  - Shell - See Table A
  - Insulator - High Grade Rigid Dielectric.
  - O-Ring - Silicone.
  - Contacts - IAW AS39029
  - Seals - Fluorosilicone Blend
- Insert arrangement in accordance with MIL-STD-1560. Contact factory for additional insert arrangements.
- Insert arrangement shown is for reference only.
- Blue color band indicated rear release retention system.
- Connector supplied with contacts (including spares), insertion/removal tools, and sealing plugs IAW MIL-DTL-38999.
- Consult factory for crimp tool and accessories selection.
- See Contact Inner Pin Table for reference orientation of the inner pins relative to connector main key/keyway.
- Glenair 234-217 series connectors are designed to meet the applicable performance and interface requirements of MIL-DTL-38999, Series IV except as noted. Connector mates with any QPL manufacturer's MIL-DTL-38999 Series IV connectors with the same insert arrangement and polarization.
- Ground plane option only available for insert arrangements where all contacts are shielded type.
- Optional mod code 909\*\* can be added to the end of part number to include contacts listed in Table III. See mod code 909 drawing. Combo layouts shall include signal contacts IAW M39029/56 & /58. Contact manufacturer for additional options.
- 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.

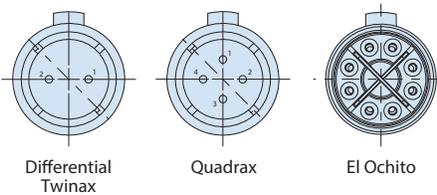
MIL-DTL-38999 Series IV Type  
234-217 High-speed plug, and panel mount and jam nut receptacles ins. arrangements

**HIGH-SPEED AND HYBRID INSERT ARRANGEMENTS**



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

**CONTACT INNER PIN ORIENTATION**



BREECH-LOCK ENVIRONMENTAL CONNECTORS

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

FIGURE 1 - INSERT ARRANGEMENTS

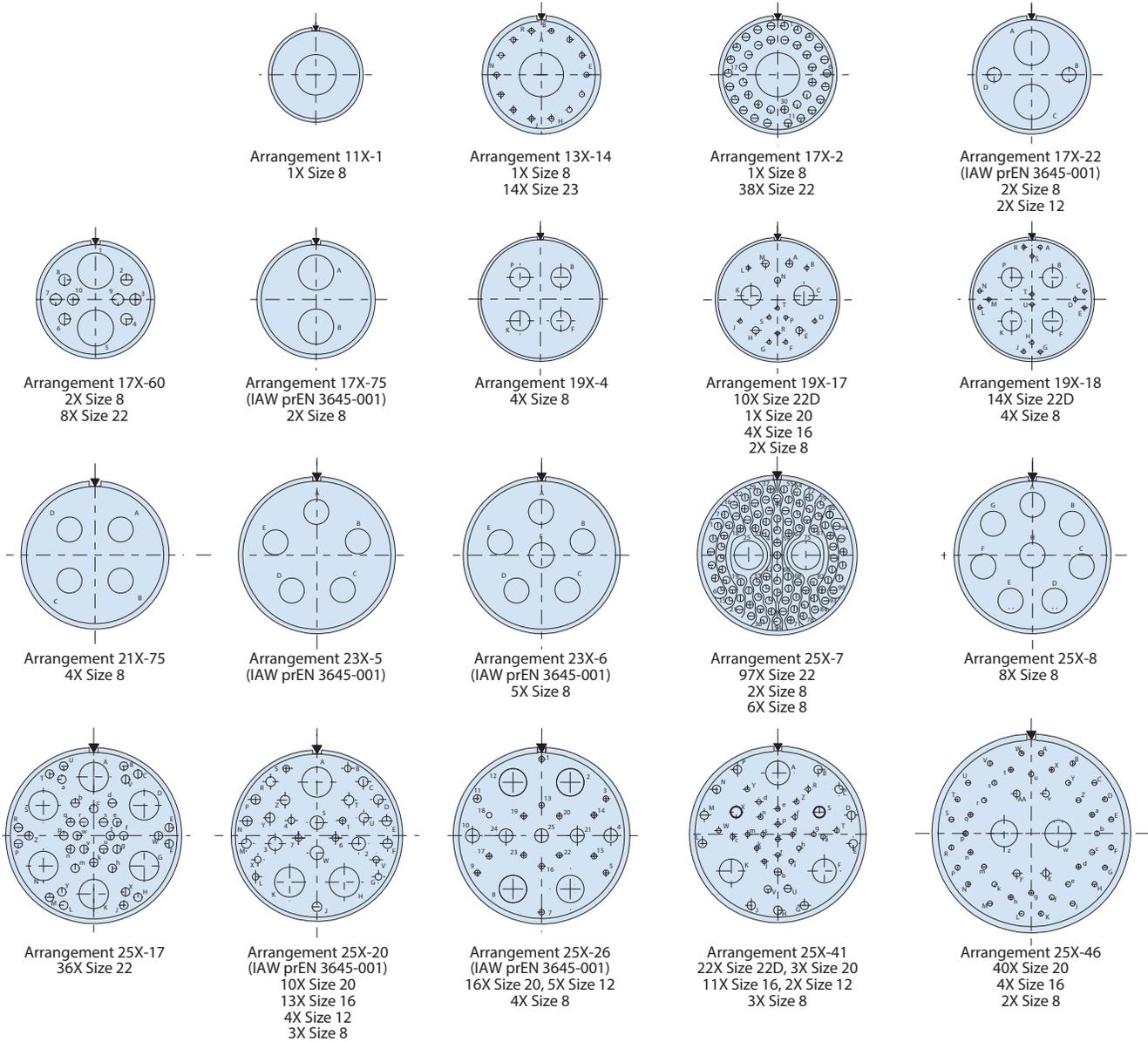
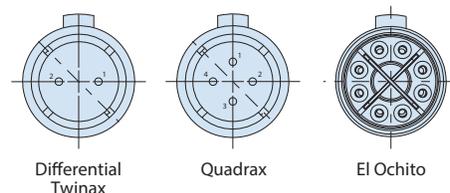


Figure 1  
Insert arrangements, mating  
face of pin insert shown.  
Replace X with C, D, E, Q or T  
(See Table VI)

FIGURE 2 - CONTACT INNER PIN ORIENTATION



BREECH-LOCK ENVIRONMENTAL CONNECTORS