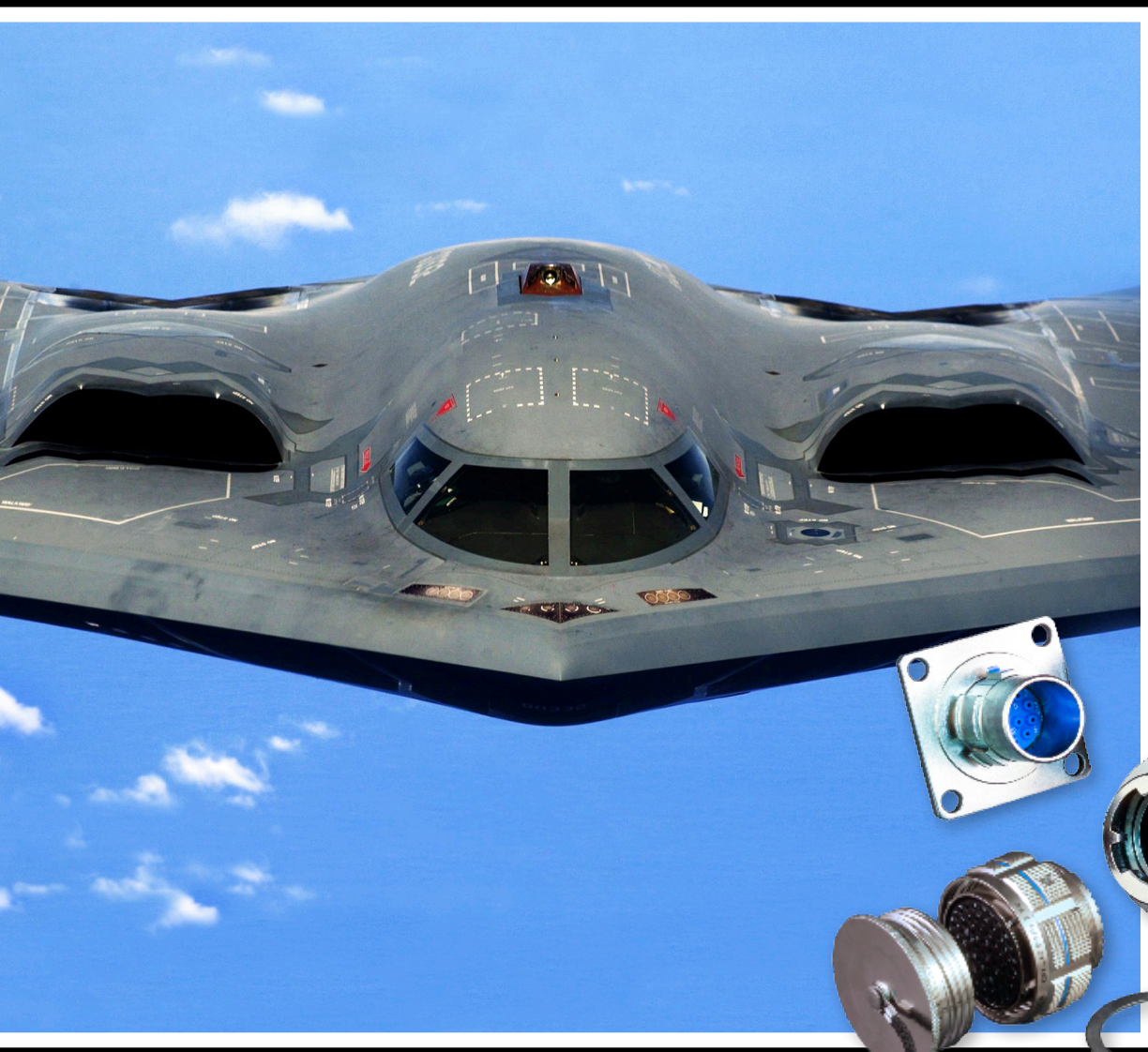
Glenair®





Environmental/Hermetic Connectors

MIL-DTL-38999 Series III and IV

Industry-Standard • Military / Aerospace • Harsh-Environment

OCTOBER 2017



HERMETIC AND ENVIRONMENTAL

MIL-DTL-38999 Series III and IV

The industry standard mil/aero connector backed by Glenair service and availability

DLA certified environmental and hermetic class MIL-DTL-38999 Series III and IV connectors are the most widely used and requested connectors within the mil-aero industry—and for good reason. Developed for reliability, the Series III triple-start thread prevents galling and cross-threading while providing quick disconnect, single-turn action to engage self-locking, metal-to-metal coupling. Series IV offers the industry's most robust mating with a 90 degree quarter-turn breech-lock mate with visual, tactile and audible engagement confirmation. The rugged construction of the Series IV disperses the mating force across a channeled metal flange while threaded mechanical force provides friction, locking the mates halves securely. Both series feature accessory threads and environmental sealing for reliable attachment of backshells. Scoop-proof shell design protects crimp-removable contacts from damage. Integrated plug-to-receptacle grounding and shell-to-shell bottoming delivers 65dB minimum shielding at 10 GHz.

Both series III and IV support all MIL-STD-1560 insert arrangements. Qualified environmental-class Series III connectors are supplied with W, F, G and T class materials and plating. Classes F and W are supplied for Series IV. Hermetic versions of Series III and IV are available in classes Y and N.

QPL qualified

DLA QPL MIL-DTL-38999 SERIES III AND IV AVAILABLE FROM GLENAIR

- **Qualified environmental plug, jam-nut, and square flange, box mount, wall mount and solder mount connectors**
- **All 1560 crimp-contact insert arrangements fully supported**
- **Environmental and hermetic versions available with plating classes IAW 38999 MIL-DTL Series III and IV**
- **A 100% made in America interconnect: No foreign-sourced materials, component parts, or assembly labor employed**

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Dimensions in inches (millimeters) are subject to change without notice

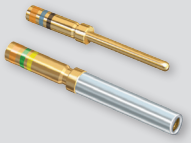
QPL QUALIFIED AND COTS EQUIVALENT

MIL-DTL-38999 Series III and IV

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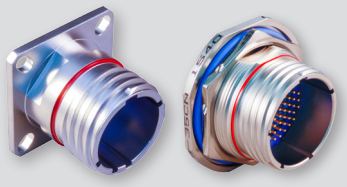
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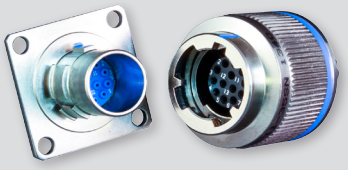
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D38999/20 wall mount receptacle 28



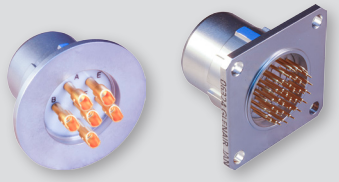
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Series IV QPL qualified and COTS equivalent hermetic connectors

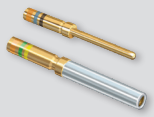
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MIL-DTL-38999 Series III and IV

MIL-STD-1560 standard power and signal contact arrangements
For environmental and hermetic connectors

Contacts			
Contact Size (environmental contacts shown in pictures below)			
Size #22D Environmental: 5 Amp Max. Current Hermetic: 3 Amp Max. Current #22-#28 AWG	Size #20 Contacts Environmental: 7.5 Amp Max. Current Hermetic: 5 Amp Max. Current #20-#24 AWG	Size #16 Contacts Environmental 13 Amp Max. Current Hermetic: 10 Amp Max. Current #16-#20 AWG	Size #12 Contacts Environmental 23 Amp Max. Current Hermetic: 17 Amp Max. Current #12-#14 AWG
			

Contact Size 22D		
Number of Conctacts	D38999 Sr III	D38999 Sr IV
6	A35	
13	B35	B35
22	C35	C35
37	D35	D35
55	E35	E35
66	F35	F35
67	F45	F45
79	G35	G35
100	H35	H35
128	J35	J35

Contact Size 16		
Number of Conctacts	D38999 Sr III	D38999 Sr IV
2	B2	B2
4	C4	C4
5	D5	D5
8	E8	E8
11	F11	F11
16	G16	G16
21	H21	H21
16	H97	H97
11	H99	H99
29	J29	J29
37	J37	J37

38999 Series III and IV Shell Size Code Reference					
Shell size	Code letter	Shell size	Code letter	Shell size	Code letter
9	A	15	D	21	G
11	B	17	E	23	H
13	C	19	F	25	J

Contact Size 20		
Number of Conctacts	D38999 Sr III	D38999 Sr IV
3	A98	
4	B4	B4
5	B5	B5
6	B98	B98
7	B99	B99
8	C8	C8
10	C98	C98
18	D18	D18
19	D19	D19
26	E26	E26
32	F32	F32
24	G24	G24
25	G25	G25
27	G27	G27
41	G41	G41
32	H32	H32
34	H34	H34
36	H36	H36
53	H53	H53
55	H55	H55
61	J61	J61

Contact Size 12		
Number of Conctacts	D38999 Sr III	D38999 Sr IV
6	E6	E6
11	G11	G11
19	J19	J19

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MIL-DTL-38999 Series III and IV

MIL-STD-1560 standard power and signal contact arrangements
For environmental and hermetic connectors - pin front view

Contact Legend
#22D ● #16 ⊕
#20 ⊖ #12 ◒

Insert Arrangement	A35	A98	B2	B4	B5	B98	B99
No. of Contacts and Contact Size	6 #22D	3 #20	2 #16	4 #20	5 #20	6 #20	7 #20
Service Rating	M	I	I	I	I	I	I

Contact Legend
#22D ● #16 ⊕
#20 ⊖ #12 ◒

Insert Arrangement	B35	C4	C8	C98	C35	D5
No. of Contacts and Contact Size	13 #22D	4 #16	8 #20	10 #20	22 #22D	5 #16
Service Rating	M	I	I	I	M	II

Contact Legend
#22D ● #16 ⊕
#20 ⊖ #12 ◒

Insert Arrangement	D18	D19	D35	E6	E8
No. of Contacts and Contact Size	18 #20	19 #20	37 #22D	6 #12	8 #16
Service Rating	I	I	M	I	II

Contact Legend
#22D ● #16 ⊕
#20 ⊖ #12 ◒

Insert Arrangement	E26	E35	F11	F32
No. of Contacts and Contact Size	26 #20	55 #22D	11 #16	32 #20
Service Rating	I	M	II	I

Contact Legend
#22D ● #16 ⊕
#20 ⊖ #12 ◒

Insert Arrangement	F35	F45	G11	G16
No. of Contacts and Contact Size	66 #22D	67 #22D	11 #12	16 #16
Service Rating	M	M	I	II

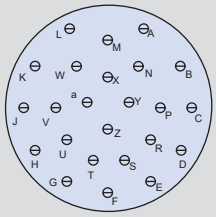
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MIL-DTL-38999 Series III and IV

MIL-STD-1560 standard power and signal contact arrangements
For environmental and hermetic connectors - pin front view

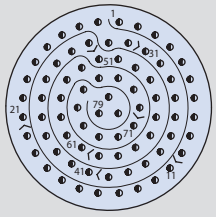
REFERENCE INFORMATION

Contact Legend
#22D ⊕ #16 ⊕
#20 ⊖ #12 ◒



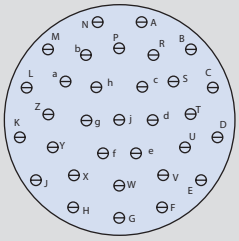
Insert Arrangement	G24	G25	G27	G41
No. of Contacts and Contact Size	24 #20	25 #20	27 #20	41 #20
Service Rating	I	I	I	I

Contact Legend
#22D ⊕ #16 ⊕
#20 ⊖ #12 ◒



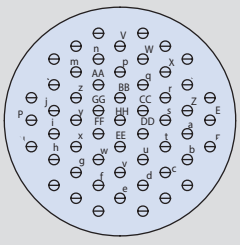
Insert Arrangement	G35	H97	H99	H21
No. of Contacts and Contact Size	79 #22D	16 #16	11 #16	21 #16
Service Rating	M	I	II	II

Contact Legend
#22D ⊕ #16 ⊕
#20 ⊖ #12 ◒



Insert Arrangement	H32	H34	H36	H53
No. of Contacts and Contact Size	32 #20	34 #20	36 #20	53 #20
Service Rating	I	I	I	I

Contact Legend
#22D ⊕ #16 ⊕
#20 ⊖ #12 ◒



Insert Arrangement	H55	H35	J19
No. of Contacts and Contact Size	55 #20	100 #22D	19 #12
Service Rating	I	M	I

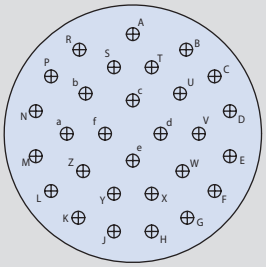
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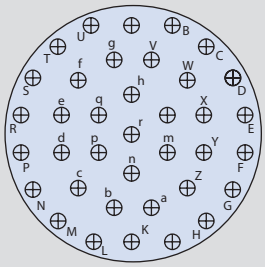
MIL-DTL-38999 Series III and IV

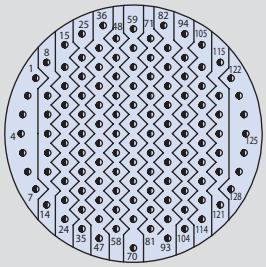
MIL-STD-1560 standard power and signal contact arrangements
For environmental and hermetic connectors - pin front view

Contact Legend

#22D	•	#16	⊕
#20	⊖	#12	◒



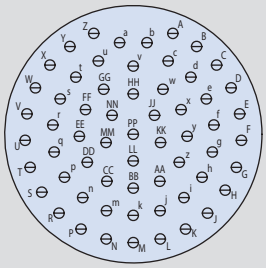




	J29	J37	J35
Insert Arrangement			
No. of Contacts and Contact Size	29 #16	37 #16	128 #22D
Service Rating	I	II	M

Contact Legend

#22D	•	#16	⊕
#20	⊖	#12	◒



	J61
Insert Arrangement	
No. of Contacts and Contact Size	61 #20
Service Rating	I

	Suggested Operating Voltage		Test Voltage AC RMS 60Hz							
	(Sea Level)		Sea Level		50,000 Ft.		70,000 Ft.		100,000 Ft	
Service Rating	AC (RMS)	DC	unmated	mated	unmated	mated	unmated	mated	unmated	mated
M	400	550	1300	1300	550	800	350	800	200	800
N	300	450	1000	1000	400	600	260	600	200	600
I	600	850	1800	1800	600	1000	400	1000	200	1000
II	900	1250	2300	2300	800	1000	500	1000	200	1000

Note: The establishment of electrical safety factors is left entirely to the designer, as he is in the position to know exactly what peak voltages, switching currents, transients, etc. can be expected in a particular circuit

38999 Series III and IV Shell Size Code Reference					
Shell size	Code letter	Shell size	Code letter	Shell size	Code letter
9	A	15	D	21	G
11	B	17	E	23	H
13	C	19	F	25	J

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Rev. 01.05.25

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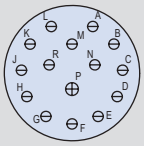
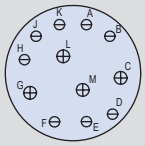
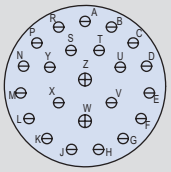
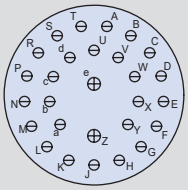
MIL-DTL-38999 Series III and IV

MIL-STD-1560 combo contact arrangements
For environmental and hermetic connectors - pin front view

Combo Contact Arrangements

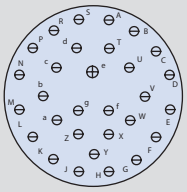
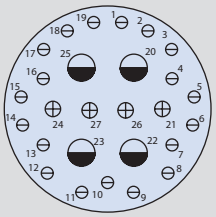
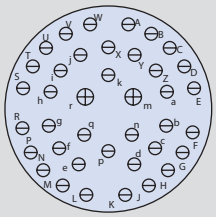
Contact Size (environmental contacts shown in pictures below)			Number of Contacts			D38999
			#20	#16	#12	Sr III & IV
Size #20 Contacts Environmental: 7.5 Amp Max. Current Hermetic: 5 Amp Max. Current #20-#24 AWG	Size #16 Contacts Environmental 13 Amp Max. Current Hermetic: 10 Amp Max. Current #16-#20 AWG	Size #12 Contacts Environmental 23 Amp Max. Current Hermetic: 17 Amp Max. Current #12-#14 AWG	14	1		D15
			8	4		D97
			21	2		E99
			26	2		F28
			29	1		F30
			19	4	4	G29
			37	2		G39
			48	8		J4
				12	12	J24
			23	20		J43

Contact Legend
#22D • #16 ⊕
#20 ⊖ #12 ◒

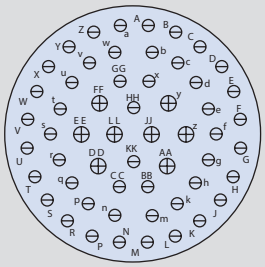
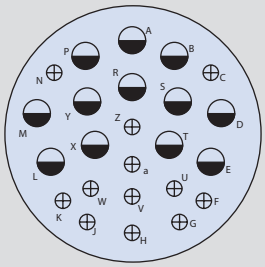
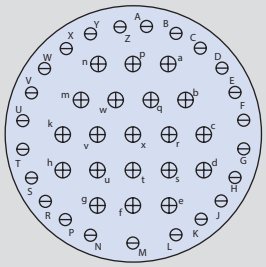
Insert Arrangement	D15		D97		E99		F28	
No. of Contacts and Size	1X #16	14X #20	4X #16	8X #20	2X #16	21X #20	2X #16	26X #20
Service Rating	I		I		I		I	

Contact Legend
#22D • #16 ⊕
#20 ⊖ #12 ◒

Insert Arrangement	F30		G29			G39	
No. of Contacts and Size	1X #16	29X #20	4x #12	4X #16	19X #20	2X #16	37X #20
Service Rating	I		I			I	

Contact Legend
#22D • #16 ⊕
#20 ⊖ #12 ◒

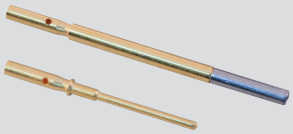




Insert Arrangement	J4		J24		J43	
No. of Contacts and Size	8X #16	48X #20	12X #12	12X #16	20X #16	23X #20
Service Rating	I		I		I	

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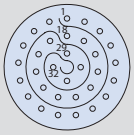
MIL-DTL-38999 Series III and IV

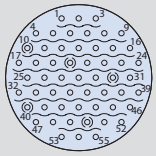
MIL-STD-1560 high-density contact arrangements
For environmental and hermetic connectors - pin front view

Environmental and Hermetic Contact Arrangements		
Contact	**Number of Size 23 Contacts**	**Inserrt Arrangement**
 857-189 Pin and 857-190 Socket Size #23 High-Density (HD) 5 Amp Max. Current #22-#26 AWG	9	A23
	19	B23
	32	C23
	55	D23
	73	E23
	88	F23
	121	G23
	151	H23
	187	J23

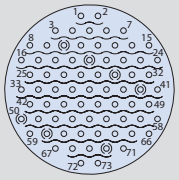


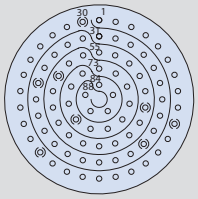


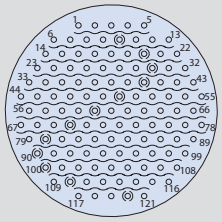




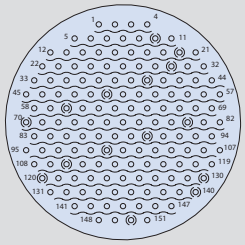
Insert Arrangement	A23	B23	C23	D23
No. of Contacts	9	19	32	55
Contact Size	#23	#23	#23	#23
Service Rating	N	N	N	N

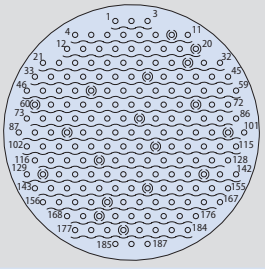






Insert Arrangement	E23	F23	G23
No. of Contacts	73	88	121
Contact Size	#23	#23	#23
Service Rating	N	N	N





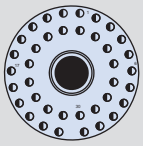
Insert Arrangement	H23	J23
No. of Contacts	151	187
Contact Size	#23	#23
Service Rating	N	N

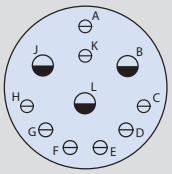
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Dimensions in inches (millimeters) are subject to change without notice

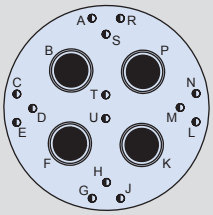
MIL-DTL-38999 Series III and IV

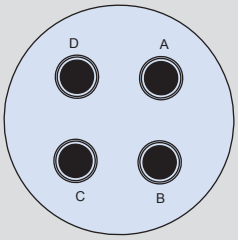
MIL-STD-1560 high-speed contact arrangements - pin front view
For environmental connectors only

Contact Legend
#22D ⊙ #16 ⊕
#20 ⊖ #12 ◒
#8 ●



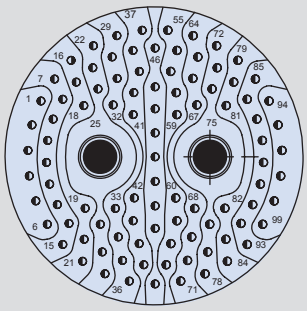


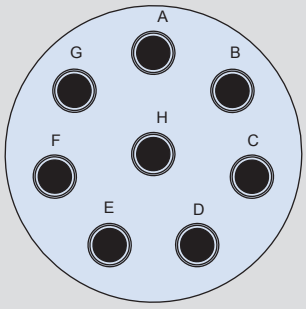


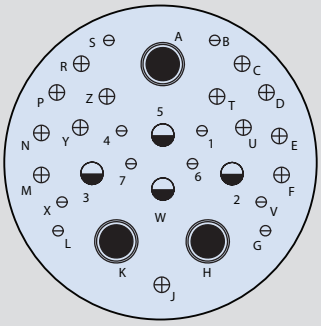


Insert Arrangement	E2		E11			F18		G75
No. of Contacts	1x #8	38x #22D	1x 12	2x 12	8x 20	4x #8	14x #22D	4x #8
Service Rating	Twinax	M	Coax	Twinax	N	Twinax	M	Twinax

Contact Legend
#22D ⊙ #16 ⊕
#20 ⊖ #12 ◒
#8 ●

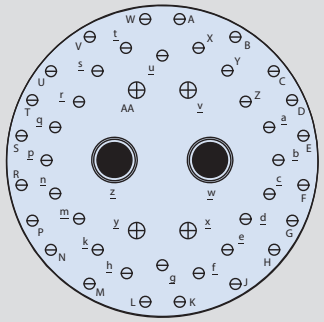






Insert Arrangement	J7		J8	J20			
No. of Contacts and Size	2x #8	97x #22D	8x #8	3x #8	4x #12	13x #16	10x #20
Service Rating	Twinax	M	Twinax	Twinax	Co-ax	N	N

Contact Legend
#22D ⊙ #16 ⊕
#20 ⊖ #12 ◒
#8 ●



Insert Arrangement	J46			J90		
No. of Contacts and Size	2x #8	4x #16	40x #20	2x #8	4x #16	40x #20
Service Rating	Coax	I	I	Twinax	I	I

J46 and J90 share same layout, with the exception of the size #8 contact

Max Current Rating (Amps)				
Contact Size	22D	20	16	12
Environ.	3			
Coaxial Contacts: 1 amp				
Twinax Contacts: 1 Amp				

Contact Arrangements					
Number of Contacts					D38999
#22D	#20	#16	#12	#8	Sr III & IV
38				1	E2
14				4	F18
				4	G75
97				2	J7
				8	J8
	10	13	4	3	J20
	40	4		2	J46
	40	4		2	J90

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ENVIRONMENTAL AND HERMETIC SERIES 23

Space-grade Guidelines

Outgassing

Space flight equipment requires low-outgassing components in order to prevent degradation to optics and other sensitive instruments. MIL-DTL-38999 environmental connectors contain nonmetallic materials such as rubber, plastic, adhesives and potting compounds which can give off gasses when subjected to a vacuum or high heat. Unless the connector is specially processed, the TML and CVCM can exceed allowable limits. The space industry has adopted a standardized test procedure, ASTM E595, to evaluate outgassing properties. The MIL-DTL-38999 specification Class G also details specific TVM and CVCM values. Glenair's 186T modification code, IAW Class G, requires environmental connectors to be heated to 175° C at a vacuum of 5 X 10^{-6} torr for 48 hours. A similar mod code is applied for hermetic connectors to meet Class H requirements. Items under test are then weighed to calculate the Total Mass Loss (TML), which may not exceed 1.0% of the total initial mass. A collector plate is used to determine the Collected Volatile Condensable Material (CVCM), which may not exceed 0.1% of the total original specimen mass. Glenair is able to offer both NASA as well as D38999 Class G or H bakeout processes which assure all materials comply with their respective standards. Glenair is a QPL supplier of Series IV environmental Class G and Series III Class H hermetic connectors.

Note on Connector Material and Finish Options

Some types of metals are prohibited for space flight. "Cadmium, zinc, chemically coated cadmium, zinc or silver shall not be used as a connector or contact finish" (NASA EEE-INST-002 Instructions for EEE Parts Selection, Screening, Qualification, and Derating). NASA recommends passivated stainless steel, electroless nickel or gold finish on connector shells and gold finish for contacts.

- **QPL supplier of Series IV Class G space-grade environmental connectors**
- **QPL supplier of Series III Class H space-grade hermetic connectors**
- **Bakeout and thermal vacuum outgas processing available for SuperNine® environmental series connectors IAW Class G space-grade requirements**
- **Bakeout and thermal vacuum outgas processing available for SuperNine® hermetic series connectors IAW Class H space-grade requirements**

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COTS EQUIVALENT

MIL-DTL-38999 Series III and IV
Class G (and NASA screening)
Space-grade application guidelines for commercial part numbers



NASA and Class G and H Screening

The MIL-DTL-38999 specification defines TML and CVCM values for Class G and H space flight. Glenair modification code 186T assures parts are outgassed to meet the Class G and H requirements for outgassing. Additionally, NASA recommends that connectors for space flight be specially screened. NASA EEE-INST-002 instructions for EEE parts selection, screening, qualification, and derating contains three levels of screening for space-grade components. These outgassing and screening modification codes are listed at right. To add a modification code append code to end of part number

- **"Mission critical" connectors for space flight should undergo rigorous 100% final inspection**
- **Modification codes are available to invoke special screening for both MIL-DTL-38999 and NASA applications**
- **Outgassing properties of materials used in Glenair D38999 connectors are detailed in the table below**

Screening Level and Available Outgassing Modification Codes				
Screening Level	Screening Only	48 Hour Oven Bake 175° C	Thermal Vacuum Outgassing (10^{-6} Torr)	
			24 Hour 125° C	48 Hour 175° C
NASA, Level 1 Highest Reliability	429B	429J	429C	
NASA, Level 2 High Reliability	429	429K	429A	
NASA, Level 3 Standard Reliability	Use Standard Part Number		429L	
38999, Class G or H (Group A and B inspection, no screening)				186T

Table II: NASA EEE-INST-02, Table 2A Screening Levels			
Inspection	Level 1	Level 2	Level 3
Visual	100%	100%	100%
Mechanical	2(0)	2(0)	
Dielectric Withstanding Voltage	2(0)	2(0)	
Insulation Resistance	2(0)	2(0)	
Contact Engagement & Separation Force	2(0)		
Hermeticity (Sealed Receptacles Only)	100%	100%	
Coupling Force	2(0)		

Required inspection quantity shown. Number in parenthesis indicates acceptance of failures allowed for all quantities inspected.

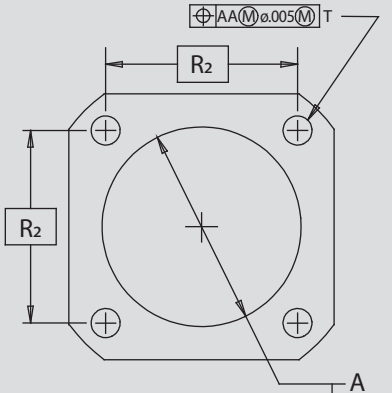
Outgassing Properties of Materials Used in MIL-DTL-38999 Connectors				
Component	Material	TML %	CVCM %	Test Reference
Front and Rear Insulator	Epiall 1908	0.84	0.0	NASA Test # GSC15435 (48 hours at 180°C)
Rear Grommet, Interfacial Seal, Peripheral Seal, and Special Auxiliary Seals	Blended fluorosilicone/silicone elastomer	0.04	0.0	Glenair test
Front-To-Rear Insulator Bonding Material	Eccobond 104 A/B	0.52	0.08	Emerson & Cuming Data Sheet
Insulator-to-Rubber Bonding Material	RTV, per MIL-A-46146	<1.0	<0.1	Glenair Test
White Epoxy Ink for Silk-screening	Markem 7224 White	0.49	0.03	NASA Test #GSC19899
Potting Compound	High-performance space-grade epoxy	<1.0	<0.1	Glenair Test

MIL-DTL-38999 Connector Materials Approved for Space Flight		
Component	Material	Notes
Shells, Coupling Nuts, Jam Nuts	Aluminum alloy	Approved for Space Flight
Rigid Insulators	Glass reinforced thermoset plastic, Epiall 1908	Approved for Space Flight
Contact Retention Clip	Beryllium copper, heat-treated, unplated	Approved for Space Flight
Grommet, Peripheral Seal, Interfacial Seal, Special Auxiliary Seals, O-ring	Blended fluorosilicone/silicone elastomer	Requires outgassing processing
Pin/Socket Contact	Gold plated beryllium copper alloy	Approved for Space Flight
Socket Contact Hood	Stainless steel	Approved for Space Flight
Potting Compounds and Adhesives	RTV and epoxies	Requires outgassing processing

MIL-DTL-38999 Series III and IV

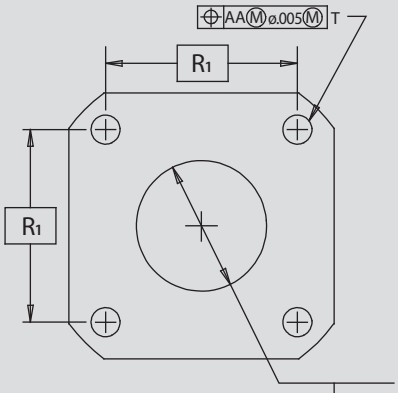
Recommended panel cut-outs

REFERENCE INFORMATION



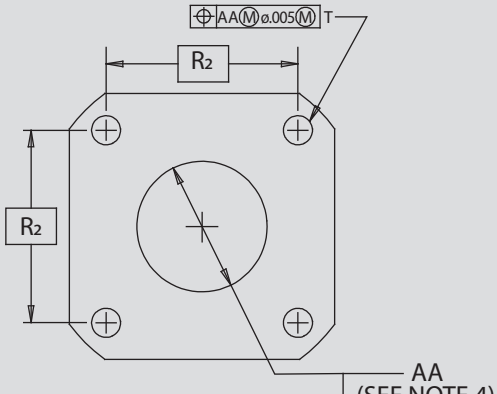
REAR PANEL MOUNT
SERIES III AND IV

TYPE A



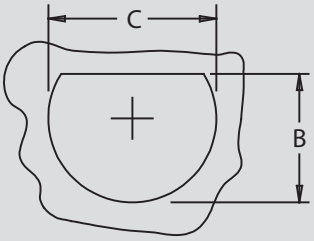
FRONT PANEL MOUNT
SERIES III AND IV

TYPE B



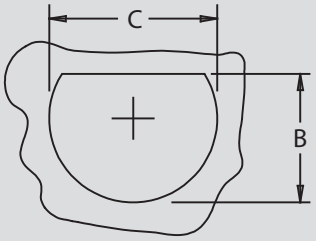
FRONT PANEL MOUNT
SERIES III

TYPE C



JAM NUT MOUNT, SERIES III,
CRIMP AND HERMETIC,
AND SERIES IV HERMETIC

TYPE E



JAM NUT MOUNT,
SERIES IV CRIMP

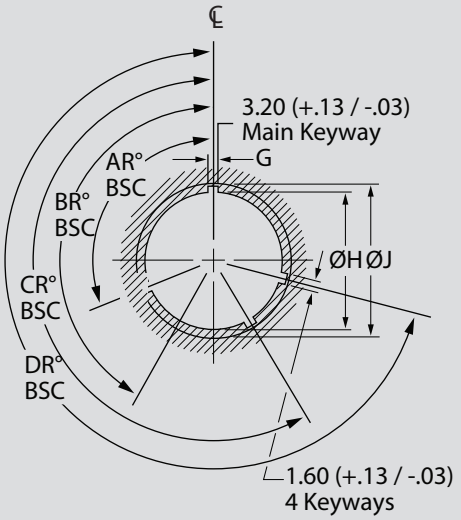
TYPE F

Series II and IV, Recommended Panel Cut-Out Dimensions											
Shell Size Code	Shell Size	A Dia	AA Dia	B* +.00 -.25	C +.25 -.00	E dia min	F +.00 -.25	G +.25 -.00	R1	R2	T dia ±.005
A	8-9	.656 (16.66)	.516 (13.11)	.657 (16.69)	.693 (17.60)	.557 (14.15)	.830 (21.08)	.885 (22.48)	.719 (18.26)	.594 (15.09)	.128 (3.25)
B	10-11	.796 (20.22)	.625 (15.88)	.771 (19.58)	.825 (20.96)	.682 (17.32)	.955 (24.26)	1.010 (25.65)	.812 (20.62)	.719 (18.26)	.128 (3.25)
C	12-13	.922 (23.42)	.750 (19.05)	.955 (24.26)	1.010 (25.65)	.854 (21.69)	1.085 (27.56)	1.135 (28.83)	.906 (23.01)	.812 (20.62)	.128 (3.25)
D	14-15	1.047 (26.59)	.906 (23.01)	1.085 (27.56)	1.135 (28.83)	.979 (24.87)	1.210 (30.73)	1.260 (32.00)	.969 (24.61)	.906 (23.01)	.128 (3.25)
E	16-17	1.219 (30.96)	1.016 (25.81)	1.210 (30.73)	1.260 (32.00)	1.104 (28.04)	1.335 (33.91)	1.385 (35.18)	1.062 (26.97)	.969 (24.61)	.128 (3.25)
F	18-19	1.297 (32.94)	1.141 (28.98)	1.335 (33.91)	1.385 (35.18)	1.229 (31.22)	1.460 (37.08)	1.510 (38.35)	1.156 (29.36)	1.062 (26.97)	.128 (3.25)
G	20-21	1.422 (36.12)	1.266 (32.16)	1.460 (37.08)	1.510 (38.35)	1.354 (34.39)	1.585 (40.26)	1.635 (41.53)	1.250 (31.75)	1.156 (29.36)	.128 (3.25)
H	22-23	1.547 (39.29)	1.375 (34.92)	1.585 (40.26)	1.635 (41.53)	1.479 (37.57)	1.709 (43.41)	1.760 (44.70)	1.375 (34.92)	1.250 (31.75)	.154 (3.91)
J	24-25	1.672 (42.47)	1.484 (37.69)	1.710 (43.43)	1.760 (44.70)	1.604 (40.74)	1.835 (46.61)	1.885 (47.88)	1.500 (38.10)	1.375 (34.92)	.150 (3.81)

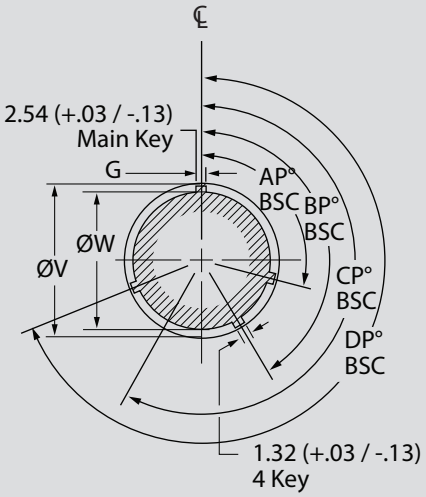
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MIL-DTL-38999 Series III

Main key and keyway polarization



Alternate Keyway Receptacles

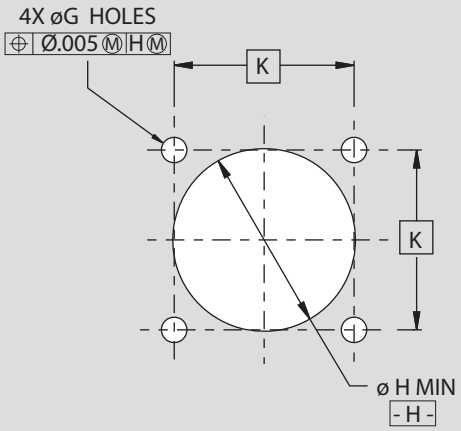


Alternate Key Plugs

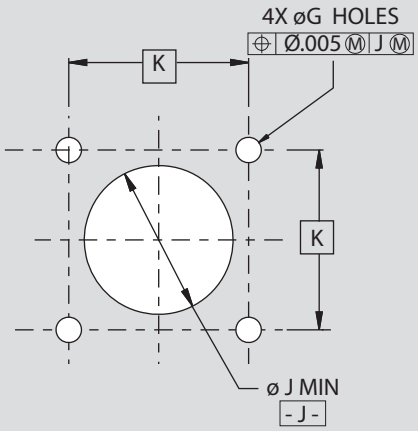
Series III Alternate Key and Keyway Polarization						
Shell Size Cde	Shell Size	Key and Keyway Code	AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
A	9	N	105	140	215	265
		A	102	132	248	320
		B	80	118	230	312
		C	35	140	205	275
		D	64	155	234	304
		E	91	131	197	240
B C D	11 13 15	N	95	141	208	236
		A	113	156	182	292
		B	90	145	195	252
		C	53	156	220	255
		D	119	146	176	298
		E	51	141	184	242
E F G H J	17 19 21 23 25	N	80	142	196	293
		A	135	170	200	310
		B	49	169	200	244
		C	66	140	200	257
		D	62	145	180	280
		E	79	153	197	272

MIL-DTL-38999 Series IV

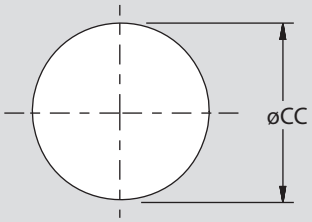
Recommended panel cut-outs



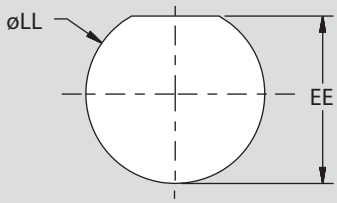
Wall or Box Mount
Rear Panel Mounting



Wall or Box Mount
Front Panel Mounting



Solder Mount

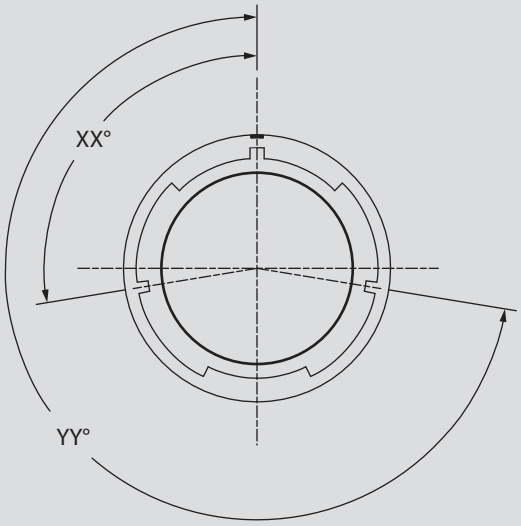


Jam-Nut

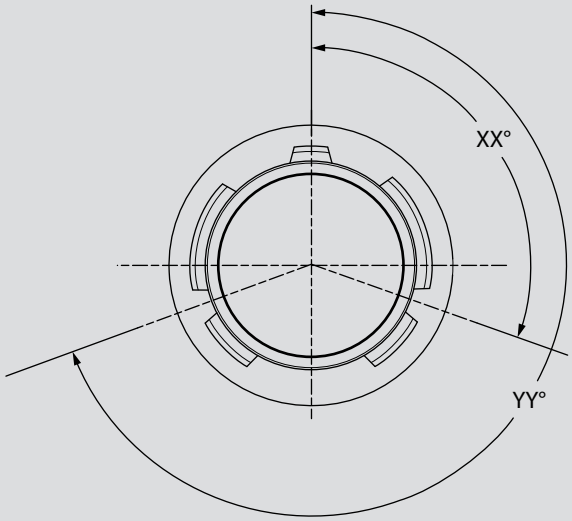
Series IV, Recommended Panel Cut-Out Dimensions											
Shell Size Code	Shell Size	Box or Wall Mount					Solder Mount	Jam-Nut Mount (Environmental)		Jam-Nut Mount (Hermetic)	
		H Dia	J Dia	G Dia Holes	K Bsc	KK Bsc	CC Dia	LL Dia	EE	LL Dia	EE
B	11	.781 (19.84)	.625 (15.88)	.133 (3.38) .123 (3.12)	.796 (20.22)	.806 (20.47)	.794 (20.17) .784 (19.91)	1.020 (25.91) 1.010 (25.65)	.955 (24.26) .945 (24.00)	.835 (21.21) .825 (20.96)	.771 (19.59) .761 (19.34)
C	13	.921 (23.39)	.750 (19.05)	.133 (3.38) .123 (3.12)	.922 (23.42)	.932 (23.67)	.919 (23.34) .909 (23.09)	1.145 (29.08) 1.135 (28.83)	1.085 (27.56) 1.075 (27.30)	1.020 (25.90) 1.010 (25.65	.955 (24.26) .945 (24.01)
D	15	1.047 (26.59)	.906 (23.01)	.133 (3.38) .123 (3.12)	1.047 (26.59)	1.057 (26.85)	1.043 (26.49) 1.033 (26.24)	1.270 (32.26) 1.260 (32.00)	1.210 (30.73) 1.200 (30.48)	1.145 (29.08) 1.135 (28.83)	1.085 (27.56) 1.075 (27.31)
E	17	1.218 (30.94)	1.16 (29.46)	.133 (3.38) .123 (3.12)	1.219 (30.96)	1.183 (30.05)	1.1698 (29.71) 1.159 (29.44)	1.395 (35.43) 1.385 (35.18)	1.335 (33.91) 1.325 (33.65)	1.270 (32.26) 1.260 (32.01)	1.210 (30.73) 1.200 (30.48)
F	19	1.296 (32.92)	1.142 (29.01)	.133 (3.38) .123 (3.12)	1.297 (32.94)	1.307 (33.20)	1.263 (32.08) 1.253 (31.83)	1.520 (38.61) 1.510 (38.35)	1.460 (37.08) 1.450 (36.83)	1.395 (35.43) 1.385 (35.18)	1.335 (33.91) 1.325 (33.66)
G	21	1.421 (36.09)	1.266 (32.16)	.133 (3.38) .123 (3.12)	1.422 (36.12)	1.432 (36.37)	1.388 (35.26) 1.378 (35.00)	1.645 (41.78) 1.635 (41.53)	1.585 (40.26) 1.575 (40.00)	1.520 (38.60) 1.510 (38.35)	1.460 (37.08) 1.450 (36.83)
H	23	1.546 (39.27)	1.375 (34.92)	.159 (4.04) .149 (3.78)	1.547 (39.29)	1.557 (39.55)	1.513 (38.43) 1.503 (38.18)	1.770 (44.96) 1.760 (44.70)	1.710 (43.43) 1.700 (43.18)	1.645 (41.78) 1.635 (41.53	1.585 (40.26) 1.575 (40.01)
J	25	1.672 (42.47)	1.484 (37.69)	.159 (4.04) .149 (3.78)	1.672 (42.47)	1.682 (42.72)	1.648 (41.86) 1.638 (41.61)	1.895 (48.13) 1.885 (47.88)	1.835 (46.61) 1.825 (46.36)	1.770 (44.95) 1.760 (44.70)	1.710 (43.43) 1.700 (43.18)

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Alternate key and keyway polarization



Alternate Key and Keyway Receptacles



Alternate Key and Keyway Plugs

Series IV Alternate Key and Keyway Polarization		
Polarization	XX°	YY°
N	110°	250°
A	100°	260°
B	90°	270°
C	80°	280°
D	70°	290°
K	120°	255°
L	120°	265°
M	120°	275°
R	120°	285°

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MIL-DTL-38999 Series III and IV

Environmental and hermetic material and finish

Series III and IV Environmental Connector Materials	
Shell, Barrel, and Coupling Nut	Aluminum alloy 6061 or 7075 per ASTM-B221
Front and Rear Insulators	High Grade Rigid Dielectric
Contact Retention Clip	Beryllium copper, heat-treated, unplated
Grommet, Peripheral Seal and Interfacial Seal	Blended elastomer, 30% silicone per ZZ-R-765, 70% fluorosilicone per MIL-R-25988
Pin / Socket Contacts (Environmental)	Copper Alloy / Gold Plate
Adhesives	Silicone and epoxy

Series III and IV Hermetic Connector Materials	
Shell, Barrel, and Coupling Nut	Corrosion resistant steel
Insulators	Fused vitreous glass
Pin Contact	Nickel iron alloy 52/gold plated
Socket Contact	Copper Alloy, Gold Plated IAW ASTM B488, Type 3, Code C
Socket Insulator	High Grade Rigid Dielectric

Series III Environmental Class Connector Finishes

QPL Finish	COTS FINISH	Material	Finish	Specification
F	ME	Aluminum	Electroless Nickel	AMS-C-26074
G	MA	Aluminum	Electroless Nickel	AMS-C-26074
J	XW	Composite	Cadmium Olive Drab Over Electroless Nickel	AMS-QQ-P-416, over AMS-C-26074
K	Z1	Stainless Steel	Passivate	ASTM A967
M	XM	Composite	Electroless Nickel	AMS-C-26074
S	ZL	Stainless Steel	Electrodeposited Nickel	SAE-AMS-QQ-N-290, Class 2
T	MT	Aluminum	Ni-PTFE (Nickel Fluorocarbon Polymer)	SAE-AMS2454
V	TZ	Aluminum	Tin-Zinc (SnZn) Over Electroless Nickel Over Suitable Underplate	SAE-AMS2434 Type 2 Grade A, B, Or Equivalent
W	NF	Aluminum	Cadmium Plate Olive Drab Over Electroless Nickel	AMS-QQ-P-416, over AMS-C-26074
Z	ZR	Aluminum	Zinc Nickel, Black Over Suitable Underplate	ASTM B841 TYPE D
AA	MN	Aluminum	Tri-Nickel Alloy	ASTM B733, Service Class SC3, .001 Inch Minimum

Series IV Environmental Class Connector Finishes

QPL Finish	COTS Finish	Material	Finish	Specification
F	ME	Aluminum	Electroless Nickel	AMS-C-26074
W	NF	Aluminum	Cadmium Plate Olive Drab over Electroless Nickel	AMS-QQ-P-416, over AMS-C-26074 (500 Hour Salt Spray)
G	MA	Aluminum	Electroless Nickel	AMS-C-26074; space-grade
K	Z1	Stainless Steel	Passivate	ASTM A967

Series III and IV Hermetic Class Connector Finishes

QPL Finish	COTS Finish	Material	Finish	Specification
Y	Z1	Stainless Steel	Passivate	ASTM A967
N	ZL	Stainless Steel	Electrodeposited Nickel	SAE-AMS-QQ-N-290, Class 2 (500 Hour Salt Spray)
H	Z1S	Stainless Steel	Passivate	ASTM A967; space-grade

MIL-DTL-38999 Series III and IV

Pin contact selection guide for environmental connectors

AS39029 Pin Contacts for 38999 Series III and IV

Wire Size	Contact Size	M39029 Part Number	Glenair Part Number	Crimp Tools				BIN	Tool Code
				Crimper		Positioner			
				M22520 Part Number	Glenair Part Number	M22520 Part Number	Glenair Part Number		
#22 - #28	#22D	M39029/58-360	850-002-22-360	M22520/2-01	809-015	M22520/2-09	K42 (Daniels)	360	A, C
#20 - #24	#20	M39029/58-363	850-002-20-363	M22520/2-01	809-015	M22520/2-10	K43 (Daniels)	363	A, E
#16 - #20	#16	M39029/58-364	850-002-16-364	M22520/1-01	809-136	M22520/1-04	809-137	364	L, M
#12 - #14	#12	M39029/58-365	850-002-12-365	M22520/1-01	809-136	M22520/1-04	809-137	365	L, M

AS39029 Coax Pin Contacts for 38999 Series III and IV

Wire Type	Contact Size	Pin Part Number M39029 P/N (Glenair P/N)	Coax Freq	Crimp Tools				BIN
				Inner Contact		Shield Crimp Sleeve		
				Crimper M22520 P/N (Glenair P/N)	Positioner M22520 P/N (Glenair P/N)	Crimper M2250 P/N (Glenair P/N)	Hex Die/Positioner M2250 P/N (Glenair P/N)	
RG180	#8	M39029/60-367 (852-007-08-367)	700 MHz	M22520/2-01 (809-015)	M22520/2-31 (859-050)	M22520/5-01 (809-129)	M22520/5-05 (859-051)	367
RG174, RG316	#12	M39029/28-211 (852-002-12-211)	700 MHz	M22520/2-01 (809-015)	M22520/2-34 (809-135)	M22520/31-01 (809-133)	M22520/31-02 (809-134)	211
RG316	#12	M39029/102-558 (852-004-12-558)	3 GHz	809-128 (Glenair) MH992 (Daniels)	859-006 (Glenair) K1721 (Daniels)	M22520/5-01 (809-129)	M22520/5-03 (809-130)	558

AS39029 Twinax Pin Contacts for 38999 Series III and IV

Wire Type	Contact Size	Pin Part Number M39029 P/N (Glenair P/N)	Crimp Tools						BIN
			Center Contact		Intermediate Contact		Shield Crimp Sleeve		
			Crimper M22520 P/N (Glenair P/N)	Positioner M22520 P/N (Glenair P/N)	Crimper M22520 P/N (Glenair P/N)	Hex Die M22520 P/N (Glenair P/N)	Crimper M22520 P/N (Glenair P/N)	Hex Die M22520 P/N (Glenair P/N)	
M17/176-00002 and Raychem 10612	#8	M39029/90-529 (853-001-08-529)	M22520/2-01 (809-015)	M22520/2-37 (809-240)	M22520/5-01 (809-129)	M22520/5-105 (859-048)	M22520/5-01 (809-129)	M22520/5-105 (859-048)	529
	#12	02004-936 853-008-1	809-128 MH992 (DMC)	859-125 (K1365 DMC)	859-126 (GS212)	859-127 (GP1437)	M22520/31-01 (809-133) (GS200-1 DMC)	859-128 (GP959 DMC)	936

BIN Color Coding

0	1	2	3	4	5	6	7	8	9
BLACK	BROWN	RED	ORANGE	YELLOW	GREEN	BLUE	VIOLET	GREY	WHITE

AS39029 Socket Power Contacts for 38999 Series III and IV

Wire Size	Contact Size	M38039 Part Number	Glenair Part Number	Crimp Tools				BIN
				Crimper		Positioner		
				M22520 Part Number	Glenair Part Number	M22520 Part Number	Glenair Part Number	
#12 - #14	#12	M39029/56-353	850-001-12-353	M22520/1-01	809-136	M22520/1-04	809-137	353
#16 - #20	#16	M39029/56-352	850-001-16-352	M22520/1-01	809-136	M22520/1-04	809-137	352
#20 - #24	#20	M39029/56-351	850-001-20-351	M22520/2-01	809-015	M22520/2-10	K43 (Daniels)	351
#22 - #28	#22D	M39029/56-348	850-001-22-348	M22520/2-01	809-015	M22520/2-09	K40 (Daniels)	348

AS39029 Coax Socket Contacts for 38999 Series III and IV

Wire Size	Contact Size	Socket Part Number M39029 P/N (Glenair P/N)	Coax Freq	Crimp Tools				BIN
				Inner Contact		Shield Crimp Sleeve		
				Crimper M22520 P/N (Glenair P/N)	Positioner M22520 P/N (Glenair P/N)	Crimper M22520 P/N (Glenair P/N)	Hex Die/ Positioner M22520 P/N (Glenair P/N)	
RG180	#8	M39029/59-366 (852-006-08-366)	700 MHz	M22520/2-01 (809-015)	M22520/2-31 (859-050)	M22520/5-01 (809-129)	M22520/5-05 (859-051)	366
RG174, G316	#12	M39029/75-416 (852-003-12-416)	700 MHz	M22520/2-01 (809-015)	M22520/2-34 (859-135)	M22520/31-01 (809-133)	M22520/31-02 (809-134) Positioner	416
RG316	#12	M39029/103-559 (852-005-12-559)	3GHz	809-128 (Glenair) MH992 (Daniels)	859-006 (Glenair) K1721 (Daniels)	M22520/5-01 (809-129)	M22520/5-03 (809-130)	559

AS39029 Concentric Twinax Socket Contacts for 38999 Series III and IV

Wire Size	Contact Size	Socket Part Number M39029 P/N (Glenair P/N)	Crimp Tools						BIN
			Center Contact		Intermediate Contact		Shield Crimp Sleeve		
			Crimper M22520 P/N (Glenair P/N)	Positioner M22520 P/N (Glenair P/N)	Crimper M22520 P/N (Glenair P/N)	Hex Die M22520 P/N (Glenair P/N)	Crimper AS22520 P/N (Glenair P/N)	Hex Die M22520 P/N (Glenair P/N)	
M17/176-00002 and Raychem 10612	#8	M39029/91-530 (853-002-08-530)	(M22520/2-01) 809-015	(M22520/2-37) 809-240	(M22520/5-01) 809-129	(M22520/5-105) 859-048	(M22520/5-01) 809-129	(M22520/5-105) 859-048	530
	#12	02003-926 (853-009-1)	809-128 (MH992 DMC)	859-125 (K1365 DMC)	859-126 (GS212 DMC)	859-127 (GP1437 DMC)	M22520/31-01 (809-133) (GS200-1 DMC)	859-128 (GP959 DMC)	926

BIN Color Coding

0	1	2	3	4	5	6	7	8	9
BLACK	BROWN	RED	ORANGE	YELLOW	GREEN	BLUE	VIOLET	GREY	WHITE

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ADJUSTABLE CRIMP TOOLS FOR SIZE #22D AND 20 POWER AND SIZE #8 AND #12 COAX CONTACTS

These crimp tools perform precision eight indent crimps for gas-tight wire terminations and excellent tensile strength. Adjustment wheel has 8 settings. Ratchet mechanism prevents improper crimps. Use with bayonet-type positioners. Check calibration with M22520/3 gages. Length is 6.75 inches, weight is approx. 10 oz.



1 Standard M22520/2-01 miniature crimper. Use with standard size #22D and #20 contacts also for use with size #12 and #20 coaxial center of M39029/75, /60, /59 contacts. positioners, ordered separately.



2 Glenair 809-128 size #12 coax crimper. Use with size #12 M39029/103 and /102, 3 GHz coax and 02003 and 02004 twinax contacts. Positioners, ordered separately. Coax and Twinax contacts also require shield crimp sleeve tools, sold separately.

Glenair Part Number	Military Part Number	Daniels Part Number
809-015	M22520/2-01	AFM8
809-128	N/A	MH992



3 Positioners for #20, #22D power contacts and size #8 and #12 coaxial contacts. Coax positioners are for crimping inner contact of M39029/28, /75, /60, /59 contacts. Use with 809-015 or 809-128 crimp tool as required.

Power Contact Positioners			
Contact Size	Glenair Part Number	Military Part Number	Daniels Part Number
#22D (Pin)	N/A	M22520/2-09	K42
#22D (Socket)	N/A	M22520/2-07	K40
#20	N/A	M22520/2-10	K43

Coaxial Inner Contact Positioner			
Contact Size	Glenair Part Number	Military Part Number	Daniels Part Number
#12	859-135	M22520/2-34	K-323
#12	859-006	N/A	K1721
#12	859-125		K136
#8	859-050	M22520/2-31	K-406

Twinax Inner Contact Positioner			
Contact Size	Glenair Part Number	Military Part Number	Daniels Part Number
#8	809-240	M22520/2-37	K-709

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MIL-DTL-38999 Series III and IV, Environmental

Contact crimp and installation tools

CRIMP TOOL AND POSITIONER FOR #12 AND #16 POWER CONTACTS

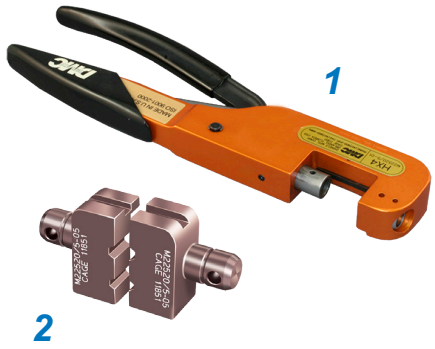


1 Crimp tool for use with size #16 and #12 power pins. 9.75 inches OAL, 1.25 pounds. Use with M39029/57 and /58 contacts and 809-093 adapters.

2 Positioner for use with size #12 and #16 Power contacts.

Figure	Glenair Part Number	Military Part Number	Daniels Part Number
1	809-136	M22520/1-01	AF8
2	809-137	M22520/1-04	TH163

PARALLEL ACTION CRIMP TOOL AND HEX DIE SET FOR #8 AND 12 COAX AND TWINAX CONTACTS



1 Parallel action tool for use with hex crimp dies. 11 inches OAL, 2.0 pounds. Anodized aluminum frame, steel mechanism, plastic handles. Includes tool for die set removal. Accepts all M22520/5 die sets.

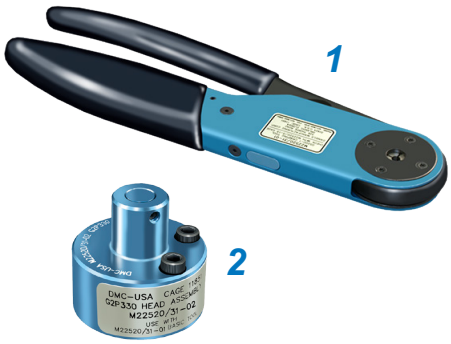
Glenair Part Number	Military Part Number	Daniels Part Number
809-129	M22520/5-01	HX4

2 Die set for terminating twinax shield and intermediate contact as well as coax shield crimp sleeve. Use with size #8 and #12 coaxial and concentric twinax contacts. Set consists of upper and lower halves. Made of hardened steel with black oxide finish. Approximately 2 inches in length, assembled. Die set has two closures per illustration.

Hex Dies				
Contact Type	Contact Size	Glenair Part Number	Military Part Number	Daniels Part Number
Coax	#8	859-051	M22520/5-05	Y197
Coax	#12	809-130	M22520/5-03	Y196
Twinax	#12	859-048	M22520/5-105	Y631

CRIMP TOOL AND POSITIONER FOR #12 COAXIAL SHIELD CRIMP SLEEVE

For crimping size #12 shield sleeves. These mil spec approved tools feature a ratchet mechanism to prevent damage from overcrimping. Check calibration with M22520/3 gage.



1 Crimp tool for use with size #12 coaxial contacts. Black handles. 9.75 inches OAL, 1.25 pounds.

2 Positioner for use with size #12 coaxial contacts. Use with 809-133 (M22520/31-01) crimp tool.

Figure	Glenair Part Number	Military Part Number	Daniels Part Number
2	809-133	M22520/31-01	GS200-1
3	809-134	M22520/31-02	G2P330

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CRIMP TOOL AND POSITIONER FOR #12 TWINAX INTERMEDIATE CONTACT

For use with 02004-936 and -926 intermediate contact

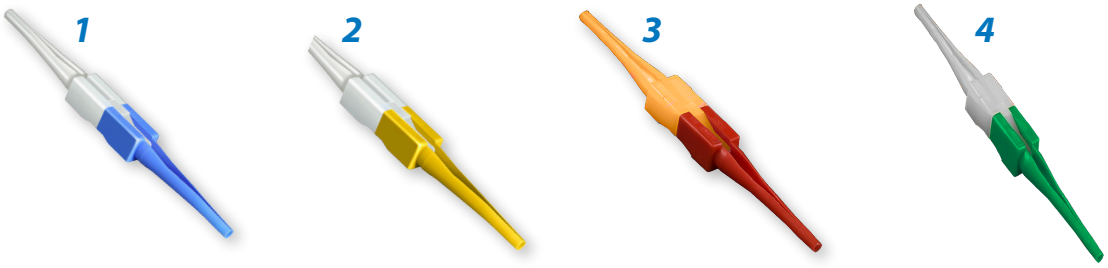
Glenair Part Number	Military Part Number	Daniels Part Number
859-126	N/A	GS212
859-127	N/A	GP1437

CRIMP TOOL AND POSITIONER FOR #12 TWINAX SHIELD CRIMP SLEEVE

For use with 02004-936 and -926 shield crimp sleeve

Glenair Part Number	Military Part Number	Daniels Part Number
809-133	M22520/31-01	GS200-1
859-128	N/A	GP959

CONTACT INSERTION AND REMOVAL TOOLS



1 Insertion/Extraction Tool for #16 Contacts. Use with size power contacts. Economical molded plastic. White extraction tip, blue insertion tip.

2 Insertion/Extraction Tool for #12 Contacts. Use with size #12 coaxial or power contacts. Molded plastic. White extraction tip, yellow insertion tip.

3 Insertion/Extraction Tool for #20 Contacts. Molded plastic. Orange extraction tip, red insertion tip.

4 Insertion/Extraction Tool for #22D Contacts. Molded plastic. White extraction tip, green insertion tip

Figure	Size	Type	Part Number	Military Part Number	Daniels Part Number
1	#16	Insertion/Extraction	809-131	M81969/14-03	(None)
2	#12	Insertion/Extraction	809-132	M81969/14-04	(None)
3	#20	Insertion/Extraction	809-207	M81969/14-10	(None)
4	#22D	Insertion/Extraction	859-020	M81969/14-01	(None)



QPL AND COTS EQUIVALENT

MIL-DTL-38999 Series III Environmental

The industry standard mil/aero connector backed with Glenair service and availability

Standard environmental-class MIL-DTL-38999 Series III connectors with DLA certification are now manufactured and supplied by Glenair. These industry-standard connectors are ideally suited for the broad range of harsh environmental land, sea, air, and space applications and are backed with Glenair's industry leading service, support, and availability. Marked with D38999 or Glenair COTS part numbering, these environmental crimp-contact connectors are available in plug, jam-nut and wall mount receptacle shell styles. Standard material and finish classes are supported including W (Cad/O.D. over Electroless Nickel), F (Electroless Nickel), T (Nickel-PTFE) and G (Space-Grade Electroless Nickel). Contact arrangements per MIL-STD-1560 and both normal and alternate polarizations are fully supported. Best of all, defense and commercial aerospace customers, as well as land and marine engineers and procurement specialists may now specify these mission-critical interconnects directly from Glenair—the recognized service, support, and availability leader for the interconnect industry.

DLA-QPL MIL-DTL-38999 SERIES III AVAILABLE FROM GLENAIR

- **Qualified environmental plug, jam-nut, and wall mount flange receptacles**
- **Size #12, #16, #20, and #22D 1560 crimp-contact insert arrangements supported**
- **F, T, W and G plating classes, plus Glenair COTS equivalents and additional material/finish options available**
- **100% made in America, no foreign-sourced materials, component parts, or assembly labor employed**



Glenair: Made in America since 1956

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QPL QUALIFIED AND COTS EQUIVALENT

MIL-DTL-38999 Series III

Industry standard, triple-start mating harsh-environment, Mil qualified connectors

MECHANICAL, ENVIRONMENTAL, AND ELECTRICAL PERFORMANCE

MIL-DTL-38999 Series III (Glenair Series 233-105) offers outstanding interconnect performance for mission-critical military and commercial applications.

- **Electromagnetic compatibility (EMC):** metal-to-metal coupling, plug grounding fingers, and conductive shell finishes deliver excellent shielding performance up to 65 dB at 10 GHz
- **Contact protection:** scoop-proof design prevents inadvertent damage to pin contacts during mating
- **Environmental performance:** interfacial and wire grommet seals deliver IP67 level sealing, even at high altitude
- **Corrosion resistance:** connector shell finishes—from Cad over Nickel to Class T Nickel-PTFE offer outstanding corrosion resistance
- **Mating:** triple-start stub ACME threads provide fast mating and resist galling and cross-threading
- **Supported contacts:** from size #22D signal to #12 shielded Coax
- **Commercial equivalent:** Glenair COTS equivalent connectors deliver mil-spec performance with material/finish options not available in QPL parts

Mechanical Performance Features
Threaded Triple-Start Coupling Design
Nine Shell Sizes, Range 9 – 25
Scoop-Proof Shell Design
Full Mate Visual Indicator
Integrated Contact Retention System
Interfacial and Grommet Seals
Fully Shielded
Shell-to-Shell Bottoming
Threaded/Toothed Accessory Interface
Full Range of Assembly Tools

CONNECTOR FINISH CLASSES



Cadmium Olive Drab
Conductivity +++++
Corrosion Resistance
-65° to +175°C
Glenair Code NF
D38999 Class W



Electroless Nickel
Conductivity +++++
Corrosion Resistance
-65° to +200°C
Glenair Code ME
D38999 Class F



Space-Grade Electroless Nickel
Conductivity +++++
Corrosion Resistance
-65° to +200°C
Glenair Code MA
D38999 Class G

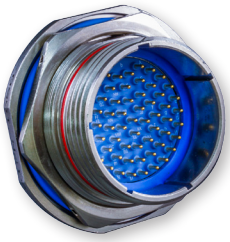


Nickel-PTFE
Conductivity +++++
Corrosion Resistance
-65° to +175°C
Glenair Code MT
D38999 Class T

SUPPORTED CRIMP-CONTACT SHELL STYLES



Plug



Jam-Nut Receptacle



Wall Mount Receptacle

38999 SERIES III ACCESSORIES





Glenair offers a full range of QPL D38999 accessories, contact the factory for details

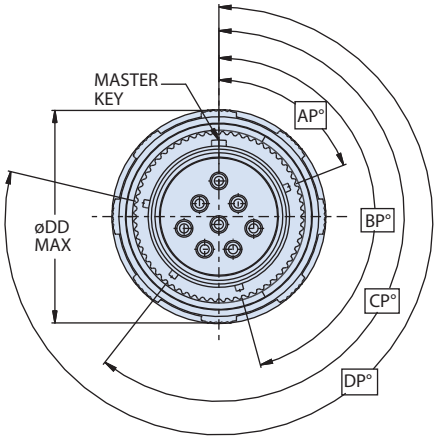
QPL QUALIFIED

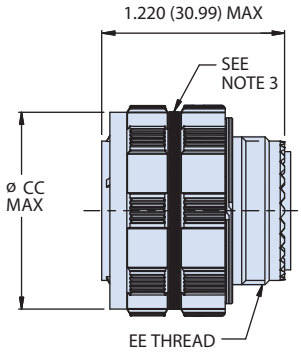
MIL-DTL-38999 Series III, Triple-Start Thread

D38999/26 plug with crimp rear release contacts and rear accessory threads

QPL Part Number Development						
Sample Part Number	**D38999/26**	**W**	**A**	**35**	**P**	**N**
D38999 Series III	**D38999/26** = Plug with accessory threads					
Class	**W** = Environmental, aluminum, cadmium O.D. over electroless nickel (500 hour salt spray), -65°C to +175°C, conductive plating **F** = Environmental, aluminum, electroless nickel (48 hour salt spray), -65°C to +200°C, conductive plating **G** = Environmental, aluminum, electroless nickel (48 hour salt spray), matte finish, space grade, -65°C to +200°C, conductive plating **T** = Environmental, aluminum, Nickel-PTFE, -65°C to +175°C, conductive plating **J** = Environmental, composite, Cadmium, Olive Drab (500 hour salt spray), -65 C to +175 C, conductive plating **M** = Environmental, composite, Electroless Nickel (500 hour salt spray), -65 C to +200 C, conductive plating					
Shell Size Code	**A**, **B**, **C**, **D**, **E**, **F**, **G**, **H** and **J** (per MIL-STD-1560)					
Insert Arrangement	Per MIL-STD-1560; See reference information information section for details					
Contact Type	**P** = Pin, 500 cycles **A** = Pin insert, less standard contacts **H** = Pin, 1500 cycles **S** = Socket, 500 cycles **B** = Socket insert, less standard contacts **J** = Socket, 1500 cycles					
Alternate Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **E** see polarization position table					







Series III Alternate Key and Keyway Polarization																			
Shell Size Code	Shell Size	Key and Keyway ID Code	AP° BSC	BP° BSC	CP° BSC	DP° BSC	Shell Size Code	Shell Size	Key and Keyway ID Code	AP° BSC	BP° BSC	CP° BSC	DP° BSC	Shell Size Code	Shell Size	Key and Keyway ID Code	AP° BSC	BP° BSC	CP° BSC	DP° BSC
A	9	N	105	140	215	265	B C D	11 13 15	N	95	141	208	236	E F G H J	17 19 21 23 25	N	80	142	196	293
		A	102	132	248	320			A	113	156	182	292			A	135	170	200	310
		B	80	118	230	312			B	90	145	195	252			B	49	169	200	244
		C	35	140	205	275			C	53	156	220	255			C	66	140	200	257
		D	64	155	234	304			D	119	146	176	298			D	62	145	180	280
		E	91	131	197	240			E	51	141	184	242			E	79	153	197	272

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COTS EQUIVALENT

MIL-DTL-38999 Series III, Triple-Start Thread

233-105-26 plug with crimp rear release contacts and rear accessory threads

COTS Part Number Development							
Sample Part Number	**233-105-26**	**MA**	**11**	**-35**	**P**	**N**	**186T**

Series / Basic Part No.	**233-105-26** = Plug with accessory threads
Material/Finish	**NF** = Aluminum, cadmium O.D. over electroless nickel (500 hour salt spray), -65°C to +175°C, conductive plating **ME** = Aluminum, electroless nickel (48 hour salt spray), -65°C to +200°C, conductive plating **MA*** = Aluminum, electroless nickel (48 hour salt spray), matte finish, space grade, -65°C to +200°C, conductive plating **MT** = Aluminum, nickel-PTFE, -65°C to +175°C, conductive plating **XW** = Environmental, composite, Cadmium, Olive Drab (500 hour salt spray), -65°C to +175°C, conductive plating **XM** = Environmental, composite, Electroless Nickel (500 hour salt spray), -65°C to +200°C, conductive plating
Shell Size	**9**, **11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Contact Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Type	**P** = Pin Insert **A** = Pin Gender, Less Contacts **S** = Socket Insert **B** = Socket Gender, Less Contacts
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** (Normal), **U** (Universal)
Optional Mod Code	**LC** = Less contacts **186T** = Thermal vacuum outgassing

* Connectors must be ordered with "MA" finish and modification code "-186T" to conform to the thermal vacuum outgassing requirements of Class G. Additional material/finish options are available, consult factory for ordering information.

Dimensions

Shell Size Code	Shell Size	ØCC Max	ØDD Max	EE Thread 1.0-6g 0.100R
A	09	.732 (18.60)	.858 (21.79)	M12
B	11	.839 (21.30)	.984 (24.99)	M15
C	13	1.008 (25.60)	1.157 (29.39)	M18
D	15	1.138 (28.90)	1.280 (32.51)	M22
E	17	1.276 (32.40)	1.406 (35.71)	M25
F	19	1.382 (35.10)	1.516 (38.51)	M28
G	21	1.508 (38.30)	1.642 (41.71)	M31
H	23	1.626 (41.30)	1.768 (44.91)	M34
J	25	1.752 (44.50)	1.890 (48.01)	M37

NOTES

1. Insert arrangements per MIL-STD-1560,
2. Connector is supplied with contacts (including spares), insertion/removal tool and sealing plugs unless otherwise specified.
3. Blue color band indicates rear release retention system.

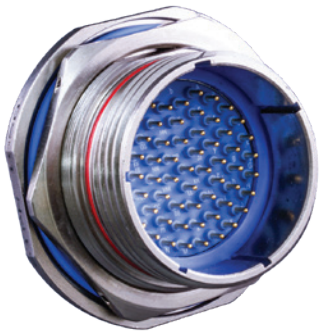
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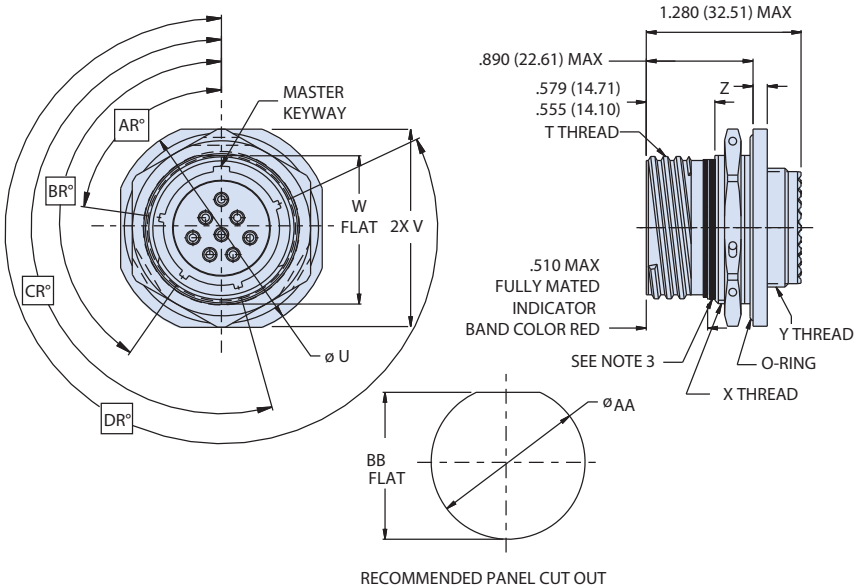
QPL QUALIFIED

MIL-DTL-38999 Series III, Triple-Start Thread

D38999/24 jam-nut receptacle with rear release crimp contacts and accessory threads

QPL Part Number Development						
Sample Part Number	**D38999/24**	**W**	**A**	**35**	**P**	**N**
D38999 Series III	**D38999/24** = Jam-Nut receptacle					
Class	**W** = Environmental, aluminum, cadmium O.D. over electroless nickel (500 hour salt spray), -65°C to +175°C, conductive plating **F** = Environmental, aluminum, electroless nickel (48 hour salt spray), -65°C to +200°C, conductive plating **G** = Environmental, aluminum, electroless nickel (48 hour salt spray), matte finish, space grade, -65°C to +200°C, conductive plating **T** = Environmental, aluminum, Nickel-PTFE, -65°C to +175°C, conductive plating **J** = Environmental, composite, Cadmium, Olive Drab (500 hour salt spray), -65 C to +175 C, conductive plating **M** = Environmental, composite, Electroless Nickel (500 hour salt spray), -65 C to +200 C, conductive plating					
Shell Size Code	**A**, **B**, **C**, **D**, **E**, **F**, **G**, **H** and **J** (per MIL-STD-1560)					
Insert Arrangement	Per MIL-STD-1560; See reference information section for details					
Contact Type	**P** = Pin, 500 cycles **A** = Pin insert, less standard contacts **H** = Pin, 1500 cycles **S** = Socket, 500 cycles **B** = Socket insert, less standard contacts **J** = Socket, 1500 cycles					
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** = Normal					





RECOMMENDED PANEL CUT OUT

Series III Alternate Keyway Polarizations																				
Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway Code	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC
A	9	N	105	140	215	265	B C D	11 13 15	N	95	141	208	236	E F G H J	17 19 21 23 25	N	80	142	196	293
		A	102	132	248	320			A	113	156	182	292			A	135	170	200	310
		B	80	118	230	312			B	90	145	195	252			B	49	169	200	244
		C	35	140	205	275			C	53	156	220	255			C	66	140	200	257
		D	64	155	234	304			D	119	146	176	298			D	62	145	180	280
		E	91	131	197	240			E	51	141	184	242			E	79	153	197	272

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COTS EQUIVALENT

MIL-DTL-38999 Series III, Triple-Start Thread

233-105-24 jam-nut receptacle with rear release crimp contacts and rear accessory options

COTS Part Number Development							
Sample Part Number	**233-105-24**	**MA**	**11**	**-35**	**P**	**N**	**186T**

Series / Basic Part No.	**233-105-24** = Environmental, jam-nut receptacle
Material/Finish	**NF** = Aluminum, cadmium O.D. over electroless nickel (500 hour salt spray), -65°C to +175°C, conductive plating **ME** = Aluminum, electroless nickel (48 hour salt spray), -65°C to +200°C, conductive plating **MA*** = Aluminum, electroless nickel (48 hour salt spray), matte finish, space grade, -65°C to +200°C, conductive plating **MT** = Aluminum, nickel-PTFE, -65°C to +175°C, conductive plating **XW** = Environmental, composite, Cadmium, Olive Drab (500 hour salt spray), -65°C to +175°C, conductive plating **XM** = Environmental, composite, Electroless Nickel (500 hour salt spray), -65°C to +200°C, conductive plating
Shell Size	**9**, **11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Type	**P** = Pin insert **A** = Pin gender, less contacts **S** = Socket insert **B** = Socket gender, less contacts
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** (Normal), **U** (Universal)
Optional Mod Codes	**LC** = Less contacts **186T** = Thermal vacuum outgassing

* Connectors must be ordered with "MA" finish and modification code "-186T" to conform to the thermal vacuum outgassing requirements of Class G. Additional material/finish options are available, consult factory for ordering information.

Dimensions

Shell Size Code	Shell Size	T Thread .1P-.3L-TS-2A	Ø U	V	W Flat	X Thread 1.0-6g 0.100R	Y Thread 1.0-6g 0.100R	Z	Panel Cut-out ØAA	Panel Cut-out BB Flat
A	09	.6250	1.201 (30.51) 1.177 (29.90)	1.079 (27.41) 1.047 (26.59)	.655 (16.64) .645 (16.38)	M17	M12	.122 (3.10) .083 (2.11)	.703 (17.86) .693 (17.60)	.661 (16.79) .655 (16.64)
B	11	.7500	1.386 (35.20) 1.362 (34.59)	1.268 (32.21) 1.236 (31.39)	.755 (19.18) .745 (18.92)	M20	M15		.835 (21.21) .825 (20.96)	.771 (19.58) .761 (19.33)
C	13	.8750	1.512 (38.40) 1.488 (37.80)	1.390 (35.31) 1.358 (34.49)	.942 (23.93) .932 (23.67)	M25	M18		1.020 (25.91) 1.010 (25.65)	.955 (24.26) .945 (24.00)
D	15	1.0000	1.638 (41.61) 1.614 (41.00)	1.516 (38.51) 1.484 (37.69)	1.066 (27.08) 1.056 (26.82)	M28	M22		1.145 (29.08) 1.135 (28.83)	1.085 (27.56) 1.075 (27.30)
E	17	1.1875	1.764 (44.81) 1.740 (44.20)	1.642 (41.71) 1.610 (40.89)	1.191 (30.25) 1.181 (30.00)	M32	M25		1.270 (32.26) 1.260 (32.00)	1.210 (30.73) 1.200 (30.48)
F	19	1.2500	1.949 (49.50) 1.925 (48.90)	1.827 (46.41) 1.795 (45.59)	1.316 (33.43) 1.306 (33.17)	M35	M28	.153 (3.89) .114 (2.90)	1.395 (35.43) 1.385 (35.18)	1.335 (33.91) 1.325 (33.65)
G	21	1.3750	2.075 (52.71) 2.051 (52.10)	1.953 (49.61) 1.921 (48.79)	1.441 (36.60) 1.431 (36.35)	M38	M31		1.520 (38.61) 1.510 (38.35)	1.460 (37.08) 1.450 (36.83)
H	23	1.5000	2.201 (55.91) 2.177 (55.30)	2.079 (52.81) 2.047 (51.99)	1.566 (39.78) 1.556 (39.52)	M41	M34		1.645 (41.78) 1.635 (41.53)	1.585 (40.26) 1.575 (40.00)
J	25	1.6250	2.323 (59.00) 2.299 (58.39)	2.205 (56.01) 2.173 (55.19)	1.691 (42.95) 1.681 (42.70)	M44	M37		1.770 (44.96) 1.760 (44.70)	1.710 (43.43) 1.700 (43.18)

NOTES

1. Insert arrangements per MIL-STD-1560,
2. Connector is supplied with contacts (including spares), insertion/removal tool and sealing plugs unless otherwise specified.
3. Blue color band indicates rear release retention system.

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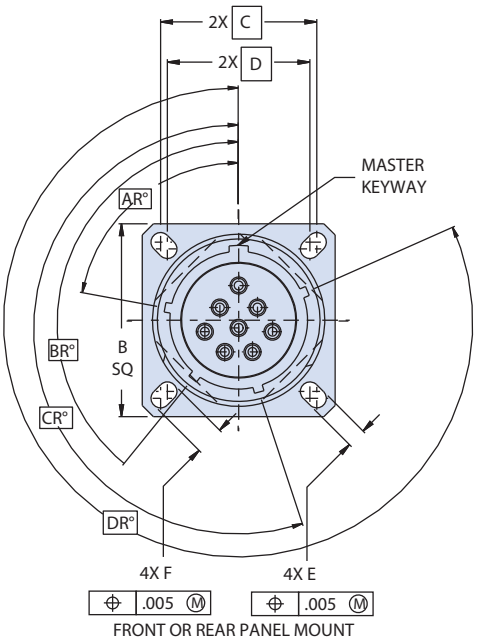
MIL-DTL-38999 Series III, Triple-Start Thread

D38999/20 wall mount receptacle with rear release crimp contacts and accessory threads

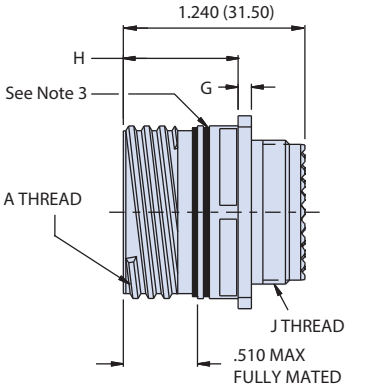
QPL Part Number Development						
Sample Part Number	**D38999/20**	**W**	**A**	**35**	**P**	**N**

D38999 Series III	**D38999/20** = Wall mount receptacle
Class	**W** = Environmental, aluminum, cadmium O.D. over electroless nickel (500 hour salt spray), -65°C to +175°C, conductive plating **F** = Environmental, aluminum, electroless nickel (48 hour salt spray), -65°C to +200°C, conductive plating **G** = Environmental, aluminum, electroless nickel (48 hour salt spray), matte finish, space grade, -65°C to +200°C, conductive plating **T** = Environmental, aluminum, Nickel-PTFE, -65°C to +175°C, conductive plating **J** = Environmental, composite, Cadmium, Olive Drab (500 hour salt spray), -65 C to +175 C, conductive plating **M** = Environmental, composite, Electroless Nickel (500 hour salt spray), -65 C to +200 C, conductive plating
Shell Size Code	**A**, **B**, **C**, **D**, **E**, **F**, **G**, **H** and **J** (per MIL-STD-1560)
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Type	**P** = Pin, 500 cycles; **A** = Pin insert, less standard contacts; **H** = Pin, 1500 cycles **S** = Socket, 500 cycles; **B** = Socket insert, less standard contacts; **J** = Socket, 1500 cycles
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** = Normal





FRONT OR REAR PANEL MOUNT



For recommended panel cut-out see reference information section

Series III Alternate Keyway Polarizations

Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway Code	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC
A	9	N	105	140	215	265	B C D	11 13 15	N	95	141	208	236	E F G H J	17 19 21 23 25	N	80	142	196	293
		A	102	132	248	320			A	113	156	182	292			A	135	170	200	310
		B	80	118	230	312			B	90	145	195	252			B	49	169	200	244
		C	35	140	205	275			C	53	156	220	255			C	66	140	200	257
		D	64	155	234	304			D	119	146	176	298			D	62	145	180	280
		E	91	131	197	240			E	51	141	184	242			E	79	153	197	272

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COTS EQUIVALENT

MIL-DTL-38999 Series III, Triple-Start Thread

233-105-20 wall mount receptacle with rear release crimp contacts and rear accessory options

COTS Part Number Development							
Sample Part Number	**233-105-20**	**NF**	**11**	**-35**	**P**	**N**	
Series / Basic Part No.	**233-105-20** = Environmental, wall mount receptacle						
Material/Finish	**NF** = Aluminum, cadmium O.D. over electroless nickel (500 hour salt spray), -65°C to +175°C, conductive plating **ME** = Aluminum, electroless nickel (48 hour salt spray), -65°C to +200°C, conductive plating **MA** = Aluminum, electroless nickel (48 hour salt spray), matte finish, space grade, -65°C to +200°C, conductive plating **MT** = Aluminum, nickel-PTFE, -65°C to +175°C, conductive plating **XW** = Environmental, composite, Cadmium, Olive Drab (500 hour salt spray), -65°C to +175°C, conductive plating **XM** = Environmental, composite, Electroless Nickel (500 hour salt spray), -65°C to +200°C, conductive plating						
Shell Size	**9**, **11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**						
Contact Arrangement	Per MIL-STD-1560; See reference information section for details						
Contact Type	**P** = Pin Insert **A** = Pin Gender, Less Contacts **S** = Socket Insert **B** = Socket Gender, Less Contacts						
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** (Normal), **U** (Universal)						
Optional Mod Codes	**LC** = Less contacts **186T** = Thermal vacuum outgassing						

* Connectors must be ordered with "MA" finish and modification code "-186T" to conform to the thermal vacuum outgassing requirements of Class G. Additional material/finish options are available, consult factory for ordering information.

Dimensions

Shell Size Code	Shell Size	A Thread .1P-.3L-TS-2A	B Sq	C BSC	D BSC	E	F	G	H	J Thread 1.0-6g 0.100R
A	09	.6250	.949 (24.10) .925 (23.50)	.719 (18.26)	.594 (15.09)	.136 (3.45) .120 (3.05)	.224 (5.69) .208 (5.28)	.098 (2.49) .083 (2.11)	.820 (20.83) .771 (19.58)	M12
B	11	.7500	1.043 (26.49) 1.019 (25.88)	.812 (20.62)	.719 (18.26)		.202 (5.13) .186 (4.72)			M15
C	13	.8750	1.138 (28.91) 1.114 (28.30)	.906 (23.01)	.812 (20.62)					M18
D	15	1.0000	1.232 (31.29) 1.208 (30.68)	.969 (24.61)	.906 (23.01)		.181 (4.60) .165 (4.19)			M22
E	17	1.1875	1.323 (33.60) 1.299 (32.99)	1.062 (26.97)	.969 (24.61)		.202 (5.13) .186 (4.72)			M25
F	19	1.2500	1.449 (36.80) 1.425 (36.20)	1.156 (29.36)	1.062 (26.97)					M28
G	21	1.3750	1.575 (40.00) 1.551 (39.40)	1.250 (31.75)	1.156 (29.36)			.126 (3.20) .083 (2.11)	.790 (20.07) .741 (18.82)	M31
H	23	1.5000	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)			M34
J	25	1.6250	1.823 (46.30) 1.799 (45.69)	1.500 (38.10)	1.375 (34.92)					M37

NOTES

1. Insert arrangements per MIL-STD-1560,
2. Connector is supplied with contacts (including spares), insertion/removal tool and sealing plugs unless otherwise specified.
3. Blue color band indicates rear release retention system.

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QPL AND COTS EQUIVALENT

MIL-DTL-38999 Series III Hermetic

The industry standard mil/aero connector backed with Glenair service and availability

Hermetic-class MIL-DTL-38999 Series III connectors are also available from Glenair with DLA certification. These hermetically sealed connectors are ideally suited for harsh environments where the environment exists under vacuum and must remain free of air or gas impurities via the ingress of foreign chemical substances. Such systems may be susceptible to the condensation of corrosive material, dielectric breakdown and the loss of insulation resistance between conductors. Typical applications include medical, geophysical, military aerospace and other industrial applications. Marked with D38999 or Glenair COTS part numbering, these hermetic class receptacles are available for Series III and IV in box mount, jam-nut, solder mount and weld mount shell styles. All standard material and finish classes are supported including Y (CRES, passivated), N (CRES, electrodeposited nickel), and H (space-grade). Contact arrangements per MIL-STD-1560. All standard and normal and alternate key and keyway polarizations are fully supported. Best of all, defense and commercial aerospace customers, as well as land and marine engineers and procurement specialists may specify these mission-critical interconnects directly from Glenair—the recognized service, support, and availability leader for the interconnect industry.



DLA-QPL MIL-DTL-38999 SERIES III AVAILABLE FROM GLENAIR

- **Qualified hermetic jam-nut, box mount, solder mount and weld mount receptacles**
- **All 1560 crimp-contact insert arrangements fully supported**
- **N, Y, and H plating classes, plus Glenair SuperNine® signature equivalents**
- **100% made in America interconnect: No foreign-sourced materials, component parts, or assembly labor employed**



Glenair: Made in America since 1956

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QPL QUALIFIED AND COTS EQUIVALENT

MIL-DTL-38999 Series III, Triple-Start Thread

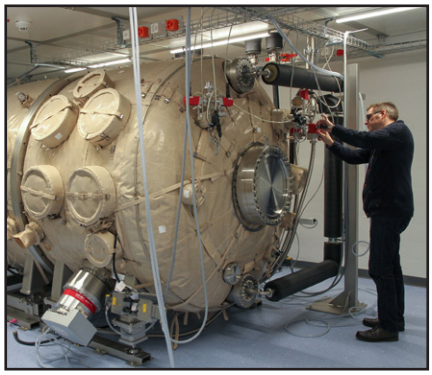
Industry standard, hermetic triple-start mating, Mil qualified connectors

MECHANICAL, HERMETIC, AND ELECTRICAL PERFORMANCE

MIL-DTL-38999 Series III (Glenair Series 233-100) offers outstanding interconnect performance for mission-critical military and commercial applications.

- **Triple start self locking connectors available with pin/socket, solder cup, PC tail or eyelet contacts**
- **Electromagnetic compatibility (EMC):** metal-to-metal coupling, grounding fingers in plugs, and conductive shell finishes deliver excellent shielding performance up to 65 dB at 10 GHz
- **Contact protection:** scoop-proof design prevents inadvertent damage to pin contacts during mating
- **Hermetic sealing: 10^{-7} cc/second maximum helium leak rate**
- **Corrosion resistance:** connector shells are made from corrosion resistant steel and are offered with passivated or electrodeposited nickel finish
- **Mating:** triple-start stub ACME threads provide fast mating and resist galling and cross-threading
- **Supported contacts:** from size #22D signal to #12 signal in solder cup, feedthru, and eyelet
- **Commercial equivalent:** Glenair COTS equivalent connectors deliver mil-spec performance with material/finish options not available in QPL parts

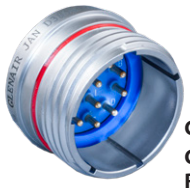




CONNECTOR FINISH CLASSES



Electrodeposited Nickel
Conductivity +++++
Corrosion Resistance
-65° to +200°C
Glenair Code ZL
D38999 Class N



Passivated
Conductivity ++
Corrosion Resistance
-65° to +200°C
Glenair Code Z1
D38999 Class Y and H (space)

38999 SERIES III ACCESSORIES





Glenair offers a full range of QPL D38999 accessories, contact the factory for details

SUPPORTED SHELL STYLES



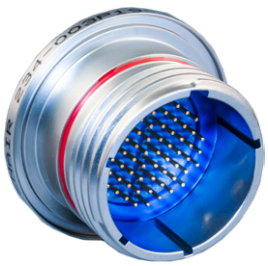
Jam-Nut Receptacle



Box Mount Receptacle



Solder Mount Receptacle



Weld Mount Receptacle

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Dimensions in inches (millimeters) are subject to change without notice

QPL QUALIFIED

MIL-DTL-38999 Series III, Triple-Start Thread

D38999/21 box mount hermetic receptacle

QPL Part Number Development

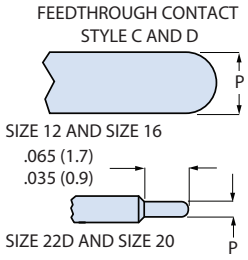
Sample Part Number	D38999/21	Y	B	35	P	N

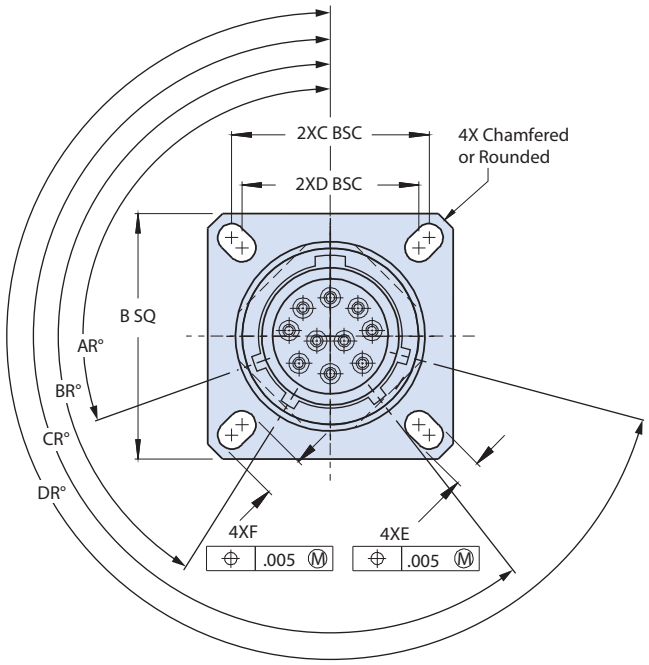
MIL-DTL-38999	**D38999/21** = Box mount receptacle
Class	**N** = Hermetic, CRES, nickel finish, conductive, -65°C to 200°C **Y** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C **H** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size Code	**A**, **B**, **C**, **D**, **E**, **F**, **G**, **H** and **J** (per MIL-STD-1560)
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Type	**P** = Pin, solder cup; **X** = Pin, eyelet; **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup; **Z** = Socket, eyelet; **D** = Socket, PCB flex feedthrough
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** = Normal

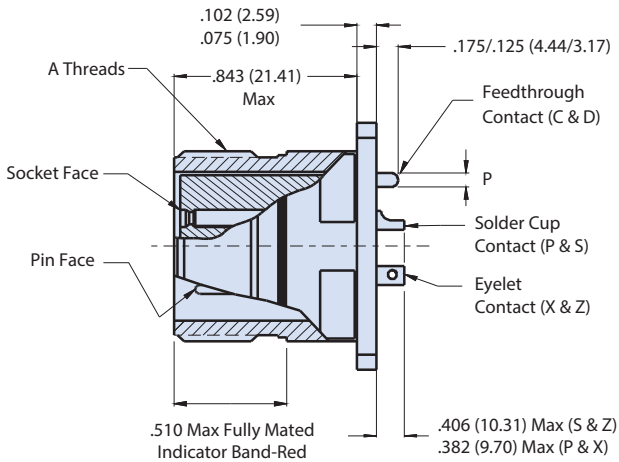


Contact Size

Size	ø P
22D	.015 (0.38) .011 (0.28)
20	.028 (0.71) .024 (0.61)
16	.0635 (1.61) .0615 (1.56)
12	.095 (2.41) .093 (2.36)







Wire Accommodation

Contact Size	Wire Gauge
22D	#22 - #28
20	#20 - #24
16	#16 - #20
12	#12 - #14

NOTES

- The 239-204 and AS85049/130 have the same dimensions
- Basic Specification D38999 "Flange gasket not provided with connector. Use gasket 239-204 and select appropriate material"

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COTS EQUIVALENT

MIL-DTL-38999 Series III, Triple-Start Thread

233-100-H2 box mount hermetic receptacle

COTS Part Number Development						
Sample Part Number	**233-100-H2**	**Z1**	**11**	**-35**	**P**	**N**

Series / Basic Part No.	**233-100-H2** = Hermetic, box mount receptacle
Material/Finish*	**ZL** = CRES, nickel finish, conductive, -65°C to 200°C **Z1** = CRES, passivate finish, conductive, -65°C to 200°C **Z1S** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size	**9**, **11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Type	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** (Normal),

Additional material/finish options are available, consult factory for ordering information.

Dimensions

Shell Size Code	Shell Size	A Thread .1P-.3L-TS-2A	B Sq ±.012	C Bsc	D Bsc	E ±.008	F ±.008
A	9	.6250	.937 (23.80)	.719 (18.26)	.594 (15.09)	.128 (3.25)	.216 (5.49)
B	11	.7500	1.031 (26.19)	.812 (20.62)	.719 (18.26)	.128 (3.25)	.194 (4.93)
C	13	.8750	1.126 (28.60)	.906 (23.01)	.812 (20.62)	.128 (3.25)	.194 (4.93)
D	15	1.0000	1.220 (30.99)	.969 (24.61)	.906 (23.01)	.173 (4.39)	.173 (4.39)
E	17	1.1875	1.311 (33.30)	1.062 (26.97)	.969 (24.61)	.128 (3.25)	.194 (4.93)
F	19	1.2500	1.437 (36.50)	1.156 (29.36)	1.062 (26.97)	.128 (3.25)	.194 (4.93)
G	21	1.3750	1.563 (39.70)	1.250 (31.75)	1.156 (29.36)	.128 (3.25)	.194 (4.93)
H	23	1.5000	1.689 (42.90)	1.375 (34.92)	1.250 (31.75)	.154 (3.91)	.242 (6.15)
J	25	1.6250	1.811 (46.00)	1.500 (38.10)	1.375 (34.92)	.150 (3.81)	.242 (6.15)

Series III Alternate Keyway Polarizations

Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway Code	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC
A	9	N	105	140	215	265	B C D	11 13 15	N	95	141	208	236	E F G H J	17 19 21 23 25	N	80	142	196	293
		A	102	132	248	320			A	113	156	182	292			A	135	170	200	310
		B	80	118	230	312			B	90	145	195	252			B	49	169	200	244
		C	35	140	205	275			C	53	156	220	255			C	66	140	200	257
		D	64	155	234	304			D	119	146	176	298			D	62	145	180	280
		E	91	131	197	240			E	51	141	184	242			E	79	153	197	272

Additional Material/Finish Options

Finish Code	Description
Z1S†	CRES, passivate finish, conductive, -65°C to 200°C, space-grade

† Connectors ordered with "Z1S" include outgas processing to conform to outgassing requirements of Class H.

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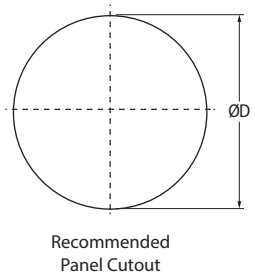
QPL QUALIFIED

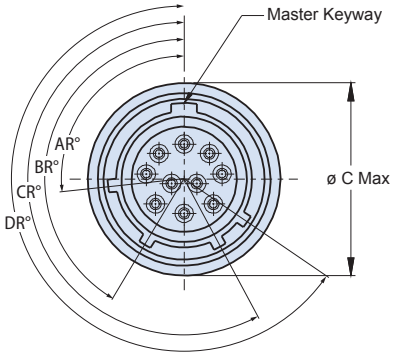
MIL-DTL-38999 Series III, Triple-Start Thread

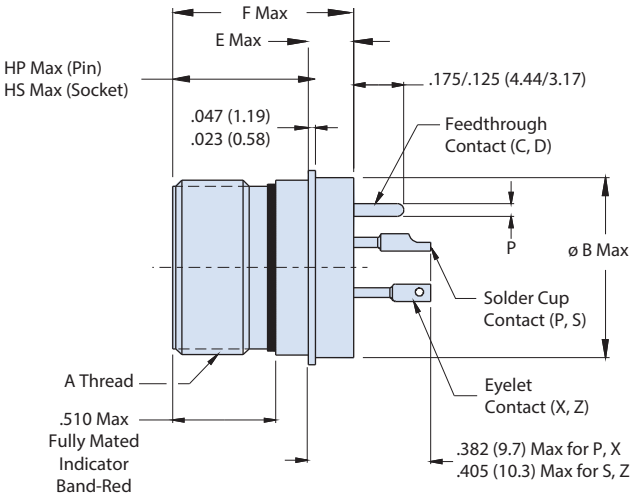
D38999/25 solder mount hermetic receptacle

QPL Part Number Development							
Sample Part Number		**D38999/25**	**Y**	**B**	**35**	**P**	**N**
MIL-DTL-38999	**D38999/25** = Solder mount recetpacle						
Class	**N** = Hermetic, CRES, nickel finish, conductive, -65°C to 200°C **Y** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C **H** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)						
Shell Size Code	**A**, **B**, **C**, **D**, **E**, **F**, **G**, **H** and **J** (per MIL-STD-1560)						
Insert Arrangement	Per MIL-STD-1560; See reference information section for details						
Contact Type	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough						
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** (Normal)						









Series III Alternate Keyway Polarizations																				
Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway Code	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC
A	9	N	105	140	215	265	B C D	11 13 15	N	95	141	208	236	E F G H J	17 19 21 23 25	N	80	142	196	293
		A	102	132	248	320			A	113	156	182	292			A	135	170	200	310
		B	80	118	230	312			B	90	145	195	252			B	49	169	200	244
		C	35	140	205	275			C	53	156	220	255			C	66	140	200	257
		D	64	155	234	304			D	119	146	176	298			D	62	145	180	280
		E	91	131	197	240			E	51	141	184	242			E	79	153	197	272

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COTS EQUIVALENT

MIL-DTL-38999 Series III, Triple-Start Thread

233-100-H5 solder mount hermetic receptacle

COTS Part Number Development							
Sample Part Number		**233-100-H5**	**Z1**	**11**	**-35**	**P**	**N**
Series / Basic Part No.	**233-100-H5** = Hermetic, solder mount receptacle						
Material/Finish	**ZL** = CRES, nickel finish, conductive, -65°C to 200°C **Z1** = CRES, passivate finish, conductive, -65°C to 200°C **Z1S** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)						
Shell Size	**9**, **11**, **13**, **15**, **17**, **19**, **21**, **23**, **25** (per MIL-STD-1560)						
Insert Arrangement	Per MIL-STD-1560; See reference information section for details						
Contact Type	**P** = Pin, solder cup **S** = Socket, solder cup	**X** = Pin, eyelet **Z** = Socket, eyelet	**C** = Pin, PCB flex feedthrough **D** = Socket, PCB flex feedthrough				
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** = Normal						

Additional material/finish options are available, consult factory for ordering information.

Dimensions

Shell Size Code	Shell Size	A Thread -.1P-.3L-TS-2A	ØB Max	ØC Max	ØD	E Max	F Max	HP Max	HS Max
A	9/09	.6250	.673 (17.09)	.764 (19.41)	.685 (17.40) .675 (17.15)	.201(5.1)	.937(23.8)	.677(17.2)	.764(19.4)
B	11	.7500	.783 (19.89)	.858 (21.79)	.794 (20.17) .784 (19.91)	.201(5.1)	.937(23.8)	.677(17.2)	.764(19.4)
C	13	.8750	.909 (23.09)	.980 (24.89)	.920 (23.37) .910 (23.11)	.201(5.1)	.937(23.8)	.677(17.2)	.764(19.4)
D	15	1.0000	1.031 (26.19)	1.106 (28.09)	1.043 (26.49) 1.033 (26.24)	.201(5.1)	.937(23.8)	.677(17.2)	.764(19.4)
E	17	1.1875	1.157 (29.39)	1.232 (31.29)	1.169 (29.69) 1.159 (29.44)	.201(5.1)	.937(23.8)	.677(17.2)	.764(19.4)
F	19	1.2500	1.252 (31.80)	1.323 (33.60)	1.263 (32.08) 1.253 (31.83)	.201(5.1)	.937(23.8)	.677(17.2)	.764(19.4)
G	21	1.3750	1.378 (35.00)	1.449 (36.80)	1.389 (35.28) 1.379 (35.03)	.201(5.1)	.937(23.8)	.677(17.2)	.764(19.4)
H	23	1.5000	1.504 (38.20)	1.575 (40.00)	1.515 (38.48) 1.505 (38.23)	.232(5.9)	.969(24.6)	.677(17.2)	.764(19.4)
J	25	1.6250	1.626 (41.30)	1.701 (43.21)	1.638 (41.61) 1.628 (41.35)	.232(5.9)	.969(24.6)	.677(17.2)	.764(19.4)

Additional Material/Finish Options

Finish Code	Description
Z1S†	CRES, passivate finish, conductive, -65°C to 200°C, space-grade

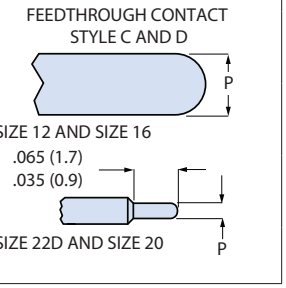
† Connectors ordered with "Z1S" include outgas processing to conform to outgassing requirements of Class H.

Wire Accommodation

Contact Size	Wire Gauge
22D	#22 - #28
20	#20 - #24
16	#16 - #20
12	#12 - #14

Contact Size

Size	ø P
22D	.011 (0.28) .015 (0.38)
20	.024 (0.61) .028 (0.71)
16	.0635 (1.61) .0615 (1.56)
12	.095 (2.41) .093 (2.36)



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QPL QUALIFIED

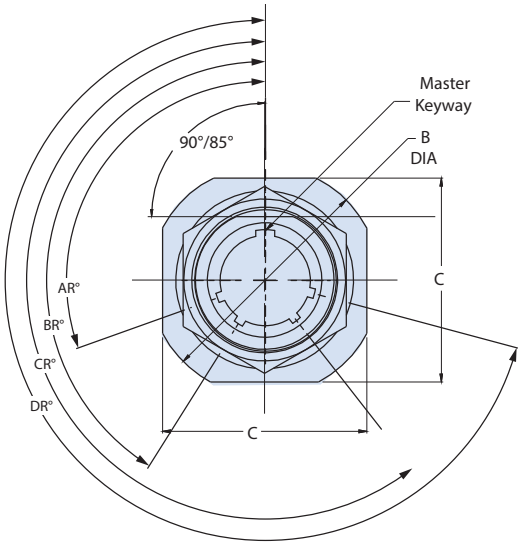
MIL-DTL-38999 Series III, Triple-Start Thread

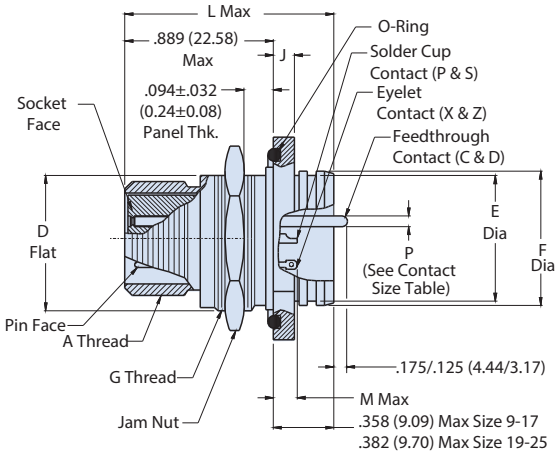
D38999/23 jam-nut mount hermetic receptacle

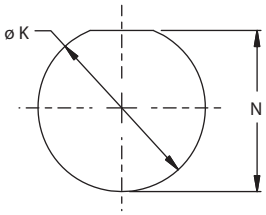
QPL Part Number Development						
Sample Part Number	**D38999/23**	**Y**	**B**	**35**	**P**	**N**

MIL-DTL-38999	**D38999/23** = Jam-Nut mount receptacle
Class	**N** = Hermetic, CRES, nickel finish, conductive, -65°C to 200°C **Y** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C **H** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size Code	**A**, **B**, **C**, **D**, **E**, **F**, **G**, **H** and **J** (per MIL-STD-1560)
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Type	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** = Normal









RECOMMENDED PANEL CUT-OUT

Wire Accommodation	
Contact Size	**Wire Gauge**
22D	#22 - #28
20	#20 - #24
16	#16 - #20
12	#12 - #14

Series III Alternate Keyway Polarizations

Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway Code	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC
A	9	N	105	140	215	265	B C D	11 13 15	N	95	141	208	236	E F G H J	17 19 21 23 25	N	80	142	196	293
		A	102	132	248	320			A	113	156	182	292			A	135	170	200	310
		B	80	118	230	312			B	90	145	195	252			B	49	169	200	244
		C	35	140	205	275			C	53	156	220	255			C	66	140	200	257
		D	64	155	234	304			D	119	146	176	298			D	62	145	180	280
		E	91	131	197	240			E	51	141	184	242			E	79	153	197	272

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COTS EQUIVALENT

MIL-DTL-38999 Series III, Triple-Start Thread

233-100-H7 jam-nut mount hermetic receptacle
233-100-DH7 jam-nut mount hermetic receptacle with dual o-rings

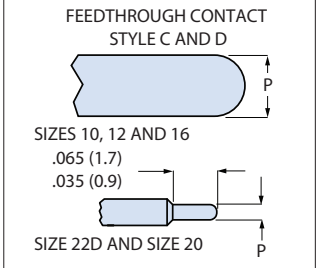
COTS Part Number Development							
Sample Part Number	**233-100-H7**	**Z1**	**11**	**-35**	**P**	**N**	
Series / Basic Part No.	**233-100-H7** = Hermetic, jam-nut mount receptacle **233-100-DH7** = Hermetic, dual o-ring, jam-nut mount receptacle (Use mod code 1358 to select alternate o-rings)						
Material/Finish	**ZL** = CRES, nickel finish, conductive, -65°C to 200°C **Z1** = CRES, passivate finish, conductive, -65°C to 200°C **Z1S** = CRES, passivate finish, conductive, -65°C to 200°C (space grade)						
Shell Size	**9**, **11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**						
Insert Arrangement	Per MIL-STD-1560; See reference information section for details						
Contact Type	**P** = Pin, solder cup **S** = Socket, solder cup	**X** = Pin, eyelet **Z** = Socket, eyelet	**C** = Pin, PCB flex feedthrough **D** = Socket, PCB flex feedthrough				
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** (Normal)						

Additional material/finish options are available, consult factory for ordering information.

Dimensions

Shell Size Code	Shell Size	A Thread -0.1P-0.3L-TS	B Dia	C A/F ±.015(0.4)	D Flat ±.005(0.1)	E Dia ±.012(0.3)	F Dia
A	9	0.625	1.201 (30.5) 1.177 (29.9)	1.063(27.0)	.650(16.5)	.602(15.3)	.653(16.6) .642(16.3)
B	11	0.750	1.386 (35.2) 1.362 (34.6)	1.252(31.8)	.750(19.1)	.724(18.4)	.775(19.7) .764(19.4)
C	13	0.875	1.512 (38.4) 1.488 (37.8)	1.374(34.9)	.937(23.8)	.850(21.6)	.905(23.0) .894(22.7)
D	15	1.000	1.638 (41.6) 1.614 (41.0)	1.500(38.1)	1.061(26.9)	.976(24.8)	1.031(26.2) 1.020(25.9)
E	17	1.187	1.764 (44.8) 1.740 (44.2)	1.626(41.3)	1.186(30.1)	1.102(28.0)	1.153(29.3) 1.142(29.0)
F	19	1.250	1.949 (49.5) 1.925 (48.9)	1.811(46.0)	1.311(33.3)	1.228(31.2)	1.278(32.5) 1.268(32.2)
G	21	1.375	2.075 (52.7) 2.050 (52.1)	1.937(49.2)	1.436(36.5)	1.350(34.3)	1.405(35.7) 1.394(35.4)
H	23	1.500	2.201 (55.9) 2.177 (55.3)	2.063(52.4)	1.561(39.6)	1.476(37.5)	1.531(38.9) 1.520(38.6)
J	25	1.625	2.323 (59.00) 2.299 (58.39)	2.189(55.6)	1.686(42.8)	1.602(40.7)	1.653(42.0) 1.642(41.7)

Contact Size



Contact Size	ø P
22D	.011 (0.28); .015 (0.38)
20	.024 (0.61); .028 (0.71)
16	.0635 (1.61); .0615 (1.56)
12	.095 (2.41); .093 (2.36)
10	.126 (3.20); .124 (3.15)

Dimensions (Continued)

Shell Size Code	Shell Size	G Thread Iso Metric	J ±.008(0.2)	K Dia ±.005 (0.1)	L Max	M Max P & X	M Max S & Z	M Max #8 (All)	N ±.005 (0.1)
A	9/09	M17 X 1.0-6g	.106 (2.7)	.698 (17.73)	1.150 (29.2)	.209 (5.3)	.232 (5.9)	.595 (15.11)	.658±.003 (16.71±.08)
B	11	M20 X 1.0-6g	.106 (2.7)	.830 (21.08)	1.150 (29.2)	.209 (5.3)	.232 (5.9)	.595 (15.11)	.766 (19.46)
C	13	M25 X 1.0-6g	.106 (2.7)	1.015 (25.78)	1.154 (29.3)	.201 (5.1)	.224 (5.7)	.590 (14.99)	.950 (24.13)
D	15	M28 X 1.0-6g	.106 (2.7)	1.140 (28.96)	1.154 (29.3)	.201 (5.1)	.224 (5.7)	.590 (14.99)	1.080 (27.43)
E	17	M32 X 1.0-6g	.106 (2.7)	1.265 (32.13)	1.154 (29.3)	.201 (5.1)	.224 (5.7)	.590 (14.99)	1.205 (30.61)
F	19	M35 X 1.0-6g	.138 (3.5)	1.390 (35.31)	1.185 (30.10)	.201 (5.1)	.224 (5.7)	.590 (14.99)	1.330 (33.78)
G	21	M38 X 1.0-6g	.138 (3.5)	1.515 (38.48)	1.185 (30.10)	.201 (5.1)	.224 (5.7)	.590 (14.99)	1.455 (36.96)
H	23	M41 X 1.0-6g	.138 (3.5)	1.640 (41.66)	1.185 (30.10)	.201 (5.1)	.224 (5.7)	.590 (14.99)	1.580 (40.13)
J	25	M44 X 1.0-6g	.138 (3.5)	1.765 (44.83)	1.185 (30.10)	.201 (5.1)	.224 (5.7)	.590 (14.99)	1.705 (43.31)

† Connectors ordered with "Z1S" include outgas processing to conform to outgassing requirements of D38999 Class H.

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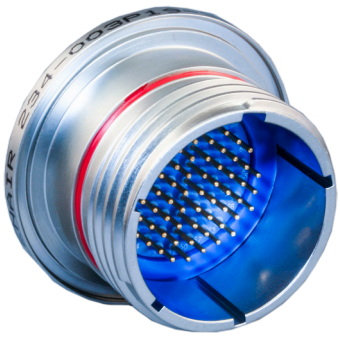
QPL QUALIFIED

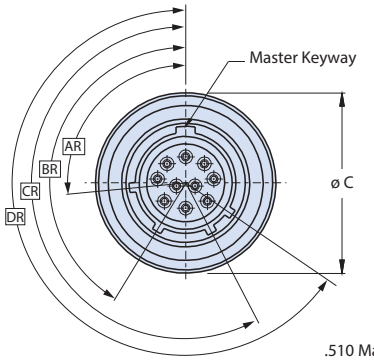
MIL-DTL-38999 Series III, Triple-Start Thread

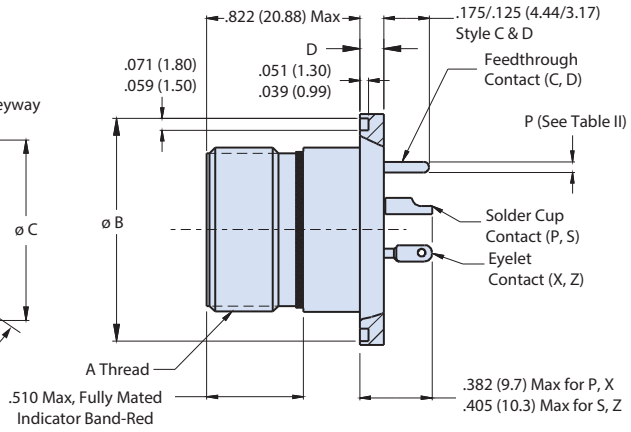
D38999/27 weld mount hermetic receptacle

QPL Part Number Development						
Sample Part Number	**D38999/27**	**Y**	**B**	**35**	**P**	**N**

MIL-DTL-38999	**D38999/27** = Weld mount receptacle
Class	**N** = Hermetic, CRES, nickel finish, conductive, -65°C to 200°C **Y** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C **H** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size Code	**A**, **B**, **C**, **D**, **E**, **F**, **G**, **H** and **J** (per MIL-STD-1560)
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Type	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** = Normal

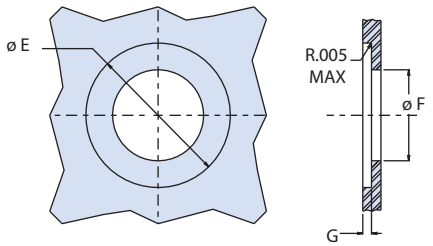






Panel Cut-Out Dimensions				
Shell Size Code	**Shell Size**	**Ø E**	**Ø F**	**Depth G ±.005**
A	9	.990 (25.15) .985 (25.02)	.300 (7.62)	.126 (3.20)
B	11	1.112 (28.24) 1.107 (28.12)	.430 (10.92)	.126 (3.20)
C	13	1.238 (31.45) 1.233 (31.32)	.550 (13.97)	.126 (3.20)
D	15	1.364 (34.65) 1.359 (34.52)	.675 (17.15)	.126 (3.20)
E	17	1.451 (36.86) 1.446 (36.73)	.795 (20.19)	.126 (3.20)
F	19	1.597 (40.56) 1.592 (40.44)	.895 (22.73)	.126 (3.20)
G	21	1.738 (44.15) 1.733 (44.02)	1.010 (25.65)	.126 (3.20)
H	23	1.894 (48.11) 1.899 (48.23)	1.135 (28.83)	.157 (3.99)
J	25	1.990 (50.55) 1.985 (50.42)	1.250 (31.75)	.157 (3.99)

Wire Accommodation	
Contact Size	**Wire Gauge**
22D	#22 - #28
20	#20 - #24
16	#16 - #20
12	#12 - #14



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COTS EQUIVALENT

MIL-DTL-38999 Series III, Triple-Start Thread

233-100-H8 weld mount hermetic receptacle

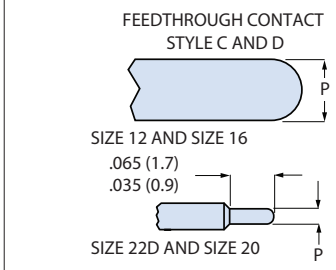
COTS Part Number Development

Sample Part Number	233-100-H8	Z1	11	-35	P	N

Series / Basic Part No.	**233-100-H8** = Hermetic, weld mount receptacle
Material/Finish	**ZL** = CRES, nickel finish, conductive, -65°C to 200°C **Z1** = CRES, passivate finish, conductive, -65°C to 200°C **Z1S** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size	**9**, **11**, **13**, **15**, **17**, **19**, **21**, **23**, **25** see dimensions table
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Type	**P** = Pin, solder cup; **X** = Pin, eyelet; **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup; **Z** = Socket, eyelet; **D** = Socket, PCB flex feedthrough
Alternate Polarization	**A**, **B**, **C**, **D**, **E**, **N** (Normal)

Additional material/finish options are available, consult factory for ordering information.

Contact Size



Contact Size	ø P
22D	.011 (0.28) .015 (0.38)
20	.024 (0.61) .028 (0.71)
16	.0635 (1.61) .0615 (1.56)
12	.095 (2.41) .093 (2.36)

Dimensions

Shell Size Code	Shell Size	A Thread .1P-.3L-TS-2A	Ø B	Ø C	D
A	9/09	.6250	.941 (23.9) .929 (23.6)	.984 (25.0) .972 (24.7)	.134 (3.4) .118 (3.0)
B	11	.7500	1.063 (27.0) 1.051 (27.0)	1.106 (28.1) 1.094 (27.8)	.134 (3.4) .118 (3.0)
C	13	.8750	1.189 (30.2) 1.177 (28.9)	1.232 (31.3) 1.220 (31.0)	.134 (3.4) .118 (3.0)
D	15	1.0000	1.315 (33.4) 1.303 (33.1)	1.358 (34.5) 1.346 (34.2)	.134 (3.4) .118 (3.0)
E	17	1.1875	1.402 (35.6) 1.390 (35.3)	1.445 (36.7) 1.433 (36.4)	.134 (3.4) .118 (3.0)
F	19	1.2500	1.547 (39.3) 1.535 (39.0)	1.591 (40.4) 1.579 (40.1)	.134 (3.4) .118 (3.0)
G	21	1.3750	1.689 (42.9) 1.677 (42.6)	1.732 (44.0) 1.720 (43.7)	.134 (3.4) .118 (3.0)
H	23	1.5000	1.854 (47.1) 1.842 (46.8)	1.898 (48.2) 1.886 (47.4)	.165 (4.2) .149 (3.8)
J	25	1.6250	1.941 (49.3) 1.929 (49.0)	1.984 (50.4) 1.972 (50.1)	.165 (4.2) .149 (3.8)

Series III Alternate Keyway Polarizations

Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway Code	AR° BSC	BR° BSC	CR° BSC	DR° BSC	Shell Size Code	Shell Size	Key and Keyway ID Letter	AR° BSC	BR° BSC	CR° BSC	DR° BSC
A	9	N	105	140	215	265	B C D	11 13 15	N	95	141	208	236	E F G H J	17 19 21 23 25	N	80	142	196	293
		A	102	132	248	320			A	113	156	182	292			A	135	170	200	310
		B	80	118	230	312			B	90	145	195	252			B	49	169	200	244
		C	35	140	205	275			C	53	156	220	255			C	66	140	200	257
		D	64	155	234	304			D	119	146	176	298			D	62	145	180	280
		E	91	131	197	240			E	51	141	184	242			E	79	153	197	272

Additional Material/Finish Options

Finish Code	Description
Z1S†	CRES, passivate finish, conductive, -65°C to 200°C, space-grade

† Connectors ordered with "Z1S" include outgas processing to conform to outgassing requirements of Class H.

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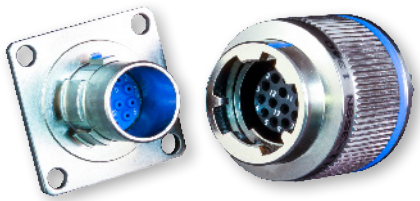
BREECH-LOCK

MIL-DTL-38999 Series IV Environmental

For missile launch controls and other severe vibration applications

From vertical launch fire-control, tracking, and multi-target missile systems to rugged industrial applications such as mining/gas-pressure blasting, the Glenair's DLA qualified MIL-DTL-38999 Series IV connector is the ultimate solution for positive and reliable breech-locking connector performance. MIL-DTL-38999 Series IV plug and receptacle connectors are available in shell sizes 11–25, with MIL-STD-1560 insert arrangements as well as hybrid shielded contact arrangements. The heart of the Series IV connector is its coupling nut/locking technology which provides rock solid breech-lock mating augmented with both primary and secondary locking mechanisms. Environmentally sealed, EMI grounded, and outfitted with pin-to-pin mating protection to prevent circuit shorts and mechanical damage, Glenair MIL-DTL-38999 Series IV QPL connectors deliver unsurpassed reliability and anti-demating performance.

- **QPL manufacturer of MIL-DTL-38999 Series IV Class F, W and G connectors**
- **Optimized for SWAMP area applications**
- **Quick-disconnect 90° breech coupling mechanism**
- **Visual, audible and tactile full-mate indicators**
- **Integrated EMI grounding fingers**
- **-65°C to 200°C operating temperature range**



Series IV solutions are available in environmental and hermetic class configurations in shell sizes from 11–25 supporting a popular range of MIL-STD-1560 insert arrangements



Glenair's complete Series IV solution includes support for power, signal and hybrid insert arrangments including shielded coax, #22, #20, #16 and #12 contacts

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QPL QUALIFIED AND COTS EQUIVALENT

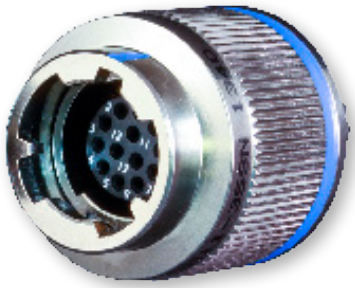
MIL-DTL-38999 Series IV, Breech Coupling

Anti decoupling, vibration and shock resistant
DLA qualified

MECHANICAL, ENVIRONMENTAL AND ELECTRICAL PERFORMANCE

MIL-DTL-38999 Series IV (Glenair Series 234-105) offers outstanding interconnect performance for high shock and vibe military and commercial applications.

- **Breech locking connectors available with crimp contacts**
- **Electromagnetic compatibility (EMC):** plug grounding fingers, and conductive shell finishes deliver excellent shielding performance up to 65 dB at 10 GHz. Grounding before engagement of contacts
- **Environmental performance:** interfacial and wire grommet seals deliver IP67 level sealing, even at high altitude
- **Contact protection:** scoop-proof design prevents inadvertent damage to pin contacts during mating
- **Mating:** breech-lock system provides fast and secure, quarter turn mating that resists decoupling even under extreme shock and vibe conditions
- **Supported contacts:** from size #22D signal to #8 twinax contacts
- **Commercial equivalent:** Glenair COTS equivalent connectors deliver mil-spec performance with material/finish options not available in QPL parts





CONNECTOR CLASSES FINISH



Electroless Nickel

Conductivity +++++
Corrosion Resistance
-65° to +200°C
Glenair Code ME
D38999 Class F, G

RoHS COMPLIANT



Cadmium Olive Drab

Conductivity ++
Corrosion Resistance
-65° to +175°C
Glenair Code NF
D38999 Class W

38999 SERIES IV ACCESSORIES



Glenair offers a full range of QPL D38999 accessories, contact the factory for details

SUPPORTED CRIMP-CONTACT SHELL STYLES



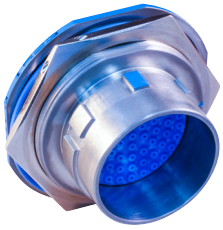
Plug



Wall-Mount Receptacle



Box-Mount Receptacle



Jam-Nut Receptacle



In-Line Receptacle

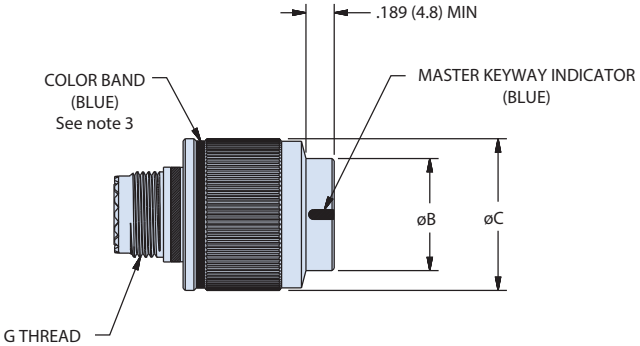
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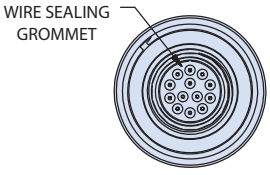
MIL-DTL-38999 Series IV, Breech Coupling

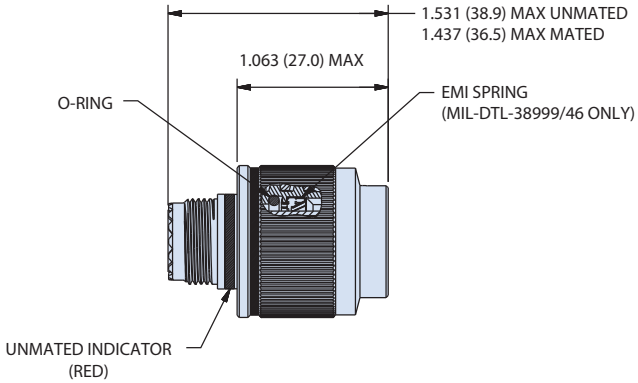
38999/46 plug with EMI ground spring
38999/47 plug without EMI ground spring

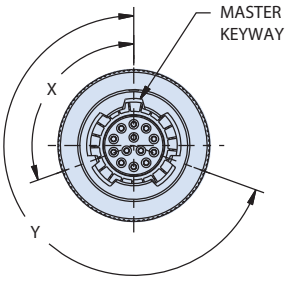
QPL Part Number Development							
Sample Part Number		**D38999/46**	**W**	**J**	**30**	**P**	**N**
MIL-DTL-38999	**38999/46** = Plug with EMI ground spring **38999/47** = Plug without EMI ground spring						
Class	**F** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C **W** = Environmental, aluminum, cadmium olive drab, conductive, -65°C to +175°C **G** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)						
Shell Size	**B**, **C**, **D**, **E**, **F**, **G**, **H**, **J**						
Insert Arrangement	Per MIL-STD-1560; See reference information section for details						
Contact Style	**P** = Pin Insert **S** = Socket Insert	**A** = Pin Gender, Less Contacts **B** = Socket Gender, Less Contacts	**H** = Pin, 1500 cycles **J** = Socket, 1500 cycles				
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table						











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

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COTS EQUIVALENT

MIL-DTL-38999 Series IV, Breech Coupling

234-105-46 plug with EMI ground spring
234-105-47 plug without EMI ground spring

COTS Part Number Development						
Sample Part Number	**234-105-46**	**NF**	**11**	**-35**	**P**	**N**
Series / Basic Part No.	**234-105-46** = Environmental plug with EMI ground spring **234-105-47** = Environmental plug without EMI ground spring					
Material/Finish	**ME*** = Aluminum, electroless nickel, conductive, -65°C to +200°C **NF** = Aluminum, cadmium olive drab, conductive, -65°C to +175°C **MA†** = Aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)					
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**					
Insert Arrangement	Per MIL-STD-1560; See reference information section for details					
Contact Designator	**P** = Pin Insert **S** = Socket Insert **A** = Pin Gender, Less Contacts **B** = Socket Gender, Less Contacts **H** = Pin, 1500 cycles **J** = Socket, 1500 cycles					
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table					

* Plug connectors, styles 46 and 47, with ME finish supplied with hard anodized coupling nuts
† Connectors must be ordered with "MA" finish and modification code "-186T" to conform to the thermal vacuum outgassing requirements of Class G. Additional material/finish options are available, consult factory for ordering information.

Dimensions				
Shell Size	Shell Size Code	ØB Max	ØC Max	G Thread
11	B	.776 (19.71)	1.047 (26.59)	M15 X 1.0-6g 0.100R
13	C	.902 (22.91)	1.220 (30.99)	M18 X 1.0-6g 0.100R
15	D	1.039 (26.39)	1.346 (34.19)	M22 X 1.0-6g 0.100R
17	E	1.150 (29.21)	1.472 (37.39)	M25 X 1.0-6g 0.100R
19	F	1.276 (32.41)	1.583 (40.21)	M28 X 1.0-6g 0.100R
21	G	1.402 (35.61)	1.705 (43.31)	M31 X 1.0-6g 0.100R
23	H	1.528 (38.81)	1.831 (46.51)	M34 X 1.0-6g 0.100R
25	J	1.650 (41.91)	1.957 (49.71)	M37 X 1.0-6g 0.100R

NOTES

1. Insert arrangements per MIL-STD-1560.
2. Connector is supplied with contacts (including spares), insertion/removal tool and sealing plugs unless otherwise specified.
3. Blue color band indicates rear release retention system.

Additional Material/Finish Options	
Finish Code	Description
TZ	Aluminum, tin zinc, green-gold
MN	Aluminum, mega nickel
ZR	Aluminum, zinc nickel, black (tri-valent cr)
MT	Aluminum, nickel PTFE
MA†	Aluminum, electroless nickel (space grade)
ZL‡	Stainless steel, electro-deposited nickel
Z1‡	Stainless steel, passivated

‡ Not firewall rated

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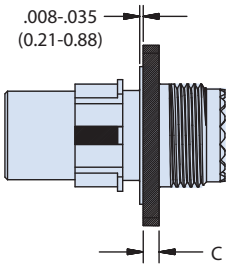
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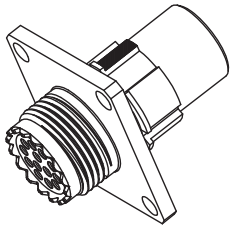
MIL-DTL-38999 Series IV, Breech Coupling

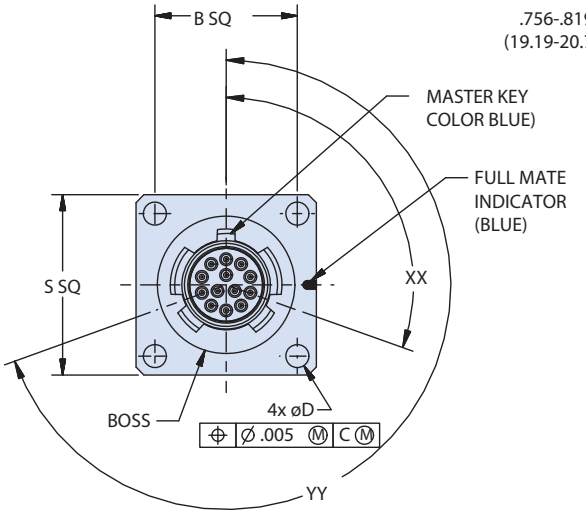
38999/40 wall mount receptacle with rear release crimp contacts

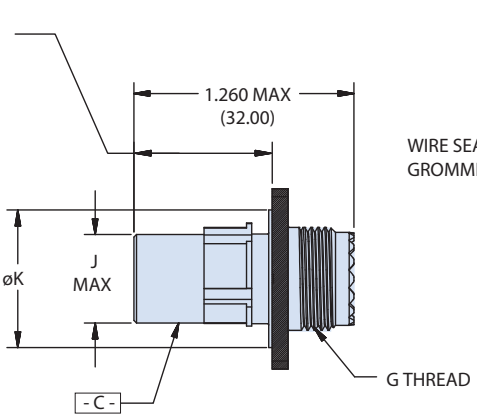
QPL Part Number Development							
Sample Part Number		**D38999/40**	**W**	**J**	**30**	**P**	**N**
MIL-DTL-38999	**38999/40** = Wall mount receptacle						
Class	**F** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C **W** = Environmental, aluminum, cadmium olive drab, conductive, -65°C to +175°C **G** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)						
Shell Size	**B**, **C**, **D**, **E**, **F**, **G**, **H**, **J**						
Insert Arrangement	Per MIL-STD-1560; See reference information section for details						
Contact Style	**P** = Pin Insert **S** = Socket Insert **A** = Pin Gender, Less Contacts **B** = Socket Gender, Less Contacts **H** = Pin, 1500 cycles **J** = Socket, 1500 cycles						
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table						

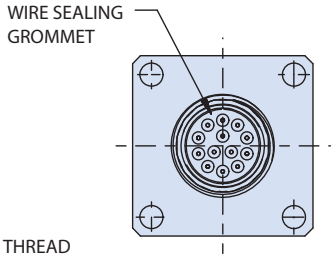












Polarization Position									
	N	**A**	**B**	**C**	**D**	**K**	**L**	**M**	**R**
XX	110°	100°	90°	80°	70°	120°	120°	120°	120°
YY	250°	260°	270°	280°	290°	255°	265°	275°	285°

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COTS EQUIVALENT

MIL-DTL-38999 Series IV, Breech Coupling

234-105-40 wall mount receptacle with rear release crimp contacts

COTS Part Number Development						
Sample Part Number	**234-105-40**	**NF**	**11**	**-35**	**P**	**N**

Series / Basic Part No.	**234-105-40** = Environmental, wall mount environmental receptacle
Material/Finish	**ME** = Aluminum, electroless nickel, conductive, -65°C to +200°C **NF** = Aluminum, cadmium olive drab, conductive, -65°C to +175°C **MA**† = Aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Style	**P** = Pin Insert; **A** = Pin Gender, Less Contacts; **H** = Pin, 1500 cycles **S** = Socket Insert; **B** = Socket Gender, Less Contacts; **J** = Socket, 1500 cycles
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization position position table

† Connectors must be ordered with "MA" finish and modification code "-186T" to conform to the thermal vacuum outgassing requirements of Class G. Additional material/finish options are available, consult factory for ordering information.

Dimensions

Shell Size	Shell Size Code	B BSC	C	ØD	G Thread 1.0-6g 0.100R	ØJ MAX	ØK	S
11	B	.812 (20.62)	.102 (2.59) .083 (2.11)	.138 (3.51) .122 (3.10)	M15	.509 (12.93)	.793 (20.14) .778 (19.76)	1.051 (26.70) 1.008 (25.60)
13	C	.906 (23.01)			M18	.634 (16.10)	.913 (23.19) .904 (22.96)	1.146 (29.11) 1.102 (27.99)
15	D	.969 (24.61)			M22	.759 (19.28)	1.044 (26.52) 1.029 (26.14)	1.240 (31.50) 1.197 (30.40)
17	E	1.062 (26.97)			M25	.885 (22.48)	1.170 (29.72) 1.155 (29.34)	1.335 (33.91) 1.291 (32.79)
19	F	1.156 (29.36)			M28	1.009 (25.63)	1.294 (32.87) 1.279 (32.49)	1.461 (37.11) 1.417 (35.99)
21	G	1.250 (31.75)	.134 (3.40) .114 (2.90)		M31	1.134 (28.80)	1.419 (36.04) 1.404 (35.66)	1.583 (40.21) 1.539 (39.09)
23	H	1.375 (34.92)		.157 (3.99) .142 (3.61)	M34	1.259 (31.98)	1.544 (39.22) 1.529 (38.84)	1.709 (43.41) 1.665 (42.29)
25	J	1.500 (38.10)			M37	1.384 (35.15)	1.669 (42.39) 1.654 (42.01)	1.835 (46.61) 1.791 (45.49)

Panel Cut-Out Dimesions

Shell Size	Shell Size Code	Rear Panel Mount ØKK	Front Panel Mount ØKKK	BB Bsc	ØDD
11	B	.796 (20.22)	.625 (15.88)	.812 (20.62)	.133 (3.38) .123 (3.12)
13	C	.922 (23.42)	.750 (19.05)	.906 (23.01)	
15	D	1.047 (26.59)	.906 (23.01)	.969 (24.61)	
17	E	1.219 (30.96)	1.016 (25.81)	1.062 (26.97)	
19	F	1.297 (32.94)	1.141 (28.98)	1.156 (29.36)	
21	G	1.422 (36.12)	1.266 (32.16)	1.250 (31.75)	
23	H	1.547 (39.29)	1.375 (34.92)	1.375 (34.92)	.159 (4.04) .149 (3.78)
25	J	1.672 (42.47)	1.484 (37.69)	1.500 (38.10)	.155 (3.94) .145 (3.68)

Additional Material/Finish Options

Finish Code	Description
TZ	Aluminum, tin zinc, green-gold
MN	Aluminum, mega nickel
ZR	Aluminum, zinc nickel, black (tri-valent cr)
MT	Aluminum, nickel PTFE
MA†	Aluminum, electroless nickel (space grade)
ZL‡	Stainless steel, electro-deposited nickel
Z1‡	Stainless steel, passivated

‡ Not firewall rated

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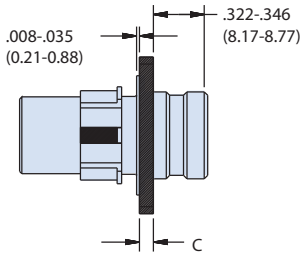
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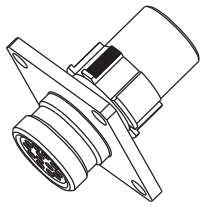
MIL-DTL-38999 Series IV, Breech Coupling

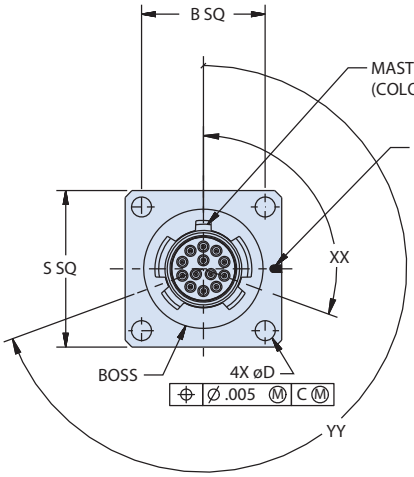
38999/42 box mount receptacle with rear release crimp contacts

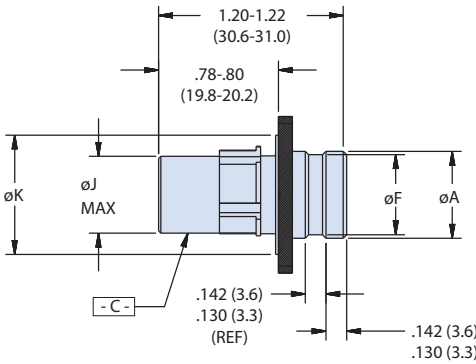
QPL Part Number Development						
Sample Part Number	**D38999/42**	**W**	**J**	**30**	**P**	**N**
MIL-DTL-38999	**38999/42** = Box mount receptacle					
Class	**F** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C **W** = Environmental, aluminum, cadmium olive drab, conductive, -65°C to +175°C **G** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)					
Shell Size	**B**, **C**, **D**, **E**, **F**, **G**, **H**, **J**					
Insert Arrangement	Per MIL-STD-1560; See reference information section for details					
Contact Style	**P** = Pin Insert **S** = Socket Insert **A** = Pin Gender, Less Contacts **B** = Socket Gender, Less Contacts **H** = Pin, 1500 cycles **J** = Socket, 1500 cycles					
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table					

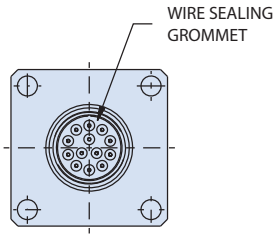












Polarization Position									
	N	**A**	**B**	**C**	**D**	**K**	**L**	**M**	**R**
XX	110°	100°	90°	80°	70°	120°	120°	120°	120°
YY	250°	260°	270°	280°	290°	255°	265°	275°	285°

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COTS EQUIVALENT

MIL-DTL-38999 Series IV, Breech Coupling

234-105-42 box mount receptacle with rear release crimp contacts

COTS Part Number Development						
Sample Part Number	**234-105-42**	**NF**	**11**	**-35**	**P**	**N**

Series / Basic Part No.	**234-105-42** = Environmental, box mount receptacle
Material/Finish	**ME** = Aluminum, electroless nickel, conductive, -65°C to +200°C **NF** = Aluminum, cadmium olive drab, conductive, -65°C to +175°C **MA**† = Aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Style	**P** = Pin Insert; **A** = Pin Gender, Less Contacts; **H** = Pin, 1500 cycles **S** = Socket Insert; **B** = Socket Gender, Less Contacts; **J** = Socket, 1500 cycles
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization position position table

† Connectors must be ordered with "MA" finish and modification code "-186T" to conform to the thermal vacuum outgassing requirements of Class G. Additional material/finish options are available, consult factory for ordering information.

Dimesions

Shell Size	Shell Size Code	ØA	B Bsc	C	ØD	ØF	ØJ	ØK	S
11	B	.579 (14.71) .563 (14.30)	.812 (20.62)	.102 (2.6) .083 (2.1)	.138 (3.50) .122 (3.10)	.535 (13.59) .520 (13.21)	.509 (12.93)	.793 (20.15) .778 (19.76)	1.051 (26.7) 1.008 (25.6)
13	C	.693 (17.60) .677 (17.20)	.906 (23.02)			.650 (16.51) .634 (16.10)	.634 (16.10)	.919 (23.35) .904 (22.96)	1.146 (29.1) 1.102 (28.0)
15	D	.819 (20.80) .803 (20.40)	.969 (24.61)			.772 (19.61) .756 (19.20)	.759 (19.28)	1.044 (26.52) 1.029 (26.13)	1.240 (31.5) 1.197 (30.4)
17	E	.945 (24.00) .929 (23.60)	1.062 (26.98)			.898 (22.81) .882 (22.40)	.885 (22.48)	1.170 (29.72) 1.115 (28.33)	1.335 (33.9) 1.291 (32.8)
19	F	1.051 (26.70) 1.035 (26.29)	1.156 (29.36)			1.004 (25.50) .988 (25.10)	1.009 (25.63)	1.294 (32.87) 1.279 (32.48)	1.461 (37.1) 1.417 (36.0)
21	G	1.173 (29.79) 1.157 (29.39)	1.250 (31.76)	.134 (3.4) .114 (2.9)		1.130 (28.70) 1.114 (28.30)	1.134 (28.80)	1.419 (36.05) 1.404 (35.66)	1.583 (40.2) 1.539 (39.1)
23	H	1.299 (32.99) 1.283 (32.59)	1.375 (34.93)		.157 (4.00) .142 (3.60)	1.256 (31.90) 1.240 (31.50)	1.259 (31.98)	1.544 (39.22) 1.332 (33.83)	1.709 (43.4) 1.665 (42.3)
25	J	1.425 (36.20) 1.409 (35.79)	1.500 (38.10)			1.378 (35.00) 1.362 (34.59)	1.384 (35.15)	1.669 (42.40) 1.654 (42.01)	1.835 (46.6) 1.791 (45.5)

Panel Cut-Out Dimesions

Shell Size	Shell Size Code	Rear Panel Mount ØK	Front Panel Mount ØKK	BB BSC	ØDD
11	B	.796 (20.22)	.625 (15.88)	.812 (20.62)	.133 (3.38) .123 (3.12)
13	C	.922 (23.42)	.750 (19.05)	.906 (23.01)	
15	D	1.047 (26.59)	.906 (23.01)	.969 (24.61)	
17	E	1.219 (30.96)	1.016 (25.81)	1.062 (26.97)	
19	F	1.297 (32.94)	1.141 (28.98)	1.156 (29.36)	
21	G	1.422 (36.12)	1.266 (32.16)	1.250 (31.75)	
23	H	1.547 (39.29)	1.375 (34.92)	1.375 (34.92)	.159 (4.04) .149 (3.78)
25	J	1.672 (42.47)	1.484 (37.69)	1.500 (38.10)	.155 (3.94) .145 (3.68)

Additional Material/Finish Options

Finish Code	Description
TZ	Aluminum, tin zinc, green-gold
MN	Aluminum, mega nickel
ZR	Aluminum, zinc nickel, black (tri-valent cr)
MT	Aluminum, nickel PTFE
MA†	Aluminum, electroless nickel (space grade)
ZL‡	Stainless steel, electro-deposited nickel
Z1‡	Stainless steel, passivated

‡ Not firewall rated

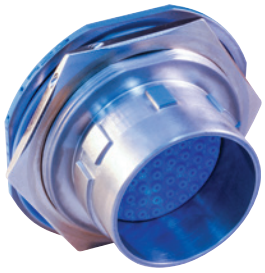
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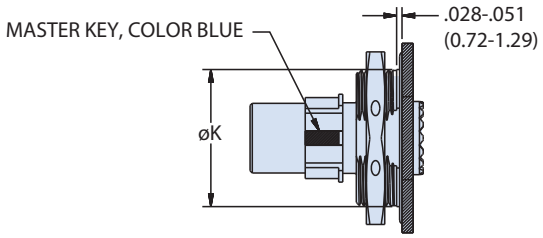
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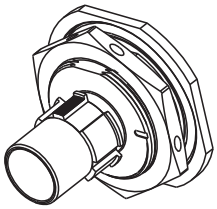
MIL-DTL-38999 Series IV, Breech Coupling

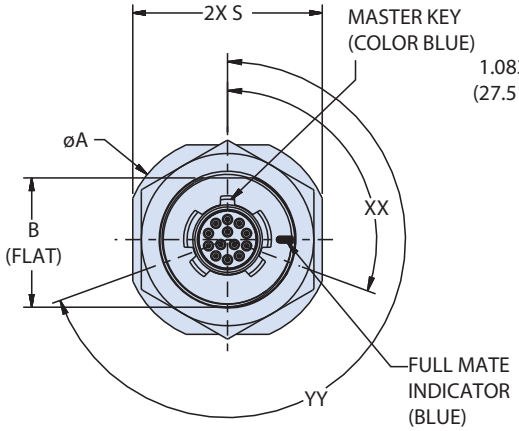
38999/44 jam-nut mount receptacle with rear release crimp contacts

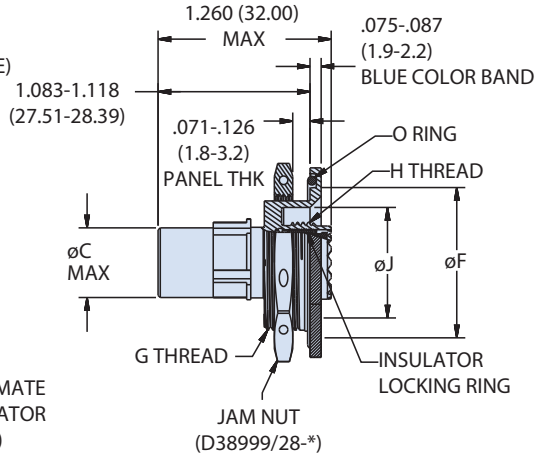
QPL Part Number Development							
Sample Part Number		**D38999/44**	**W**	**J**	**30**	**P**	**N**
MIL-DTL-38999	**38999/44** = Jam-Nut receptacle						
Class	**F** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C **W** = Environmental, aluminum, cadmium olive drab, conductive, -65°C to +175°C **G** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)						
Shell Size	**B**, **C**, **D**, **E**, **F**, **G**, **H**, **J**						
Insert Arrangement	Per MIL-STD-1560; See reference section for details						
Contact Style	**P** = Pin Insert **A** = Pin Gender, Less Contacts **S** = Socket Insert **B** = Socket Gender, Less Contacts						
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table						

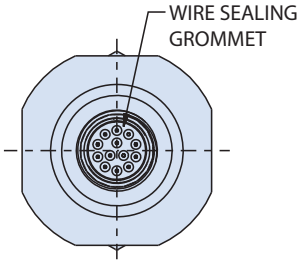




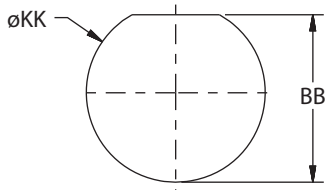








Panel Cut-Out Dimesions							
Shell Size	**Shell Size Code**	**ØKK**	**BB**	**Shell Size**	**Shell Size Code**	**ØKK**	**BB**
11	B	1.020 (25.90) 1.010 (25.65)	.955 (24.26) .945 (24.01)	19	F	1.520 (38.60) 1.510 (38.35)	1.460 (37.08) 1.450 (36.83)
13	C	1.145 (29.08) 1.135 (28.83)	1.085 (27.56) 1.075 (27.31)	21	G	1.645 (41.78) 1.635 (41.53)	1.585 (40.26) 1.575 (40.01)
15	D	1.270 (32.26) 1.260 (32.01)	1.210 (30.73) 1.200 (30.48)	23	H	1.770 (44.95) 1.760 (44.70)	1.710 (43.43) 1.700 (43.17)
17	E	1.395 (35.43) 1.385 (35.18)	1.335 (33.91) 1.325 (33.66)	25	J	1.895 (48.13) 1.885 (47.88)	1.835 (46.61) 1.825 (46.36)



JAM-NUT MOUNT RECEPTACLE
RECOMMENDED PANEL CUTOUT

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COTS EQUIVALENT

MIL-DTL-38999 Series IV, Breech Coupling

234-105-44 jam-nut mount receptacle with rear release crimp contacts

COTS Part Number Development						
Sample Part Number	**234-105-44**	**NF**	**11**	**-35**	**P**	**N**

Series / Basic Part No.	**234-105-44** = Environmental, jam-nut environmental receptacle
Material/Finish	**ME** = Aluminum, electroless nickel, conductive, -65°C to +200°C **NF** = Aluminum, cadmium olive drab, conductive, -65°C to +175°C **MA**† = Aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference section for details
Contact Style	**P** = Pin Insert **A** = Pin Gender, Less Contacts **S** = Socket Insert **B** = Socket Gender, Less Contacts
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table

† Connectors must be ordered with "MA" finish and modification code "-186T" to conform to the thermal vacuum outgassing requirements of Class G. Additional material/finish options are available, consult factory for ordering information.

Dimensions

Shell Size	Shell Size Code	ØA	B Flat	ØC Max	ØF	G Thd 1.0-6g 0.100R	H Thd 1.0-6g 0.100R	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	M15	.804 (20.42) .794 (20.17)	1.000 (25.40) .990 (25.15)	1.394 (35.40) 1.354 (34.40)	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) 1.249 (31.72)	M28	M18	.928 (23.57) .918 (23.32)	1.125 (28.58) 1.115 (28.33)	1.520 (38.60) 1.480 (37.60)	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	M22	1.046 (26.56) 1.036 (26.31)	1.250 (31.75) 1.240 (31.50)	1.641 (41.68) 1.602 (40.70)	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	M25	1.182 (30.02) 1.172 (29.77)	1.375 (34.92) 1.365 (34.67)	1.799 (45.70) 1.760 (44.70)	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	M28	1.296 (32.91) 1.286 (32.66)	1.500 (38.10) 1.490 (37.85)	1.909 (48.50) 1.870 (47.50)	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	M31	1.422 (36.11) 1.412 (35.86)	1.625 (41.28) 1.615 (41.03)	2.035 (51.70) 1.996 (50.70)	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	M34	1.546 (39.26) 1.536 (39.01)	1.750 (44.45) 1.740 (44.20)	2.157 (54.80) 2.118 (53.80)	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	M37	1.672 (42.46) 1.662 (42.21)	1.875 (47.63) 1.865 (47.38)	2.283 (58.00) 2.244 (57.00)	AS3582-033

Polarization Positions

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

Additional Material/Finish Options

Finish Code	Description
TZ	Aluminum, tin zinc, green-gold
MN	Aluminum, mega nickel
ZR	Aluminum, zinc nickel, black (tri-valent cr)
MT	Aluminum, nickel PTFE
MA†	Aluminum, electroless nickel (space grade)
ZL‡	Stainless steel, electro-deposited nickel
Z1‡	Stainless steel, passivated

‡ Not firewall rated

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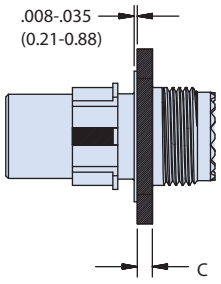
QPL QUALIFIED

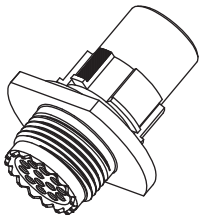
MIL-DTL-38999 Series IV, Breech Coupling

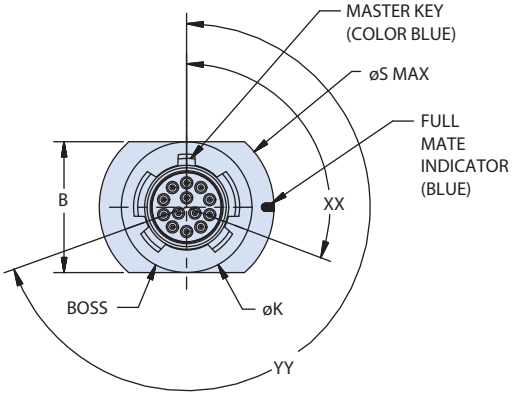
38999/49 in-line receptacle with rear release crimp contacts

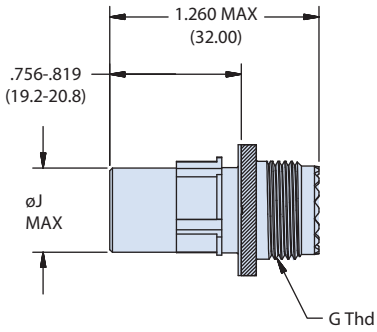
QPL Part Number Development						
Sample Part Number	**D38999/49**	**W**	**J**	**35V**	**P**	**N**
MIL-DTL-38999	**38999/49** = In-line receptacle					
Class	**F** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C **W** = Environmental, aluminum, cadmium olive drab, conductive, -65°C to +175°C **G** = Environmental, aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)					
Shell Size	**B**, **C**, **D**, **E**, **F**, **G**, **H**, **J**					
Insert Arrangement	Per MIL-STD-1560; See reference information section for details					
Contact Style	**P** = Pin Insert **S** = Socket Insert **A** = Pin Gender, Less Contacts **B** = Socket Gender, Less Contacts **H** = Pin, 1500 cycles **J** = Socket, 1500 cycles					
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table					

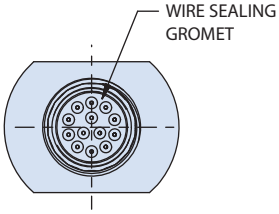












Polarization Position									
	N	**A**	**B**	**C**	**D**	**K**	**L**	**M**	**R**
XX	110°	100°	90°	80°	70°	120°	120°	120°	120°
YY	250°	260°	270°	280°	290°	255°	265°	275°	285°

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COTS EQUIVALENT

MIL-DTL-38999 Series IV, Breech Coupling

234-105-49 in-line receptacle with rear release crimp contacts

COTS Part Number Development						
Sample Part Number	**234-105-49**	**NF**	**11**	**-35**	**P**	**N**

Series / Basic Part No.	**234-105-49** = Environmental, in-line receptacle
Material/Finish	**ME** = Aluminum, electroless nickel, conductive, -65°C to +200°C **NF** = Aluminum, cadmium olive drab, conductive, -65°C to +175°C **MA**† = Aluminum, electroless nickel, conductive, -65°C to +200°C (space-grade)
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Style	**P** = Pin Insert **A** = Pin Gender, Less Contacts **H** = Pin, 1500 cycles **S** = Socket Insert **B** = Socket Gender, Less Contacts **J** = Socket, 1500 cycles
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization position position table

† Connectors must be ordered with "MA" finish and modification code "-186T" to conform to the thermal vacuum outgassing requirements of Class G. Additional material/finish options are available, consult factory for ordering information.

Dimensions

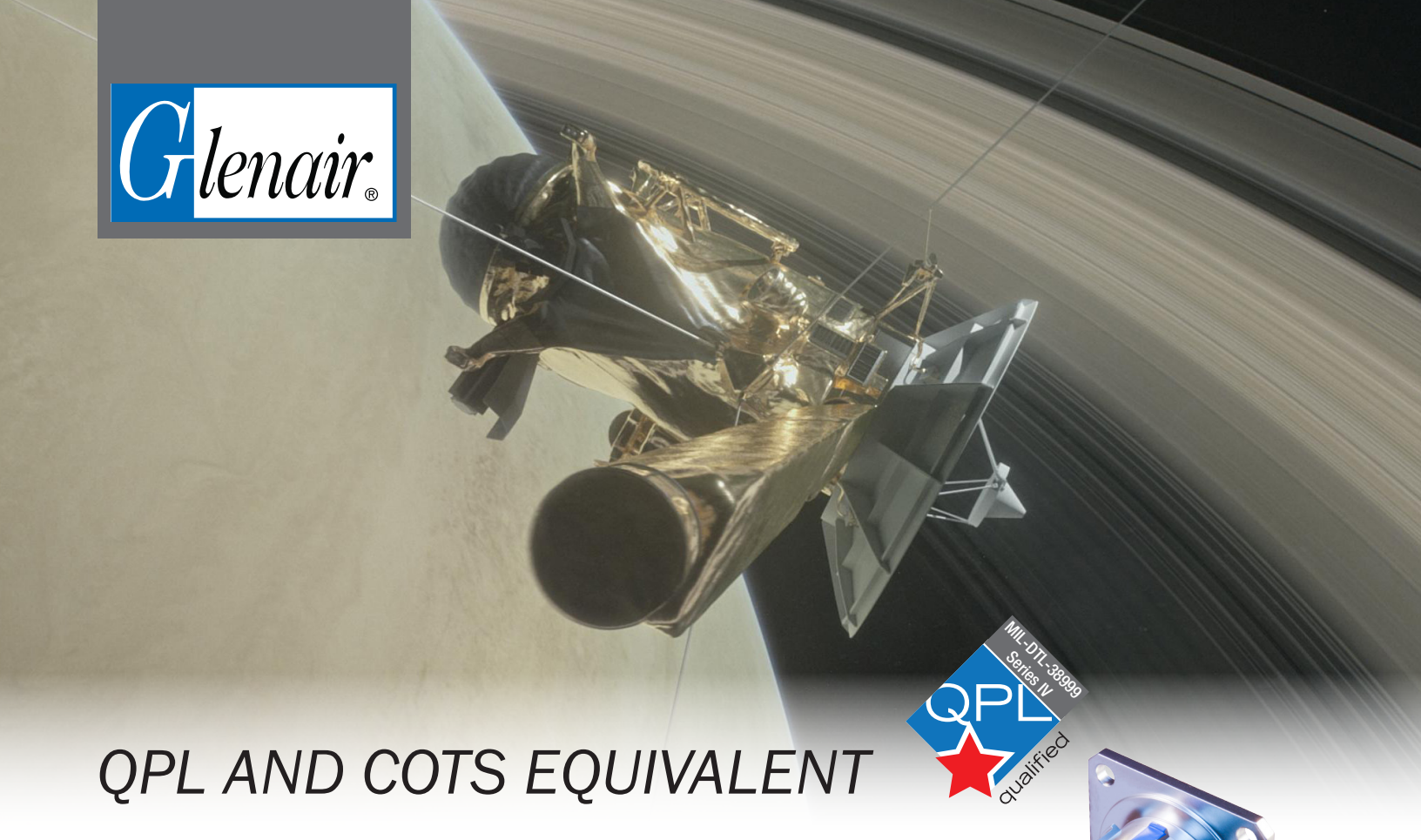
Shell Size	Shell Size Code	B (Flat)	C	G Thread 1.0-6g 0.100R	ØJ	ØK	ØS Max
11	B	.793 (20.15) .778 (19.76)	.102 (2.6) .083 (2.1)	M15	.509 (12.93)	.793 (20.15) .778 (19.76)	1.054 (26.78)
13	C	.919 (23.35) .904 (22.96)	.102 (2.6) .083 (2.1)	M18	.634 (16.10)	.919 (23.35) .904 (22.96)	1.226 (31.15)
15	D	1.044 (26.52) 1.029 (26.13)	.102 (2.6) .083 (2.1)	M22	.759 (19.28)	1.044 (26.52) 1.029 (26.13)	1.351 (34.32)
17	E	1.170 (29.72) 1.155 (29.33)	.102 (2.6) .083 (2.1)	M25	.885 (22.48)	1.170 (29.72) 1.155 (29.33)	1.476 (37.50)
19	F	1.294 (32.87) 1.279 (32.48)	.102 (2.6) .083 (2.1)	M28	1.009 (25.63)	1.294 (32.87) 1.279 (32.48)	1.586 (40.29)
21	G	1.419 (36.05) 1.404 (35.66)	.134 (3.4) .114 (2.9)	M31	1.134 (28.80)	1.419 (36.05) 1.404 (35.66)	1.711 (43.46)
23	H	1.544 (39.22) 1.529 (38.83)	.134 (3.4) .114 (2.9)	M34	1.259 (31.98)	1.544 (39.22) 1.529 (38.83)	1.836 (46.64)
25	J	1.669 (42.40) 1.654 (42.01)	.134 (3.4) .114 (2.9)	M37	1.384 (35.15)	1.669 (42.40) 1.654 (42.01)	1.964 (49.89)

Additional Material/Finish Options

Finish Code	Description
TZ	Aluminum, tin zinc, green-gold
MN	Aluminum, mega nickel
ZR	Aluminum, zinc nickel, black (tri-valent cr)
MT	Aluminum, nickel PTFE
MA†	Aluminum, electroless nickel (space grade)
ZL‡	Stainless steel, electro-deposited nickel
Z1‡	Stainless steel, passivated

‡ Not firewall rated

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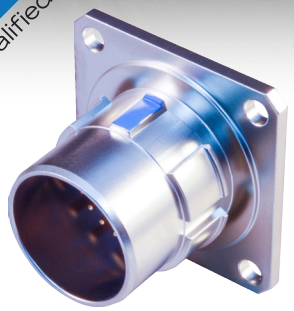


QPL AND COTS EQUIVALENT

MIL-DTL-38999 Series IV Hermetic

The industry standard mil/aero connector backed with Glenair service and availability

Hermetic-class DLA certified MIL-DTL-38999 Series IV connectors from Glenair provide hermetically sealed breech lock connectors for high shock and vibration applications. Breech-lock systems provide robust engagement augmented by an internal mechanical thread to ensure connectors remain mated. Glenair Series IV hermetics maintain seal integrity and prevent ingress of chemical substances or fluids in mission-critical vacuum environments where air or gas impurities can result in corrosion, dielectric breakdown, and loss of insulation resistance between conductors. Typical applications include medical, geophysical, military aerospace and other industrial applications. Marked with D38999 or Glenair COTS part numbering, these hermetic class receptacles are available for box mount, jam-nut, solder mount and weld mount shell styles. All standard material and finish classes are supported including Y (CRES, passivated) and N (CRES, electrodeposited nickel). Contact arrangements per MIL-STD-1560 and both normal and alternate polarizations are fully supported. Best of all, defense and commercial aerospace customers, as well as land and marine engineers and procurement specialists may now specify these mission-critical interconnects directly from Glenair—the recognized service, support, and availability leader for the interconnect industry.



DLA-QPL MIL-DTL-38999 SERIES III AVAILABLE FROM GLENAIR

- **Qualified hermetic jam-nut, weld, solder and box mount receptacles**
- **All 1560 crimp-contact insert arrangements fully supported**
- **N and Y plating classes, plus Glenair COTS equivalents**
- **100% made in America, no foreign-sourced materials, component parts, or assembly labor employed**



Glenair: Made in America since 1956

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QPL QUALIFIED AND COTS EQUIVALENT

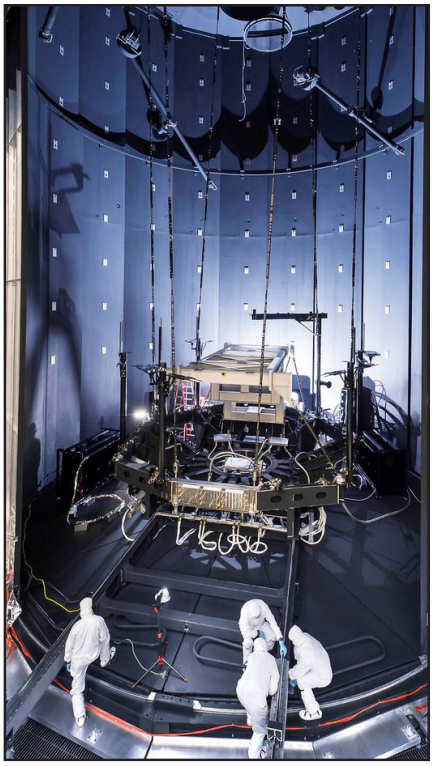
MIL-DTL-38999 Series IV, Breech Coupling

Industry standard, hermetic triple-start mating, Mil qualified connectors

MECHANICAL, HERMETIC, AND ELECTRICAL PERFORMANCE

MIL-DTL-38999 Series IV (Glenair Series 234-100) offers outstanding interconnect performance for mission-critical military and commercial applications.

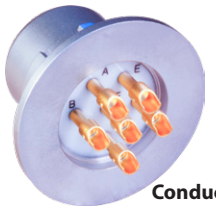
- **Breech-lock, self locking connectors available with pin/socket, solder cup or eyelet contacts**
- **Electromagnetic compatibility (EMC):** metal-to-metal coupling, plug grounding fingers, and conductive shell finishes deliver excellent shielding performance up to 45 dB at 10 GHz
- **Contact protection:** scoop-proof design prevents inadvertent damage to pin contacts during mating
- **Hermetic sealing: 10^{-7} cc/second maximum helium leak rate**
- **Corrosion resistance:** connector shells are made from corrosion resistant steel and are offered with passivated or electrodeposited nickel finish
- **Mating:** breech lock interface provides fast mating with excellent high shock and vibration tolerance to demating
- **Supported contacts:** from size #22D signal to #12 signal in solder cup, feedthru, and eyelet
- **Commercial equivalent:** Glenair COTS equivalent connectors deliver mil-spec performance with material/finish options not available in QPL parts



CONNECTOR FINISH CLASSES



Electrodeposited Nickel
Conductivity +++++
Corrosion Resistance
-65° to +200°C
Glenair Code ZL
D38999 Class N



Passivated
Conductivity ++++++
Corrosion Resistance
-65° to +200°C
Glenair Code Z1 and Z1S (space)
D38999 Class Y and H (space)

38999 SERIES IV ACCESSORIES



Glenair offers a full range of QPL D38999 accessories, contact the factory for details

SUPPORTED SHELL STYLES



Jam-Nut Receptacle



Box Mount Receptacle



Solder Mount Receptacle



Weld Mount Receptacle

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QPL QUALIFIED

MIL-DTL-38999 Series IV, Breech Coupling

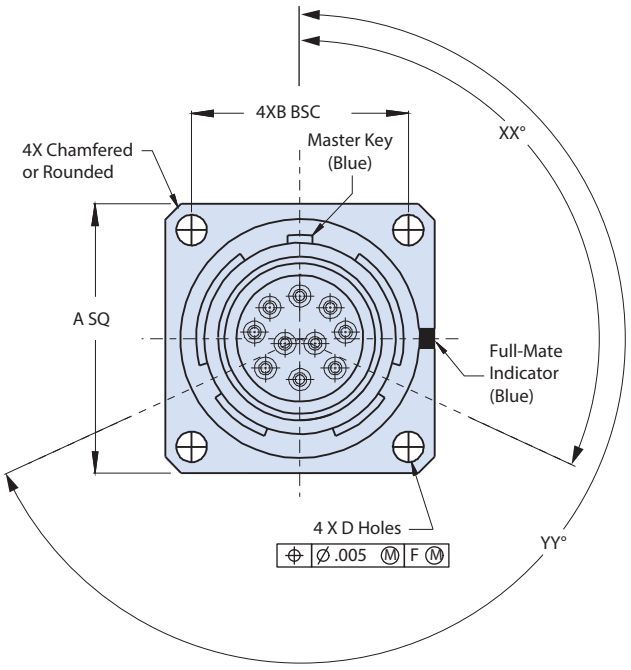
38999/41 box mount receptacle

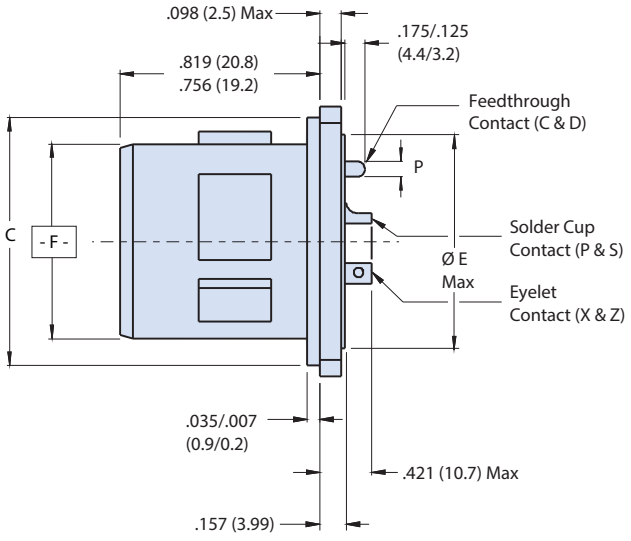
QPL Part Number Development							
Sample Part Number		**D38999/41**	**Y**	**B**	**35**	**P**	**N**
D38999	**38999/41** = Box mount receptacle						
Class	**N** = Hermetic, CRES, nickel finish, conductive, -65°C to 200°C **Y** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C **H** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)						
Shell Size	**B**, **C**, **D**, **E**, **F**, **G**, **H**, **J**						
Insert Arrangement	Per MIL-STD-1560; See reference information section for details						
Contact Style	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough						
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**;see polarization positions table						



Polarization Position									
	N	**A**	**B**	**C**	**D**	**K**	**L**	**M**	**R**
XX	110°	100°	90°	80°	70°	120°	120°	120°	120°
YY	250°	260°	270°	280°	290°	255°	265°	275°	285°

Wire Accommodation	
Contact Size	**Wire Gauge**
22D	#22 - #28
20	#20 - #24
16	#16 - #20
12	#12 - #14





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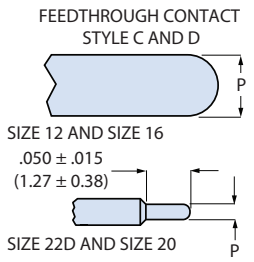
MIL-DTL-38999 Series IV, Breech Coupling

234-100-H2 box mount receptacle

SuperNine Part Number Development						
Sample Part Number	**234-100-H2**	**Z1**	**11**	**-35**	**P**	**N**

Series / Basic Part No.	**234-100-H2** = Hermetic, box mount receptacle
Material/Finish*	**ZL** = CRES, nickel finish, conductive, -65°C to 200°C **Z1** = CRES, passivate finish, conductive, -65°C to 200°C **Z1S** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Style	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization position position table

Contact Size



Contact Size	ø P
22D	.011 (0.28) .015 (0.38)
20	.024 (0.61) .028 (0.71)
16	.0635 (1.61) .0615 (1.56)
12	.095 (2.41) .093 (2.36)

Dimensions

Shell Size Code	Shell Size	A Sq	B Bsc	C Dia	D Dia	Ø E Max
B	11	1.051 (26.7) 1.008 (25.6)	.812 (20.6)	.793 (20.1) .778 (19.8)	.138 (3.5) .122 (3.1)	.625 (15.88)
C	13	1.145 (29.1) 1.102 (28.0)	.906 (23.0)	.919 (23.3) .904 (23.0)	.138 (3.5) .122 (3.1)	.749 (19.02)
D	15	1.240 (31.5) 1.197 (30.4)	.969 (24.6)	1.044 (26.5) 1.029 (26.1)	.138 (3.5) .122 (3.1)	.906 (23.01)
E	17	1.334 (33.9) 1.291 (32.8)	1.062 (27.0)	1.170 (29.7) 1.155 (29.3)	.138 (3.5) .122 (3.1)	1.016 (25.81)
F	19	1.460 (37.1) 1.417 (36.0)	1.156 (29.4)	1.294 (32.9) 1.279 (32.5)	.138 (3.5) .122 (3.1)	1.141 (28.98)
G	21	1.583 (40.2) 1.539 (39.1)	1.250 (31.8)	1.419 (36.0) 1.404 (35.7)	.138 (3.5) .122 (3.1)	1.266 (32.16)
H	23	1.709 (43.4) 1.665 (42.3)	1.375 (34.9)	1.544 (39.2) 1.529 (38.8)	.157 (4.0) .142 (3.6)	1.375 (34.92)
J	25	1.835 (46.6) 1.791 (45.5)	1.500 (38.1)	1.670 (42.4) 1.654 (42.0)	.157 (4.0) .142 (3.6)	1.484 (37.69)

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QPL QUALIFIED

MIL-DTL-38999 Series IV, Breech Coupling

38999/43 jam-nut mount receptacle

QPL Part Number Development

Sample Part Number	D38999/43	Y	B	35	P	N

D38999	**38999/43** = Jam-Nut receptacle
Class	**N** = Hermetic, CRES, nickel finish, conductive, -65°C to 200°C **Y** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C **H** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size	**B**, **C**, **D**, **E**, **F**, **G**, **H**, **J**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Style	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table



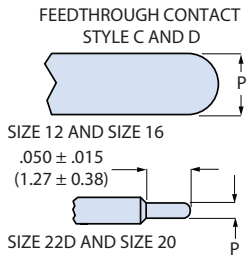
Polarization Position

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

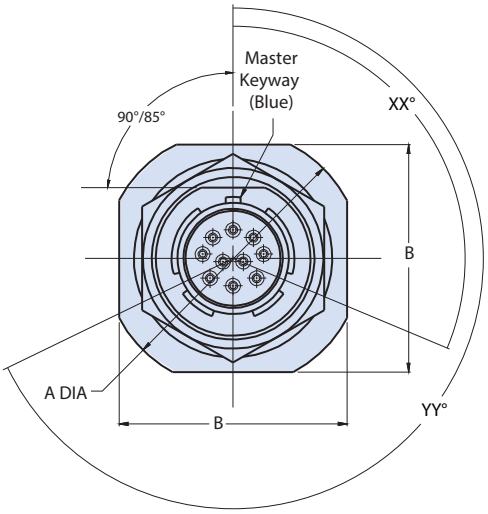
Wire Accommodation

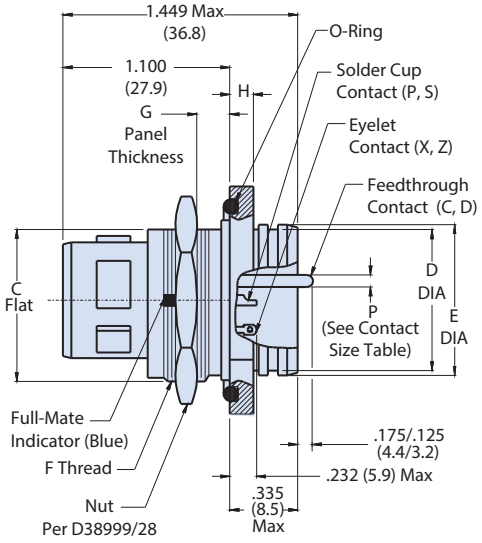
Contact Size	Wire Gauge
22D	#22 - #28
20	#20 - #24
16	#16 - #20
12	#12 - #14

Contact Size



Contact Size	ø P
22D	.011 (0.28) .015 (0.38)
20	.024 (0.61) .028 (0.71)
16	.0635 (1.61) .0615 (1.56)
12	.095 (2.41) .093 (2.36)





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COTS EQUIVALENT

MIL-DTL-38999 Series IV, Breech Coupling

234-100-H7 jam-nut mount receptacle

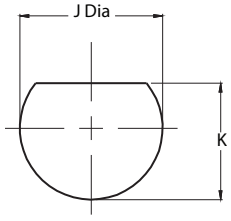
DLA Equivalent Part Number Development						
Sample Part Number	**234-100-H7**	**Z1**	**11**	**-35**	**P**	**N**

Series / Basic Part No.	**234-100-H7** = Hermetic, jam-nut mount hermetic receptacle
Material/Finish*	**ZL** = CRES, nickel finish, conductive, -65°C to 200°C **Z1** = CRES, passivate finish, conductive, -65°C to 200°C **Z1S** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Style	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R** see polarization position position table

*Additiona

Dimensions

SHELL SIZE CODE	SHELL SIZE	A DIA	B	C FLAT	D DIA	E DIA ±.010(0.3)	F THREAD ISO METRIC 1.0-6g	G ±.033(0.8)	H ±.012(0.3)
B	11	1.385(35.2) 1.362(34.6)	1.267 (32.18) 1.232 (31.29)	.754(19.2) .745(18.9)	.732(18.6) .716(18.2)	.769(19.5)	M20	.092(2.3)	.106(2.7)
C	13	1.511(38.4) 1.488(37.8)	1.393 (35.38) 1.358 (34.49)	.941(23.9) .932(23.7)	.858(21.8) .839(21.3)	.899(22.8)	M25	.092(2.3)	.106(2.7)
D	15	1.637(41.6) 1.614(41.0)	1.519 (38.58) 1.484 (37.69)	1.065(27.1) 1.056(26.8)	.984(25.0) .968(24.6)	1.025(26.0)	M28	.092(2.3)	.106(2.7)
E	17	1.763(44.8) 1.740(44.2)	1.641 (41.68) 1.606 (40.79)	1.190(30.2) 1.181(30.0)	1.110(28.2) 1.091(27.7)	1.147(29.1)	M32	.092(2.3)	.106(2.7)
F	19	1.948(49.5) 1.925(48.9)	1.830 (46.48) 1.795 (45.59)	1.316(33.4) 1.306(33.2)	1.236(31.4) 1.220(31.0)	1.273(32.3)	M35	.092(2.3)	.137(3.5)
G	21	2.074(52.7) 2.051(52.1)	1.956 (49.68) 1.921 (48.79)	1.441(36.6) 1.431(36.3)	1.358(34.5) 1.342(34.1)	1.399(35.5)	M38	.092(2.3)	.137(3.5)
H	23	2.200(55.9) 2.177(55.3)	2.078 (52.78) 2.043 (51.89)	1.565(39.8) 1.556(39.5)	1.484(37.7) 1.468(37.3)	1.525(38.7)	M41	.092(2.3)	.137(3.5)
J	25	2.326(59.1) 2.299(58.4)	2.204 (55.98) 2.169 (55.09)	1.692(43.0) 1.681(42.7)	1.610(40.9) 1.594(40.5)	1.647(41.8)	M44	.092(2.3)	.137(3.5)



Panel Cut-Out

Panel Cut-Out Dimensions

Shell Size Code	J Dia	K	Shell Size Code	J Dia	K
B	.835 (21.21) .825 (20.96)	.771 (19.58) .761 (19.33)	F	1.395 (35.43) 1.385 (35.18)	1.335 (33.91) 1.325 (33.66)
C	1.020 (25.91) 1.010 (25.65)	.955 (24.26) .945 (24.00)	G	1.520 (38.61) 1.510 (38.35)	1.460 (37.08) 1.450 (36.83)
D	1.145 (29.08) 1.135 (28.83)	1.085 (27.56) 1.075 (27.31)	H	1.645 (41.78) 1.635 (41.53)	1.585 (40.26) 1.575 (40.01)
E	1.270 (32.26) 1.260 (32.00)	1.210 (30.73) 1.200 (30.48)	J	1.770 (44.96) 1.760 (44.70)	1.710 (43.43) 1.700 (43.18)

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QPL QUALIFIED

MIL-DTL-38999 Series IV, Breech Coupling

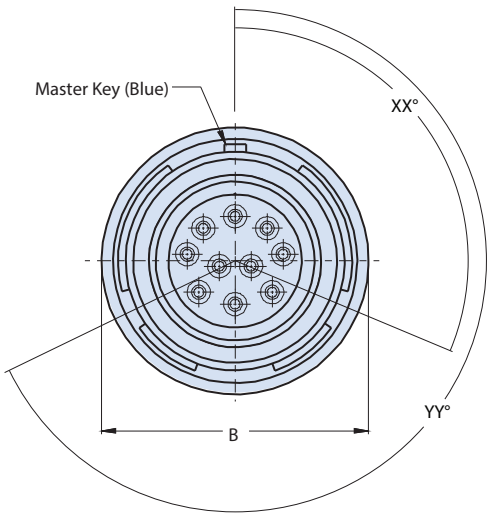
38999/45 solder mount receptacle

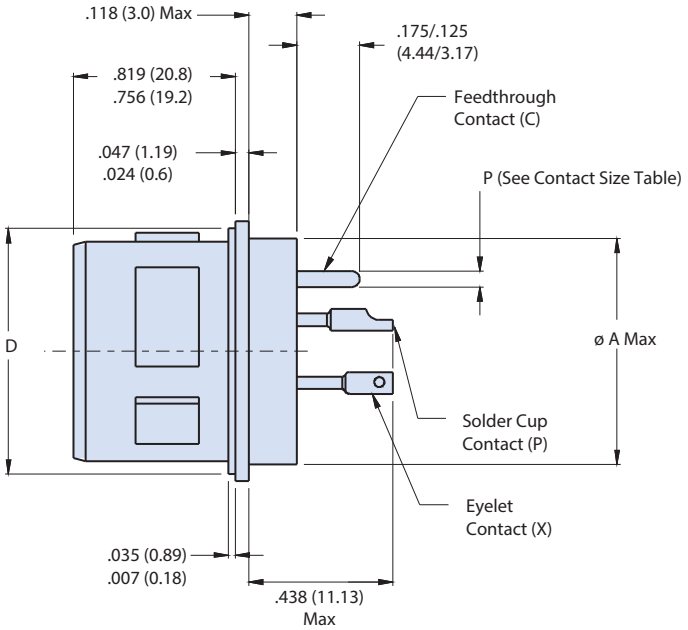
QPL Part Number Development							
Sample Part Number		**D38999/45**	**Y**	**B**	**35**	**P**	**N**
D38999	**38999/45** = Solder mount receptacle						
Class	**N** = Hermetic, CRES, nickel finish, conductive, -65°C to 200°C **Y** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C **H** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)						
Shell Size	**B**, **C**, **D**, **E**, **F**, **G**, **H**, **J**						
Insert Arrangement	Per MIL-STD-1560; See reference information section for details						
Contact Style	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough						
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table						



Polarization									
	N	**A**	**B**	**C**	**D**	**K**	**L**	**M**	**R**
XX	110°	100°	90°	80°	70°	120°	120°	120°	120°
YY	250°	260°	270°	280°	290°	255°	265°	275°	285°

Wire Accommodation	
Contact Size	**Wire Gauge**
22D	#22 - #28
20	#20 - #24
16	#16 - #20
12	#12 - #14





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COTS EQUIVALENT

MIL-DTL-38999 Series IV, Breech Coupling

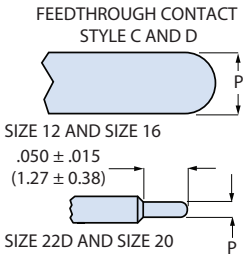
234-100-H5 solder mount receptacle

DLA Equivalent Part Number Development

Sample Part Number	234-100-H5	Z1	11	-35	P	N

Series / Basic Part No.	**234-100-H5** = Hermetic, solder mount receptacle
Material/Finish*	**ZL** = CRES, nickel finish, conductive, -65°C to 200°C **Z1** = CRES, passivate finish, conductive, -65°C to 200°C **Z1S** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Style	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R** see polarization table

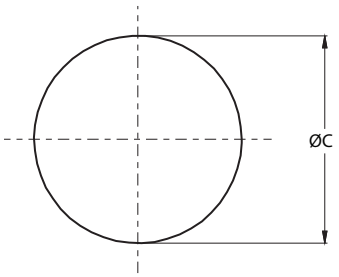
Contact Size



Contact Size	ø P
22D	.011 (0.28) .015 (0.38)
20	.024 (0.61) .028 (0.71)
16	.0635 (1.61) .0615 (1.56)
12	.095 (2.41) .093 (2.36)

Dimensions

SHELL SIZE CODE	SHELL SIZE	ø A MAX	ø B MAX	ø C	D
B	11	.783(19.9)	.862(21.9)	.794 (20.17) .784 (19.91)	.793(20.1) .778(19.8)
C	13	.909(23.1)	.988(25.1)	.920 (23.37) .910 (23.11)	.919(23.3) .904(23.0)
D	15	1.035(26.3)	1.110(28.2)	1.046 (26.57) 1.036 (26.31)	1.044(26.5) 1.028(26.1)
E	17	1.157(29.4)	1.236(31.4)	1.169 (29.71) 1.159 (29.44)	1.170(29.7) 1.155(29.3)
F	19	1.252(31.8)	1.331(33.8)	1.263 (32.08) 1.253 (31.83)	1.294(32.9) 1.279(32.5)
G	21	1.378(35.0)	1.457(37.0)	1.389 (35.28) 1.379 (35.03)	1.419(36.0) 1.404(35.7)
H	23	1.504(38.2)	1.583(40.2)	1.515 (38.48) 1.505 (38.23)	1.544(39.2) 1.528(38.8)
J	25	1.630(41.4)	1.705(43.3)	1.642 (41.71) 1.632 (41.45)	1.670(42.4) 1.654(42.0)



Panel Cut-Out

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MIL-DTL-38999 Series IV, Breech Coupling

38999/48 weld mount receptacle

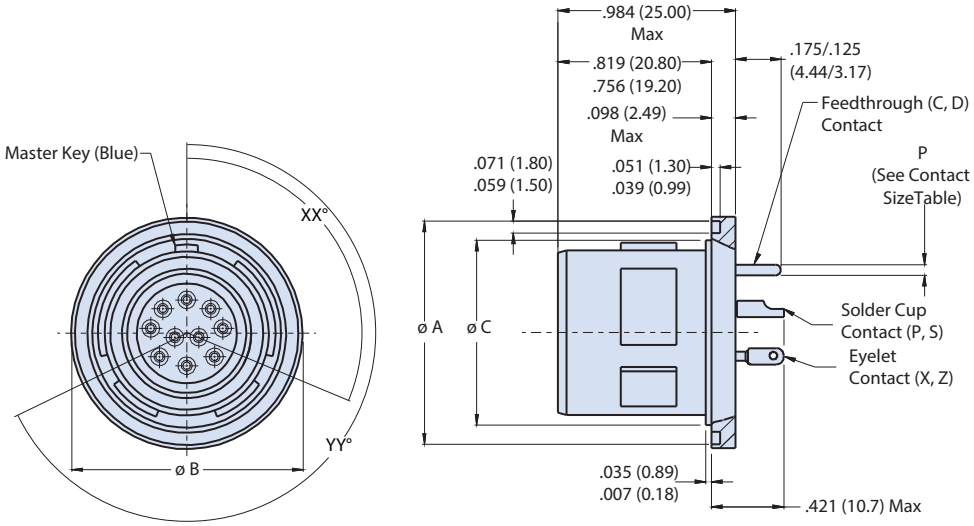
QPL Part Number Development						
Sample Part Number	**D38999/48**	**Y**	**B**	**35**	**P**	**N**

D38999	**38999/48** = Weld mount receptacle
Class	**N** = Hermetic, CRES, nickel finish, conductive, -65°C to 200°C **Y** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C **H** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size	**B**, **C**, **D**, **E**, **F**, **G**, **H**, **J**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Style	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, PCB flex feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, PCB flex feedthrough
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R**; see polarization positions table



Polarization									
	N	A	B	C	D	K	L	M	R
XX	110°	100°	90°	80°	70°	120°	120°	120°	120°
YY	250°	260°	270°	280°	290°	255°	265°	275°	285°

Wire Accommodation	
Contact Size	**Wire Gauge**
22D	#22 - #28
20	#20 - #24
16	#16 - #20
12	#12 - #14



Consult Factory for Recommended Panel Cutout Dimensions

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COTS EQUIVALENT

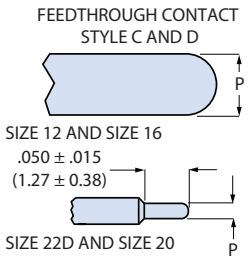
MIL-DTL-38999 Series IV, Breech Coupling

234-100-H8 weld mount receptacle

DLA Equivalent Part Number Development						
Sample Part Number	**234-100-H8**	**Z1**	**11**	**-35**	**P**	**N**

Series / Basic Part No.	**234-100-H8** = Hermetic, weld mount receptacle
Material/Finish*	**ZL** = CRES, nickel finish, conductive, -65°C to 200°C **Z1** = CRES, passivate finish, conductive, -65°C to 200°C **Z1S** = Hermetic, CRES, passivate finish, conductive, -65°C to 200°C (space grade)
Shell Size	**11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**
Insert Arrangement	Per MIL-STD-1560; See reference information section for details
Contact Style	**P** = Pin, solder cup **X** = Pin, eyelet **C** = Pin, feedthrough **S** = Socket, solder cup **Z** = Socket, eyelet **D** = Socket, feedthrough
Polarization	**N** (Normal), **A**, **B**, **C**, **D**, **K**, **L**, **M**, **R** see polarization position table

Contact Size



Contact Size	ø P
22D	.011 (0.28) .015 (0.38)
20	.024 (0.61) .028 (0.71)
16	.0635 (1.61) .0615 (1.56)
12	.095 (2.41) .093 (2.36)

Dimensions

SHELL SIZE CODE	SHELL SIZE	ø A	ø B	ø C
B	11	1.035 (26.3) 1.024 (26.0)	1.106 (28.1) 1.094 (27.8)	.793 (20.1) .778 (19.8)
C	13	1.161 (29.5) 1.150 (29.2)	1.232 (31.3) 1.220 (31.0)	.919 (23.3) .904 (23.0)
D	15	1.287 (32.7) 1.276 (32.4)	1.358 (34.5) 1.346 (34.2)	1.044 (26.5) 1.029 (26.1)
E	17	1.374 (34.9) 1.362 (34.6)	1.445 (36.7) 1.433 (36.4)	1.170 (29.7) 1.155 (29.3)
F	19	1.520 (38.6) 1.508 (38.3)	1.591 (40.4) 1.579 (40.1)	1.294 (32.9) 1.279 (32.5)
G	21	1.661 (42.2) 1.650 (41.9)	1.732 (44.0) 1.720 (43.7)	1.419 (36.0) 1.404 (35.7)
H	23	1.827 (46.4) 1.815 (46.1)	1.898 (48.2) 1.886 (47.4)	1.544 (39.2) 1.529 (38.8)
J	25	1.913 (48.6) 1.902 (48.3)	1.984 (50.4) 1.972 (50.1)	1.669 (42.4) 1.654 (42.0)

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Glenair®

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go-to supplier



MIL-DTL-38999

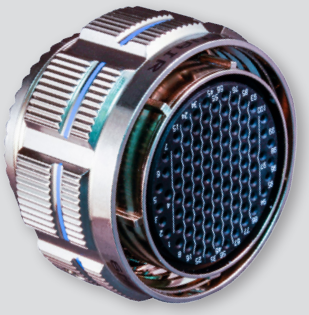
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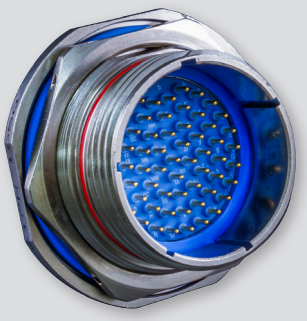
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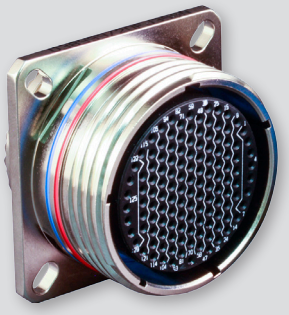
QPL MIL-DTL-38999 CONNECTORS



D38999/26 Plug



D38999/24 Jam-Nut receptacle



D38999/20 Wall mount receptacle

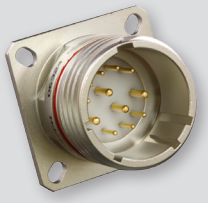
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Mil-Aero Connector Specials

GLENAIR SUPERNINE® ADVANCED PERFORMANCE CONNECTORS



SuperNine® environmental I/O, cable and PCB connectors



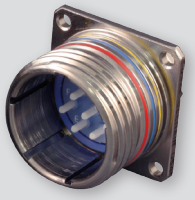
SuperNine® high-pressure hermetic connectors



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SuperNine® EMI/EMP filter connectors



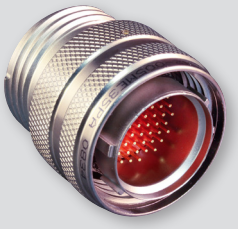
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Sav-Con® Connector Savers and gender changers

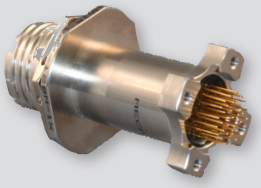
INNOVATIVE SHELL PACKAGE MODIFICATIONS AND MATING TECHNOLOGIES



Mounting flange modifications



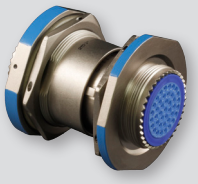
Quick-disconnect push-pull and lanyard-release mating



Integrated/housed electronics



Integrated band/ boot porch



Blind-mate and low-extraction force

NON-STANDARD CONTACT LAYOUTS



Hybrid power contact arrangement



Sealed Coax insert arrangement



Hybrid shielded contact/signal contact insert arrangement



Optronic (transmitter/receiver) contact arrangement

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