MIL-DTL-38999 Series I Type
231-100-H7 and MS27470 Jam-nut mount receptacle

MATERIAL/FINISH:

- Shell: CRES/passivated, CRES/nickel plated or carbon steel / fused tin plated.
- Contacts: nickel iron alloy 52 / gold plated
- Sockets: copper alloy / gold plated
- Insulator: fused vitreous glass
- Socket insulator: high grade rigid dielectric
- Seals: fluorosilicone rubber

PERFORMANCE SPECIFICATIONS

- Hermeticity: <1 x 10^{-7}

NOTES

- Glenair 231-100-H7 receptacle connector is designed to mate with any QPL manufacturer's DTL-38999 Series III plug connector having the same shell size, polarization, and arrangement except for shielded contact arrangements. Consult factory for mating plug options
- Insert arrangements in accordance with MIL-STD-1560 arrangements which specify shielded contacts will be built with appropriately sized power / signal contacts. Crimp-removable shielded contacts are not available in standard hermetic connectors. Consult factory for special hermetic shielded contact option

HOW TO ORDER

COTS Sample Part No.	231-100	-H7	Z1	11	-35	P	N
Series	231-100						
Shell Style	H7						
Material and Finish	ZL, Z1, FT						
Shell Size	9 thru 25						
Insert Arrangement	Per MIL-STD-1560; see page C-2						
Contact Termination	P, X, C, S, Z, D						
Keyway Position	A, B, C, D; (N for Normal)						

MS Sample Part No.	MS27470	Y	11	N	35	P	A
MS Number and Cl	MS27470						
Class	Y						
Shell Size	9 thru 25						
Material and Finish	D, E, N						
Insert Arrangement	Per MIL-STD-1560; see page C-2						
Contact Termination	P, X, C, S, Z, D						
Keyway Position	A, B, C, D; (Omit for Normal)						

MS PART NUMBER DETAILS

Shell Style and Class

MS27470Y = hermetic, Jam-nut mount receptacle

Shell Size

9, **11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**

Connector Material and Finish

D = carbon steel, fused tin finish, 150° C, conductive

E = stainless steel, passivate finish, 200° C, conductive

N = stainless steel, nickel finish (electrodeposited), 200° C conductive

Insert Arrangement

MIL-DTL-38999 Series I hermetic inserts per MIL-STD-1560; Refer to Insert Arrangements on page B-2

Contact Termination (500-cycle contacts)

P = pin, solder cup
X = pin, eyelet
C = pin, feedthru
S = socket, solder cup
Z = socket, eyelet
D = socket, feedthru

Alternate Key Position

A, **B**, **C**, **D**; (**N** for normal)

COTS PART NUMBER DETAILS

Shell Style and Class

231-100-H7 = hermetic, solder-mount receptacle

Connector Material and Finish

ZL = carbon steel, fused tin finish, 150° C, conductive

Z1 = stainless steel, passivate finish, 200° C, conductive

FT = stainless steel, nickel finish (electrodeposited), 200° C, conductive

Shell Size

9, **11**, **13**, **15**, **17**, **19**, **21**, **23**, **25**

Insert Arrangement

MIL-DTL-38999 Series I hermetic inserts per MIL-STD-1560; Refer to Insert Arrangements on page B-2

Contact Termination (500-cycle contacts)

P = pin, solder cup
X = pin, eyelet
C = pin, feedthru
S = socket, solder cup
Z = socket, eyelet
D = socket, feedthru

Alternate Key Position

A, **B**, **C**, **D**; (**N** for normal)

HERMETIC LEAK RATE MODIFICATION CODES

Designator	Required Leak Rate
-585A	1x10^{-10} atm ccHe/s per sec
-585B	1x10^{-9} ccHe/s per sec
-585C	1x10^{-8} ccHe/s per sec

WIRE ACCOMMODATION

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

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MIL-DTL-38999 Series I Type
231-100-H7 and MS27470 Jam-nut mount receptacle

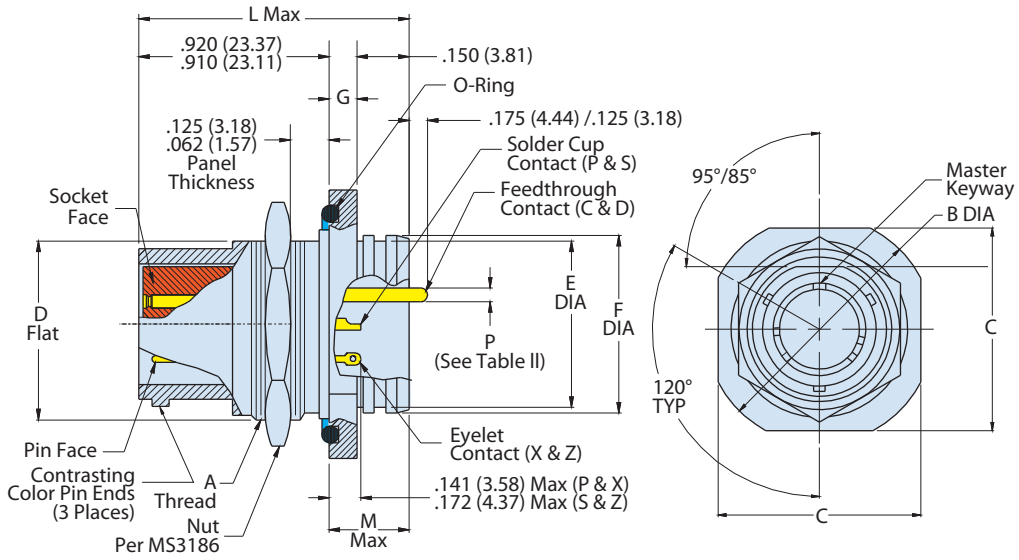
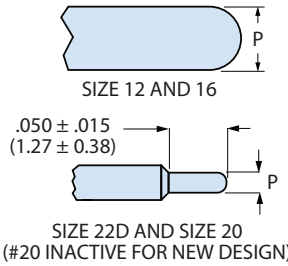
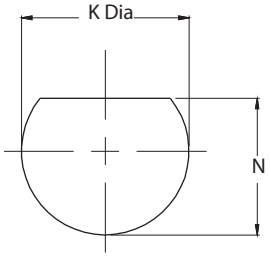


TABLE II: CONTACT SIZE

PCB CONTACT STYLE C AND D



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)



Recommended Panel Cut-Out

CONNECTOR DIMENSIONS

Shell Size	A Thread Class 2a	B Dia ±.016 (0.4)	C ±.016 (0.4)	D Flat ±.005 (0.1)	E Dia ±.011 (0.3)	F Dia ±.005 (0.1)	G ±.016 (0.4)	K Dia ±.005 (0.1)	L Max	M Max	N ± .004 (0.1)
9	.6875-24 UNEF	1.188 (30.2)	1.062 (27.0)	.65 (16.5)	.602 (15.3)	.648 (16.5)	.109 (2.8)	.698 (17.7)	1.200 (30.5)	.280 (7.1)	.657 (16.69)*
11	.8125-20 UNEF	1.375 (34.9)	1.25 (31.8)	.75 (19.1)	.726 (18.4)	.772 (19.6)	.109 (2.8)	.830 (21.1)	1.200 (30.5)	.280 (7.1)	.765 (19.43)
13	1.000-20 UNEF	1.5 (38.1)	1.375 (34.9)	.937 (23.8)	.852 (21.6)	.898 (22.8)	.109 (2.8)	1.015 (25.8)	1.200 (30.5)	.280 (7.1)	.949 (24.10)
15	1.125-18 UNEF	1.625 (41.3)	1.5 (38.1)	1.061 (26.9)	.978 (24.8)	1.024 (26.0)	.109 (2.8)	1.140 (29.0)	1.200 (30.5)	.280 (7.1)	1.079 (27.41)
17	1.250-18 UNEF	1.75 (44.5)	1.625 (41.3)	1.186 (30.1)	1.102 (28.0)	1.148 (29.2)	.109 2.8)	1.265 (32.1)	1.200 (30.5)	.280 (7.1)	1.204 (30.58)
19	1.375-18 UNEF	1.938 (49.2)	1.812 (46.0)	1.311 (33.3)	1.228 (31.2)	1.274 (32.4)	.140 (3.6)	1.390 (35.3)	1.231 (31.3)	.311 (7.9)	1.329 (33.76)
21	1.500-18 UNEF	2.062 (52.4)	1.938 (49.2)	1.436 (36.5)	1.352 (34.3)	1.398 (35.5)	.140 (3.6)	1.515 (38.5)	1.231 (31.3)	.311 (7.9)	1.454 (36.93)
23	1.625-18 UNEF	2.188 (55.6)	2.062 (52.4)	1.561 (39.6)	1.478 (37.5)	1.524 (38.7)	.140 (3.6)	1.640 (41.7)	1.231 (31.3)	.311 (7.9)	1.579 (40.11)
25	1.750-18 UNS	2.312 (58.7)	2.188 (55.6)	1.686 (42.8)	1.602 (40.7)	1.648 (41.9)	.140 (3.6)	1.765 (44.8)	1.231 (31.3)	.311 (7.9)	1.704 (43.28)

* for shell size 9 only 'N' tolerance value is: +.004 (0.10)/-.002 (0.05)

INSERT ARRANGEMENTS

Shell Size - Insert Arrangement	22D	20	16	12
	Number of Pins			
9-98		3		
9-35	6			
11-4		4		
11-5		5		
11-98		6		
11-99		7		
11-35	13	7		
11-2			2	
13-4			4	
13-8		8		
13-98		10		
13-35	22			
15-5			5	
15-15		14	1	
15-18		18		
15-19		19		
15-35	37			
15-97		8	4	
17-6				6
17-8			8	
17-26		26		
17-99		21	2	
17-35	55			
19-11			11	
19-28		26	2	
19-30		29	1	
19-32		32		
19-35	66			
19-45	67			
21-11				11
21-16			16	
21-24		24		
21-25		25		
21-27		27		
21-41		41		
21-29		19	4	4
21-39		37	2	
21-35	79			
23-35	100			
23-21			21	
23-32		32		
23-34		34		
23-36		36		
23-53		53		
23-97			16	
23-99			11	
23-55		55		
25-35	128			
25-29			29	
25-37			37	
25-61		61		
25-4		48	8	
25-43		23	20	
25-19				19
25-24			12	12

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SuperNine MIL-DTL-38999 Series I Type · Dimensions in Inches (millimeters) are subject to change without notice.