



B SERIES

MIL-C-38999 Hermetic connectors were developed for application where a controlled atmosphere such as inert gasses, partial vacuums, or constant environments are needed. These receptacles are designed for use in aerospace electronic, electrical power, and control circuits.

The "B" Series receptacles are manufactured to American Micro Products, Inc. (AMPI / ACE) standards and meet the intermateability requirements of MIL-C-38999 Series I. They are hermetically sealed with an all glass seal to prevent air leakage in excess of .01 micron cubic foot per hour at one atmosphere. They are manufactured with conductive finishes to provide electrical continuity between mated halves prior to contact engagement. Manufactured in the scoop proof design, the contacts are located so as to prevent handling damage or inadvertent electrical contact.

Standard hermetic receptacles are supplied with either solder cup or eyelet type contact terminations. Contacts for other applications such as thermocouple or flex prints are also available. Standard receptacles are steel shells with nickel-iron alloy contacts and a final coat of tin plate and gold plated nickel-iron alloy contacts; or stainless steel shells with gold plated contacts. Other materials and finishes can be supplied to meet specific application requirements.

"B" Series receptacles meet the, voltage, salt spray, shock, and vibration requirements of MIL-C-38999.

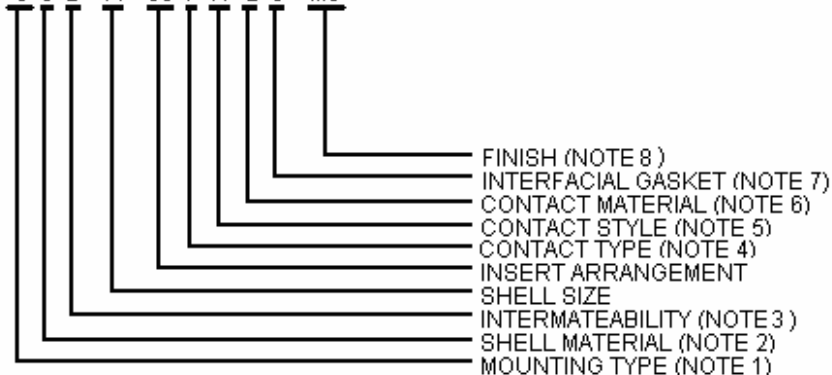
ELECTRICAL SERVICE DATA

The maximum current to be carried by the connector, based on contact size, is the same as permitted by the wire bundle. Maximum current ratings and corresponding voltage drops under test condition, fully assembled, are shown below.

CONTACT SIZE	TEST CURRENT (AMPS)	POTENTIAL DROP (MILLIVOLTS)
22D	2	85
20	5	60
16	10	85
12	17	85

PART NUMBER EXPLANATION

3 0 B- 11 -35 P A- 2 0- M3



STANDARD MATERIALS AND FINISHES

FERROUS ALLOY SHELLS

Material: Cold Rolled Steel per ASTM 108
Finish: 100 microinches minimum fused tin per MIL-T-10727 over suitable underplate

STAINLESS STEEL SHELLS

Material: Corrosion resistant steel per QQ-S-764, type 303 or as specified.
Finish: Passivated.

CONTACTS

Material: Nickel-iron alloy per MIL-I-23011, class 2.
Finish: 50 micronches minimum gold per MIL-G-45204 over a suitable underplate

BAYONET PINS

Material: Corrosion resistant steel per QQ-S-764, type 303

INSERTS

Material: Glass

INTERFACIAL SEALS

Material: Fluorosilicone rubber.

DESCRIPTION	MILITARY DESIGNATION	AMPI DESIGNATION
JAM NUT MOUNT	MS27470Y*D*P	50B-*P-20
	MS27470Y*D*X	50B-*P-10
	MS27470Y*E*P	51B-*P-20
	MS27470Y*E*X	51B-*P-10
SOLDER MOUNT	MS27471Y*D*P	20B-*P-20
	MS27471Y*D*X	20B-*P-10
	MS27471Y*E*P	21B-*P-20
	MS27471Y*E*X	21B-*P-10
BOX MOUNT	NO SPECIFIED HERMETIC	30B-*P-20
		30B-*P-10
		31B-*P-20
		31B-*P-10
MATING PLUG	MS27467	

HIGH POTENTIAL TEST VOLTAGE

SERVICE RATING	TEST VOLTAGE (RMS 60 CPS)
N	1000
M	1300
I	1800
II	2300

NOTES:

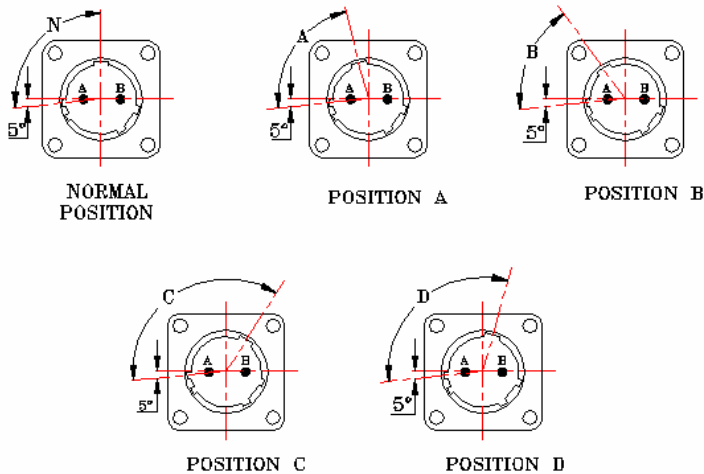
- 1-- 2---Circular flange solder mount
3---Square flange box mount
5---Jam nut mount
- 2-- 0---Ferrous alloy
1 thru 7- various stainless steel #303 thru #347
- 3-- MIL-C-38999 series I intermateability
- 4-- P---Pin
- 5-- Alternate keyway position
- 6-- 1---Eyelet
2---Solder cup
- 7-- 0---Nickel-iron alloy
- 8-- M3--Fused tin over copper over nickel with gold on contacts
M2--Contacts gold with shell passivated



INDEX OF INSERT ARRANGEMENTS
MIL-STD-1560

SHELL SIZE	INSERT ARRANGEMENT	TOTAL CONTACTS	CONTACT SIZE				SERVICE RATING
			22	20	16	12	
9	35	6	6				M
	98	3		3			I
11	5	5		5			I
	35	13	13				M
	98	6		6			I
	99	7		7			I
13	4	4			4		II
	8	8		8			I
	35	22	22				M
15	98	10		10			I
	5	5			5		II
	15	15		14	1		I
	18	18		18			I
	19	19		19			I
	35	37	37				M
17	97	12		8	4		I
	8	8			8		II
	26	26		26			I
19	35	55	55				M
	30	30		29	1		I
21	32	32		32			I
	35	66	66				M
	16	16			16		II
23	35	79	79				M
	39	39		37	2		I
	41	41		41			I
25	35	100	100				M
	35	128	128				M
25	61	61		61			I

MASTER KEYWAY POSITIONS
FRONT FACE OF PIN INSERT SHOWN

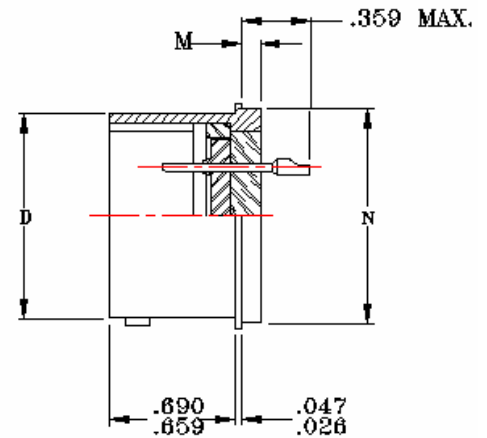
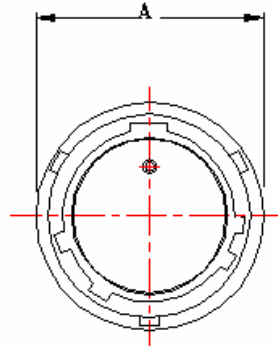


SHELL SIZE	NORMAL POSITION	LOCATION OF ALTERNATE MASTER KEYWAY POSITION IN DEGREES				
		N	A	B	C	D
9	95		77	-	-	113
11		81	67	123	109	
13		75	63	127	115	
15		74	61	129	116	
17		77	65	125	113	
19		77	65	125	113	
21		77	65	125	113	
23		80	69	121	110	
25		80	69	121	110	





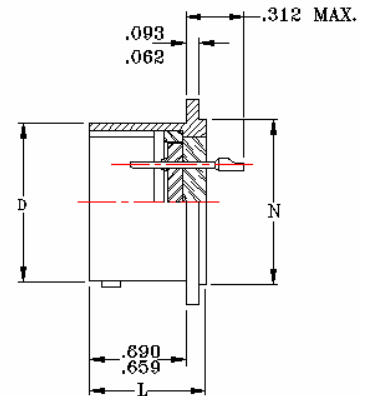
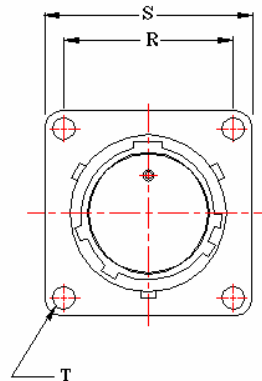
SOLDER MOUNT 20B RECEPTACLES (REF. MS27471)



SHELL SIZE	PART NUMBER	A	D	M MAX	N
		+0.016 -0.016	+0.001 -0.005		
9	20B-9-(*)P▼-(**)	0.750	0.572	.187	0.672
11	20B-11-(*)P▼-(**)	0.844	0.700		0.781
13	20B-13-(*)P▼-(**)	0.969	0.850		0.906
15	20B-15-(*)P▼-(**)	1.094	0.975		1.031
17	20B-17-(*)P▼-(**)	1.218	1.100		1.156
19	20B-19-(*)P▼-(**)	1.312	1.207		1.250
21	20B-21-(*)P▼-(**)	1.438	1.332	.218	1.375
23	20B-23-(*)P▼-(**)	1.563	1.457		1.500
25	20B-25-(*)P▼-(**)	1.688	1.582		1.625

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR // (*) REPLACE WITH PIN ARRANGEMENT INDICATOR NOT REQUIRED FOR NORMAL POSITION // (**) REPLACE WITH CONTACT STYLE AND MATERIAL

BOX MOUNT 30B RECEPTACLES



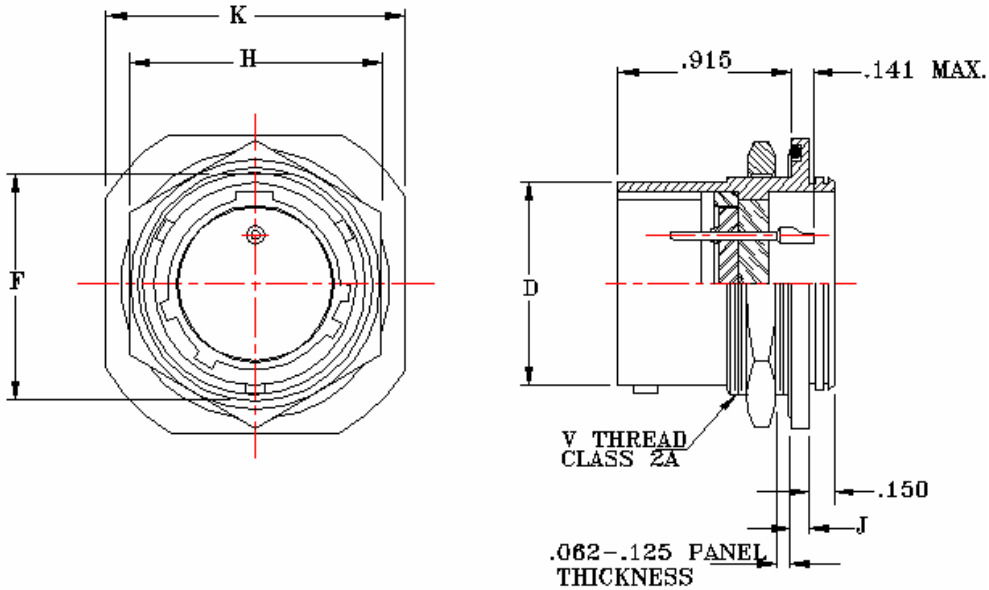
SHELL SIZE	PART NUMBER	D	L REF	N	R	S	T
		+0.001 -0.005		-0.001 -0.005	+0.005 -0.005	+0.016 -0.016	+0.010 -0.005
9	30B-9-(*)P▼-(**)	0.572	0.775	0.672	0.719	0.938	0.128
11	30B-11-(*)P▼-(**)	0.700		0.781	0.812	1.031	
13	30B-13-(*)P▼-(**)	0.850		0.906	0.906	1.125	
15	30B-15-(*)P▼-(**)	0.975		1.031	0.969	1.219	
17	30B-17-(*)P▼-(**)	1.100		1.156	1.062	1.312	
19	30B-19-(*)P▼-(**)	1.207		1.250	1.156	1.438	
21	30B-21-(*)P▼-(**)	1.332	0.781	1.375	1.250	1.562	0.147
23	30B-23-(*)P▼-(**)	1.457	0.795	1.500	1.375	1.688	
25	30B-25-(*)P▼-(**)	1.528	0.805	1.625	1.500	1.812	

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR // (*) REPLACE WITH PIN ARRANGEMENT INDICATOR NOT REQUIRED FOR NORMAL POSITION // (**) REPLACE WITH CONTACT STYLE AND MATERIAL





JAM NUT MOUNT 50B RECEPTACLES (REF. MS27470)



SHELL SIZE	PART NUMBER	D	F	H	J	K	V
		+0.001 -0.005	+0.000 -0.010	+0.016 -0.016	+0.016 -0.016	+0.016 -0.016	THREAD CLASS 2A
9	50B-9-(*)P▼-(**)	0.572	0.655	0.875	0.109	1.062	.6875-24 UNEF
11	50B-11-(*)P▼-(**)	0.700	0.755	1.000		1.250	.8125-20 UNEF
13	50B-13-(*)P▼-(**)	0.850	0.942	1.188		1.375	1.000-20 UNEF
15	50B-15-(*)P▼-(**)	0.975	1.066	1.312		1.500	1.1250-18 UNEF
17	50B-17-(*)P▼-(**)	1.100	1.191	1.438		1.625	1.2500-18 UNEF
19	50B-19-(*)P▼-(**)	1.207	1.316	1.562		1.812	1.3750-18 UNEF
21	50B-21-(*)P▼-(**)	1.332	1.441	1.688		1.938	1.5000-18 UNEF
23	50B-23-(*)P▼-(**)	1.457	1.566	1.812	0.140	2.062	1.6250-18 UNEF
25	50B-25-(*)P▼-(**)	1.582	1.691	2.000		2.188	1.7500-18 UNS

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR /(*) REPLACE WITH PIN ARRANGEMENT INDICATOR NOT REQUIRED FOR NORMAL POSITION /(**) REPLACE WITH CONTACT STYLE AND MATERIAL

