



D 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 "D" Series receptacles are manufactured to American Micro Products, Inc. (AMPI / ACE) standards and meet the intermateability requirements of MIL-C-38999 Series III. 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 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 stainless steel shells with gold plated nickel-iron alloy contacts. Other materials and finishes can be supplied to meet specific application requirements.

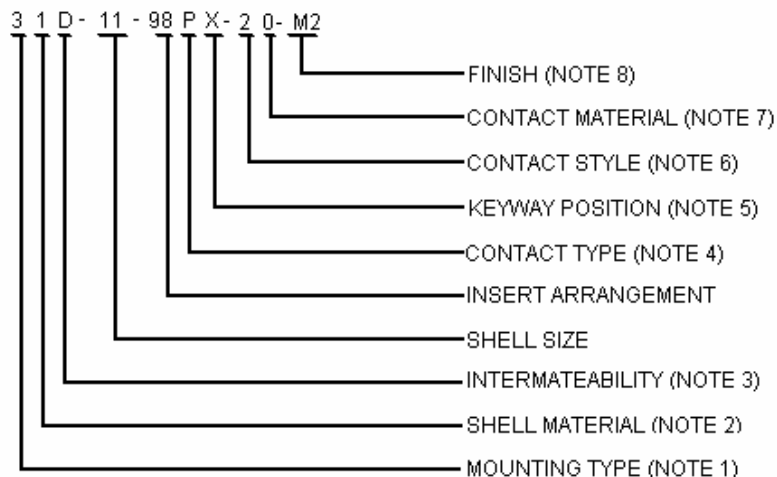
"D" Series receptacles meet the, voltage, salt spray, shock, and vibration requirements of MIL-C-38999.

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	3	85
20	5	60
16	10	85
12	17	85

PART NUMBER EXPLANATION



STANDARD MATERIALS AND FINISHES

STAINLESS STEEL SHELLS

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

Finish: Passivated or nickel per QQ-N-290

CONTACTS

Material: Nickel-iron alloy per MIL-I-23011, class 2.

Finish: 50 microniches minimum gold per MIL-G-45204 over a suitable underplate

INSERTS

Material: Glass

INTERFACIAL SEALS

Material: Fluorosilicone rubber.

DESCRIPTION	MILITARY DESIGNATION	AMPI DESIGNATION
BOX MOUNT	D38999/21Y**PN	31D-*.PN-20-M2
	D38999/21Y**XN	31D-*.PN-10-M2
	D38999/21N**PN	31D-*.PN-20-M8
	D38999/21N**XN	31D-*.PN-10-M8
JAM NUT MOUNT	D38999/23Y**PN	51D-*.PN-20-M2
	D38999/23Y**XN	51D-*.PN-10-M2
	D38999/23N**PN	51D-*.PN-20-M8
	D38999/23N**XN	51D-*.PN-10-M8
SOLDER MOUNT	D38999/25Y**PN	21D-*.PN-20-M2
	D38999/25Y**XN	21D-*.PN-10-M2
	D38999/25N**PN	21D-*.PN-20-M8
	D38999/25N**XN	21D-*.PN-10-M8
WELD MOUNT	D38999/27Y**PN	62D-*.PN-20-M2
	D38999/27Y**XN	62D-*.PN-10-M2
	D38999/27N**PN	62D-*.PN-20-M8
	D38999/27N**XN	62D-*.PN-10-M8
MATING PLUG	D38999/26	

HIGH POTENTIAL TEST VOLTAGE

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

NOTES:

1. -- 2-- Circular flange solder mount
- 3-- Square flange box mount
- 5-- Jam nut mount
- 6-- Circular flange weld mount
2. -- 1 thru 7- various stainless steel #303 thru #347
3. -- MIL-C-38999 Series III intermateability
4. -- P--Pin
5. -- Keyway position
6. -- 1--Eyelet
- 2--Solder cup
7. -- 0--Nickel-iron alloy
8. -- M2-- Contacts gold with shell passivated
- M8--Gold contacts with shell nickel plated

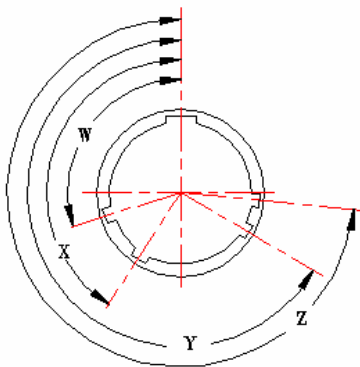




INDEX OF INSERT ARRANGEMENTS MIL-STD-1560

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
	98	10		10			I
15	5	5			5		II
	15	15		14	1		I
	18	18		18			I
	19	19		19			I
	35	37	37				M
	97	12		8	4		I
17	8	8			8		II
	26	26		26			I
	35	55	55				M
19	30	30		29	1		I
	32	32		32			I
	35	66	66				M
21	16	16			16		II
	35	79	79				M
	39	39		37	2		I
	41	41		41			I
23	35	100	100				M
25	35	128	128				M
	61	61		61			I

MASTER KEYWAY POSITIONS FRONT FACE OF PIN INSERT SHOWN

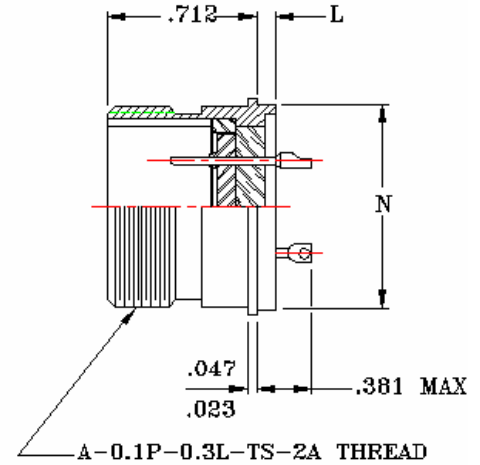
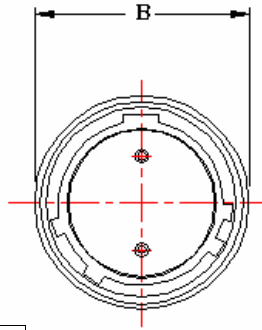


SHELL SIZE	KEYWAY POSITION	W°	X°	Y°	Z°
9	N	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
11, 13, and 15	E	91	131	197	240
	N	95	141	208	236
	A	113	156	182	292
	B	90	145	195	252
	C	53	156	220	255
17, 19, 23, and 25	D	119	146	176	298
	E	51	141	184	242
	N	80	142	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





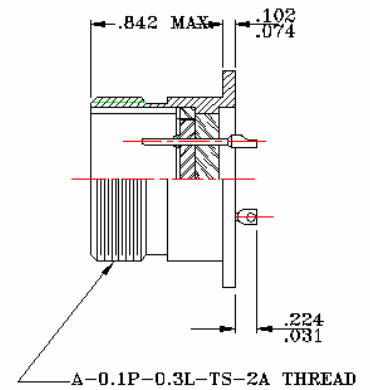
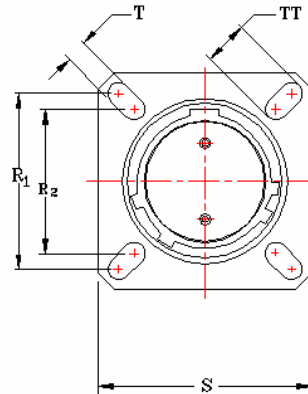
SOLDER MOUNT 21D RECEPTACLES (REF. D38999/25)



SHELL SIZE	PART NUMBER	A THREAD	B +.010 -.010	L MAX	N +.001 -.005
9	21D-9-(*)P▼-(**)	0.6250	0.750	0.200	0.672
11	21D-11-(*)P▼-(**)	0.7500	0.844		0.781
13	21D-13-(*)P▼-(**)	0.8750	0.969		0.906
15	21D-15-(*)P▼-(**)	1.0000	1.094		1.031
17	21D-17-(*)P▼-(**)	1.1875	1.218		1.156
19	21D-19-(*)P▼-(**)	1.2500	1.312		1.25
21	21D-21-(*)P▼-(**)	1.3750	1.438	0.232	1.375
23	21D-23-(*)P▼-(**)	1.5000	1.563		1.500
25	21D-25-(*)P▼-(**)	1.6250	1.688		1.500
					1.625

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR /(*) REPLACE WITH PIN ARRANGEMENT
NORMAL POSITION INDICATOR REQUIRED IS N /(**) REPLACE WITH CONTACT STYLE AND MATERIAL

BOX MOUNT 31D RECEPTACLES (REF. D38999/21)



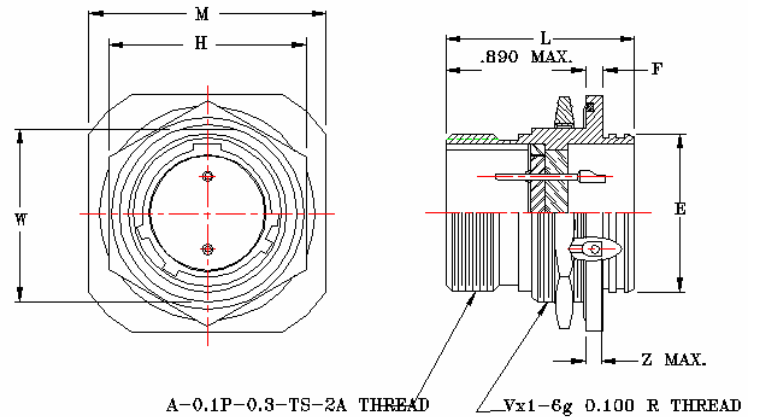
SHELL SIZE	PART NUMBER	A THREAD	R1 +.005 -.005	R2 +.005 -.005	S +.011 -.011	T +.008 -.008	TT +.008 -.008
9	31D-9-(*)P▼-(**)	0.6250	0.719	0.594	0.937	0.128	0.216
11	31D-11-(*)P▼-(**)	0.7500	0.812	0.719	1.031		0.194
13	31D-13-(*)P▼-(**)	0.8750	0.906	0.812	1.126		0.194
15	31D-15-(*)P▼-(**)	1.0000	0.969	0.906	1.220		0.173
17	31D-17-(*)P▼-(**)	1.1875	1.062	0.969	1.311		0.194
19	31D-19-(*)P▼-(**)	1.2500	1.156	1.062	1.437		0.194
21	31D-21-(*)P▼-(**)	1.3750	1.250	1.156	1.563	0.154	0.194
23	31D-23-(*)P▼-(**)	1.5000	1.375	1.250	1.689		0.242
25	31D-25-(*)P▼-(**)	1.6250	1.500	1.375	1.811		0.242
							0.242

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR /(*) REPLACE WITH PIN ARRANGEMENT
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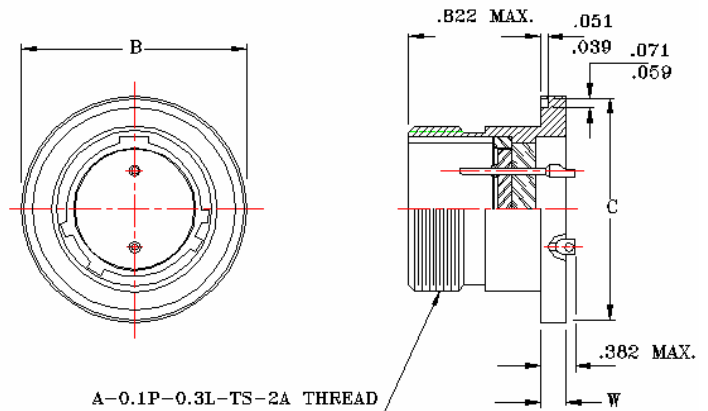
JAM NUT MOUNT 51D RECEPTACLES (REF. D38999/23)



SHELL SIZE	PART NUMBER	A THREAD	E		H			L	M	V THREAD	W	Z MAX
			+0.012 -0.000	+0.012 -0.004	+0.010 -0.010	+0.015 -0.015	+0.015 -0.015					
9	51D-9-(*)P▼-(**)	0.6250	0.642	0.102	0.875	1.125	1.063	M17	0.655	0.208		
11	51D-11-(*)P▼-(**)	0.7500	0.764		1.000	1.125	1.252	M20	0.755	0.208		
13	51D-13-(*)P▼-(**)	0.8750	0.894		1.250	1.133	1.374	M25	0.942	0.200		
15	51D-15-(*)P▼-(**)	1.0000	1.020		1.312	1.133	1.500	M28	1.066	0.200		
17	51D-17-(*)P▼-(**)	1.1875	1.142		1.437	1.133	1.626	M32	1.191	0.200		
19	51D-19-(*)P▼-(**)	1.2500	1.268		1.562	1.165	1.811	M35	1.316	0.200		
21	51D-21-(*)P▼-(**)	1.3750	1.394		1.750	1.165	1.937	M38	1.441	0.200		
23	51D-23-(*)P▼-(**)	1.5000	1.520	0.134	1.875	1.165	2.063	M41	1.566	0.200		
25	51D-25-(*)P▼-(**)	1.6250	1.642		2.000	1.165	2.189	M44	1.691	0.200		

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR /(*) REPLACE WITH PIN ARRANGEMENT
NORMAL POSITION INDICATOR REQUIRED IS N /(**) REPLACE WITH CONTACT STYLE AND MATERIAL

WELD MOUNT 61D RECEPTACLES (REF. D38999/27)



SHELL SIZE	PART NUMBER	A THREAD	B		C	W
			+0.011 -0.000	+0.000 -0.011		
9	61D-9-(*)P▼-(**)	0.6250	0.972	0.941	0.126	0.126
11	61D-11-(*)P▼-(**)	0.7500	1.094	1.063		
13	61D-13-(*)P▼-(**)	0.8750	1.220	1.189		
15	61D-15-(*)P▼-(**)	1.0000	1.346	1.315		
17	61D-17-(*)P▼-(**)	1.1875	1.433	1.401		
19	61D-19-(*)P▼-(**)	1.2500	1.578	1.547		
21	61D-21-(*)P▼-(**)	1.3750	1.720	1.689		
23	61D-23-(*)P▼-(**)	1.5000	1.885	1.854	0.157	0.157
25	61D-25-(*)P▼-(**)	1.6250	1.972	1.941		

▼ REPLACE WITH ALTERNATE INSERT POSITION INDICATOR /(*) REPLACE WITH PIN ARRANGEMENT
NORMAL POSITION INDICATOR REQUIRED IS N /(**) REPLACE WITH CONTACT STYLE AND MATERIAL

