MILITARY SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES:
PLUG, STRAIGHT-THRU, HERMAPHRODITIC CONTACTS (.100 INCH SPACING)

This specification sheet is approved for use by the Communications Research and Development Command, Department of the Army, and is available for use by all Departments and Agencies of the Department of Defense.

The complete requirements for procuring the connectors described herein shall consist of this document and the latest issue of Specification MIL-C-55302.

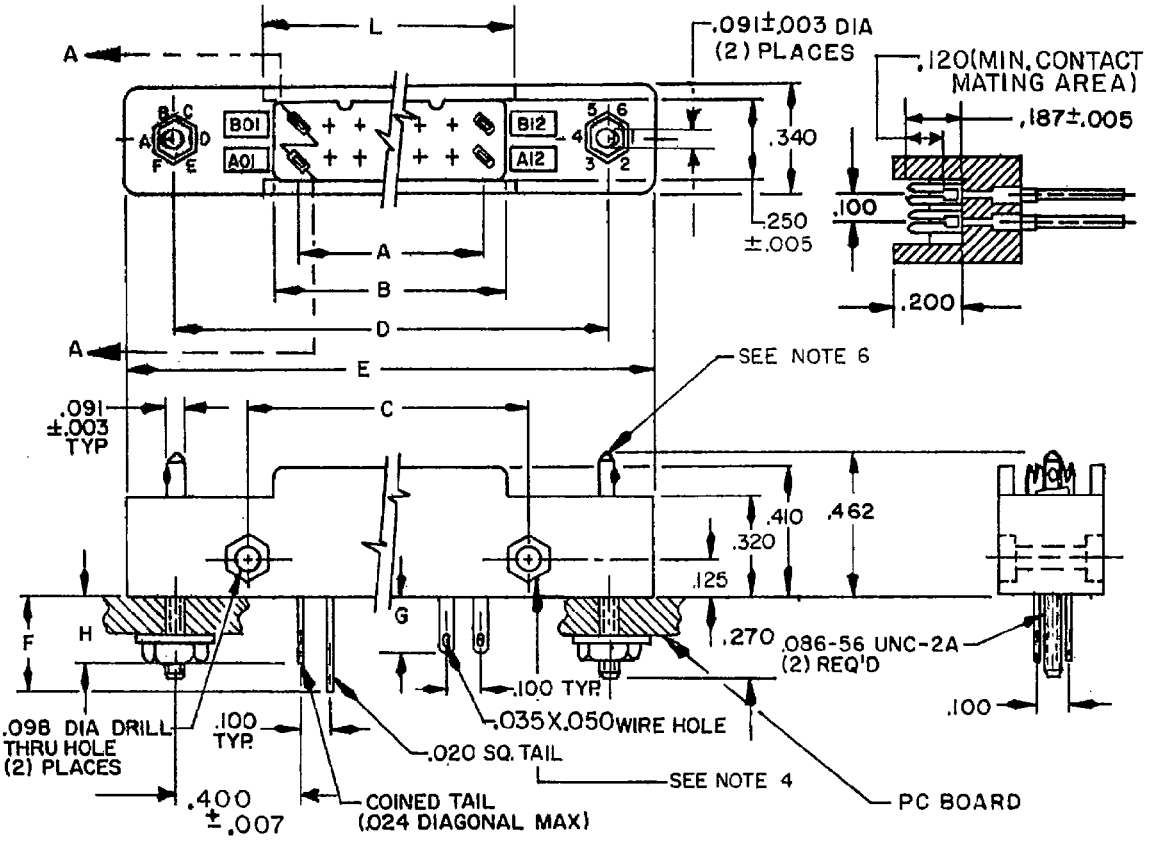

FIGURE 1. Connector, plug (.100 inch spacing).

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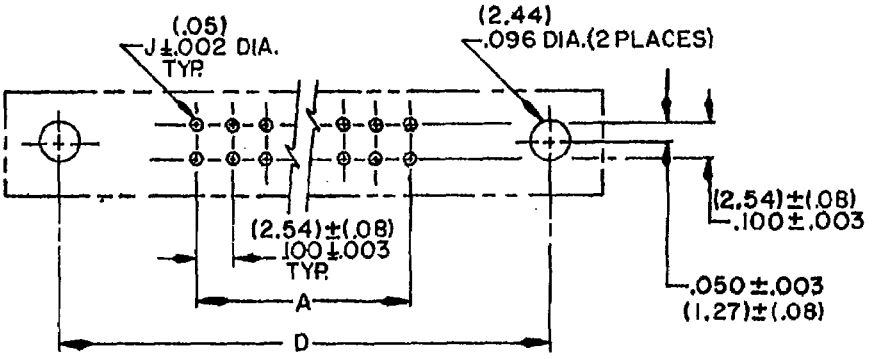
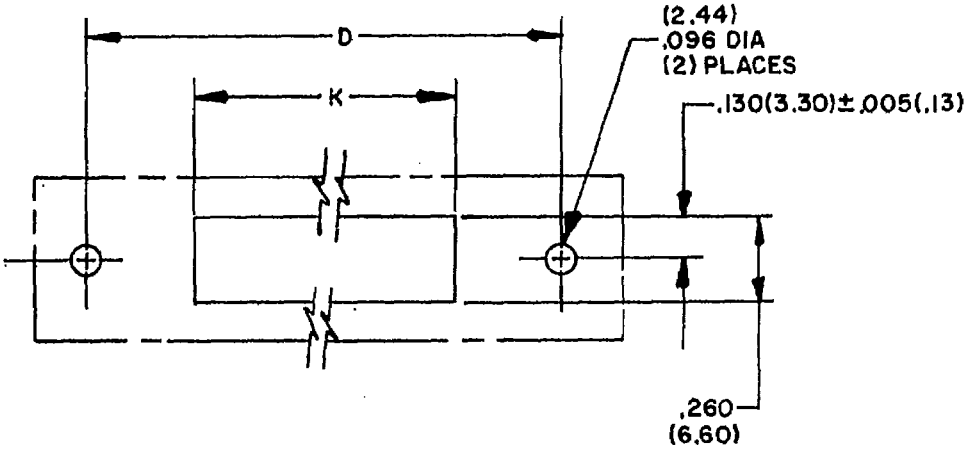


Typical hold grid layout using P.C. tail contacts.



Typical hole cutout using wire hole contact.

INCHES	MM	INCHES	MM	INCHES	MM	INCHES	MM
.003	.08	.032	.81	.100	2.54	.270	6.86
.005	.13	.070	1.78	.125	3.18	.320	8.13
.015	.38	.086	2.18	.187	4.75	.340	8.64
.020	.51	.091	2.31	.200	5.08	.410	10.41
.024	.61	.098	2.49	.250	6.35	.462	11.73

FIGURE 1. Connector, plug (.100 inch spacing) - Continued.

Number	Contacts	Dimensions (inches)										
		A ±.006 (.15)	B ±.006 (.15)	C ±.006 (.15)	D ±.006 (.15)	E	F ±.015 (.38)	G ±.015 (.38)	H ±.015 (.38)	J	K	L ±.006 (.15)
01 3/	24	1.100 (27.94)	1.250 (31.75)	1.400 (35.56)	1.900 (48.26)	2.200 (55.88)	—	—	.400 (10.16)	.026 (.66)	1.260 (32.00)	1.252 (31.80)
02 1/							—	.162 (4.11)	—	—		
03 2/							.103 (2.62)	—	—	.032 (.81)		
04 2/							.228 (5.79)	—	—	.032 (.81)		
05 2/							.259 (6.58)	—	—	.032 (.81)		
06 2/							.462 (11.73)	—	—	.032 (.81)		
07 2/							.541 (13.74)	—	—	.032 (.81)		
29 3/								—	.279 (7.09)	.026 (.66)		
30 3/								—	.309 (7.85)	.026 (.66)		
31 3/								—	.341 (8.66)	.026 (.66)		
32 3/								—	.479 (12.17)	.026 (.66)		
33 3/								—	.509 (12.93)	.026 (.66)		
34 3/								—	.541 (13.74)	.026 (.66)		
08 3/	48	2.300 (58.42)	2.450 (62.23)	2.600 (66.04)	3.100 (78.74)	3.400 (86.36)	—	—	.400 (10.16)	.026 (.66)	2.460 (62.48)	2.452 (62.28)
09 1/							—	.162 (4.11)	—	—		
10 2/							.103 (2.62)	—	—	.032 (.81)		
11 2/							.228 (5.79)	—	—	.032 (.81)		
12 2/							.259 (6.58)	—	—	.032 (.81)		
13 2/							.462 (11.73)	—	—	.032 (.81)		
14 2/							.541 (13.74)	—	—	.032 (.81)		
35 3/							—	—	.279 (7.09)	.026 (.66)		
36 3/							—	—	.309 (7.85)	.026 (.66)		
37 3/							—	—	.341 (8.66)	.026 (.66)		
38 3/							—	—	.479 (12.17)	.026 (.66)		
39 3/							—	—	.509 (12.93)	.026 (.66)		
40 3/							—	—	.541 (13.74)	.026 (.66)		

FIGURE 1. Connector, plug (.100 inch spacing) - Continued.

Number	Contacts	A ±.006 (.15)	B ±.006 (.15)	C ±.006 (.15)	D ±.006 (.15)	E	F ±.015 (.38)	G ±.015 (.38)	H ±.015 (.38)	J	K	L ±.006 (.15)
15 3/							—	—	.400 (10.16)	.026 (.66)		
16 1/							—	.162 (4.11)	—	—		
17 2/							.103 (2.62)	—	—	.032 (.81)		
18 2/							.228 (5.79)	—	—	.032 (.81)		
19 2/							.259 (6.58)	—	—	.032 (.81)		
20 2/							.462 (11.73)	—	—	.032 (.81)		
21 2/	72	3.500 (88.90)	3.650 (92.71)	3.800 (96.52)	4.300 (109.22)	4.600 (116.84)	.541 (13.74)	—	—	.032 (.81)	3.660 (92.96)	3.652 (92.76)
41 3/							—	—	.279 (7.09)	.026 (.66)		
42 3/							—	—	.309 (7.85)	.026 (.66)		
43 3/							—	—	.341 (8.66)	.026 (.66)		
44 3/							—	—	.479 (12.17)	.026 (.66)		
45 3/							—	—	.509 (12.93)	.026 (.66)		
46 3/							—	—	.541 (13.74)	.026 (.66)		
22 3/							—	—	.400 (10.16)	.026 (.66)		
23 1/							—	.162 (4.11)	—	—		
24 2/							.103 (2.62)	—	—	—		
25 2/							.228 (5.79)	—	—	—		
26 2/							.259 (6.58)	—	—	—		
27 2/							.462 (11.73)	—	—	—		
28 2/	96	4.700 (119.38)	4.850 (123.19)	5.000 (127.00)	5.500 (139.70)	5.800 (147.32)	.541 (13.74)	—	—	—	4.860 (123.44)	4.852 (123.24)
47 3/							—	—	.279 (7.09)	.026 (.66)		
48 3/							—	—	.309 (7.85)	.026 (.66)		
49 3/							—	—	.341 (8.66)	.026 (.66)		
50 3/							—	—	.479 (12.17)	.026 (.66)		
51 3/							—	—	.509 (12.93)	.026 (.66)		
52 3/							—	—	.541 (13.74)	.026 (.66)		

1/ Contact termination type - wire hole.
2/ Contact termination type - .020 square post.
3/ Contact termination type - .024 diagonal post.

NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only and are based upon 1.00 inch = 25.4 mm.
3. Unless otherwise specified, tolerance is ±.010 (.25 mm).
4. Dimensions are .162 (4.11 mm) hex across the flats by .052 deep (1.32 mm) - 4 places.
5. Metric equivalents are in parentheses or in columns.
6. Keying pins shown are in positions 1 and A.

FIGURE 1. Connector, plug (.100 inch spacing) - Continued.

REQUIREMENTS:

Dimensions and configuration: See figure 1.

Material and finish:

Contact: 0.020 inch thick phosphor bronze per QQ-B-750, composition "A". Gold plate per MIL-G-45204, type II, grade D, class 1, over nickel plating per QQ-N-290, class 2, 30 to 100 microinches.

Insulator: MIL-M-14, type SDG-F.

Keying hardware: 2 each hex nuts and washers, stainless steel, class 300 per QQ-S-763, passivated per QQ-P-35, and 2 each keying pins, free machining brass per QQ-B-626, nickel plated per QQ-N-290. For direct government procurement the keying hardware shall be assembled to the connector. For other orders the keying hardware may be furnished loose as specified in contract or order.

Contact identification: The first and last contact in each row shall be identified by an alphabetical-numerical code (e.g., A01, B12). The letter designates the row and the number designates the contact position within that row. Every fifth contact in each row shall have its identification mark molded in.

Contact retention: 6 pounds.

Mating and unmating: The maximum insertion force, in pounds, shall not exceed a value equal to .5 times the number of contacts, and the withdrawal force, in pounds, shall be a minimum of .11 times the number of contacts and shall not exceed the measured insertion force.

Contact separation force: 1 ounce minimum.

Contact resistance: The contact resistance shall not exceed 20 milliohms.

Dielectric withstanding voltage:

Sea level: 1,000 volts rms, 60 Hz.

High altitude: 300 volts rms, 60 Hz.

Current rating, maximum: 5 amperes.

Keying pin: When required, can be easily keyed to the desired positions by using a standard type wrench. Connectors are supplied with keying pins in "1" and "A" positons.

Mating connectors: Shall conform to MIL-C-55302/90 and MIL-C-55302/92 or MIL-C-55302/94 and MIL-C-55302/96.

Part number: M55302/91-(dash number from figure 1).

Group submission: MIL-C-55302/89, MIL-C-55302/92, and MIL-C-55302/95.

Revison letters are not used to denote changes due to the extensiveness of the changes.

Custodians:
Army - CR

Review activities:
Army - AT, AV, MI
DLA - ES

User activities:
Army - AR, ME

Preparing activity:
Army - CR

Agent:
DLA - ES

(Project 5935-A179-3)