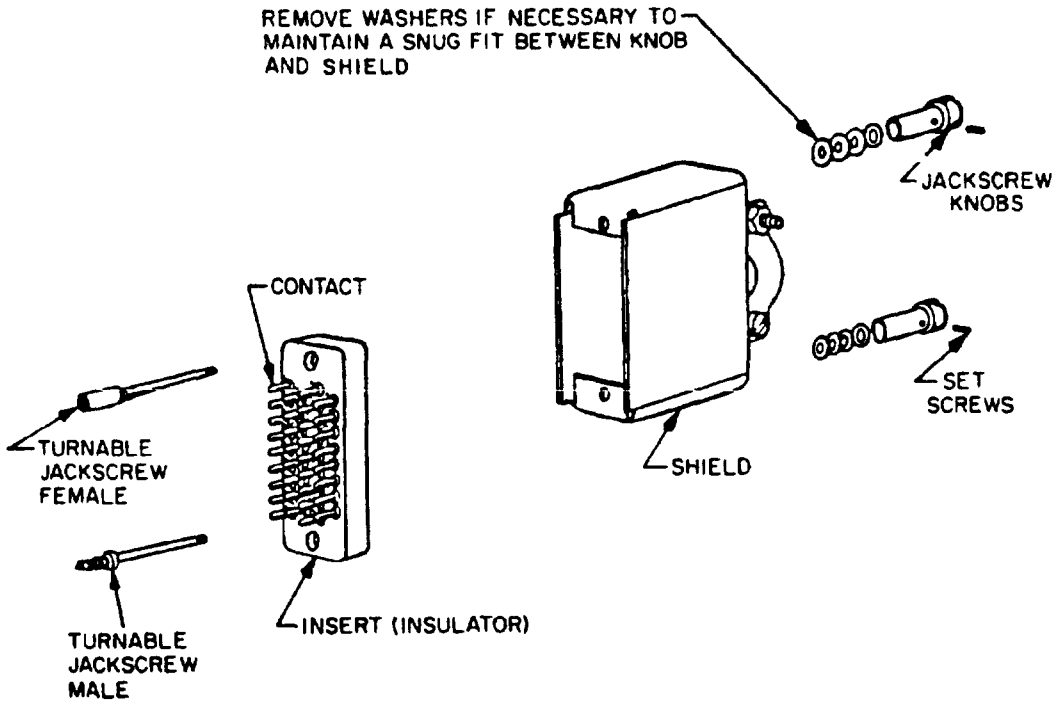
MILITARY SPECIFICATION SHEET

CONNECTORS PLUG, ELECTRICAL, RECTANGULAR,
RACK AND PANEL, CRIMP TYPE REMOVABLE PIN CONTACTS, SIZE 22

This specification is approved for use by all Departments and Agencies of the Department of Defense.

The requirements for acquiring the connectors described herein shall consist of this specification and the latest issue of MIL-C-28748.

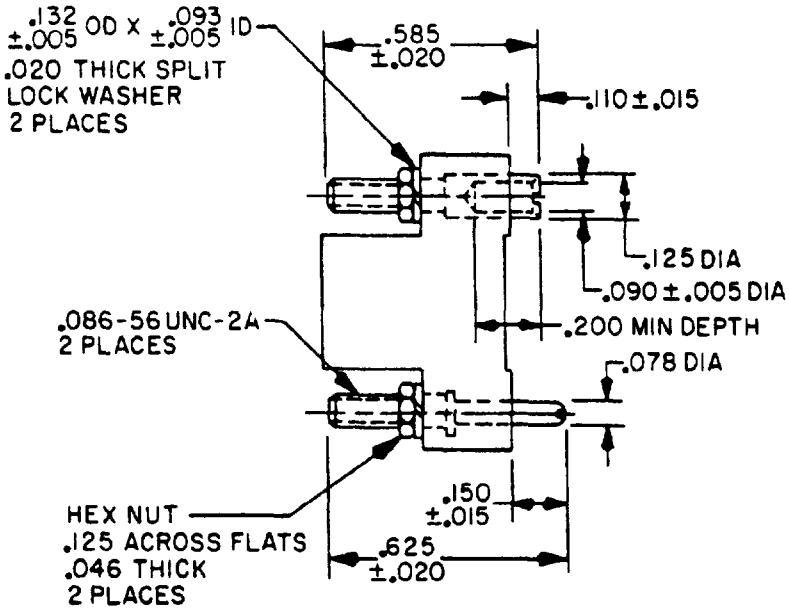


Configuration A. Connector.

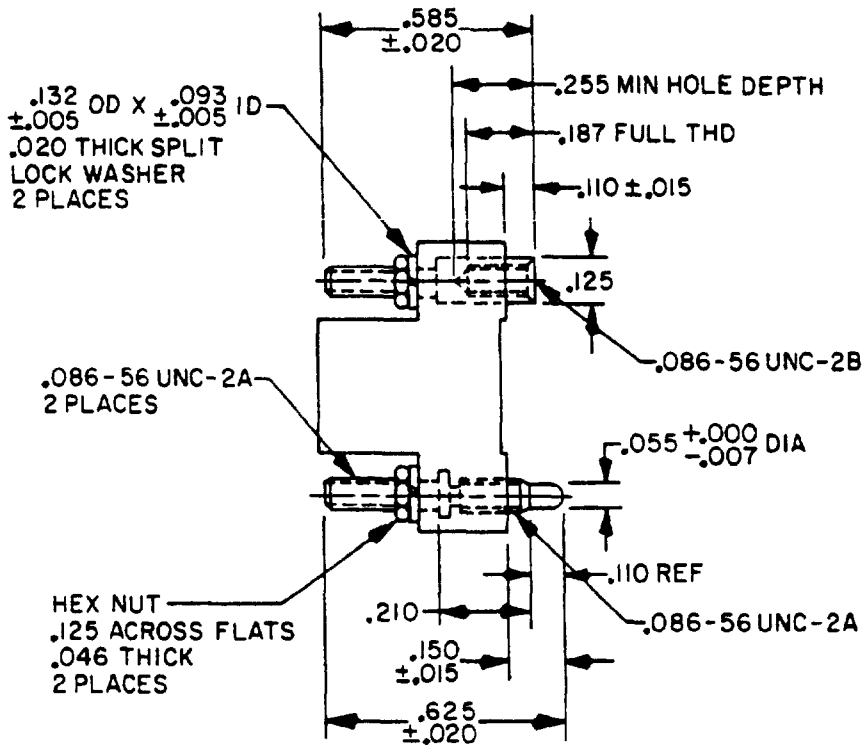
FIGURE 1. Connector with shields, jackscrews, and guide pins.

(B) denotes changes

DISTRIBUTION STATEMENT A. Approved for public release, distribution is unlimited.

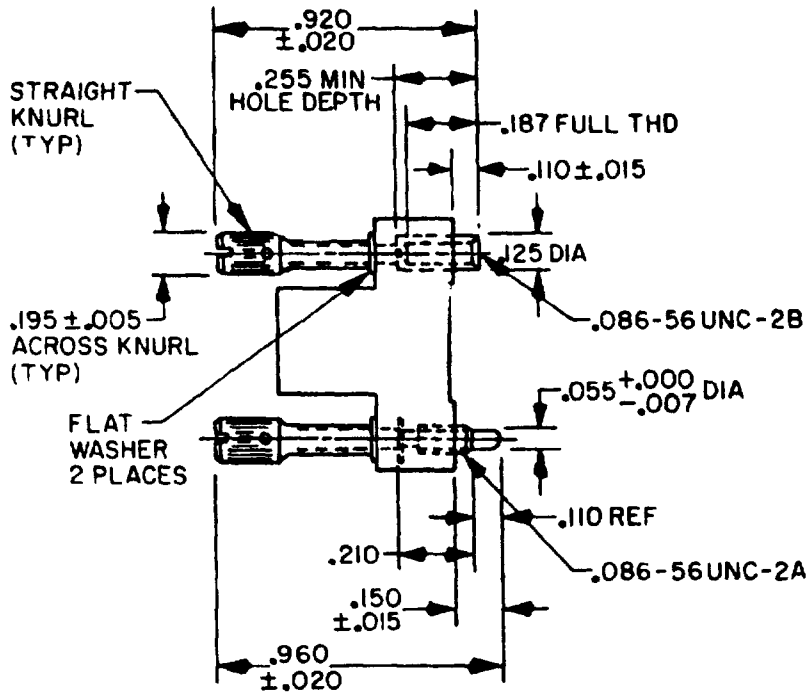


Configuration B Connector with guide pins

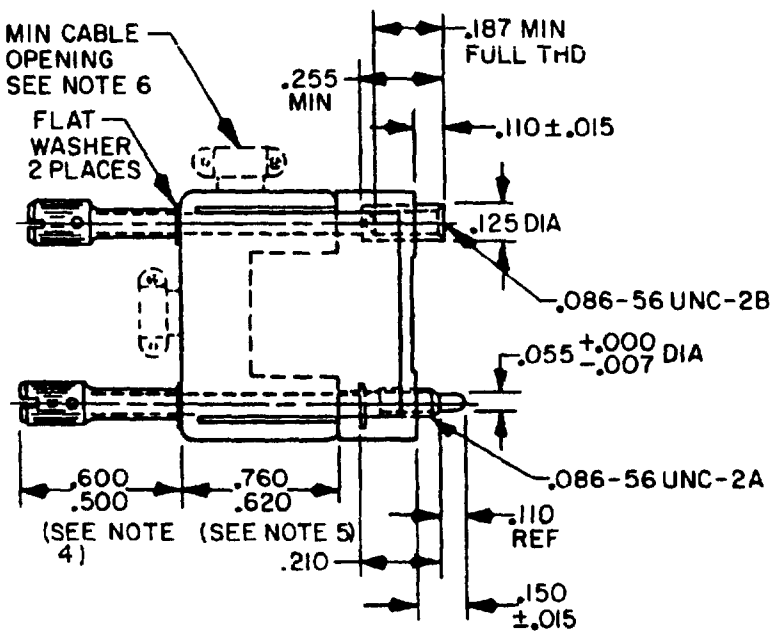


Configuration C. Connector with fixed jackscrews

FIGURE 1. Connector with shields, jackscrews, and guide pins - Continued.

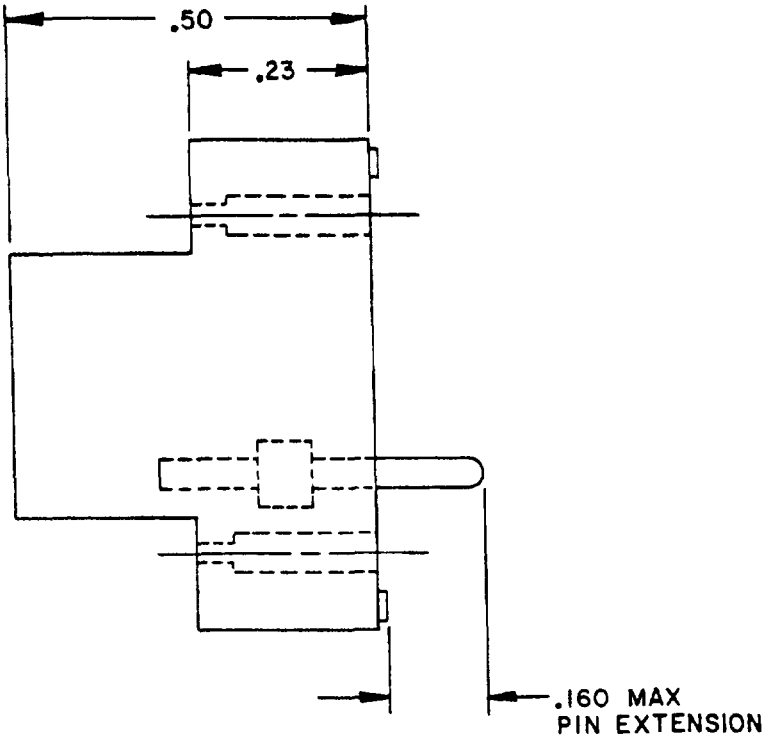


Configuration D. Connector with short turnable jackscrews.



Configuration E. Connector with long turnable jackscrews and shield.

FIGURE 1. Connector with shields, jackscrews, and guide pins - Continued.

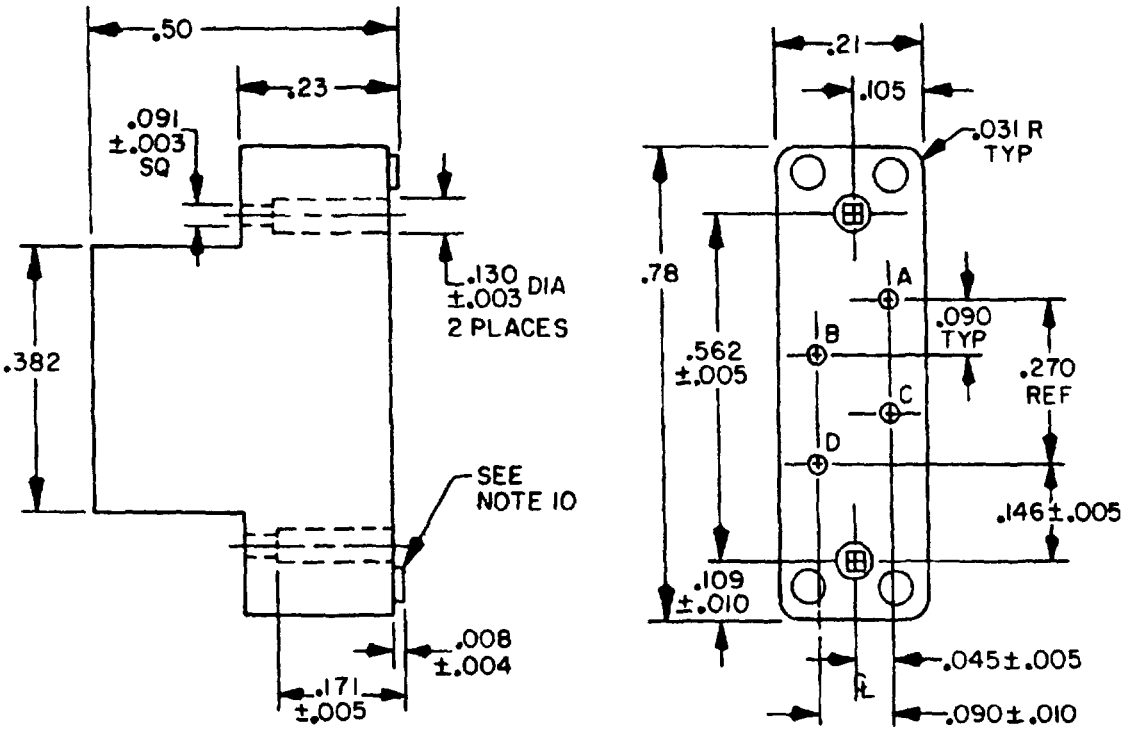


Inches	mm	Inches	mm	Inches	mm	Inches	mm
005	0 13	086	2.18	160	4 06	500	12 70
007	0 18	.090	2 29	.187	4.75	.585	14.86
015	0 38	093	2.36	195	4 95	600	15 24
020	0 51	110	2 79	.200	5.08	.620	15 75
046	1 17	125	3.18	210	5 33	625	15 88
055	1.40	132	3.35	.23	5 8	.760	19 30
078	1 98	150	3 81	.255	6.48	920	23 37
						960	24 38

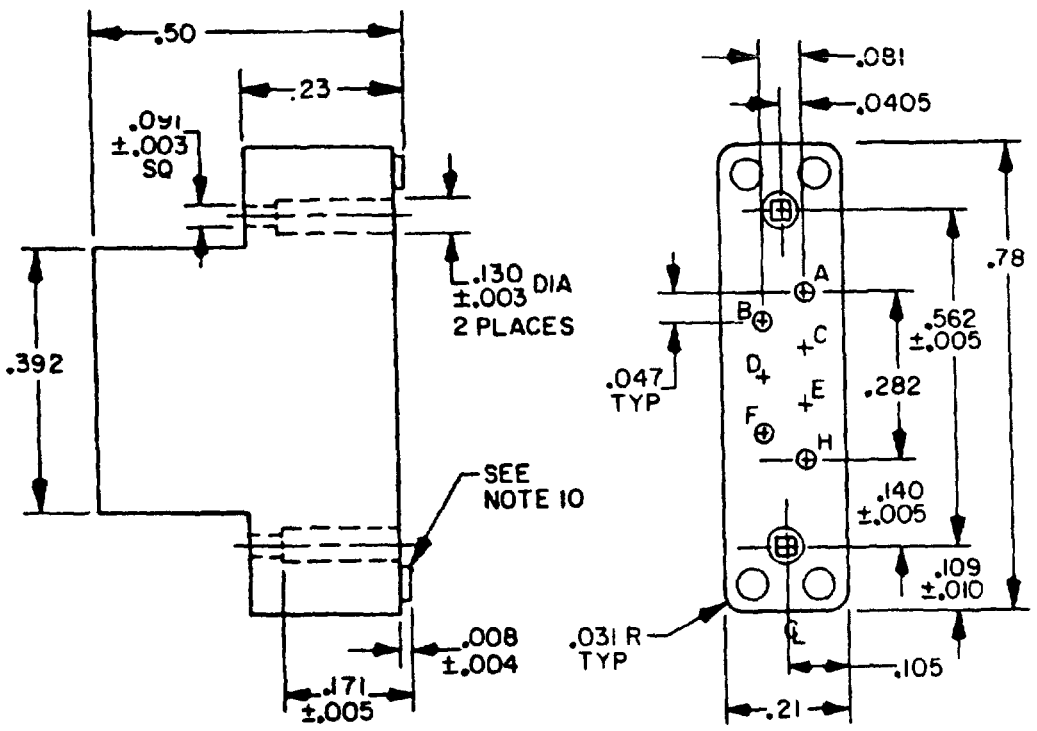
NOTES:
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ±.003 (0.08 mm)
4. .730 (18.54 mm) maximum for 14 contact connector with side opening shield.
   .630 (16.00 mm) maximum for 50 contact connector.
5. 1.20 (30.48 mm) maximum for 44 contact arrangements.
   1.52 (38.61 mm) maximum for 50 contact arrangements.
6.

Number of contacts	Minimum cable openings
4	.07 (1.8 mm) sq. inch
7	.07 (1.8 mm) sq. inch
14	.19 (4.8 mm) sq. inch
20	.22 (5.6 mm) sq. inch
26	.26 (6.6 mm) sq. inch
34	.34 (8.6 mm) sq. inch
44	.34 (8.6 mm) sq. inch
50	.34 (8.6 mm) sq. inch

FIGURE 1. Connector with shields, jackscrews, and guide pins - Continued.

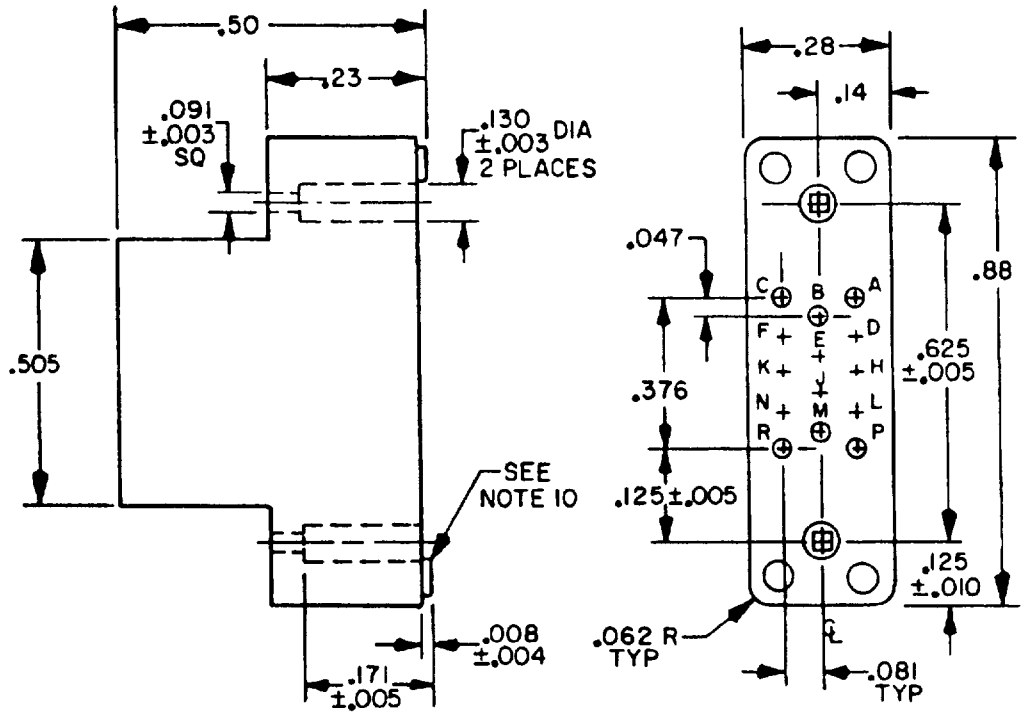


Configuration A. Insert with 4 contacts.

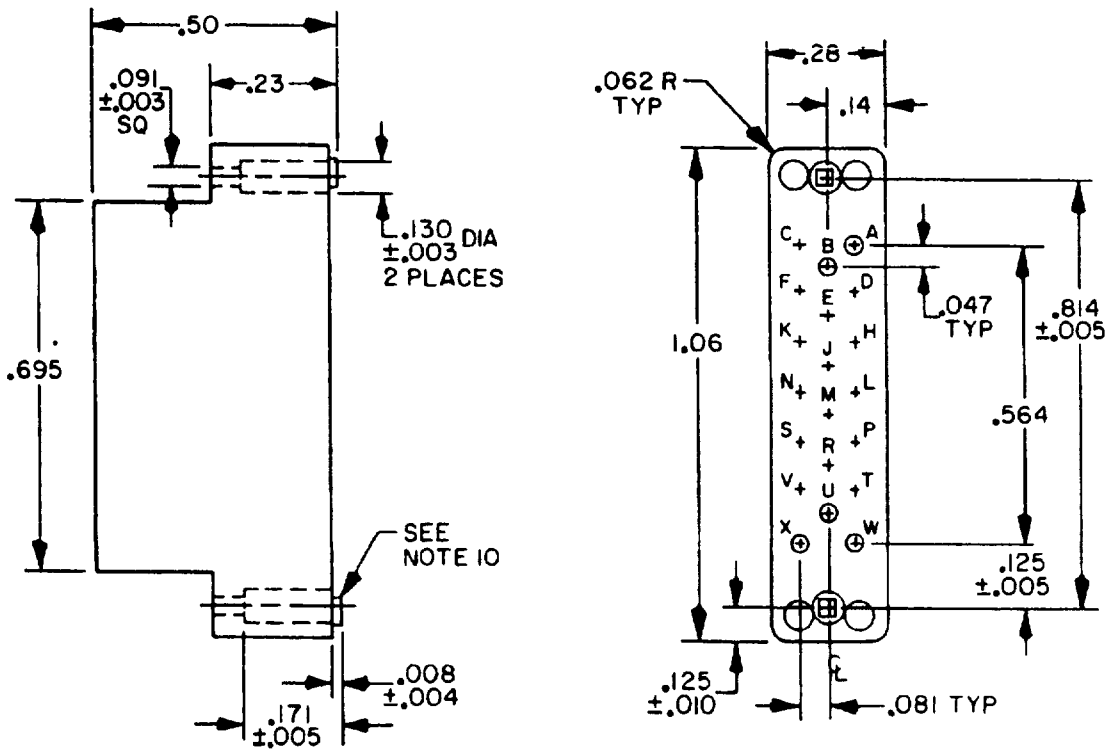


Configuration B. Insert with 7 contacts.

FIGURE 2. Insert arrangements.

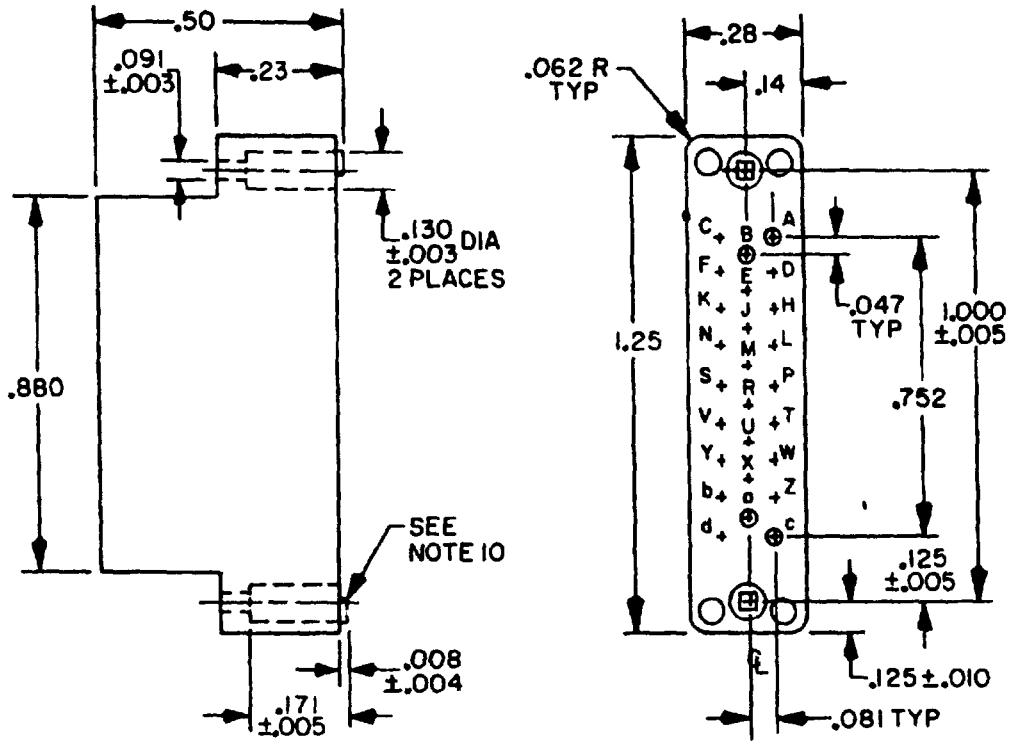


Configuration C. Insert with 14 contacts.

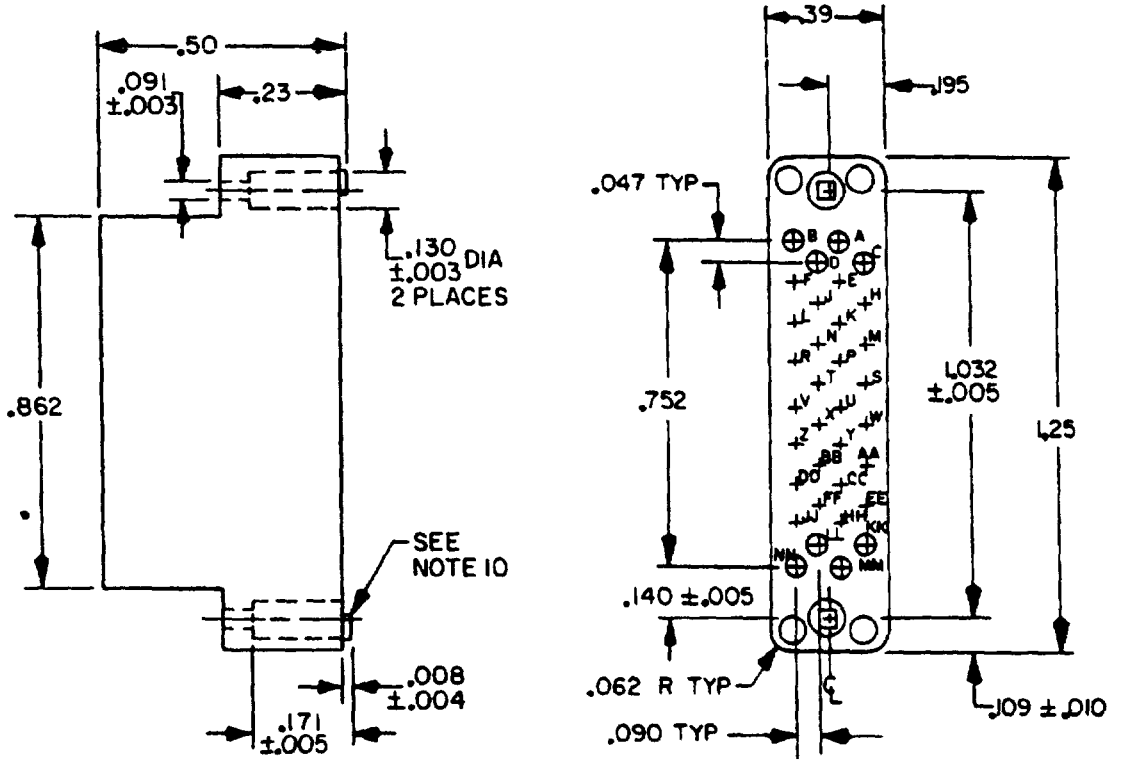


Configuration D. Insert with 20 contacts.

FIGURE 2. Insert arrangements - Continued.

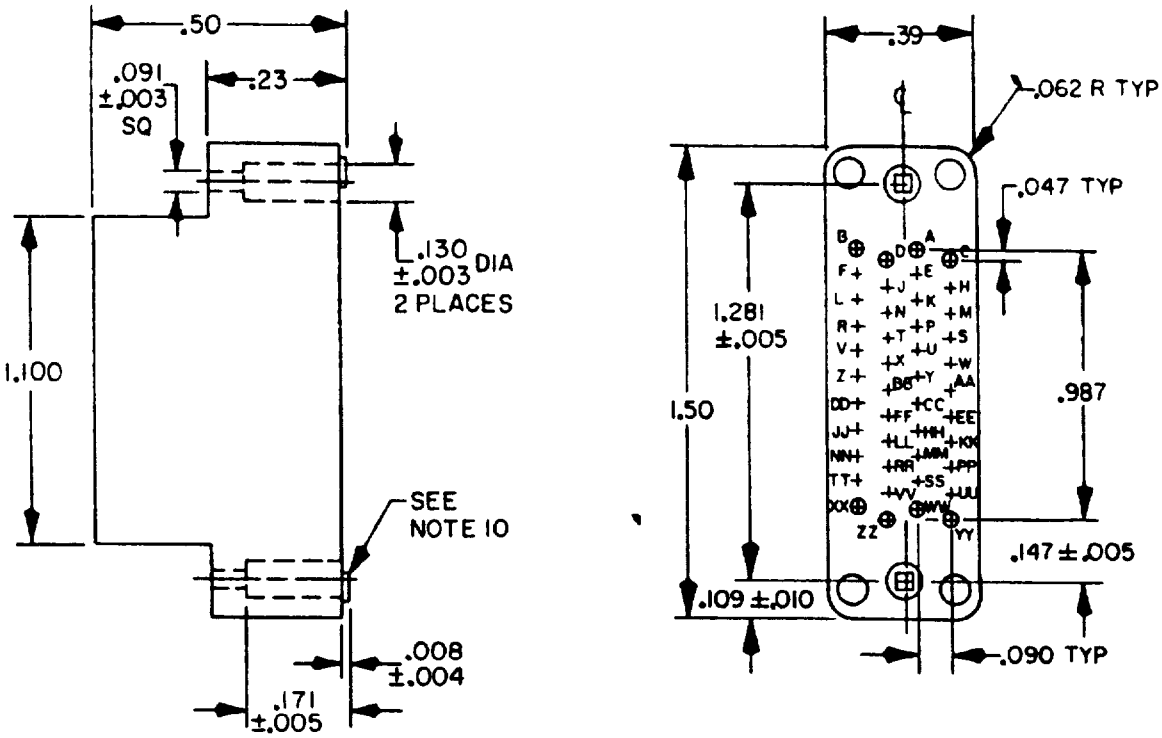


Configuration E. Insert with 26 contacts.

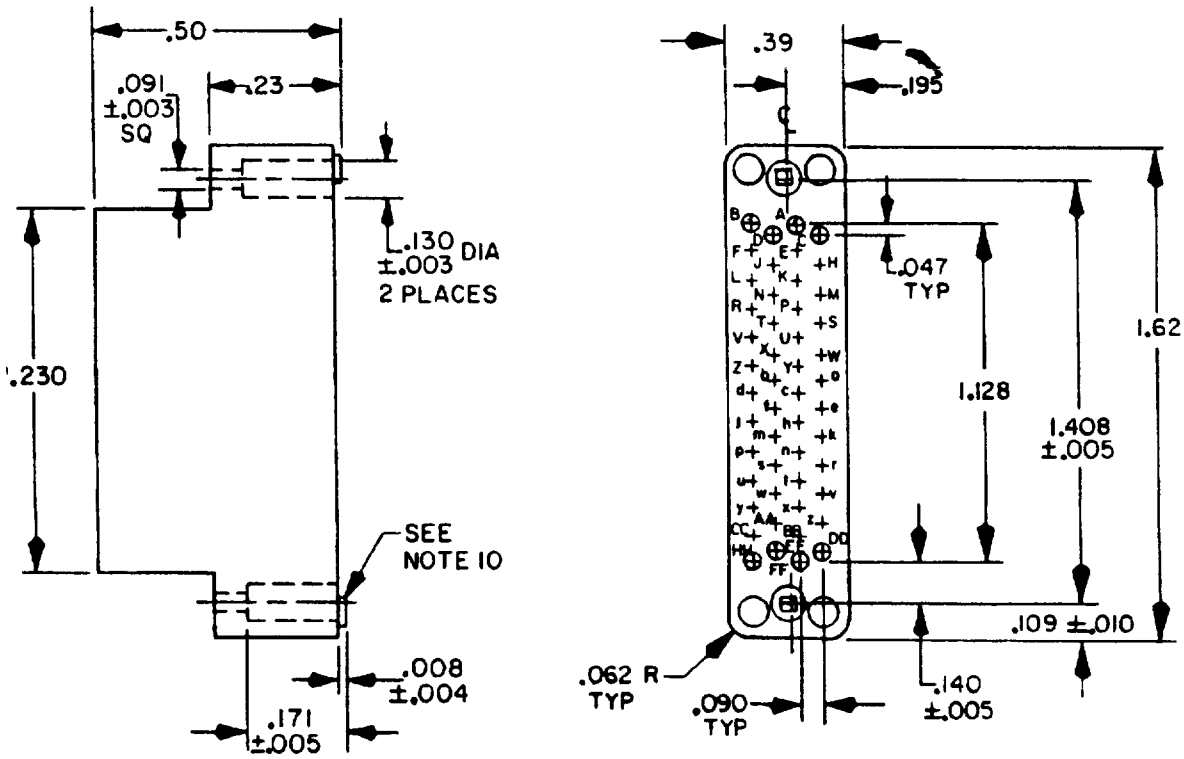


Configuration F. Insert with 34 contacts.

FIGURE 2. Insert arrangements - Continued.



Configuration G. Insert with 44 contacts.



Configuration H. Insert with 50 contacts.

FIGURE 2. Insert arrangements - Continued.

Inches	mm	Inches	mm	Inches	mm	Inches	mm
003	0 08	105	2 67	282	7 16	814	20 68
.004	0.10	109	2 77	.376	9 55	862	21 89
.005	0.13	.125	3 18	.382	9.70	.88	22.4
.008	0.20	130	3 30	.39	9 9	987	25.07
010	0.25	140	3 56	50	12.7	1 000	25.40
.031	0.79	.146	3.71	.505	12.83	1 032	26 21
0405	1.029	147	3 73	.562	14 27	1 06	26 9
.045	1.14	171	4.34	.564	14.33	1.100	27 94
.047	1 19	.195	4 95	.625	15 88	1 128	28 65
062	1 57	21	5.3	.695	17.65	1 230	31 24
.081	2 06	23	5.8	.752	19 10	1 25	31 8
.090	2.29	270	6 86	78	19 8	1.281	32 54
.091	2 31	.28	7.1			1.408	35.76
						1 50	38 1
						1 62	41.1

NOTES.
1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are ±.02 (0.51 mm) for two place decimals amd ±.015 (0.38 mm) for three place decimals.
4. Tolerance between any two adjacent contact centers shall be ±.004 (0.10 mm). Tolerance between any two contact centers, other than adjacent contacts, shall be ±.006 (0.15 mm).
5. Contact letter identification may be located on either side of the contact hole. All letters shall appear on the front and rear face of each insert.
6. Inserts shall be used with guide pin assemblies or jackscrew assemblies.
7. Insert material: Shall be in accordance with MIL-C-28748.
8. Installing and removal tools MIL-I-81969/18 and /20.
9. Crimp tool: M22520/2-01. Positioner: Buchanan 614412 and Daniels K187, or equivalent.
10. Shape of .008 pads optional.
11. Mating fact of pin insert shown; socket insert is reverse image.
12. Contacts: MIL-C-39029/34-440.

FIGURE 2. Insert arrangements - Continued.

REQUIREMENTS

(B) Dimensions and configurations: See figures 1 and 2.

Mating connectors See MIL-C-28748/8 and MIL-C-28748/14.

Part number: As shown in the following example

(See part number code)

M28748/13	A	1	0	L	•1A
Basic number of specification sheet	Insert arrangement (Fig. 2)	Shield and shield clamp location or retaining plate (Fig. 1)	Shell type	Jackscrews or guide pins (Fig. 1)	Contacts

PART NUMBER CODE·

Insert arrangement figure 2 configuration	Number of contacts	Shield and shield clamp location or retaining plate	Shell type
A -	4	Shield	0 - None included
B -	7	1 - Top opening per configuration E of figure 1	
C -	14		
D -	20		
E -	26	2 - Side opening per configuration E of figure 1	
F -	34		
G -	44		
H -	50	0 - None included	

Jackscrews or guide pins

L - Long jackscrews: Configuration E, figure 1
F - Fixed jackscrews: Configuration C, figure 1
•S - Short jackscrews: Configuration D, figure 1
G - Guide pins: Configuration B, figure 1

Jack and guide location: The jacksocket (turning or fixed) or guide socket shall be located by the "A" pin contact.

Contacts: MIL-C-39029/34-440
1A - 100 percent size 22.

Custodians:
Army - CR
Navy - EC
Air Force - 85

Review activities:
Army - AT, MI
Navy - AS, SH
Air Force - 11, 17, 99
DLA - ES

User activities:
Army - AV, ME
Navy - MC, OS

Preparing activity:
Navy - EC

Agent:
DLA - ES

(Project 5935-3571)