

INCH-POUND

MIL-DTL-83513/3G  
25 June 2002  
SUPERSEDING  
MIL-PRF-83513/3F  
15 August 1997

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, RECTANGULAR, PLUG, MICROMINIATURE,  
POLARIZED SHELL, PIN CONTACTS, CLASS M, CRIMP TYPE

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

The requirements for acquiring the product described herein shall consist of this specification sheet and  
MIL-DTL-83513.

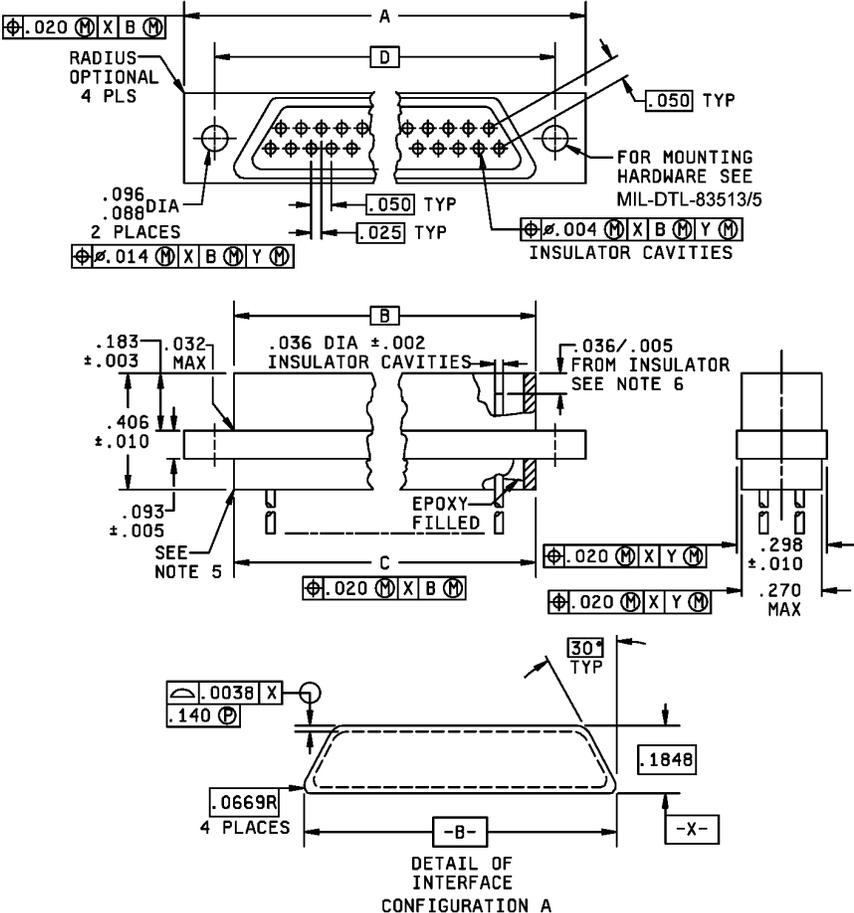


FIGURE 1. Connector, plug, .050 spacing.

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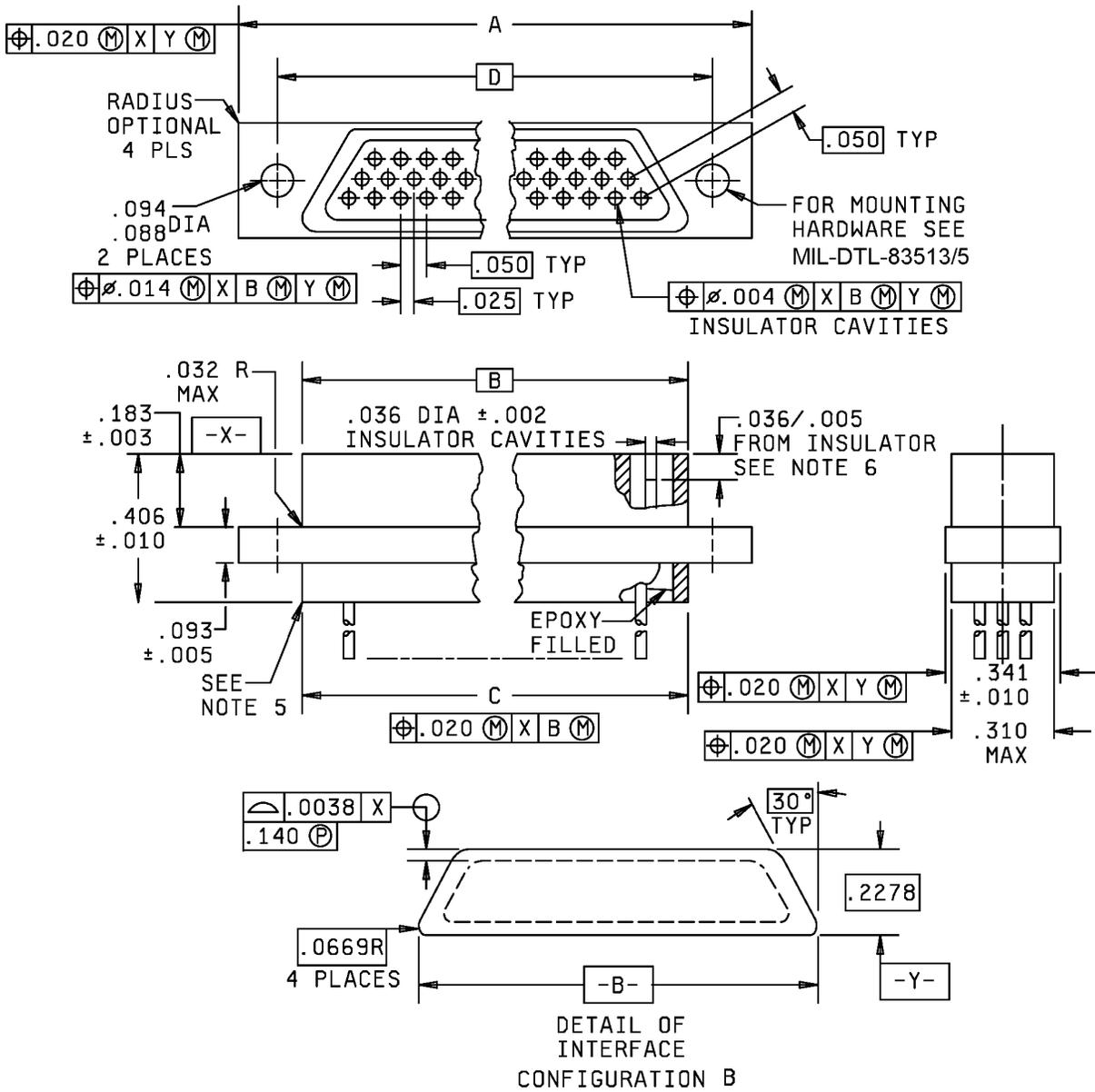


FIGURE 1. Connector, plug, .050 spacing - Continued.

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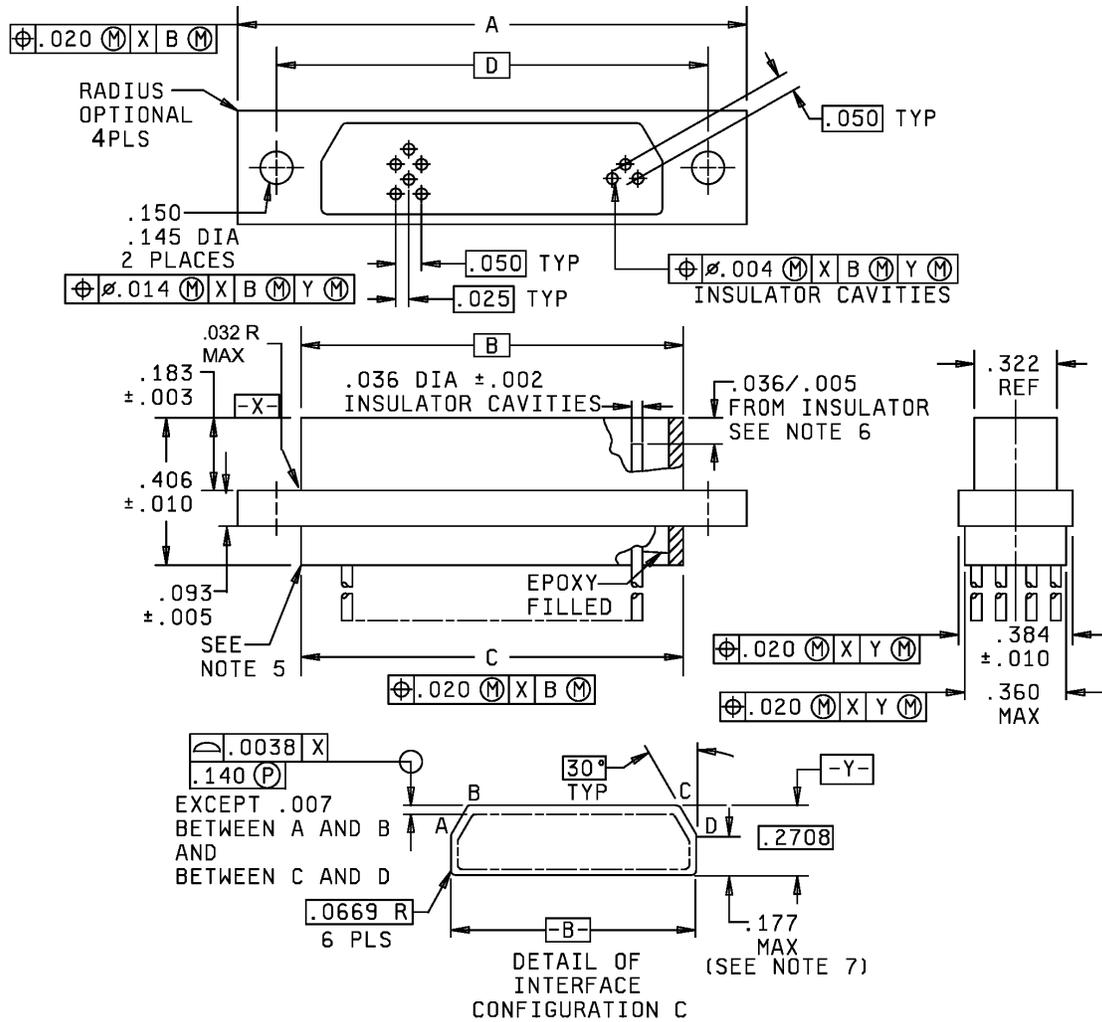


FIGURE 1. Connector, plug .050 spacing - Continued.

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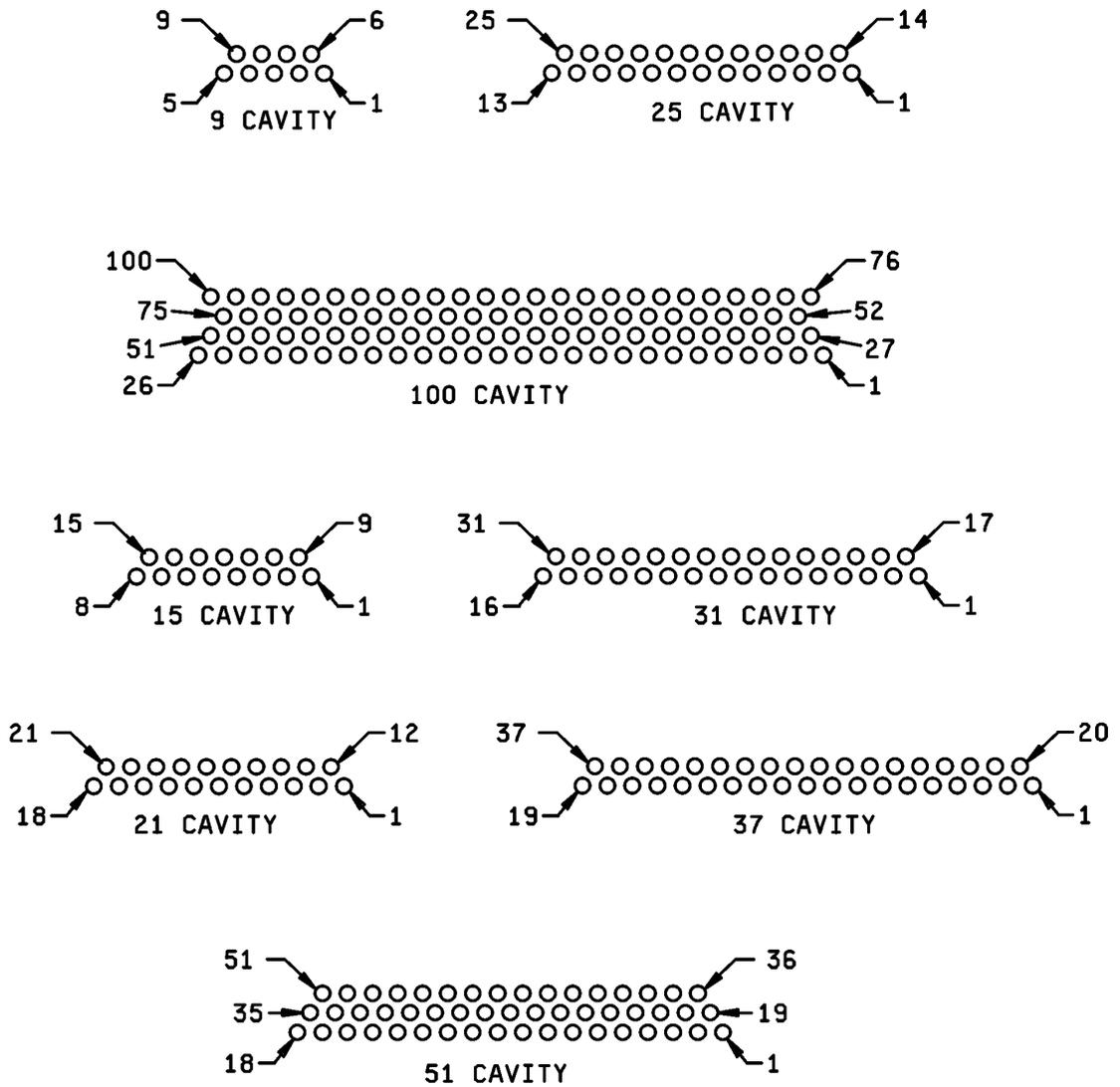
Number of cavities	A .010 (.25)	B BSC	C +.010 -.018 + (.25) - (.46)	D BSC	Configuration letter	Inches	mm	Inches	mm
						.0015	0.038	.094	2.39
.002	0.05	.1139	2.893						
.003	0.08	.117	2.97						
.0038	0.097	.123	3.12						
.004	0.10	.145	3.68						
.005	0.13	.150	3.81						
.007	0.18	.173	4.39						
.010	0.25	.181	4.60						
.014	0.36	.182	4.62						
.020	0.51	.183	4.65						
.022	0.56	.224	5.69						
.025	0.64	.2278	5.786						
.036	0.91	.267	6.78						
.050	1.27	.270	6.86						
.0669	1.699	.298	7.57						
.0671	1.704	.310	7.87						
.089	2.26	.341	8.66						
.090	2.29	.360	9.14						
.0924	2.345	.384	9.75						
.093	2.36	.406	10.31						
9	.775 (19.68)	.3338 (8.48)	.390 (9.91)	.565 (14.35)	A				
15	.925 (23.50)	.4838 (12.29)	.540 (13.72)	.715 (18.16)	A				
21	1.075 (27.30)	.6338 (16.10)	.690 (17.53)	.865 (21.97)	A				
25	1.175 (29.84)	.7338 (18.64)	.790 (20.07)	.965 (24.51)	A				
31	1.325 (33.66)	.8838 (22.45)	.940 (23.88)	1.115 (28.32)	A				
37	1.475 (37.46)	1.0338 (26.26)	1.090 (27.69)	1.265 (32.13)	A				
51	1.425 (36.20)	.9838 (24.99)	1.040 (26.42)	1.215 (30.86)	B				
100	2.160 (54.86)	1.3838 (35.15)	1.432 (36.37)	1.800 (45.72)	C				

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerances are  $\pm .005$  (0.13 mm).
4. Metric equivalents are in parentheses or columns.
5. Point from which the lead length is measured.
6. Dimension line at point D locates the point of intersection of the two adjacent side of the receptacle interface.
7. 26 AWG wire is the maximum wire size that can be used in the solder cup.

FIGURE 1. Connector, plug, .050 spacing - Continued.

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NOTES:

1. Engaging face of pin insert shown.
2. Cavity identification numbers are for reference only and do not appear on part.

FIGURE 2. Insert arrangement.

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REQUIREMENTS:

Dimensions and configurations: See figure 1. This specification sheet describes the pin side of a rectangular metal shell connector. This connector uses reverse gender contact, i.e., the live pin recessed in the insulator with the static socket protruding from a shrouded interface.

Materials and finish:

Shell: The requirements for shell materials shall be in accordance with MIL-DTL-83513.

Contact identification: See figure 2 for contact layout identification.

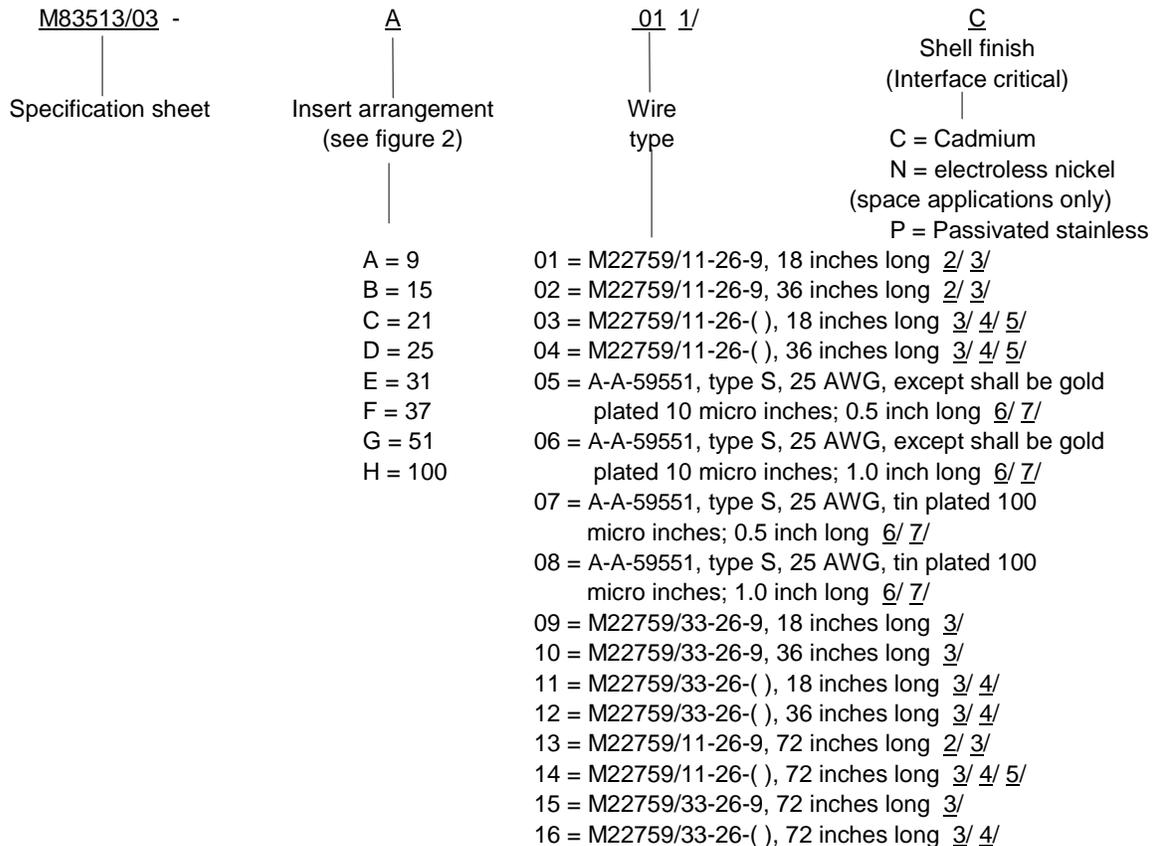
Contact connection: The pin contact (being recessed in the insulator) is normally connected to the live side of the circuit.

Current rating, maximum: 3 amperes per contact.

Mounting and mating hardware: Mounting hardware is to be ordered separately. For insert arrangements A through G, use MIL-DTL-83513/5, configurations A and B. For insert arrangement H, use MIL-DTL-83513/5, configuration C.

Mating plug: Shall conform to MIL-DTL-83513/2 or MIL-DTL-83513/4.

Part or Identifying Number (PIN): Consists of the letter M, the basic number of the specification sheet, a letter from the insert column and the shell finish.



See footnotes on next page.

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- 1/ These connectors have leads attached of which wire type, wire size, wire color, and lead length are specified in PIN.
- 2/ For connectors with shell finish N intended for space applications, wire shall be M22759/33-26-9.
- 3/ Lead length tolerance +1.0, -0.0 inch.
- 4/ For connectors with shell finish N intended for space applications, wire shall be M22759/33-26-( ).
- 5/ Color coding in accordance with MIL-STD-681, system I, except the appropriate color code shall be the individual contact cavity number minus 1 for contact positions 1 through 10 only, 11 through 20, etc. For example:

Pin number	Identification
4	3
9	8
21	0
31	0
77	6
100	9

- 6/ Lead length tolerance +0.2, -0.0 inch.
- 7/ Contact and wire may be a single piece design.
- 8/ Corrosion has been experienced on M83513 connectors that are prewired with MIL-W-22759/33 and stored in a sealed environment. CAUTION SHOULD BE EXERCISED WHEN USING THIS WIRE.

CONCLUDING MATERIAL

Custodians:  
Army - CR  
Navy - EC  
Air Force - 11  
NASA - NA  
DLA - CC

Preparing activity:  
DLA - CC

(Project: 5935-4310-03)

Review activities:  
Army - AT, MI  
Navy - AS, CG, MC, SH  
Air Force - 99