

INCH-POUND
 MIL-DTL-83513/33B
 w/AMENDMENT 1
 13 June 2013
 SUPERSEDING
 MIL-DTL-83513/33B
 29 October 2008

DETAIL SPECIFICATION SHEET

CONNECTORS, ELECTRICAL, RECTANGULAR, RECEPTACLE, MICROMINIATURE,
 POLARIZED SHELL, STRAIGHT, SOCKET CONTACTS, 4 ROW, SOLDER TYPE,
 STANDARD PROFILE, 100 CONTACTS, PRINTED CIRCUIT BOARD

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.

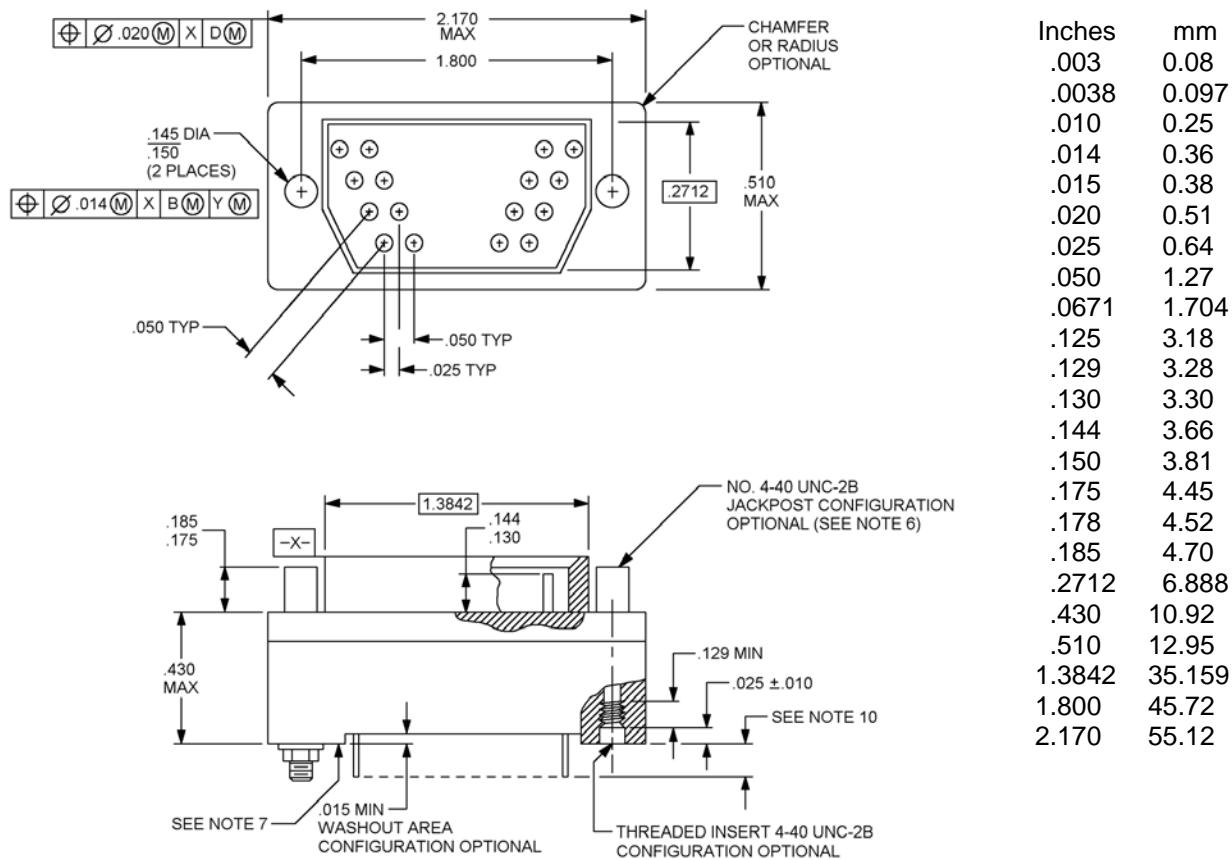
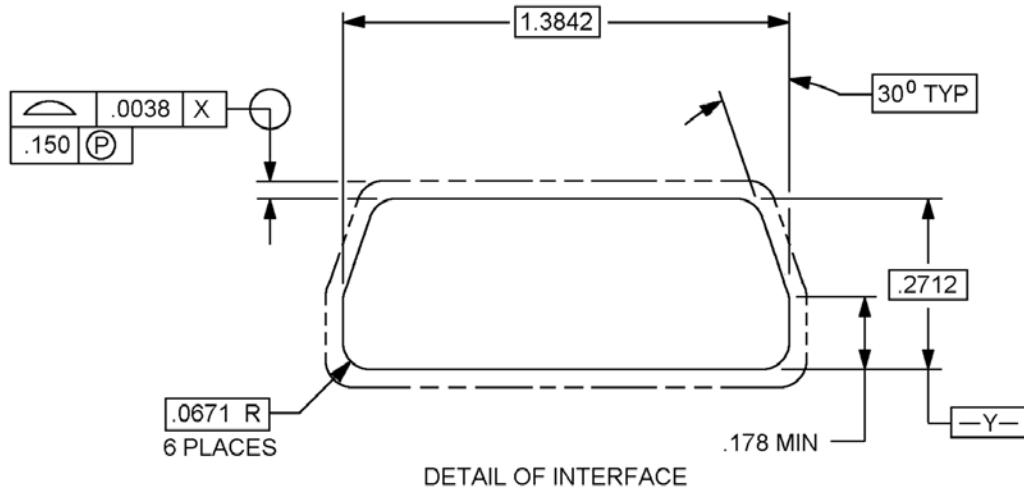


FIGURE 1. Connector receptacle.

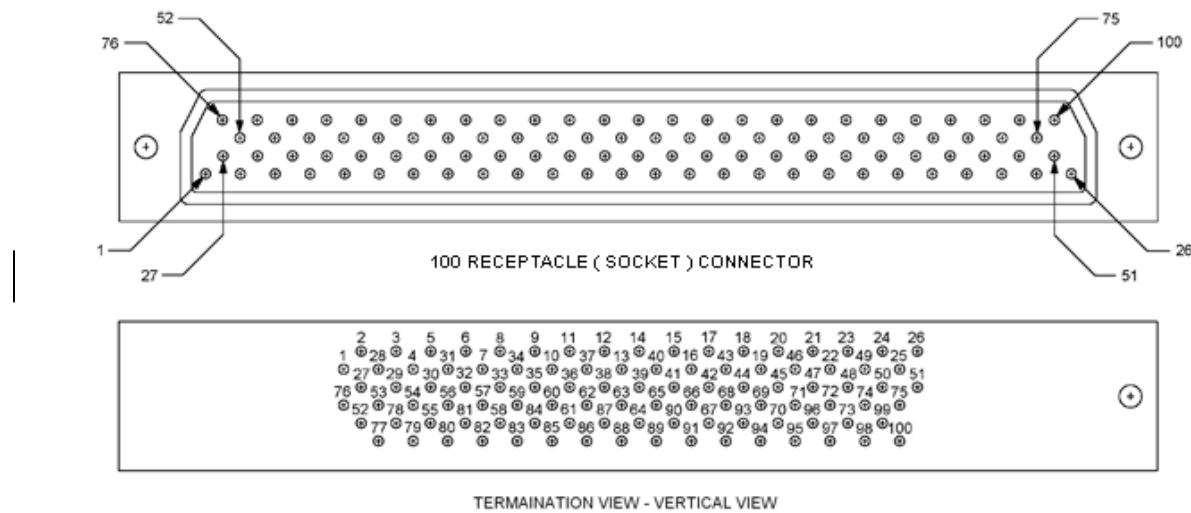


NOTES:

- Dimensions are in inches.
- Metric equivalents are given for information only.
- Unless otherwise specified, tolerances are $\pm .005$ (0.13 mm).
- Termination organization area to be optionally molded or filled with a potting fill material capable of passing the electrical and environmental requirements of MIL-DTL-83513. Plastic molding shall conform to type GDI-30F or type SDG-F in accordance with ASTM D5948 or GCT-30F in accordance with ASTM D5927 or MIL-M-24519 or GST-40F in accordance with ASTM D4067 or MIL-M-24519 or GLCP-30F or GLCP-50 in accordance with ASTM D5138 or MIL-M-24519.
- Metal shell shall be of material in accordance with MIL-DTL-83513 for class M parts.
- Jackpost (securely attached) when specified: Corrosion resistant steel in accordance with ASTM A484/A484M and ASTM A582/A582M, 300 series stainless steel, passivated in accordance with SAE-AMS-2700, type 2. Hardware will be attached in such a fashion as to not loosen during normal de-mating conditions, where as, the mating connector hardware does not exceed the following torque values: 2.5 inch pounds for #2-56 (arrangements A – G) and 4.5 inch pounds for #4-40 (arrangement H).
- Separately molded plastic body (if used) shall conform to type GDI-30F or type SDG-F in accordance with ASTM D5948 or GCT-30F in accordance with ASTM D5927 or MIL-M-24519 or GST-40F in accordance with ASTM D4067 or MIL-M-24519 or GLCP-30F or GLCP-50 in accordance with ASTM D5138 or MIL-M-24519.
- Wire termination pins shall conform to A-A-59551, number 24 AWG copper, except shall be tin-lead plated with a minimum of 3 percent lead.
- Interfacial seals are included with each type receptacle connector.
- Termination lengths available: .109 (2.77 mm), .140 (3.56 mm), or .172 (4.37 mm). The tolerance shall be $\pm .015$ (0.38 mm) for all termination lengths.
- Threaded insert, when specified: Corrosion resistant steel in accordance with ASTM A484/A484M and ASTM A582/A582M, 300 series stainless steel, passivated in accordance with SAE-AMS-2700, type 2.

FIGURE 1. Connector receptacle - Continued.

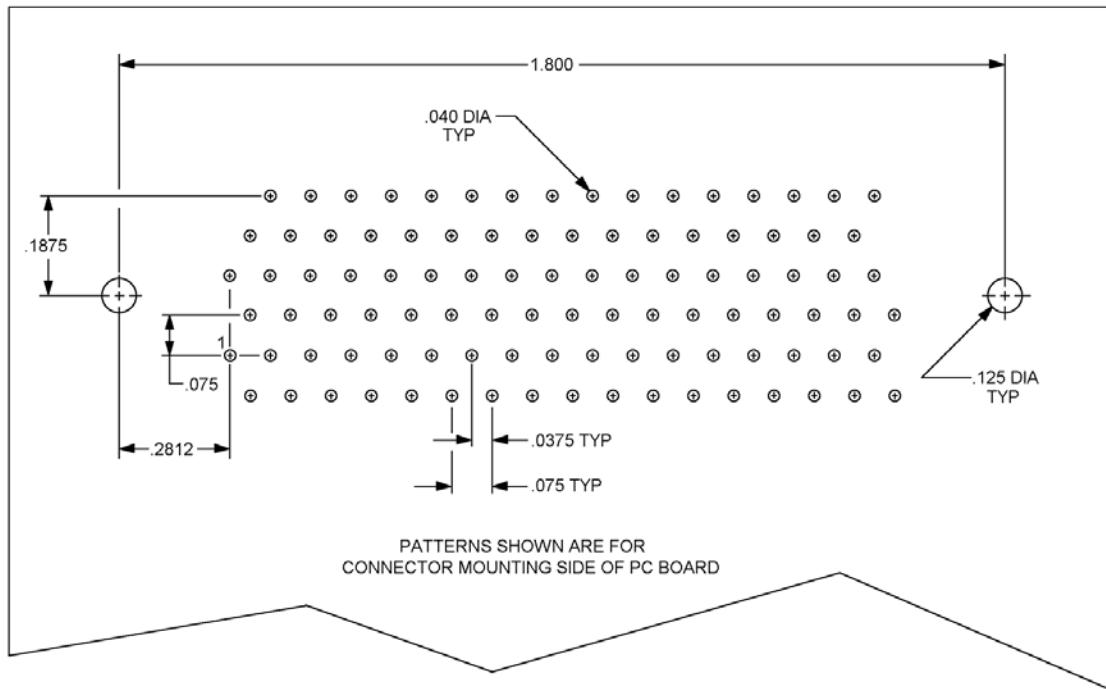
MIL-DTL-83513/33B
w/AMENDMENT 1



NOTE: Engaging face of socket insert shown, cavity identification numbers are for reference only and do not appear on the part.

FIGURE 2. Insert arrangement.

MIL-DTL-83513/33B
w/AMENDMENT 1



Inches	mm
.0375	0.953
.040	1.02
.075	1.91
.125	3.18
.1875	4.763
.2812	7.142
1.800	45.72

FIGURE 3. Layout arrangement.

MIL-DTL-83513/33B
w/AMENDMENT 1

REQUIREMENTS:

Dimensions and configurations: See figures 1, 2 and 3.

Current rating, maximum: 3 amperes per contact.

Materials:

Termination organization area: Potting fill material capable of passing the electrical and environmental requirements specified in MIL-DTL-83513.

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

Plastic body or plastic molding: Shall conform to the requirements of GDI-30F or SDG-30F of ASTM D5948, or GPT-30F or GET-30F or GCT-30F of ASTM D5927 or MIL-M-24519 or GST-40F of ASTM D4067 or MIL-M-24519 or GLCP-30F or GLCP-50F in accordance with ASTM D5138 or MIL-M-24519.

Jackpost: Corrosion resistant steel in accordance with ASTM A484/A484M and ASTM A582/A582M, 300 series stainless steel, passivated in accordance with SAE-AMS-2700, type 2.

Wire termination pins: Wire termination pins shall conform to A-A-59551, number 24 AWG copper or shall be of a single piece contact with a tail of suitable conductive copper based alloys, except shall be tin-lead plated with a minimum of 3 percent lead.

Mating connector: Shall conform to MIL-DTL-83513/1 and MIL-DTL-83513/3.

Plating of termination leads: Solder dipping of termination leads will be accomplished in SN60 PB40 or SN63 PB37 in accordance with J-STD-006.

Part or Identifying Number (PIN): The PIN shall consist of the letter M, the basic number of the specification sheet, a letter from the insert, a numerical code for the termination length, and a letter code for the shell finish and hardware column.

M83513/33-	H	01	C	P
Specification sheet number	Insert arrangements (see figure 2)	Termination length	Shell finish (interface critical)	Hardware
	H =100	01 = .109 02 = .140 03 = .172	A = Pure electrodeposited aluminum C = Cadmium K = Zinc nickel N = electroless nickel (space applications only)	N = No hardware or threaded insert P = jackpost attach U = 4-40 threaded insert 1/ Y = jackpost and 4-40 threaded insert 1/
			P = Passivated Stainless Steel T = Nickel fluorocarbon polymer	

1/ "U" and "Y" designators replaced the "T" and "W" designators which are for 2-56 UNC-2B threaded insert. See table for supersession data.

MIL-DTL-83513/33B
w/AMENDMENT 1

TABLE I. Hardware supersession data

Superseded designator	New designator	Hardware
T	U	Threaded insert 4-40 UNC-2B
W	Y	Jackpost and 4-40 UNC-2B threaded insert

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. This was done as a convenience only and the Government assumes no liability whatsoever for any inaccuracies in these notations. Bidders and contractors are cautioned to evaluate the requirements of this document based on the entire content irrespective of the marginal notations and relationship to the last previous issue.

Referenced documents. In addition to MIL-DTL-83513, this document references the following:

MIL-DTL-83513/1
MIL-DTL-83513/3
MIL-M-24519
ASTM 484/A484M
ASTM 582/A582M
ASTM D4067
ASTM D5138
ASTM D5927
ASTM D5948
A-A-59551
J-STD-006
SAE-AMS-2700

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 85
NASA - NA
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-2011-008)

Review activities

Army - AT, CR4, MI
Navy - AS, CG, MC, SH
Air Force - 99

NOTE: The activities listed above were interested in this document as of the date of this document. Since organizations and responsibilities can change, you should verify the currency of the information above using the ASSIST Online database at <https://assist.dla.mil>.