

INCH-POUND

MIL-DTL-55302/75D
w/AMENDMENT 2
22 August 2016
SUPERSEDING
MIL-DTL-55302/75D
w/AMENDMENT 1
26 July 2010

DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES:
SOCKET RECEPTACLE, ELECTRICAL, POLARIZED
(.100 SPACING), REMOVABLE CRIMP CONTACTS

Inactive for new design after 1 October 1986.

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-55302.

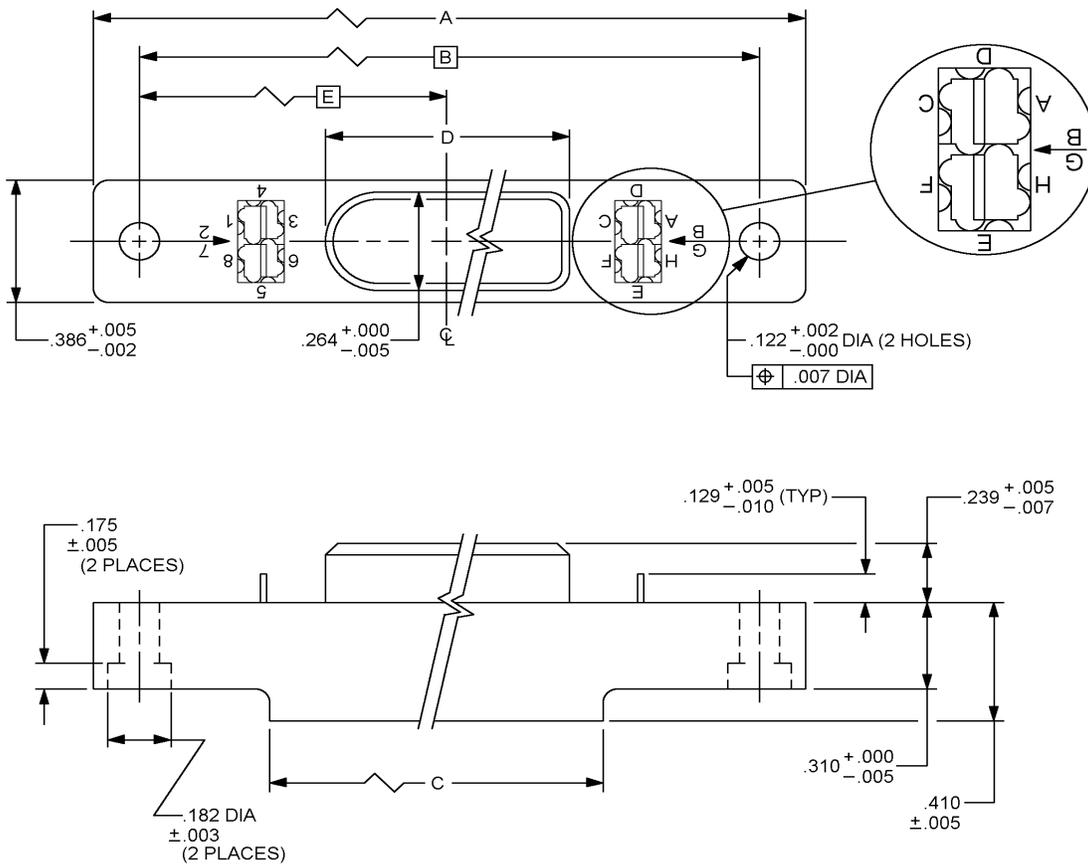


FIGURE 1. Connectors, plug, .100 (2.54 mm) contact spacing, removable crimp terminal.

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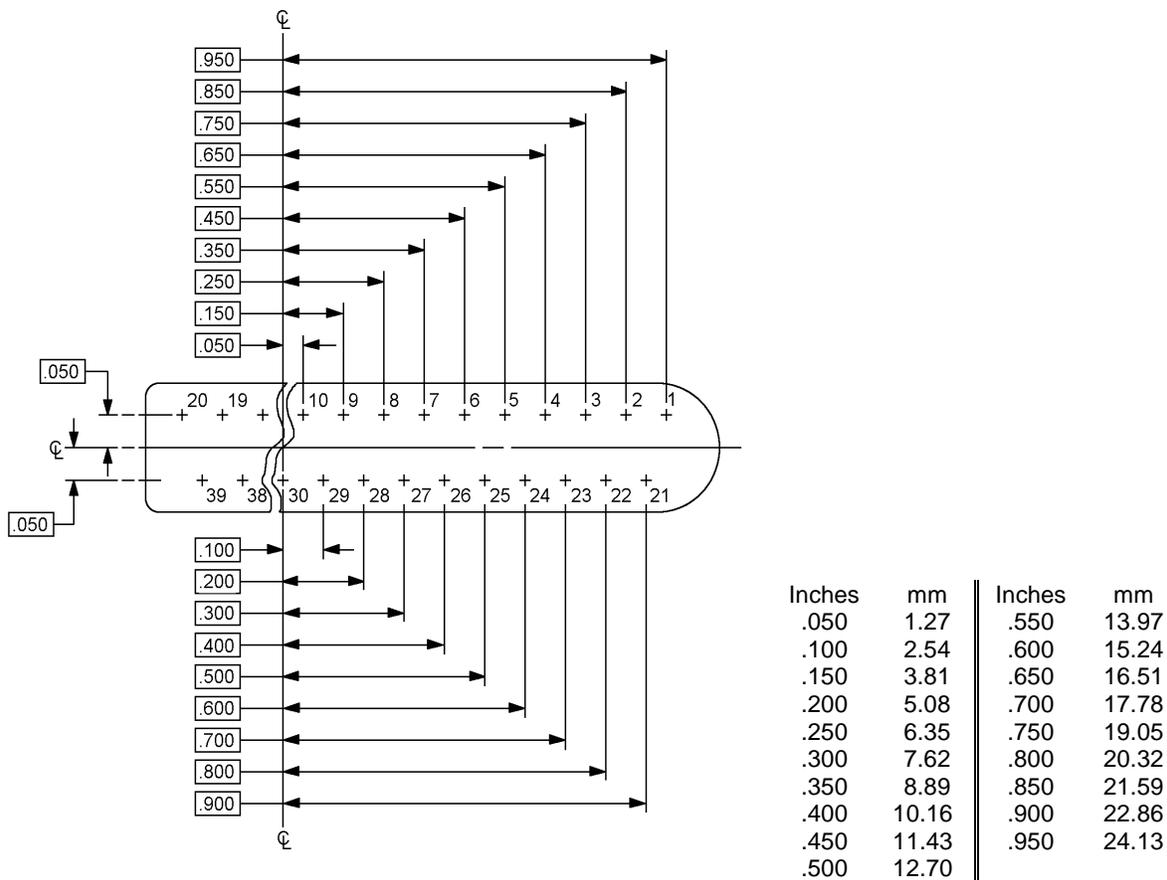
Inches	mm
.002	0.05
.003	0.08
.005	0.13
.007	0.18
.010	0.25
.122	3.10
.129	3.28
.175	4.45
.182	4.62
.192	4.88
.239	6.07
.264	6.71
.310	7.87
.386	9.80
.410	10.41

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for information only.
3. Nominal spacing between any two adjacent pin contacts shall be .100.
4. Unless otherwise specified, tolerances are ± 0.010 (0.25 mm).
5. For dimensions A through E, see table I.
6. A quantity of M39029/57-354 socket crimp contacts consisting of the normal complement plus one spare contact for connector arrangements having 26 contacts shall be supplied with each connector.
7. Mating connectors provide a total of 256 different polarization positions. Polarization components conforming to M55302/78-02 are supplied uninstalled with the connector.

FIGURE 1. Connectors, plug, .100 (2.54 mm) contact spacing, removable crimp terminal - Continued.

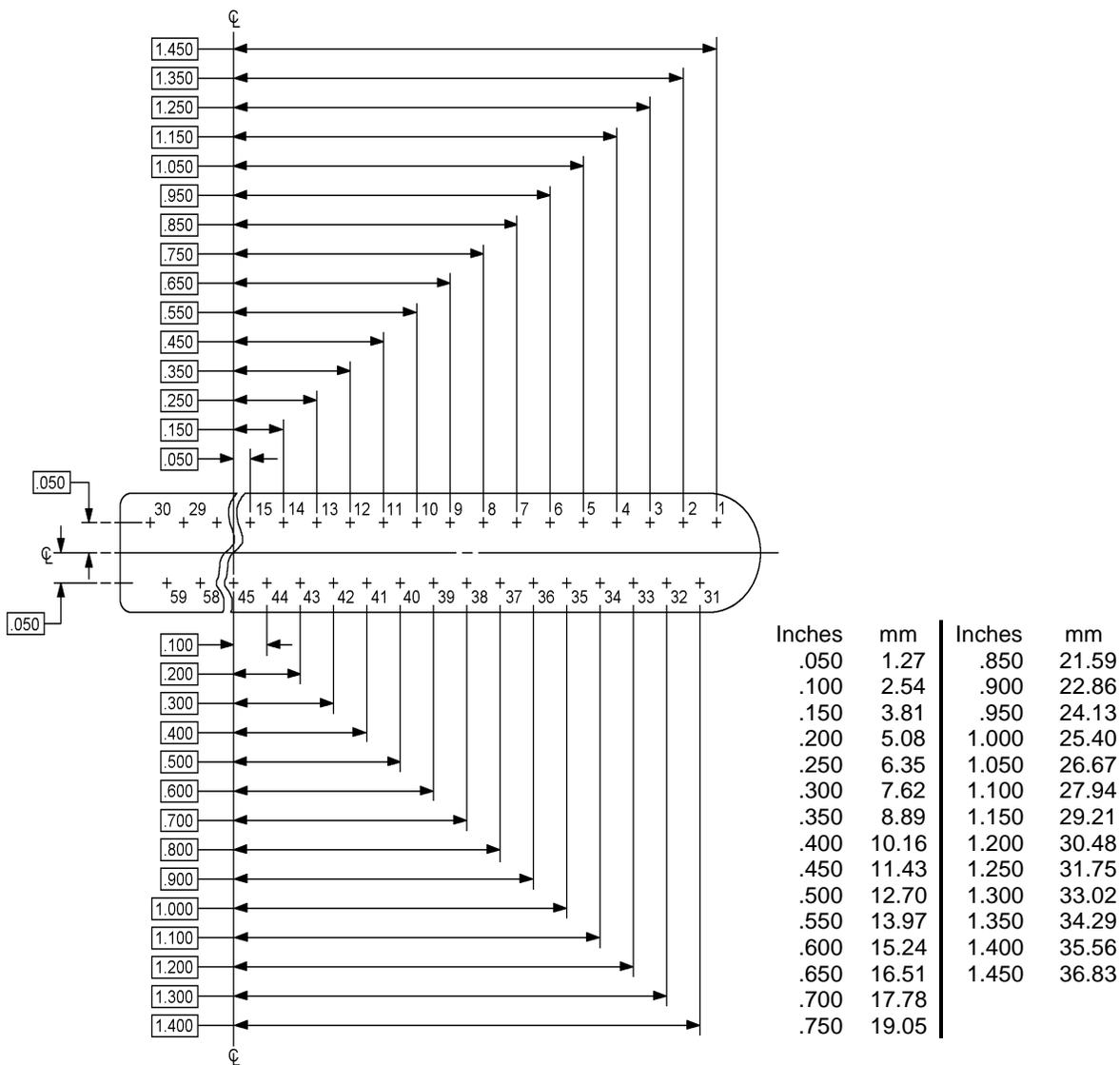
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NOTE: Contacts 1, 20, 21 and 39 are identified on the front and rear face of the connector per the insert arrangement.

FIGURE 2. Insert arrangement for .100 (2.54 mm) contact spacing connectors (female engaging face).

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NOTE: Contacts 1, 30, 31 and 59 are identified on the front and rear face of the connector as per the insert arrangement.

FIGURE 2. Insert arrangement for .100 (2.54 mm) contact spacing connectors (female engaging face) - Continued.

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Requirements:

Dimensions and configuration: See figure 1 and table II.

Material: In accordance with MIL-DTL-55302.

Plating: In accordance with MIL-DTL-45204 type II, grade C, and class 1.

Contact identification: Contact locations are identified numerically as shown on figure 2.

Mating and unmating: The maximum mating force, in pounds, shall be 0.5 times the number of contacts, and the withdrawal force, in pounds, shall be a minimum of 0.08 times the number of contacts and shall not exceed the measured insertion force.

Contact engagement and separation forces: When tested as specified herein, the engaging and separation forces shall be within the applicable limits specified in table I. Cylindrical steel or tungsten carbide test pins having spherical tips and a surface finish not exceeding 3 microinches roughness for steel pins or 10 microinches for tungsten carbide pins shall be engaged with and separated from the socket contacts. The forces necessary to insert the maximum diameter pin and withdraw the minimum diameter pin shall be measured and shall meet the requirements specified in table I. The depth of insertion shall be not less than 0.205 inch measured from the face of the insert or 0.140 inch measured from the end of the socket body, but the pins shall not bottom in the socket.

TABLE I. Engaging and separating forces.

Mating end size	Engaging test pin diameter in inches	Maximum engagement force (ounces)	Separating test pin diameter in inches	Minimum separation force (ounces)
22	+0.0002	12	+0.0000	0.75
	0.0305		0.0295	
	-0.0000		-0.0002	

Contact resistance: With a test current of 3 A dc, the average resistance of all contact pairs measured shall not exceed 0.010 ohm, and no individual contact pair shall have a resistance exceeding 0.020 ohm.

Over-size pin: The connectors shall exclude a .038 minimum diameter pin.

Dielectric withstanding voltage:

- Sea level: 1,300 volts rms, 60 Hz, ac.
- High altitude: 325 volts rms, 60 Hz, ac.

Current rating: 3.0 amperes.

Insert arrangement: See figure 2.

High potential voltage: 1,300 V rms, at sea level.

Mating connectors: See MIL-DTL-55302/74.

Contact insertion and removal tool: M81969/14-01.

Quality conformance inspection:

Group A inspection: Delete mating and unmating.

Group B inspection: Add mating and unmating.

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Qualification: Qualification is not required for this specification sheet.

First article testing (FAT): FAT shall be in accordance with MIL-DTL-55302, qualification inspection.

Part or Identifying Number (PIN): M55302/75-(dash number from table II).

TABLE II. Dash number and dimensions.

Dash number	Dimensions ^{1/}					Number of contacts
	A	B	C max	D ^{+0.000} _{-0.008 (.0.20)}	E	
01	3.280 (83.31)	3.000 (76.20)	2.085 (52.96)	2.083 (52.91)	1.500 (38.10)	39
02	4.280 (108.71)	4.000 101.60	2.086 (52.98)	3.083 (78.31)	2.000 (50.80)	59

^{1/} Metric equivalents are given for information only. Millimeters are in parentheses.

Amendment notations. The margins of this specification are marked with vertical lines to indicate where modifications from this amendment were made. 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.

Referenced documents. In addition to MIL-DTL-55302, this document references the following:

MIL-DTL-55302/74
MIL-DTL-45204

CONCLUDING MATERIAL

Custodians:
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-2016-168)

Review activities:
Air Force – 19, 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>.