

INCH-POUND

MIL-DTL-55302/71D
w/AMENDMENT 1
26 July 2010
SUPERSEDING
MIL-DTL-55302/71D
12 November 2004

DETAIL SPECIFICATION SHEET

CONNECTORS, PRINTED CIRCUIT SUBASSEMBLY AND ACCESSORIES,
SOCKET RECEPTACLE, ELECTRICAL, POLARIZED
COMPOSITE CONTACT (.100 SPACING)

Inactive for new design after 1 October 1986.

This specification is approved for used 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.

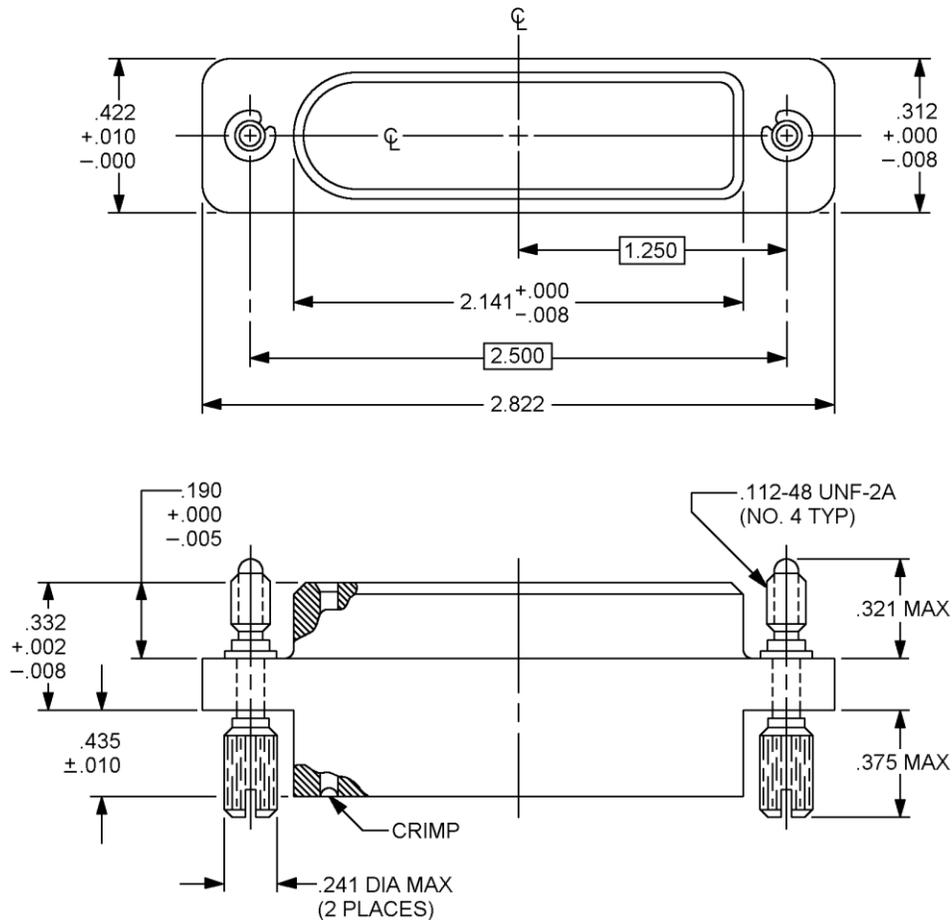


FIGURE 1. Connectors, plug, .100 (2.54 mm) contact spacing, removable crimp socket.

MIL-DTL-55302/71D
w/AMENDMENT 1

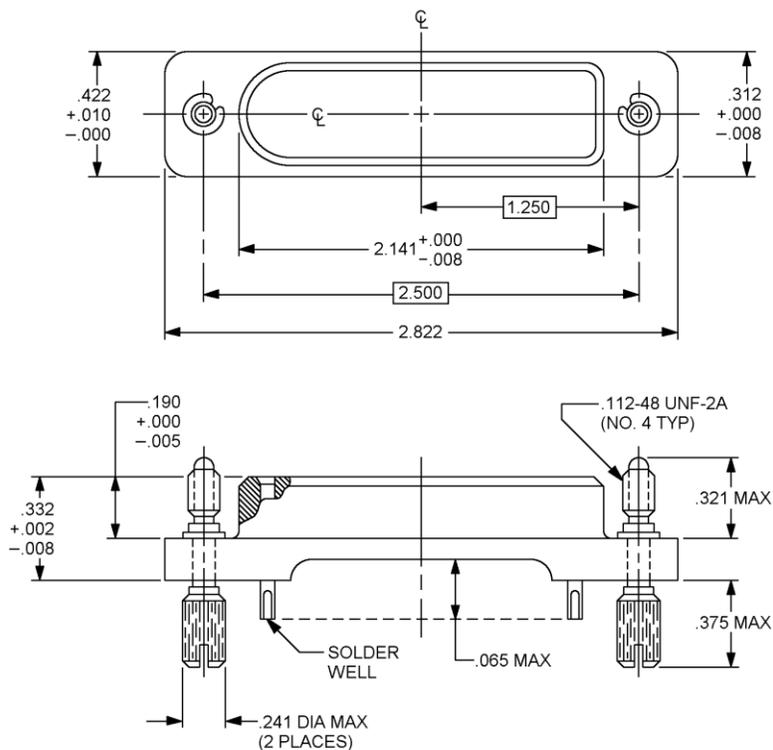
Inches	mm	Inches	mm
.002	0.05	.321	8.15
.005	0.13	.332	8.43
.008	0.20	.375	9.53
.010	0.25	.422	10.72
.031	0.79	1.250	31.75
.065	1.65	2.141	54.38
.190	4.83	2.500	63.50
.241	6.12	2.822	71.68
.312	7.92		

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 $.100 \pm .003$ ($2.54 \pm .08$ mm).
4. Unless otherwise specified, tolerances are $\pm .010$ (0.25 mm).
5. A quantity of M39029/57-354 socket crimp contacts consisting of the normal complement plus one spare contact for connector arrangements having 26 contacts or less and two spare for arrangements having over 26 contacts shall be supplied with each connector.

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

MIL-DTL-55302/71D
w/AMENDMENT 1



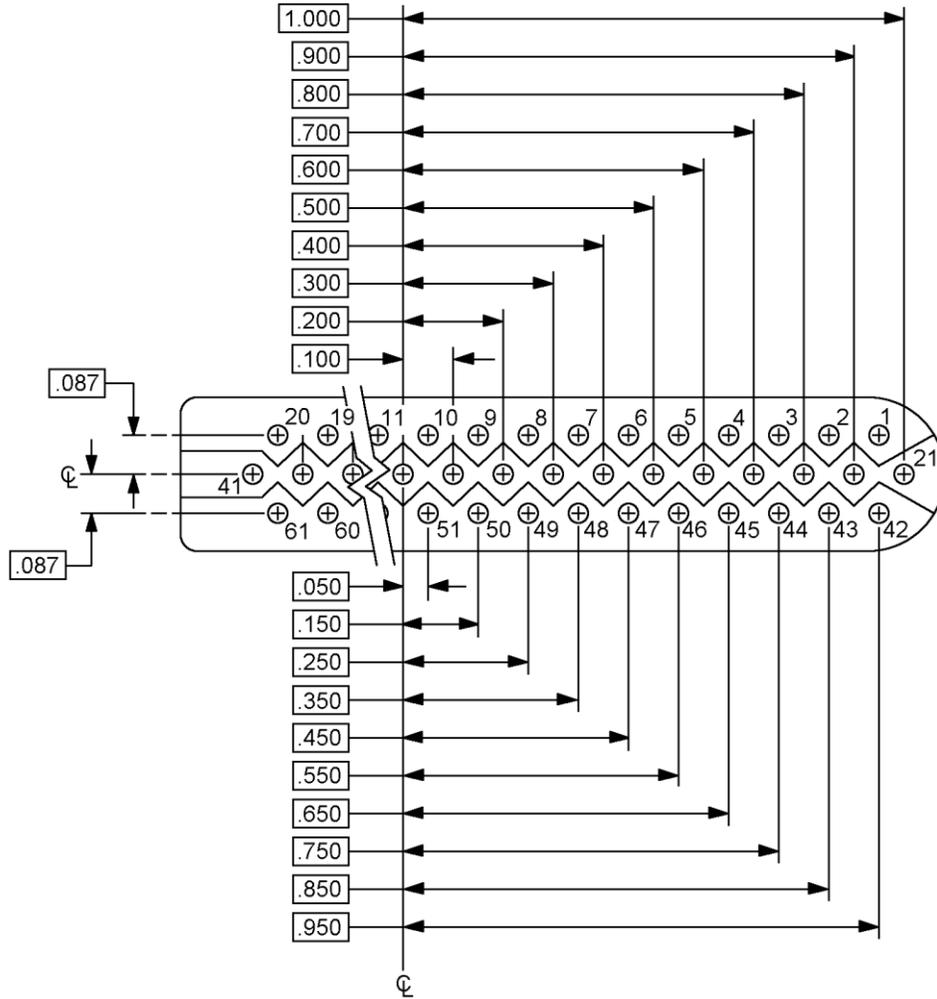
Inches	mm	Inches	mm
.002	0.05	.321	8.15
.005	0.13	.332	8.43
.008	0.20	.375	9.53
.010	0.25	.422	10.72
.031	0.79	.435	11.05
.065	1.65	1.250	31.75
.190	4.83	2.141	54.38
.241	6.12	2.500	63.50
.312	7.92	2.822	71.68

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 $.100 \pm .003$ ($2.54 \pm .08$ mm).
4. Unless otherwise specified, tolerances are $\pm .010$ (0.25 mm).

FIGURE 2 Connector, plug, .100 (2.54 mm) contact spacing solder terminal.

MIL-DTL-55302/71D
w/AMENDMENT 1



Inches	mm	Inches	mm
.050	1.27	.550	13.97
.087	2.21	.600	15.24
.100	2.54	.650	16.51
.150	3.81	.700	17.78
.200	5.08	.750	19.05
.250	6.35	.800	20.32
.300	7.62	.850	21.59
.350	8.89	.900	22.86
.400	10.16	.950	24.13
.450	11.43	1.000	25.40
.500	12.70		

Part or Identifying Number (PIN)	Number of contacts	Type of termination	
71-01	61	Solder nonremovable	Figure 2
71-02	61	Crimp removable	Figure 1

NOTE: Contacts 1, 20 and 61 are identified on the front face of the connector and all others are identified on the rear face per the insert arrangement.

FIGURE 3. Insert arrangement for contact spacing connectors (female engaging face).

MIL-DTL-55302/71D
w/AMENDMENT 1

Requirements:

Dimensions and configuration: See figure 1.

Material: In accordance with MIL-DTL-55302, except:

Body - reinforced epoxy resin or equivalent.

Plating: The contact plating shall be gold in accordance with ASTM B488, type II, code C, class 1.27 over 100 microinches of copper in accordance with SAE-AMS2418.

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 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 and withdraw, first the maximum diameter pin and then the minimum diameter pin shall be measured. The depth of insertion shall not be less than 0.150 inch measured from the face of the insert, but the pins shall not bottom in the sockets for the 71-01 connectors. The depth of insertion shall not be 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 for the 71-02 connectors.

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
	-0.0000		0.0295 -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.

Oversize 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 3.

Mating connectors: See MIL-DTL-55302/70.

MIL-DTL-55302/71D
w/AMENDMENT 1

Quality conformance inspection (for 71-02 connector only):

Group A: Delete mating and unmating.

Group B: Add mating and unmating.

PIN: M55302/71-(dash number from figure 3).

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-55302/70
ASTM B488
SAE-AMS2418

CONCLUDING MATERIAL

Custodians:
Air Force - 85
DLA - CC

Preparing activity:
DLA - CC

(Project 5935-2010-106)

Review activity:
Air Force - 19

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.daps.dla.mil>.