MILITARY SPECIFICATION SHEET

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

Ⓒ This specification inactive for new design after 1 October 1986

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

The requirements for acquiring the connector described herein shall consist of this specification and the latest issue of MIL-C-55302.

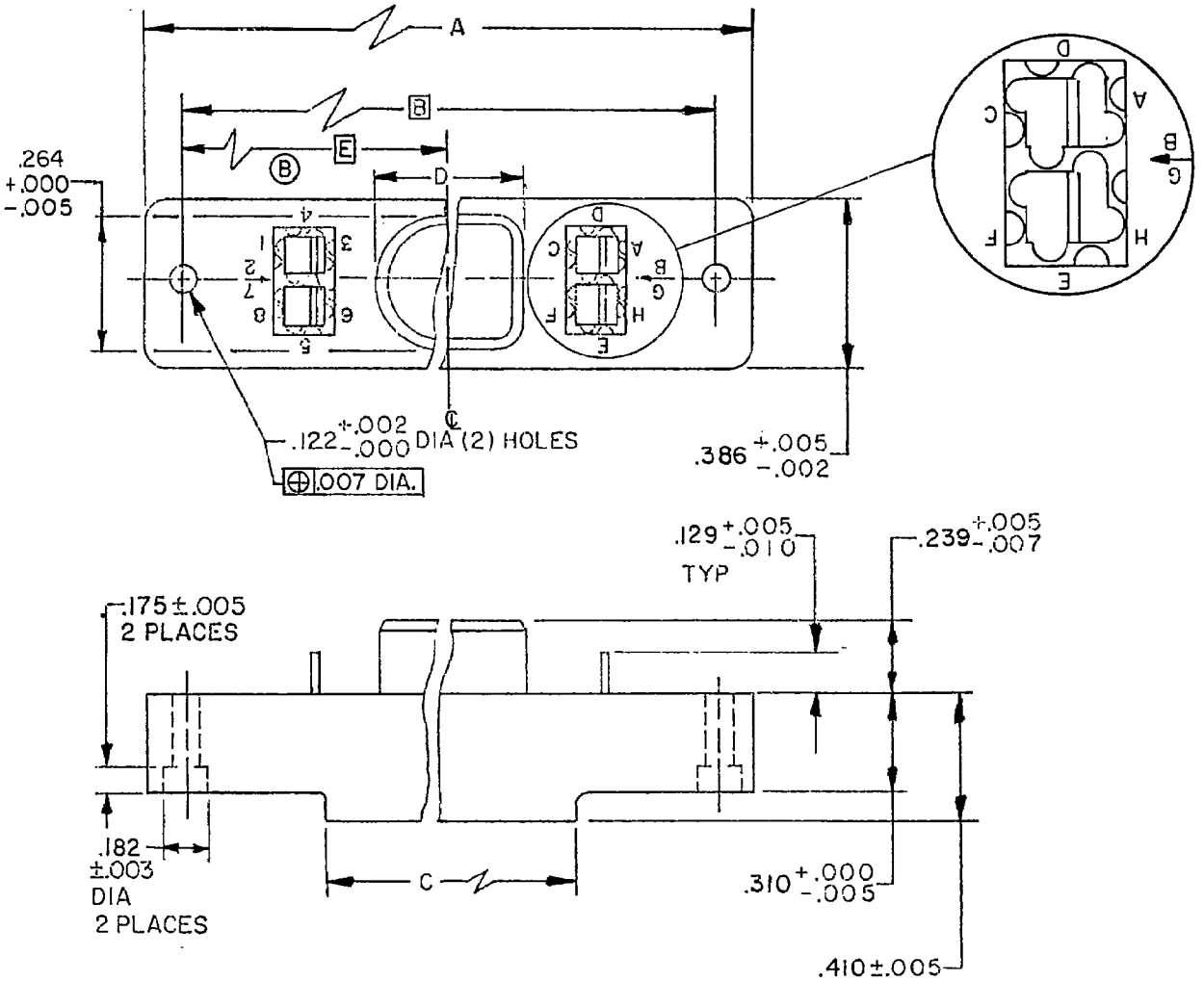


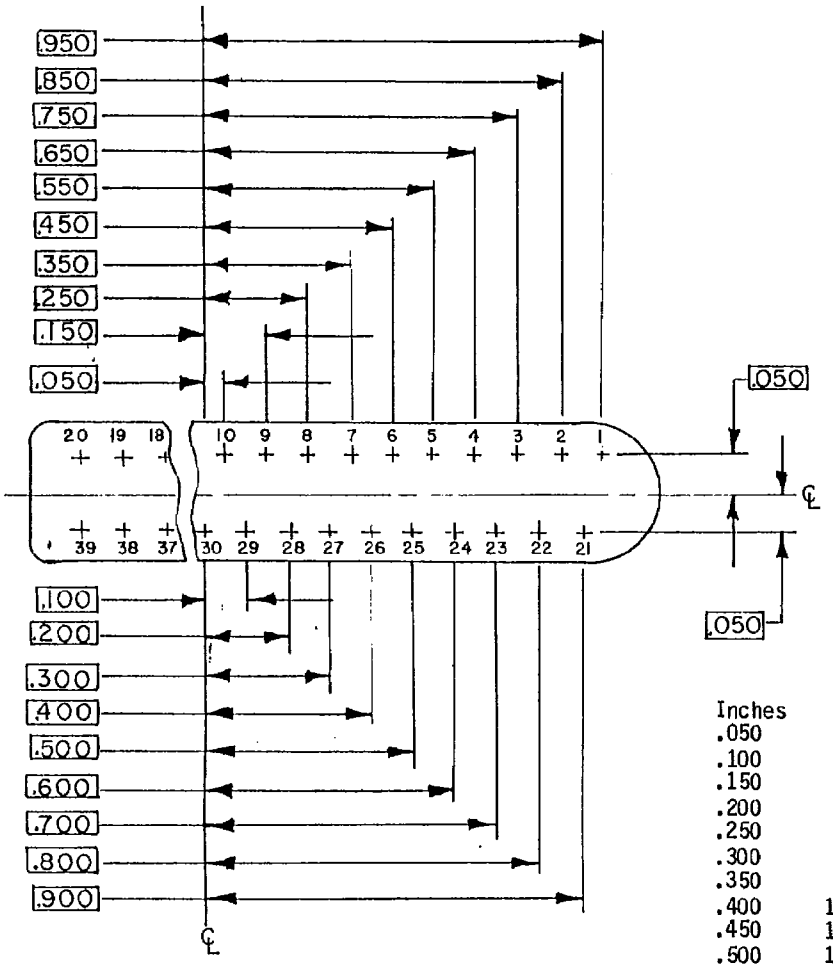
FIGURE 1. Connector, receptacle, .100 (2.54 mm) contact spacing, removable crimp terminal.

Ⓒ denotes changes

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 general information only.
3. Nominal spacing between any two adjacent pin contacts shall be .100.
4. Unless otherwise specified, tolerance is ±.010 (0.25 mm).
5. For dimensions A through E, see table I.
6. A quantity of MS27491-22D socket crimp contacts consisting of the normal complement plus one space 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 MIL-C-55302/78-02 are supplied uninstalled with the connector.
8. Quality assurance provisions of MS 274971-22D socket are in accordance with MIL-C-38999.

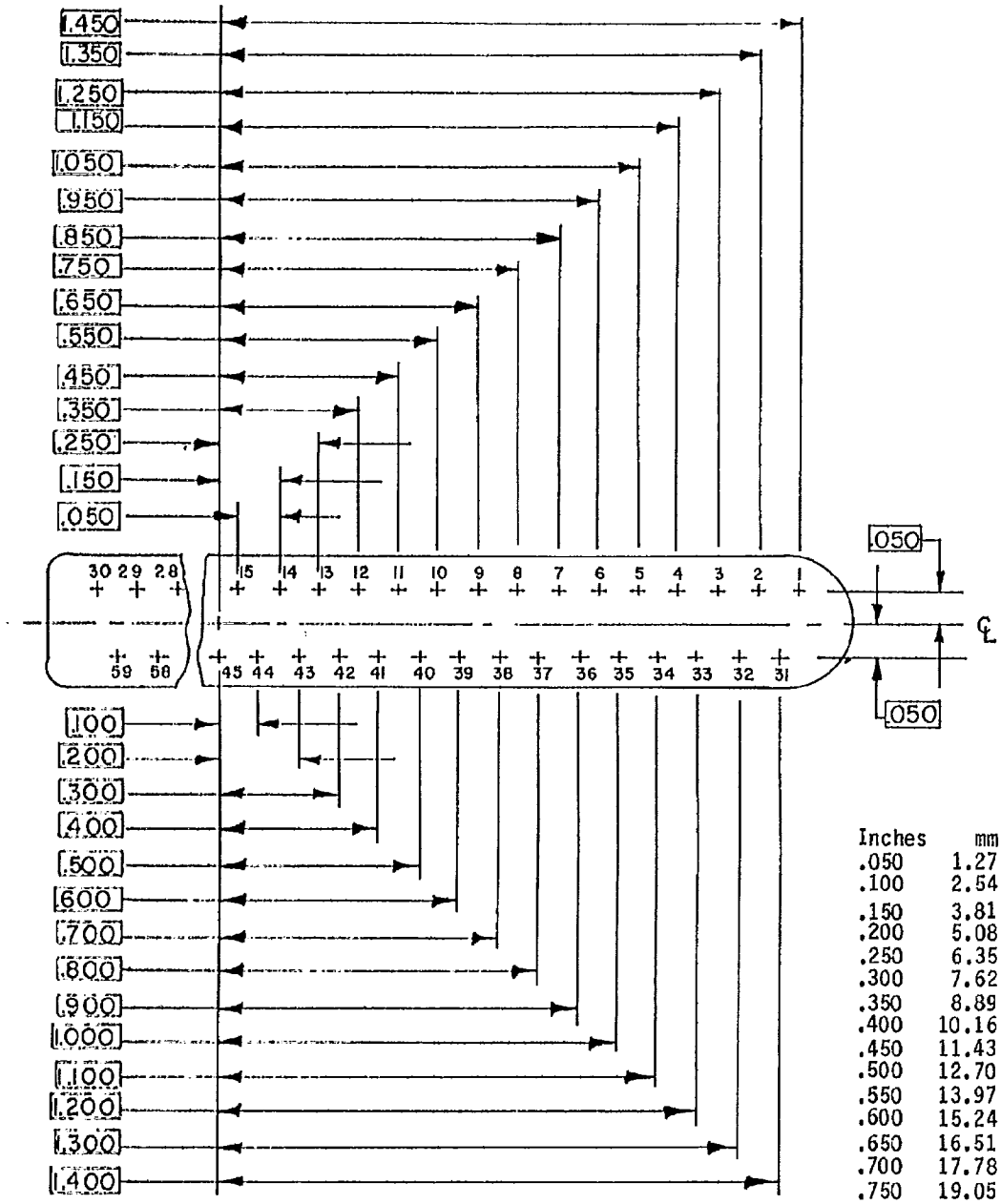
FIGURE 1. Connector, receptacle, .100 (2.54 mm) contact spacing, removable crimp terminal.



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

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

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



Inches	mm	Inches	mm
.050	1.27	.850	21.59
.100	2.54	.900	22.86
.150	3.81	.950	24.13
.200	5.08	1.000	25.40
.250	6.35	1.050	26.67
.300	7.62	1.100	27.94
.350	8.89	1.150	29.21
.400	10.16	1.200	30.48
.450	11.43	1.250	31.75
.500	12.70	1.300	33.02
.550	13.97	1.350	34.29
.600	15.24	1.400	35.56
.650	16.51	1.450	36.83
.700	17.78		
.750	19.05		

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

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

REQUIREMENTS:

Dimensions and configuration: See figure 1 and table II.

Material: In accordance with MIL-C-55302.

Plating: In accordance with MS27491-22D.

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 of 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	$0.0305\ ^{+0.0002}_{-0.0000}$	12	$0.0295\ ^{+0.0000}_{-0.0002}$	0.75

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 V rms, 60 Hz, ac.

High altitude: 325 V rms, 60 Hz, ac.

Contact current rating: 3.0 amperes.

Insert arrangement: See figure 2.

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

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

Contact insertion and removal tool: MS27534A22D.

Quality conformance inspection:

Group A inspection: Delete mating and unmating.

Group B inspection: Add mating and unmating.

Part number: M55302/75-(dash number from table II).

TABLE II. Dash number and dimensions.

Dash number	Dimensions 1/					No. of contacts
	A	B	C Max	D +.000 -.008(.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)	3.085 (78.36)	3.083 (78.31)	2.000 (50.80)	59

1/ Metric equivalent are given for general information only. Millimeters are in parentheses.

Custodian:
Air Force - 17

Review activities:
Air Force - 11, 17, 85
DLA - ES

User activity:
Air Force - 19

Preparing activity:
Air Force - 17

Agent:
DLA - ES

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