

INCH POUND

MIL-DTL-3655/13B

4 October 1999

SUPERSEDING

MIL-C-3655/13A

11 April 1980

DETAIL SPECIFICATION SHEET

CONNECTOR, RECEPTACLE, ELECTRICAL, CLASS I
(COAXIAL, SERIES TWIN, TWTNC, JAM NUT MOUNTED)

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 and MIL-C-3655.

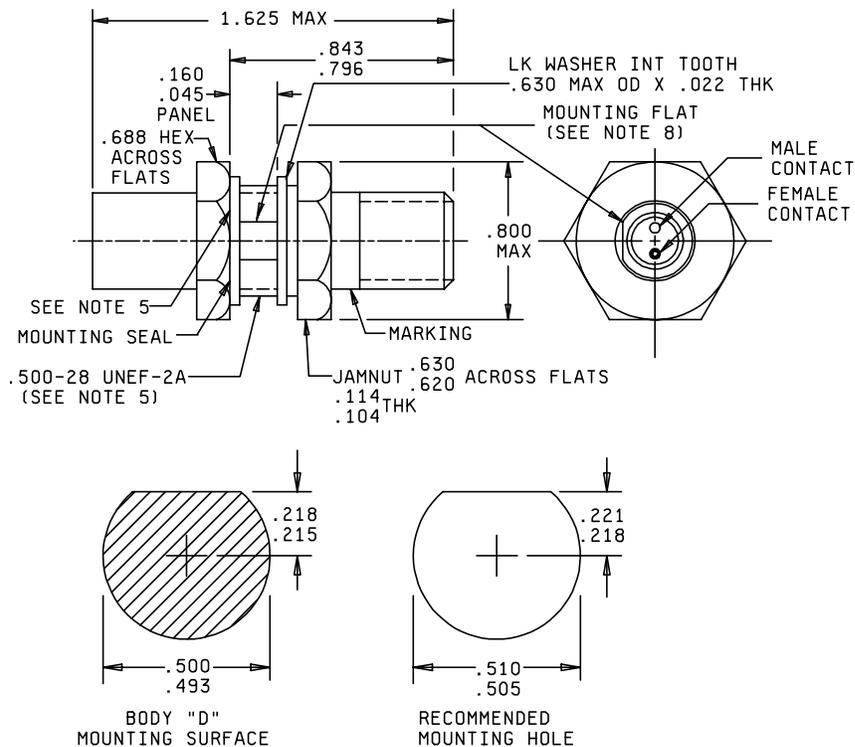


FIGURE 1. Type TWTNC, electrical receptacle connector.

Inches	mm	Inches	mm
.022	0.56	.500	12.70
.045	1.14	.505	12.83
.104	2.64	.510	12.95
.114	2.90	.620	15.75
.160	4.06	.630	16.00
.215	5.46	.688	17.48
.218	5.54	.796	20.22
.221	5.61	.800	20.32
.493	12.53	.843	21.41
		1.625	41.28

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Wrench flats are to accommodate standard wrench openings in accordance with H-28 appendix 10.
4. All undimensioned pictorial configurations are for reference purposes only.
5. Full threads to within .063 (1.60 mm) of shoulder.
6. Unless otherwise specified, tolerance is $\pm .005$ (.13 mm).
7. Dimensions define the maximum length of the connector when assembled to the appropriate cable.
8. Contacts, insulator and mounting flat shall be oriented within $\pm 3^\circ$ of orientation shown.

FIGURE 1. Type TWTNC, electrical receptacle connector – Continued.

ENGINEERING DATA

Nominal impedance: 78 ohms.

Frequency range: DC to 500 MHz, maximum.

Voltage rating: 500 V rms, maximum.

Mating connector: MIL-DTL-3655/14 (see table I).

TABLE I. Connector to cable accommodation.

Connector Part or Identifying Number (PIN)	Cable accommodation ^{1/}
M3655/13-0001	M17/45-RG108 and M17/186-00001
M3655/13-0002	M17/182-00001
M3655/13-0003	M17/182-00002

^{1/} The latest version of each cable shall apply.

Captive contact retention: 6 pounds, axial.

Intended use: Type MIL-DTL-3655/13 electrical connectors are intended for use with various types of twin axial radio frequency cables.

REQUIREMENTS:

Dimensions and construction: See figure 1 and MIL-STD-348.

Force to engage/disengage:

Torque: 2 inch-pounds, maximum.

Longitudinal force: Not applicable.

Coupling proof torque: 15 inch-pounds, minimum.

Mating characteristics (see figure 1 and MIL-STD-348 for dimensions):

Inner contact:

Oversize test pin: 0.042 inch diameter, minimum (nonclosed entry contacts only).

Test pin finish: 16 microinches.

Insertion depth: .093 inch, minimum.

Number of insertions: One.

Insertion force test:

- Steel test pin diameter: .039 inch, maximum.
- Test pin finish: 16 microinches.
- Insertion depth: .093 inch, minimum.

Withdrawal force test:

- Steel test pin diameter: .037 inch, maximum.
- Test pin finish: 16 microinches.
- Insertion depth: .093 inch, minimum.
- Withdrawal force: 2 ounces, minimum.

Permeability: Applicable.

Hermetic seal: Not applicable.

Leakage: Not applicable.

Insulation resistance: 5×10^9 ohms, minimum.

Contact insulator captivation: Applicable; torque shall be 1 inch-pound.

Salt spray (corrosion): Applicable.

Connector durability: Applicable.

Contact resistance (milliohms, maximum):

	<u>Initial</u>	<u>After environment</u>
Inner conductor contacts:	3.0	4.2
Outer conductor contacts:	.4	Not applicable
Braid to body	.2	Not applicable

Dielectric withstanding voltage: 1,500 V rms, minimum, at sea level.

Vibration, high frequency: Applicable.

Shock (specified pulse): Applicable.

Temperature cycling: Applicable.

Humidity: Applicable, but no measurement shall be made at high humidity.
Insulation resistance shall be at least 2×10^8 ohms within 5 minutes after removal from the humidity chamber.

Cable retention force: 25 pounds, minimum.

Coupling nut retention: Applicable.

PIN: M3655/13 (See table I for dash numbers).

Qualification: Not required.

CONCLUDING MATERIAL

Custodians:

Army - CR
Navy - EC
Air Force - 11
DLA - CC

Preparing activity:

DLA - CC

Review activities:

Army - AT, MI
Navy - AS, MC, OS, SH
Air Force - 17, 19, 99

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