

INCH POUND

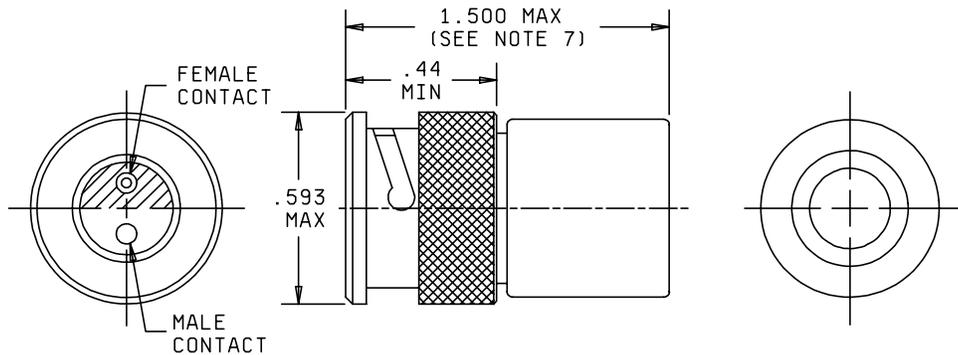
MIL-DTL-3655/15B
4 October 1999
SUPERSEDING
MIL-C-3655/15A
11 April 1980

DETAIL SPECIFICATION SHEET

CONNECTOR, PLUG, ELECTRICAL, CLASS I
(COAXIAL, SERIES TWIN, TWBNC)

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.



| Inches | mm |
|--------|-------|
| .393 | 9.98 |
| .44 | 11.2 |
| .593 | 15.06 |
| 1.500 | 33.10 |

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified, tolerance is $\pm .005$ (.13 mm).
4. Dimension .593 is the largest overall diameter of the connector.
5. Wrench flats are to accommodate standard wrench openings in accordance with H-28 appendix 10.
6. All undimensioned pictorial configurations are for reference purpose only.
7. Dimensions define the maximum length of the connector when assembled to the appropriate cable.

FIGURE 1. Type TWBNC, electrical plug connector.

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ENGINEERING DATA

Nominal impedance: 78 ohms.

Voltage rating: 500 V rms, maximum.

Mating connector: MIL-DTL-3655/16 (see table I).

TABLE I. Connector to cable accommodation.

| Connector Part or Identifying Number (PIN) <u>1/</u> | Cable accommodation <u>2/</u> |
|--|--------------------------------|
| M3655/15-0001 | M17/45-RG108 and M17/186-00001 |
| M3655/15-0002 | M17/182-00001 |
| M3655/15-0003 | M17/182-00002 |

1/ Not for Air Force applications.

2/ The latest version of each cable shall apply.

Captive contact retention: 6 pounds.

Intended use: Type MIL-DTL-3655/15 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: 2.5 inch-pounds, maximum.

Longitudinal force: 3 pounds, maximum.

Coupling proof torque: Not applicable.

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

Inner contact (sockets):

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.

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Insertion force test:

- Steel test pin diameter: .039 inch, minimum.
- Test pin finish: 16 microinches.
- Insertion depth: .093 inch, minimum.
- Insertion force: 2 pounds, maximum.

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.

Outer contact:

- Test ring I.D.: .319 inch, maximum.
- Test ring finish: 16 microinches.
- Insertion force: 5 pounds maximum when inserted a minimum of .093 inch.
- Contacts with slotted members: Shall contact a .324 inch minimum diameter ring within .031 of their tip ends.

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 |

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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.

Part or Identifying Number (PIN): M3655/15 (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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