

INCH POUND

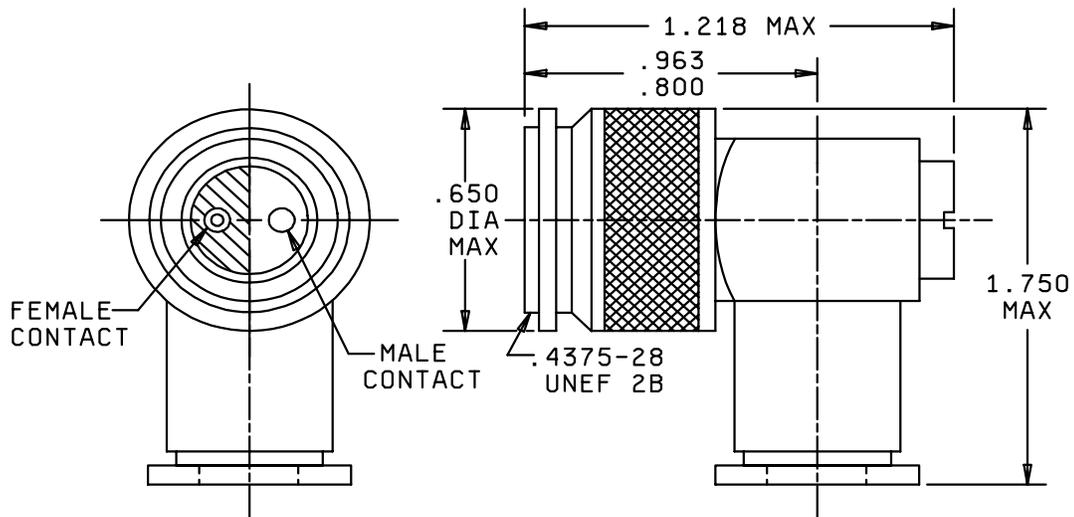
MIL-DTL-3655/17A  
4 October 1999  
SUPERSEDING  
MIL-C-3655/17  
11 April 1980

DETAIL SPECIFICATION SHEET

CONNECTOR, PLUG, ELECTRICAL, CLASS I  
(COAXIAL, SERIES TWIN, TWTNC, RIGHT ANGLE)

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
.4375	11.12
.650	16.51
.800	20.32
.963	24.46
1.218	30.94
1.750	44.45

NOTES:

1. Dimensions are in inches.
2. Metric equivalents are given for general information only.
3. Unless otherwise specified tolerance is  $\pm .005$ .
4. All undimensioned pictorial configurations are for reference purpose only.
5. Contacts, insulator and shell to be oriented within  $\pm 3^\circ$  of position shown.

FIGURE 1. Type TWTNC, electrical plug connector.

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ENGINEERING DATA

Nominal impedance: 78 ohms.

Frequency range: DC to 500 MHz, maximum.

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)	Cable accommodation <sup>1/</sup>
M3655/17-0001	M17/45-RG108 and M17/186-00001
M3655/17-0002	M17/182-00001
M3655/17-0003	M17/182-00002

<sup>1/</sup> The latest version of each cable shall apply.

Captive contact retention: 6 pounds, axial.

Intended use: Type MIL-DTL-3655/17 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 (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.

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.

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Withdrawal force test:

Steel test pin diameter: .037 inch, minimum.

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:  $5 \times 10^9$  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  $2 \times 10^8$  ohms within 5 minutes after removal from the humidity chamber.

Cable retention force: 25 pounds, minimum.

Coupling nut retention: Applicable.

PIN: M3655/17 (See table I for dash numbers).

Qualification: Not required.

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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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