

MIL-PRF-39012/33A
w/AMENDMENT 3
14 April 2023
SUPERSEDING
MIL-PRF-39012/33A
11 January 1973

PERFORMANCE SPECIFICATION SHEET

CONNECTORS, COAXIAL, RADIO FREQUENCY (SERIES TNC (UNCABLED · RECEPTACLE, SOCKET, RIGHT ANGLE, CLASS 2))

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 sheet and MIL-PRF-39012.

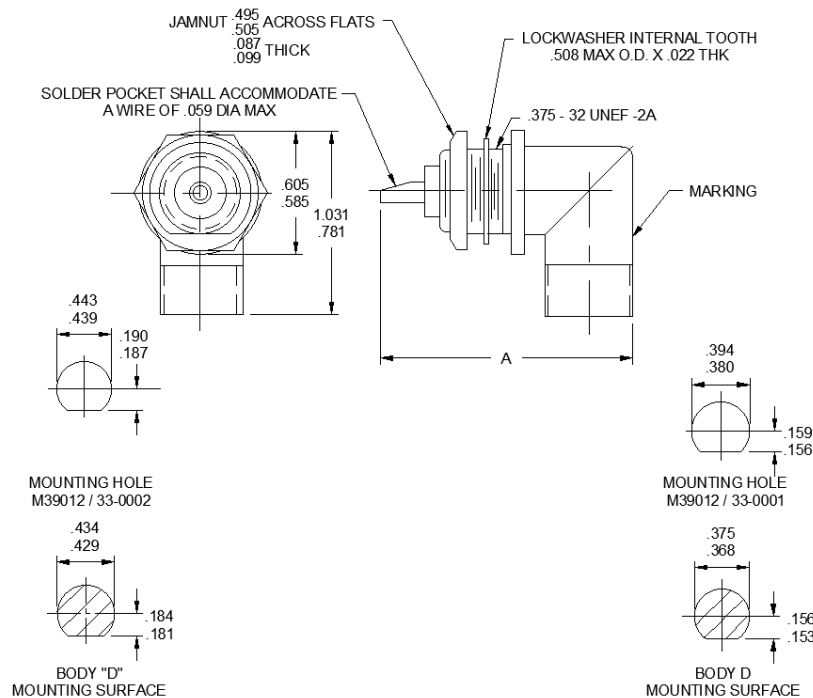


FIGURE 1. General configuration.

NOTES:

1. Dimensions are in inches.
2. For dimension A, see table I.
3. Wrench flats are to accommodate standard wrench opening in accordance with FED-STD-H28.
4. All undimensioned pictorial representations are for reference purposes only.
5. Full threads to within .063 of shoulder; 1 ½ max uneven threads to shoulder.
6. Series TNC, socket contact interface in accordance with MIL-STD-348.



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TABLE I. Dash number and overall dimensions.

Dash Number	Dimension	Inches	Maximum panel thickness	Minimum panel thickness
0001	A	1.500	.250	.045
0002	A	1.359	.125	.045

TABLE II. Group qualification.

Group	Submission and qualification of any of the following connectors	Qualifies the following connectors
I	0001 0002	0001 0002

ENGINEERING DATA:

Nominal impedance: 50 ohms.

Frequency range: 0 to 11 GHz.

Voltage rating:

500 volts rms maximin working voltage at sea level.

125 volts rms, maximin at 70, 000 feet (4.437 kPa).

Temperature rating: -65°C to +165°C.

REQUIREMENTS:

Design and configurations: See figure 1.

Force to engage and disengage:

Longitudinal force - Not applicable.

Torque - 2 inch-pounds maximum.

Coupling proof torque: Not applicable.

Inspection conditions:

Coupling torque - 4 to 6 inch pounds.

Mating characteristics:

In accordance with MIL-STD-348.

Center contact (female):

Oversize test pin - .057 diameter minimum (non-closed entry contacts only).

Insertion depth - .125 minimum.

Number of insertions - 1.

Insertion force test - Steel test pin diameter .054 minimum.

Test pin finish - 16 micro inches.

Insertion force - 2 pounds maximum.

Withdrawal force test - Steel test pin diameter .052 minimum.

Withdrawal force - 2 ounce minimum.

Test pin finish - 16 microinches.

Hermetic seal: Not applicable.

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Leakage:

Connector mounted in mounting hole specified on figure 1 with mating end capped.
Test applicable to mounting seal only.
Air pressure - 30 psi.
Duration - 30 seconds minimum.
Applicable to M39012/33-0001 only.

Insulation resistance: MIL-STD-202-302, test condition B, 5,000 megohms, minimum.

Center contact retention: 6 pounds (26.69 N) minimum axial force.
5 inch-ounces radial torque minimum.

Corrosion (salt spray): MIL-STD-202-101, test condition B.

Voltage standing wave ratio (VSWR): Not applicable.

Connector durability: 500 cycles minimum, at 12 cycles per minute, maximum. The connector shall meet the mating characteristics and force to engage and disengage requirements.

Contact resistance: In milliohms, maximum:

	<u>Initial</u>	<u>After environment</u>
Center contact	2.0	2.5
Outer contact	.2	Not applicable

Dielectric withstanding voltage: MIL-STD-202-301, 1,500 volts rms, minimum at sea level.

Vibration, high frequency: MIL-STD-202-204, test condition B.

Shock: MIL-STD-202-213, test condition I.

Temperature cycling: MIL-STD-202-107 test condition B, except test high temperature shall be +200°C.

Thermal shock: Not applicable.

Moisture resistance: MIL-STD-202-106. No measurements at high humidity. Insulation resistance shall be at least 200 megohms within 5 minutes after removal from humidity.

Corona Level:

Voltage: 375 volts rms, minimum.

Altitude: 70,000 feet (4.437 kPa).

RF high potential withstanding voltage:

Voltage and frequency: 1,000 volts rms at a frequency from 5MHz.

Leakage current: Not applicable.

Cable retention force: Not applicable.

Coupling mechanism retention force: Not applicable.

RF leakage: Not applicable.

Insertion loss: Not applicable.

Part number M39012/33- (dash number from table I).

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Referenced documents. In addition to MIL-PRF-39012, this document references the following:

MIL-STD-202-101	MIL-STD-202-213	MIL-STD-348
MIL-STD-202-106	MIL-STD-202-301	FED-STD-H28
MIL-STD-202-107	MIL-STD-202-302	
MIL-STD-202-204		

Amendment notations. The margins of this specification are marked with vertical lines to indicate modifications generated by this amendment. 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.

CONCLUDING MATERIAL

Custodians:
Army - CR
Navy - EC
Air Force – 85
NASA – NA

Preparing activity:
DLA - CC

(Project 5935-2022-242)

Review activities:
Army - AR, AT, EA
Navy - AS, MC, OS
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.dla.mil>.