



## Description

TNC connectors are miniature, weatherproof\* units which have constant 50 ohm impedance and operate in the 0-11 GHz frequency range. These features make TNC connectors an ideal choice for use in cellular mobile communications, and test and instrument equipment. TNC connectors are also widely used in airframe, aerospace and radar applications where extreme vibration is a factor.

## Applications

- Cellular Mobile Phones
- Test and Measurement
- Computer Network/LANs
- Microwave Components (Filters, Diplexors)
- Aircraft and Missile
- Instrumentation
- Radar
- Base Stations

## Features

- These connectors are suitable for use in applications where safety can not be compromised such as test and measurement, and medical equipment.
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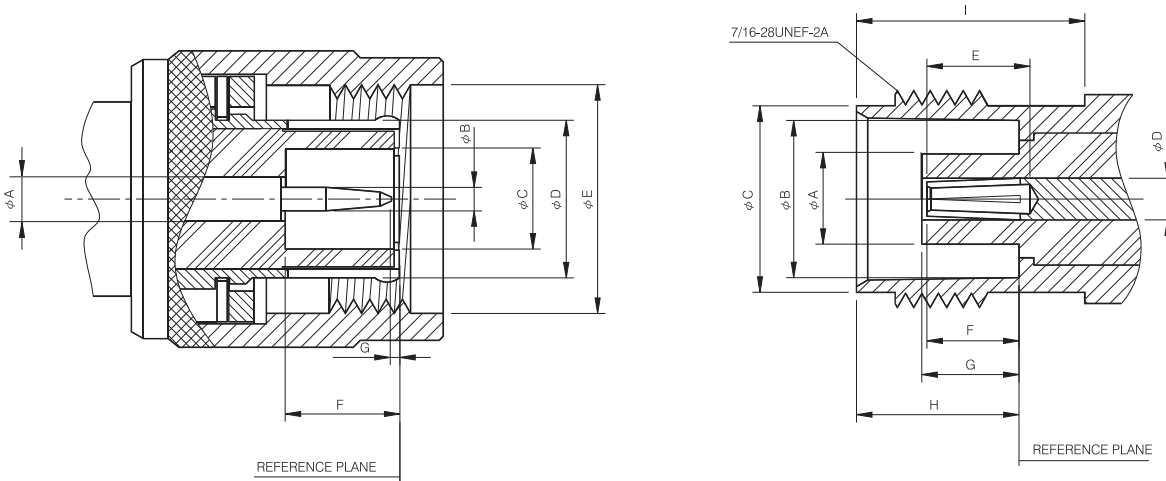
# TNC Series

## Specification TNC 50 ohm 0-11 GHz

TNC series connectors are similar to BNC connectors except for their mating threaded coupling which is designed to provide low reflection from DC to 11 GHz under extreme environmental conditions, especially shock and vibration. Cable terminations are available in crimp, clamp, twist-on and solder configurations, The 7/16"-28 thread coupling provides positive mating.

Although their rugged design was initially developed for high vibration environments, TNC connectors are widely accepted and used for data transmission, medical equipment, cellular mobile telephones, test equipment, microwave components and aerospace applications.

## Interface Mating Dimensions:



### PLUG

Letter	Millimeters(Inches)	
	Minimum	Maximum
A	2.06 (0.081)	2.21 (0.087)
B	1.32 (0.052)	1.37 (0.054)
C	4.83 (0.190)	-
D	-	8.08 (0.318)
E	11.18 (0.440)	-
F	5.28 (0.208)	5.79(0.228)
G	0.08(0.003)	1.02(0.040)

### JACK

Letter	Millimeters(Inches)	
	Minimum	Maximum
A	-	4.72 (0.186)
B	8.10 (0.319)	8.15 (0.321)
C	9.60 (0.378)	9.68 (0.381)
D	2.06(0.081)	2.21 (0.087)
E	4.95(0.195)	-
F	4.95(0.075)	-
G	4.72(0.186)	5.23 (0.206)
H	8.31 (0.327)	8.51 (0.335)
I	10.52(0.414)	-

# TNC Series

## Electrical :

Impedance	50 ohm	75 ohm
Frequency Range	0 to 11.0 GHz	0 to 1.0 GHz
VSWR	1.3max	
Voltage Rating	500 volts rms max * RG-58,141,142,223→500 volts rms max * RG-174,188,316→335 volts rms max	
Dielectric withstanding Voltage	1,500 volts rms max * RG-58,141,142,223→1000 volts rms max * RG-174,188,316→750 volts rms max	
Contact resistance	center contact=1.5 milliohms max outer contact=0.2 milliohms max	
RF Leakage	-55dB min @3 GHz	
Insertion Loss	0.2dB max @3 GHz	
Insulator resistance	5,000 Megohms min	

## Mechanical & Environmental

Mating	7/16"-28 threaded coupling
Durability	500 matings
Coupling Nut Retention	100 lbs min
Cable Retention	RG-58,141,142,223→40 lbs min RG-59,62A,210→40 lbs min RG-174,188,316→20 lbs min
Temperature Range	-65°C to 165°C
Vibration	MIL-STD-202 Method 204 test Cond.B.
Temperature Cycling	MIL-STD-202 Method 101 test Cond.B.

## Material

	Material	Plating
Connector Body	Brass	Gold or Nickel
Center Contact	Male: Brass Female : Brass, Phosphor Bronze or Beryllium-Copper	Gold Gold
Insulation	Teflon or Derlin	None
Gasket	Silicone Rubber, Rubber	None
Crimp Ferrule	Annealed Copper or Brass	Same as Body