

TNC Series

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
- Instrumentation
- Aircraft and Missile
- Radar
- Computer Networks/LANs
- Base Stations
- Microwave Components (Filters, Diplexors)

Features

- These connectors are suitable for use in applications where safety can not be compromised such as test and measurement, and medical equipment. Designed to accommodate a wide range of popular miniature coaxial cables, TNC connectors are available with crimp terminations which provide lower cost installation.
- Interface according to IEC 169-17, CECC 22200, MIL-C-39012 TNC, MIL-STD-348A/313

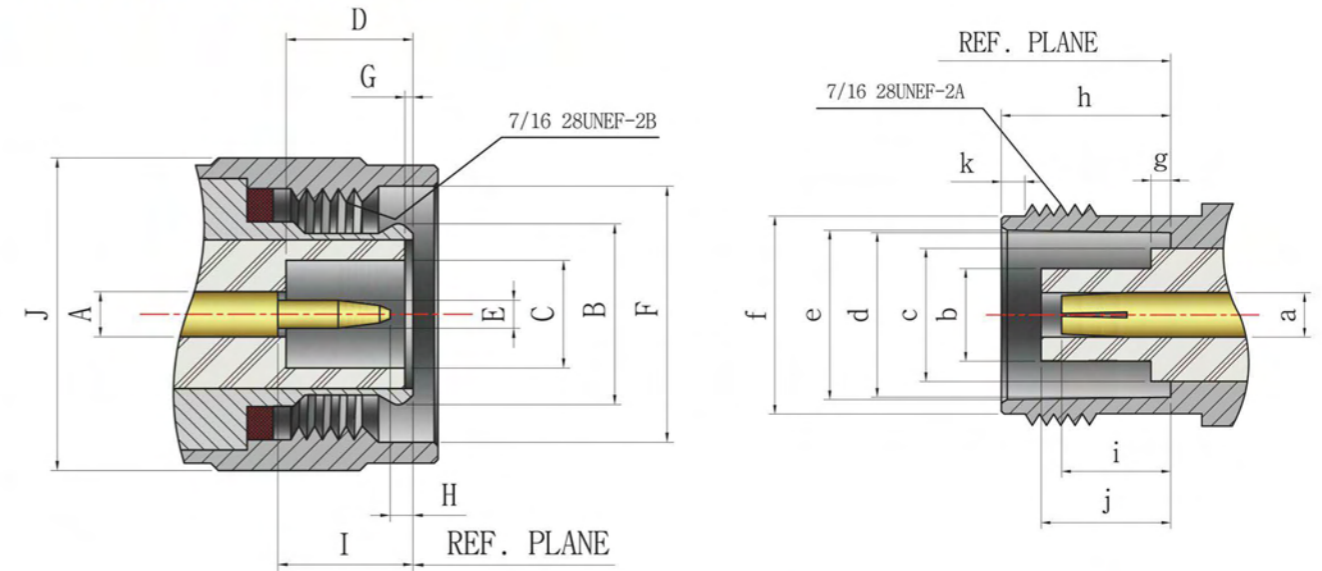


Specification

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 11GHz under extreme environmental conditions, especially shock and vibration. Cable terminations are available in crimp, clamp, twist-on and solder configuration. 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

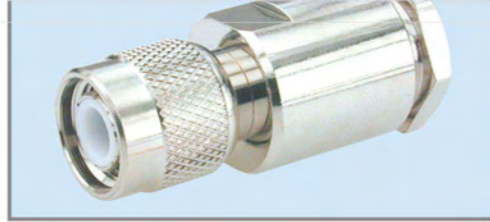


PLUG

Letter	Millimeters (inches)	
	Minimum	Maximum
A	2.06(.081)	2.21(.087)
B	Gauge test	
C	4.83(.190)	5.79(.228)
D	5.28(.208)	1.37(.054)
E	1.32(.052)	—
F	11.18(.440)	—
G	0.15(.006)	1.02(.040)
H	0.08(.003)	5.84(.230)
I	5.33(.210)	—
J	16 nom	

JACK

Letter	Millimeters (inches)	
	Minimum	Maximum
a	2.06(.081)	2.21(.087)
b	—	4.72(.186)
c	—	6.50(.256)
d	8.10(.319)	8.15(.321)
e	8.31(.327)	8.46(.333)
f	9.60(.378)	9.68(.381)
g	—	0.15(.006)
h	8.31(.327)	8.51(.335)
I	4.72(.186)	5.23(.206)
j	4.78(.188)	5.28(.208)
k	1.73(.068)	2.24(.088)



Electrical

Impedance	50Ω / 75Ω
Frequency Range	0 to 11 GHz / 0 to 1 GHz
VSWR	≤ 1.3 (straight connector) ≤ 1.35 (right angle connector)
RF Leakage	≥ 60 dB
Dielectric Withstanding Voltage	1500 V rms
Voltage Rating	≥ 500 V rms (depending on cable)
Center Contact Resistance	≤ 1.5 mΩ
Outer Contact Resistance	≤ 1 mΩ
Insulation Resistance	≥ 5 GΩ

Mechanical

Mating	7/16-28 UNEF Screw-on Coupling
Connector Durability	≥ 500 Cycles (for beryllium copper female contact only)
Recommended Mating Torque	4.1 lbs ~ 6.1 lbs
Coupling Nut Retention Force	≥ 101.2 lbs
Cable Retention Force	≥ 12.1 lbs (for RG316) ≥ 28.7 lbs (for RG58) ≥ 38.3 lbs (for RG59)

Environmental

Temperature Range	-65° C to 165° C
Corrosion (Salt Spray)	MIL-STD-202, Method 101, Cond. B
Vibration	MIL-STD-202, Method 204, Cond. B
Thermal Shock	MIL-STD-202, Method 107, Cond. B
Mechanical Shock	MIL-STD-202, Method 213, Cond. G

Material

Parts Name	Material	Plating
Body	Brass	Gold or Nickel
Center Contact	Male: Brass Female: Brass, Phosphor Bronze or Beryllium Copper	Gold or Nickel
Insulator	PTFE or Delrin	None
Gasket	Silicone Rubber	None
Crimp Ferrule	Annealed Copper	Same as Body

Note: Other Material/Finish is Available on Request.

Crimp Termination for Flexible Cable

TNC Straight Crimp Plug

	Hand Tool	See Appendix B
	Cable	RG6/G, 8/U, 8/X, 58/U, 59/U, 174/U, 179/U, 316/U, 213/U
	Cable Assembly Instruction	See Appendix A Code E

TNC R/A Crimp Plug

	Hand Tool	See Appendix B
	Cable	RG6/U, 58/U, 59/U
	Cable Assembly Instruction	See Appendix A Code A

TNC Crimp Plug, Molded Type

	Hand Tool	See Appendix B
	Cable	RG58/U
	Cable Assembly Instruction	See Appendix A

TNC Push-on Crimp Plug

	Hand Tool	See Appendix B
	Cable	RG58/U, RG174/U
	Cable Assembly Instruction	See Appendix A Code B

TNC Straight Crimp Jack

	Hand Tool	See Appendix B
	Cable	RG6/U, 8/X, 58/U, 59/U, 174/U, 179/U, 316/U
	Cable Assembly Instruction	See Appendix A Code E