# Amphenol<sup>®</sup>Connex

## A New Kind of RF Solution

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Part Number: 122349

Family/Series: TNC Coaxial Connectors

Product Type: ADAPTERS **Description:** Jack-To-Jack Adapter

Cable: Non Applicable \*\*

Cable Group: N/A Finish: Nickel Insulation: Delrin Impedance: 75 ohms Crimp Tool: N/A

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Please note: Images are for reference only

Between-Series Adapters

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Strain-Relief Boots

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<u>7/16</u>

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**MCX** 

<u>SMA</u>

**SMB SMC TNC** Twin BNC

Type F Type N <u>UHF</u>

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## **Our Products**

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# TNC connector series

Features & Benefits | Applications | Standard Specs | Reverse Polarity Specs | Assembly Instructions

Developed in the late 1950's, the TNC stands for Threaded Neill Concelman and is named after Amphenol engineer Carl Concelman. Designed as a threaded version of the BNC, the TNC series features screw threads for mating. TNC are miniature, threaded weatherproof units with a constant 75  $\Omega$  impedance and they operate from 0 - 11 GHz.

There are two types of TNC connectors: Standard and Reverse Polarity. Reverse polarity is a keying system accomplished with a reverse interface. and ensures that reverse polarity interface connectors do not mate with standard interface connectors. Amphenol accomplishes this by inserting female contacts into plugs and male contacts into jacks. Other manufacturers may use reverse threading to accomplish reverse polarity keying.

#### **TNC Coaxial Connectors**

## PLUG CRIMP ATTACHMENTS FOR FLEXIBLE AND SEMI-RIGID CABLE

Straight Crimp Plug - Miniature Cable

Straight Crimp Plug - Single Crimp

Straight Crimp Plug - Standard Cable

Straight Crimp Plug - Plenum Cable

Straight Solder Plug - Semi-Rigid Cable

Straight Crimp Plug - Miniature Cable

Straight Crimp Plug - Pin-In-Pin - Miniature Cable

## RIGHT ANGLE PLUG CRIMP ATTACHMENTS FOR FLEXIBLE AND SEMI-RIGID CABLE

Right Angle Crimp/Solder Plug - Standard Cable

Right Angle Crimp/Solder Plug - Standard Cable

Right Angle Crimp/Solder Plug - Miniature Cable

Right Angle Crimp/Crimp Plug - Standard Cable

Right Angle Solder Plug - Semi-Rigid Cable

Right Angle Crimp/Crimp Plug - Plenum Cable

Right Angle Crimp/Crimp Plug - Miniature Cable

Right Angle Crimp/Solder Plug - Plenum Cable

### JACK CRIMP ATTACHMENTS FOR FLEXIBLE AND SEMI-RIGID CABLE

Straight Crimp Jack - Standard Cable

Straight Crimp Jack - Plenum Cable

Straight Crimp Jack - Miniature Cable

Straight Crimp Jack - Semi-Rigid Cable

#### BULKHEAD JACK CRIMP ATTACHMENTS FOR FLEXIBLE AND SEMI-RIGID CABLE

Bulkhead Crimp Jack - Standard Cable

Bulkhead Crimp Jack - Plenum Cable

Bulkhead Crimp Jack - Plenum Cable

Bulkhead Crimp Jack - Miniature Cable

Bulkhead Solder Jack - Semi-Rigid Cable- Front Mount Bulkhead Solder Jack - Semi-Rigid Cable- Rear Mount

Bulkhead Isolated Crimp Jack - Standard Cable

Bulkhead Isolated Crimp Jack - Plenum Cable

Bulkhead Isolated Crimp Jack - Miniature Cable

Bulkhead Crimp Jack - Standard Cable

## PANEL JACK CRIMP ATTACHMENTS FOR FLEXIBLE AND SEMI-RIGID CABLE/RECEPTACLE

Panel Crimp Jack - Standard Cable

Panel Crimp Jack - Plenum Cable

Panel Crimp Jack - Miniature Cable

Panel Solder Jack - Semi-Rigid Cable

## TWIST-ON ATTACHMENTS FOR FLEXIBLE CABLE

Twist-On Plug

Right Angle Twist -On Plug

Twist-On Jack

#### CLAMP ATTACHMENTS FOR FLEXIBLE CABLE

Straight Clamp Plug - Captive Contact

Straight Clamp Plug

Right Angle Clamp Plug

Straight Clamp Jack - Captive Contact

#### WEDGE COMPRESSION ATTACHMENTS FOR FLEXIBLE CABLE

Wedge Compression Plug

Wedge Compression Jack

#### **PANEL RECEPTACLES**

Panel Receptacle - Extended Teflon Post - Gasket Seal

Panel Receptacle Jack

Panel Receptacle - Extended Teflon Post 0.500 Flange

Panel Receptacle - Extended Teflon Post

#### PRINTED CIRCUIT BOARD/STRAIGHT R/A TERMINALS

Commercial Straight PCB Mount Jack

Commercial Right Angle PCB Mount Jack

Straight PCB Mount Receptacle Jack

Right Angle Bulkhead Receptacle

#### **BULKHEAD RECEPTACLE/SOLDER POT TERMINALS**

Bulkhead Receptacle Plug

Bulkhead Receptacle Jack

Bulkhead Receptacle Isolated Jack

#### **BULKHEAD FEEDTHROUGH ADAPTERS**

Bulkhead Crimp Jack - Plenum Cable

Jack-To-Jack Bulkhead Adapter

Jack-To-Jack Bulkhead Adapter

Jack-To-Jack Bulkhead - Isolated Adapter

Jack-To-Plug Bulkhead Adapter - Push On

Bulkhead Right Angle TNC Female To MCX Female Adapter

#### **ADAPTERS**

Jack-To-Jack Adapter

Plug-To-Plug Adapter

Right Angle Adapter - Plug-To-Jack

#### **TEE ADAPTERS**

Tee Adapter - Jack-To-Jack-To-Jack

Tee Adapter - Jack-To-Plug-To-Jack

#### **TERMINATORS**

TNC Terminator Plug

## **ACCESSORIES**

TNC Male Cap & Chain

## **Features & Benefits**

- Threaded coupling interface ensures connector will not de-couple in vibration-intensive applications
- Many TNCs are recognized under the component program of Underwriter's Laboratories and have undergone stringent testing from an independent laboratory

# **Applications**

- Antennas
- Cellular
- Mil-Aero
- Telecom

- Base Stations
- Components
- Networks

- Cable Assembly
- Instrumentation
- Radar

# **Standard TNC Specifications**

Electrical	
Impedance	50 Ω
Frequency Range	0 - 11 GHz
Voltage Rating	500 volts peak
Dielectric Withstanding Voltage	1,500 volts rms
VSWR	M39012 straight connectors: 1.3 max @ 0 - 11 GHzM39012 right angle connectors: 1.35 max @ 0 - 11 GHz
Contact Resistance	Center: contact 1.5 mΩOuter contact: 0.2 mΩ
Braid to Body	0.1 mΩ
RF Leakage	-60 dB minimum @ 3 GHz
Insertion Loss	0.18 dB @ 9 GHz
Insulation Resistance	= 5,000 MΩ
Mechanical	
Mating	7/16 threaded coupling
Braid/Jacket Cable Affixment	Crimps: hex braid crimpClamps: screw-thread nut and braid clamp
Center Conductor Cable Affixmer	t Crimps: crimp or solderAll others: solder only
Captivated Contact	All crimps unless specified otherwise
Cable Retention	Crimps: 20 - 100 lbsClamps: 20 - 50 lbs
Material	
Male Center Contacts	Brass, silver or gold plated
Female Center Contact	Beryllium copper or phosphorous bronze, silver or gold plated
Other Metal Parts	Brass with nickel finish (except for M39012 which are silver)
Insulators	TFE, Delrin
Clamp Gaskets	Synthetic rubber, silicone rubber
Crimp Ferrule	Copper
Environmental	
Temperature Range	-65°C to +165°C
Weatherproof	Clamps with clamp gaskets, Crimps with heat-shrink tubing
Hermetic Seals	Pass helium leak test of 2x10-8 cc/sec
Shock	MIL-STD-202, method 202
Vibration	MIL-STD-202, method 204, test condition D
Moisture Resistance	MIL-STD-202, method 106
Corrosion	MIL-STD-202, method 101, test condition B
Temperature Cycling	MIL-STD-202, method 102, test condition D
Altitude	MIL-STD-202, method 105, test condition C

Note: These characteristics are typical but may not apply to all connectors.

## **Reverse Polarity TNC Specifications**

Electrical	
Impedance	50Ω
Frequency Range	0 - 4 GHz
Voltage Rating	500 volts peak
Dielectric Withstanding Voltage	1,500 volts rms
VSWR	M39012 straight connectors: 1.3 max @ 0 - 4 GHzM39012 right angle connectors: 1.35 max @ 0 - 4 GHz