

## Description

Reverse Polarity is a keying system accomplished with a reversed interface. This ensures, for example, a Reverse Polarity SMA does not mate with a Standard SMA.

Amphenol's RP Plugs have a female contact; Jacks have a male contact. Some competitors prefer to use reverse threading to accomplish their RP keying.

Available for RG-316, RD-316, RG-142, RG-178, Belden 9913, and RG-58 cable.

## Features/Benefits

- May be used in applications where keying is necessary to eliminate mis-matching from mating with a standard connector.
- MIL Standard 348 interface ensures high quality and premium performance.
- Crimp-crimp termination allows easy and quick assembly.
- Fits a variety of cables and configurations allowing the customer to choose the right connector for the application.

## Applications

- Antennas
- Cable Assembly
- GPS
- Spread Spectrum Wireless
- WLAN



### RP-SMA Connectors

Specifications	150
Connectors	151-152

### RP-BNC & RP-TNC

Specifications	154
TNC Connectors	155-156
BNC Connectors	157

## Description

Amphenol reverse polarity BNC, TNC & SMA connectors (RP-BNCTM, RP-TNCTM, RP-SMATM) are designed for use in spread spectrum wireless applications.

## Features/Benefits

These connectors may also be used in applications where keying is a necessity. The RP-BNCs, RP-TNCs & RP-SMAs meet the same high quality requirements as standard Amphenol BNCs, TNCs & SMAs. They provide excellent performance — DC to 4 GHz for RP-BNCs, DC to 4 GHz for RP-TNCs and DC to 18 GHz for RP-SMAs.

## Applications

- Spread Spectrum Wireless Devices
- Inventory Control



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## Reverse Polarity

TNC Connectors	156
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# Reverse Polarity RP-BNC and RP-TNC

## SPECIFICATIONS\*

### ELECTRICAL

Impedance	50 ohms
Frequency range	BNC: 0-4 GHz TNC: 0-4 GHz
Voltage rating	500 volts peak
Dielectric withstanding voltage	1,500 volts rms.
VSWR	Straight connectors 1.3 max. 0-4 GHz Right angle connectors 1.35 max. 0-4 GHz
Insertion loss	0.18 dB @ 9 GHz
Insulation resistance	5,000 megohms

### MECHANICAL

Mating	BNC: Bayonet coupling TNC: .437-28 threaded coupling
Cable affixment	Braid & jacket: hex crimp
Center conductor	Hex crimp or solder
Captivated contact	Except as noted
Cable retention	20 to 100 lbs. depending on cable

### MATERIAL

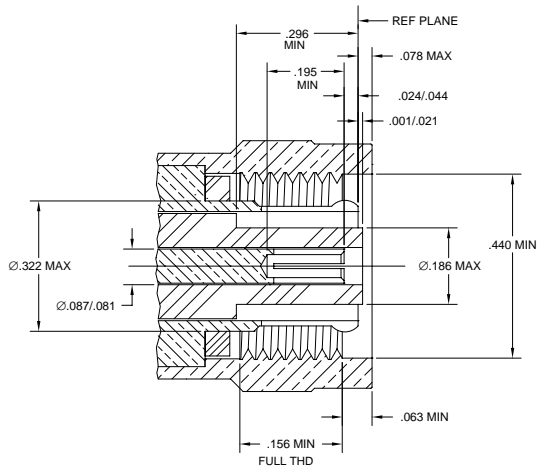
Center contacts	Male: brass. Female: beryllium copper or phosphor bronze. Gold plated
Crimp ferrule	Copper, nickel plated
Other metal parts	Brass (bright nickel finish)
Insulators	TFE
Weatherproof gaskets	Silicone rubber

\* These characteristics are typical and may not apply to all connectors.

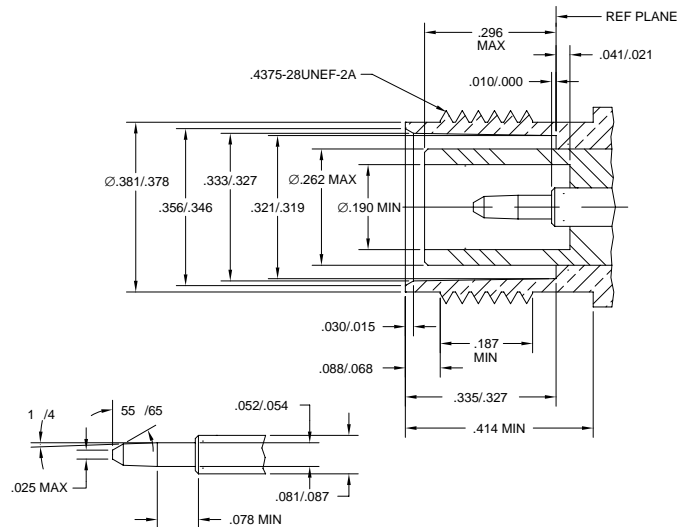
### ENVIRONMENTAL

Temperature range	-65°C to + 165°C
Weatherproof	When mated with other Amphenol RP-TNC and RP-BNC connectors.
Corrosion	MIL-STD-202 method 101 (test cond. B)

### RP-TNC PLUG



### RP-TNC JACK

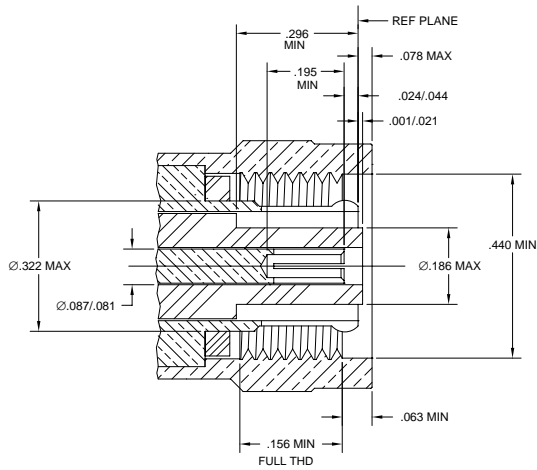


## RP-TNC PLUGS, ANGLE PLUGS, JACKS, RECEPTACLES & ACCESSORIES

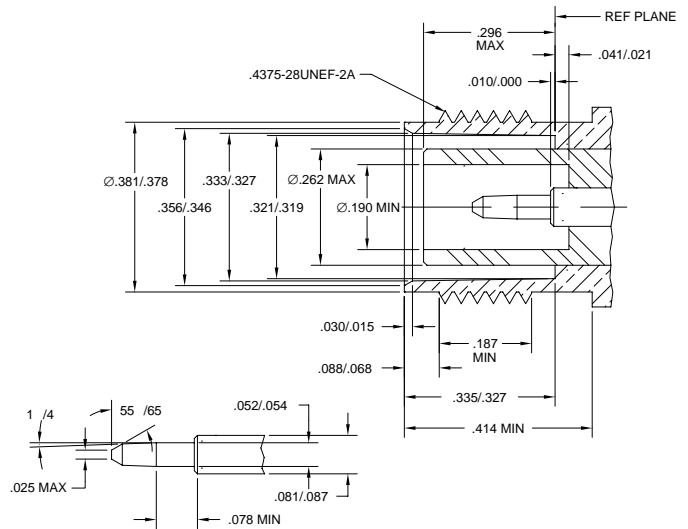
Cable RG-/U	Conn. Type	Cable Attachment		Dimensions, inches (millimeters)				CAI	Plt.	Ins.	MTG Hole	Amphenol Number	Fig.
		Outer	Inner	a	b	c •	d						
58	RP-TNC Plug	Crimp	Crimp	1.12(28.4) ■	.610(15.5)	.206(5.2)	—	C38	P15	D1	—	▲ 31-5677	1
	RP-TNC Jack	Crimp	Crimp	1.17(29.7) ■	.510(12.9)	.206(5.2)	—	C38	P15	D1	—	▲ 31-5678	3
	RP-TNC Bulkhead Jack	Crimp	Crimp	1.41(35.8) ■	.795(20.2) dia	.206(5.2)	.812(20.6)	C38	P15	D1	P	▲ 31-5687	6
142	RP-TNC Plug	Crimp	Crimp	1.12(28.4) ■	.610(15.5)	.220(3.6)	—	C38	P15	D1	—	▲ 31-5677-1000	1
178	RP-TNC Panel Jack	Crimp	Crimp	1.06(27.0) ■	.972(24.1)	.114(2.9)	.625(15.9)	C38	P15	D1	T	▲ 31-5685	5
	RP-TNC Bulkhead Jack	Crimp	Crimp	1.33(33.8) ■	.795(20.2) dia	.114(2.9)	.812(20.6)	C38	P15	D1	P	▲ 31-5686	6
B9913	RP-TNC Plug	Crimp	Solder	1.29(37.8) ■	.610(15.5)	.438(11.1)	—	C38	P15	D1	—	▲ 31-5679	1
	RP-TNC Angle Plug	Crimp	Solder	1.06(26.9)	.610(15.5)	.438(11.1)	1.85(47.0) ■	C38	P15	D1	—	▲ 31-5680	2
	RP-TNC Jack	Crimp	Solder	1.41(35.8) ■	.510(12.9)	.438(11.1)	—	C38	P15	D1	—	▲ 31-5684	3
RP-TNC Panel Receptacle, Solder Cup Terminal				1.06(27.0)	.687(17.4) sq.	—	.625(15.9)	—	P15	D1	K	▲ 31-5694	4
RP-TNC Right Angle Printed Circuit Board Receptacle				.880(22.4)	.580(14.7)	—	1.500(38.1)	—	P6	D1/31	—	▲ 31-5688	7

• accommodates cable diameter ▲ distributor stocked ■ includes outer ferrule

### RP-TNC PLUG

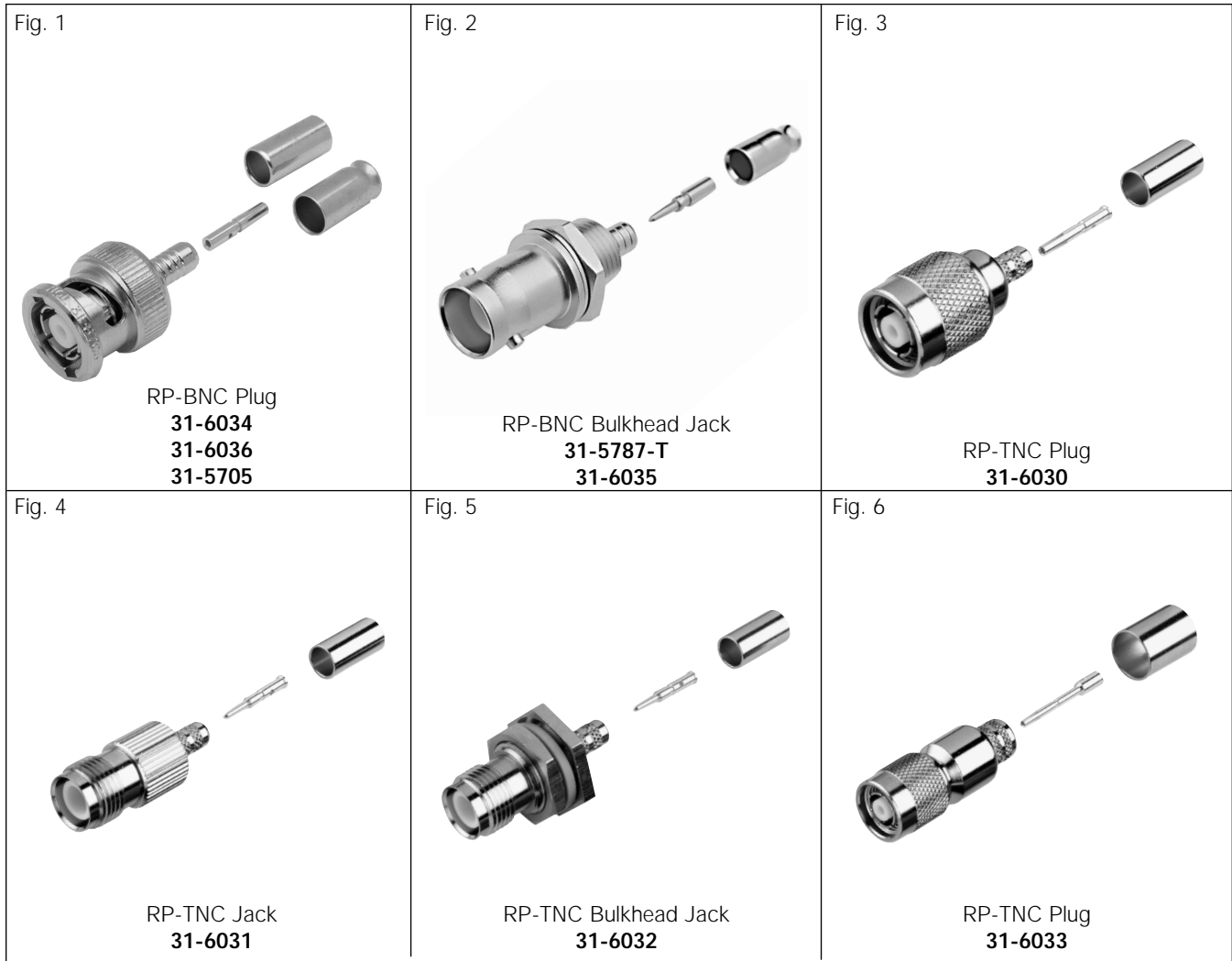


### RP-TNC JACK



# Reverse Polarity RP-BNC Connectors

Amphenol's RP-BNC connectors provide the quick connect/disconnect bayonet lock coupling of the BNC series. The RP-BNC plug is supplied with two crimp ferrules — one for use on PVC cables and another for use on smaller diameter plenum cables.



## RP-BNC/TNC PLUG

Cable RG-/U	Conn. Type	Cable Attachment		CAI	Plt.	Ins.	Amphenol Number	Fig.
		Outer	Inner					
58, 141	RP-BNC Plug	Crimp	Crimp	C38	P15	D1	31-5705	1
174, 188, 316	RP-BNC Bulkhead Jack Front Mount	Crimp	Crimp	C38	P15	D1	31-5787-T	2
58, 141	RP-TNC Plug	Crimp	Crimp	C38	P15	D1	31-6030	3
58, 141	RP-TNC Jack	Crimp	Crimp	C38	P15	D1	31-6031	4
58, 141	RP-TNC Bulk Jack	Crimp	Crimp	C38	P15	D1	31-6032	5
8214, 9913	RP-TNC Plug	Crimp	Crimp	C38	P15	D1	31-6033	6
8214, 9913	RP-BNC Plug	Crimp	Crimp	C38	P15	D1	31-6034	1
58, 141	RP-BNC Jack	Crimp	Crimp	C38	P15	D1	31-6035	2
58, 141	RP-BNC Plug	Crimp	Crimp	C38	P15	D1	31-6036	1