

**Description**

Developed in the late 1940's, the BNC is a miniature version of the Type C. BNC stands for Bayonet Neill Concelman and is available in 50 Ohm and 75 Ohm impedance versions.

The BNC product line is a miniature quick connect / disconnect RF connector. It features two bayonet lugs on the female connector; mating is achieved with only a quarter turn of the coupling nut.

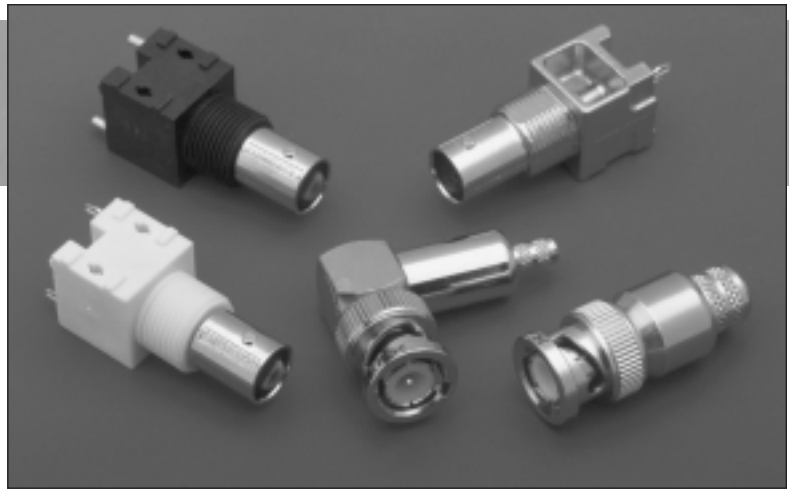
Primary Applications - Ideally suited for cable termination for miniature to subminiature coaxial cable (RG-58, 59, to RG-179, RG-316, etc.)

**Features/Benefits**

- Bayonet coupling mechanism provides quick mating and unmating.
- 50 and 75 ohm impedance designs allow customers to match impedance to system requirements.
- 50 and 75 ohm connectors are intermateable to ensure nondestructive mating.
- Three grades of connectors are available for military, industrial and commercial applications.

**Applications**

- Antennas
- Automotive (GPS)
- Base Stations
- Broadcast (75 ohm)
- Cable Assemblies
- Cable Modems
- Components
- Computers/LANs
- Instrumentation
- Network Analyzers
- Oscilloscopes
- Medical Equipment
- Mil-Aerospace
- Networks
- Radios
- Satcom
- Surge Protection
- Telecom



**50 ohm  
BNC Cable Connectors**

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**75 ohm**

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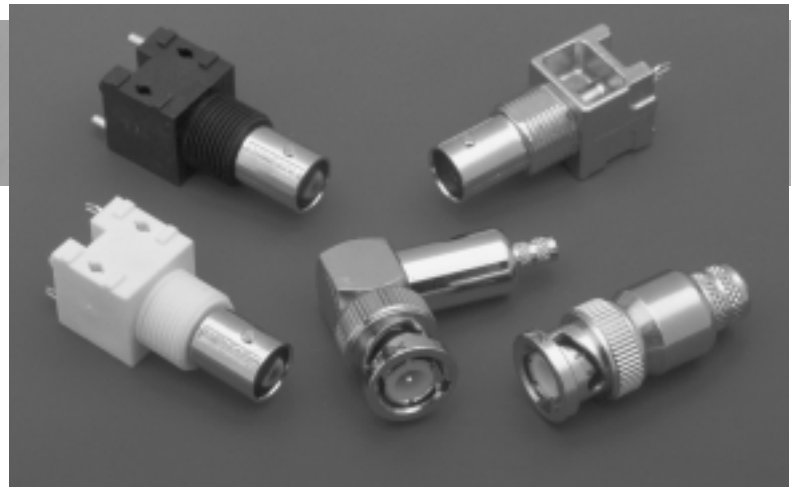


## Description

Amphenol 50 ohm BNC connectors are miniature, lightweight units designed to operate up to 11 GHz and typically yield low reflection through 4 GHz. Designed to accommodate a large variety of RG and industry standard cables, BNC connectors are available in crimp-crimp, clamp-solder, SURETWIST®, and field serviceable termination styles. A full line of printed circuit board receptacles, bulkhead receptacles, resistor terminations, and other accessories complement the product offering.

## Features/Benefits

Amphenol manufactures a full line of BNC connectors to meet all users' needs. Parts which are listed with the appropriate M39012 number in the catalog are **Military Grade** connectors produced in accordance with and actively qualified to the military specification MIL-C-39012. Connectors not listed with the M39012 number constitute the **Industrial Grade** product offering. These connectors provide comparable performance and generally feature nickel plated brass bodies, Teflon insulators, and either gold or silver plated center contacts. Amphenol's **Commercial Grade** connector offering carries the part number designation "RFX" for easy recognition. These low cost connectors typically utilize diecast and molded components. While



performance will not be equal to the Industrial or Military grade products, these connectors are ideal for use on a variety of commercial applications.

Amphenol's 50 ohm BNC connectors (where indicated) are recognized under the Component Program of Underwriter's Laboratories, Inc. They are ideal for use with medical equipment and test instrumentation where safety cannot be compromised.

## Applications

- Computers/LANs
- Test and Measurement
- Medical Equipment
- Telecommunications
- Wireless/Networks

## 50 ohm

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## ELECTRICAL

Impedance	50 ohms nominal ■
Frequency range	0-4 GHz w/low reflection
Voltage rating	500 volts peak
Dielectric withstanding voltage	1,500 volts rms.
VSWR	M39012 straight connectors: 1.3 max. 0-4 GHz M39012 right angle: 1.35 max. 0-4 GHz
Other (MIL-C-39012 cable connectors)	Contact resistance: center contact 1.5 milliohm outer contact 0.2 milliohm Braid to body 0.1 milliohm RF leakage: - 55 dB minimum at 3 GHz Insertion loss: 0.2 dB maximum at 3 GHz Insulation resistance: 5000 megohms (min.)

## MECHANICAL

Mating	2-stud bayonet coupling per M39012
Cable affixment (braid or jacket)	All crimps: hex braid crimp. Clamps: screw-thread nut and braid clamp.
Cable affixment (center conductor)	Crimps: crimp or solder All others: solder only
Captivated contact	All crimps Others: where specified.
Cable retention	Crimps: 20-100 lbs. All others: 30-70 lbs.

## MATERIAL

Center contacts	Male: brass Female: Beryllium copper or phosphor bronze. Silver or gold plated
Other metal parts	Brass, Nickel finish except M39012 silver.
Insulators	TFE; copolymer of styrene, glass-TFE (hermetically sealed)
Clamp gaskets	Synthetic rubber, Silicone rubber
Crimp ferrule	Copper / Brass

## ENVIRONMENTAL

Temperature range	TFE insulators: - 65°C to + 165°C Copolymer of Styrene: - 55°C to + 85°C
Weatherproof	Clamps with clamp gaskets. Crimps with heat-shrink tubing.
Hermetic seals	Pass helium leak test of 2 X 10 <sup>-8</sup> cc/sec
Shock	MIL-Std. 202 method 202
Vibration	MIL-Std. 202 method 204 (test cond. D)
Moisture resistance	MIL-Std. 202 method 106
Corrosion	MIL-Std. 202 method 101 (test cond. B)
Temperature cycling	MIL-Std. 202 method 102 (test cond. D)
Altitude	MIL-Std. 202 method 105 (test cond. C)

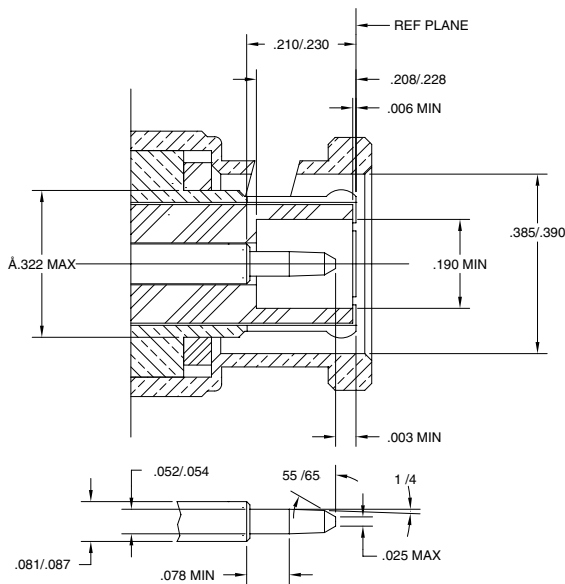
## MILITARY SPECIFICATIONS

MIL-C-39012	Where applicable
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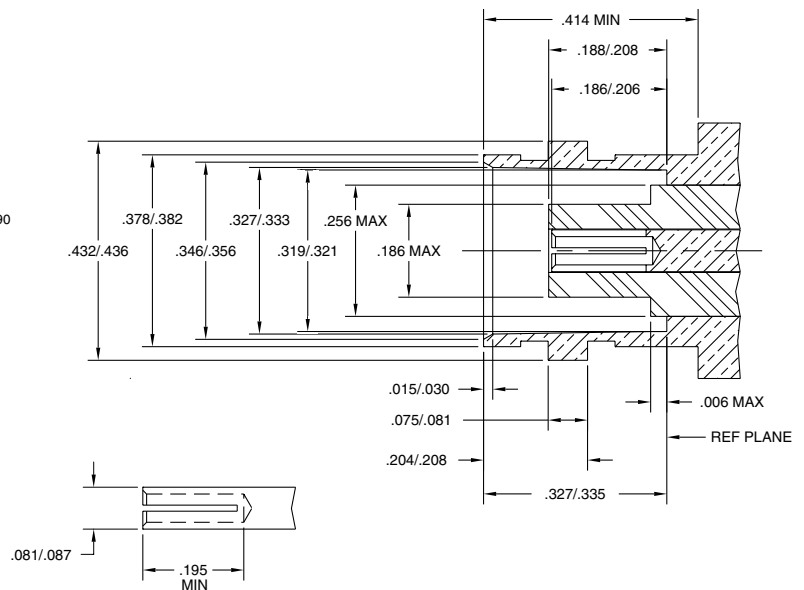
NOTE: These characteristics are typical and may not apply to all connectors.

■ Also see 75 ohm BNC connectors in the following section

## PLUG



## JACK



# BNC 50 ohm 3-Piece Cable Crimp Plugs

Fig. 1

BNC 3-Piece Crimp Plugs

36650-1003	68175-5RFX	31-320-1006	31-326	31-5557-RFX†
36650-3RFX	31-242	31-320-RFX	31-326-RFX	31-5558-RFX
36875	31-242-RFX	31-321	31-4320	31-5560-RFX†
68175-1003	31-315	31-321-1000	31-4321	31-5559-RFX
68175-1005	31-315-1005	31-321-RFX	31-4411	31-5559-1RFX
68175-1011	31-315-RFX	31-321-10RFX	31-4427	31-5556-1RFX
68175-11RFX	31-320	31-325	31-5556-RFX†	

Fig. 2

BNC Crimp Plugs

				31-351
				31-359
				31-371

## BNC 3-PIECE CRIMP CABLE PLUGS

Cable RG-/U	Cable Attachment		Dimensions, inches (millimeters)			Notes			Military Number	Amphenol Number	Fig.
	Outer	Inner	a ■	b	c •	CAI	Pit.	Ins.			
6 TYPE (.314 OD)	Crimp	Crimp	1.17(29.7)	.571(14.5)	.314(8.0)	C26	P7	D23	—	31-5558-RFX	1
55, 142, 223, 400	Crimp	Crimp	1.27(32.1)	.563(14.3)	.220(5.59)	C26	P15	D1	—	36875*	1
	Crimp	Crimp	1.20(30.5)	.563(14.3)	.220(5.59)	C26	P15	D1	M23329/3-02,3-04	31-326*	1
	Crimp	Crimp	1.11(28.2)	.563(14.3)	.220(5.59)	C26	P7	D26	—	31-326-RFX	1
	Crimp	Press Fit	1.31(33.3)	.571(14.5)	.212(5.4)	C7R	P7	D23	—	31-5557-RFX†	1
58, 141	Crimp	Crimp	1.11(28.2)	.563(14.3)	.206(5.2)	C26	P15	D1	M23329/3-01,3-03	31-5800	☆
	Crimp	Crimp	1.17(29.8)	.571(14.5)	.210(5.3)	C26	P7	D26	—	31-320-RFX	1
	Crimp	Solder	1.47(37.3)	.562(14.3)	.206(5.2)	C26b	P15	D1	—	31-351*	2
	Crimp	Crimp	1.09(27.8)	.563(14.3)	.206(5.23)	C26	P33	D1	M39012/16-0013	31-4320*	1
	Crimp	Crimp	1.28(32.6)	.571(14.5)	.181(4.6)	C26	P7	D26	—	36650-3RFX	1
59 (20 AWG Ctr. Contact)	Crimp	Press Fit	1.31(33.3)	.571(14.5)	.260(6.6)	C7R	P7	D23	—	31-5556-RFX†	1
59, 62, 140, 210, 302	Crimp	Crimp	1.11(28.2)	.563(14.3)	.260(6.6)	C26	P15	D26	—	31-5900	☆
	Crimp	Crimp	1.12(28.5)	.562(14.3)	.261(6.6)	C26	P15	D1	M23329/3-05	31-321*	1
	Crimp	Crimp	1.17(29.8)	.571(14.5)	.260(6.6)	C26	P7	D26	—	31-321-RFX	1
59	Crimp	Solder	1.47(37.3)	.563(14.3)	.261(6.6)	C26b	P15	D1	—	31-359*	2
	Crimp	Crimp	1.12(28.5)	.562(14.3)	.261(6.6)	C26	P33	D1	M39012/16-0015	31-4321	1
	Crimp	Crimp	1.11(28.2)	.562(14.3)	.261(6.6)	C26	P15	D1	—	68175-1005	1
142, 400 Plenum 59, 62	Crimp	Crimp	1.17(29.8)	.571(14.5)	.260(6.6)	C26	P7	D26	—	68175-5RFX	1
	Crimp	Crimp	1.11(28.2)	.563(14.3)	.220(5.6)	C26	P33	D1	M39012/16-0503	31-4427*	1
	Crimp	Crimp	1.28(32.6)	.571(14.5)	.212(5.4)	C26	P7	D26	—	68175-11RFX	1
174, 179, 187, 188, 316	Crimp	Press Fit	1.31(33.3)	.571(14.5)	.212(5.4)	C7R	P7	D23	—	31-5560-RFX†	1
	Crimp	Solder	1.34(34.1)	.563(14.3)	.128(3.25)	C26b	P15	D9	—	31-371*	2
	Crimp	Crimp	1.19(30.2)	.562(14.3)	.125(3.2)	C26	P15	D1	—	31-315	1
174, 188, 316	Crimp	Crimp	1.19(30.2)	.571(14.5)	.106(2.7)	C26	P7	D23	—	31-315-RFX	1
	Crimp	Crimp	1.19(30.2)	.562(14.3)	.117(3.0)	C26	P15	D1	—	31-242*	1
179, 187	Crimp	Crimp	1.19(30.2)	.571(14.5)	.106(2.7)	C26	P7	D23	—	31-242-RFX	1
	Crimp	Crimp	1.11(28.2)	.562(14.3)	.135(3.4)	C26	P16	D1	—	31-315-1005	1
Dbl. Br. RG-316	Crimp	Crimp	1.11(28.2)	.562(14.3)	.135(3.4)	C26	P16	D1	—	31-315-1005	1
Belden 8213	Crimp	Crimp	1.59(40.5)	.562(14.3)	.418(10.6)	C26	P17	D1	—	31-4411	1
Belden 8218	Crimp	Crimp	1.11(28.2)	.562(14.3)	.175(4.4)	C26	P15	D1	—	31-325*	1
Belden 8281, 88281	Crimp	Crimp	1.21(30.7)	.562(14.3)	.342(8.7)	C26	P15	D1	—	31-321-1000*	1
	Crimp	Crimp	1.17(29.8)	.571(14.5)	.334(8.5)	C26	P7	D26	—	31-321-10RFX	1
Belden 9259	Crimp	Crimp	1.11(28.2)	.562(14.3)	.261(6.6)	C26	P15	D1	—	68175-1003	1
Belden 9907, 89907	Crimp	Crimp	1.11(28.2)	.562(14.3)	.196(5.0)	C26	P15	D1	—	31-320-1006	1
Belden 1560A, 82259, 89259, Plenum 59, 62	Crimp	Crimp	1.11(28.2)	.563(14.3)	.220(5.6)	C26	P15	D1	—	68175-1011	1
Belden 82907, 88240, 89907, Plenum 58	Crimp	Crimp	1.11(28.2)	.563(14.3)	.175(4.4)	C26	P15	D1	—	36650-1003	1
Plenum 58	Crimp	Press Fit	1.28(32.6)	.571(14.5)	.181(4.6)	C26	P7	D26	—	36650-3RFX	1
Plenum 58	Crimp	Press Fit	1.03(25.0)	.563(14.3)	.213(4.6)	C26	P7	D28	—	31-5559-1RFX	1
Plenum 58	Crimp	Press Fit	1.03(25.0)	.563(14.3)	.26(4.6)	C7R	P7	D23	—	31-5556-1RFX	1

\* recognized under the component program of U.L., Inc. • accommodates cable diameter ☆ see Fig. 1 and table on page 109. ▲ distributor stocked  
■ includes outer ferrule † features preinstalled center contact

Fig. 1

BNC Crimp Plugs for Networking

**31-5800**  
**31-5900**

Fig. 2

BNC Clamp Plugs

<b>6775</b>	<b>31-2</b>	<b>31-3202</b>
<b>9350</b>	<b>31-2-RFX</b>	<b>31-3301</b>
<b>15875</b>	<b>31-202</b>	<b>31-3302</b>
<b>16300</b>	<b>31-212</b>	
<b>69475</b>	<b>31-212-1005</b>	
<b>84975</b>	<b>31-212-RFX</b>	

## BNC CRIMP-CRIMP CABLE PLUGS FOR NETWORKING

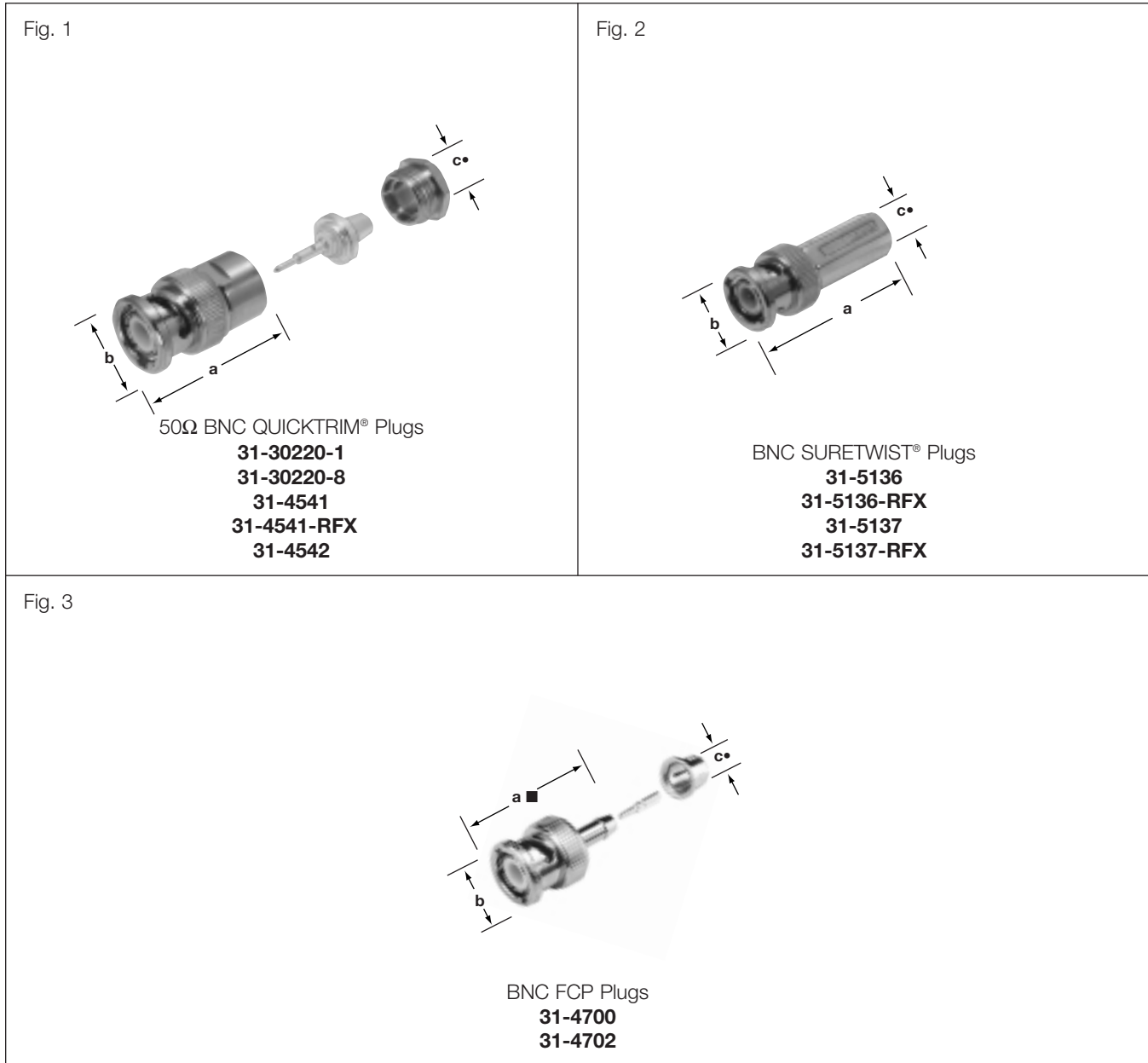
Cable RG-/U	Dimensions, inches (millimeters)				Notes			Amphenol Number	Fig.
	a ■	b	c • 1	c • 2	CAI	Plt.	Ins.		
58, 58A, 58B, 58C, 141, Plenum 58, Belden 9907, 89907, Comscope 2104K, 2135, 3104	1.11(28.2)	.563(14.3)	.209(5.3)	.181(4.60)	C26	P15	D26	<b>31-5800</b>	1 ▲
59 & 62, RG-59 20GACC, Plenum 59 & 62; Belden 1515A, 8212, 8221, 8241, 8241A, 8241F, 8263, 8279A, 9100, 9209, 9209A, 9240, 9244, 9259, 9274, 9275, 9659, 1426A, 82108, 88241, 82241, 89259, 82259, 1506A; AT&T 734A; Comscope 5553, 2020K, 3037V, 2249K	1.11(28.2)	.563(14.3)	.261(6.6)	.220(5.59)	C26	P15	D26	<b>31-5900</b>	

## BNC CLAMP CABLE PLUGS

Cable RG-/U	Cable Attachment		Dimensions, inches (millimeters)			Notes			Military Number	Amphenol Number	Fig.
	Outer	Inner	a ■	b	c •	CAI	Plt.	Ins.			
<b>6</b>	Clamp	Solder	1.25(31.8)	.563(14.3)	.348(8.8)	C25	P1	D6	—	<b>9350*</b>	2 ▲
<b>8, 9, 11, 213, 214</b>	Clamp	Solder	1.66(42.1)	.688(17.5)	.437(11.1)	C25	P1	D1	UG-959/U	<b>6775*</b>	
<b>55, 58, 141, 142, 223, 400</b>	Clamp	Solder	1.06(27.0)	.562(14.3)	.224(5.7)	C25	P1	D1	UG-88C/U	<b>31-202*</b>	
	Clamp	Solder	1.06(27.0)	.563(14.3)	.221(5.6)	C25	P1	D1	UG88E/U	<b>31-3202*</b>	
<b>58, 141, 142, 400</b>	Clamp	Solder	.969(24.6)	.563(14.3)	.212(5.38)	C25	P1	D1	UG-88/U	<b>31-2*</b>	
	Clamp	Solder	1.07(27.2)	.571(14.5)	.212(5.38)	C25	P7	D23	—	<b>31-2-RFX</b>	
	Clamp	Solder	1.06(27.0)	.563(14.3)	.224(5.7)	C25	P33	D1	M39012/16-0101	<b>31-3301*</b>	
<b>59, 62, 71, 140, 210, 302</b>	Clamp	Solder	1.10(27.9)	.562(14.3)	.255(6.5)	C25	P1	D1	UG260B/U	<b>31-212*</b>	
	Clamp	Solder	1.07(27.2)	.571(14.5)	.256(6.5)	C25	P7	D23	—	<b>31-212-RFX</b>	
	Clamp	Solder	1.06(27.0)	.563(14.3)	.255(6.5)	C25	P33	D1	M39012/16-0102	<b>31-3302*</b>	
<b>59 (20GA CC)</b>	Clamp	Solder	1.06(27.0)	.563(14.3)	.255(6.48)	C25	P1	D1	—	<b>31-212-1005</b>	
<b>122</b>	Clamp	Solder	1.06(27.0)	.563(14.3)	.177(4.5)	C25	P1	D1	UG1033/U	<b>84975*</b>	
<b>174, 179, 187, 188, 316</b>	Clamp	Solder	1.06(27.0)	.563(14.3)	.116(2.9)	C25	P1	D1	—	<b>69475*</b>	
<b>178, 196</b>	Clamp	Solder	1.00(25.4)	.563(14.3)	.094(2.39)	C25	P1	D9	—	<b>15875*</b>	
<b>180</b>	Clamp	Solder	1.00(25.4)	.563(14.3)	.150(3.81)	C25	P1	D9	—	<b>16300*</b>	

"b" dimension is body O.D. • accommodates cable diameter ▲ distributor stocked \* recognized under the component program of U.L., Inc.  
■ includes outer ferrule

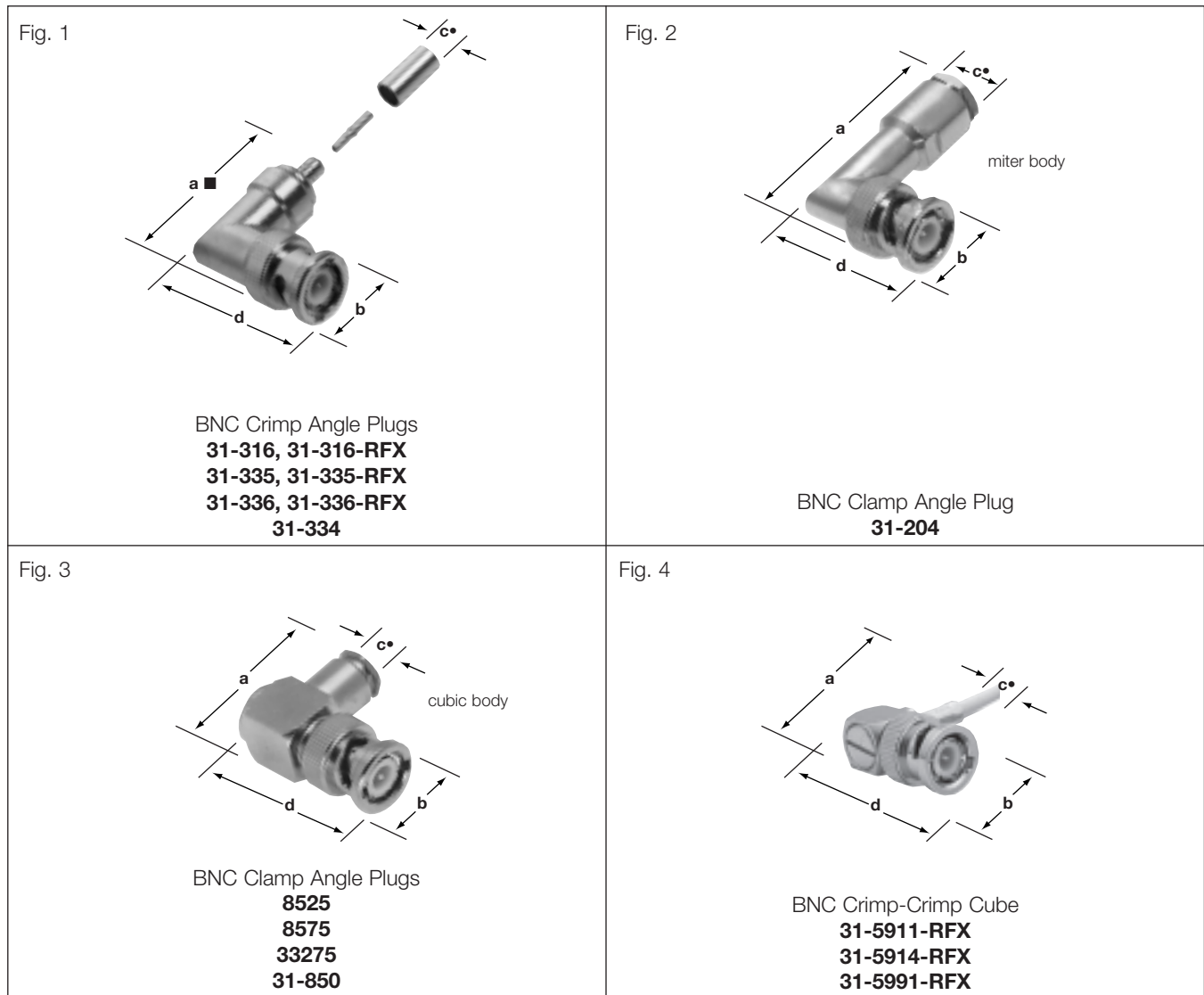




## BNC CABLE PLUGS

Cable RG-/U	Cable Attachment		Dimensions, inches (millimeters)			Notes			Military Number	Amphenol Number	Fig.
	Outer	Inner	a ■	b	c •	CAI	Plt.	Ins.			
58 B/U	SURETWIST®		1.47(37.3)	.562(14.3)	.181(4.6)	C28	P5	D15	—	<a href="#">31-5137</a>	2 ▲
	SURETWIST®		1.48(37.6)	.571(14.5)	.185(4.7)	C28	P7	D23	—	<a href="#">31-5137-RFX</a>	2 ▲
58	FCP	Pliers	1.06(27.0)	.563(14.3)	.206(5.23)	C30	P1	D1	—	<a href="#">31-4700*</a>	3 ▲
	QUICKTRIM®		1.06(27.0)	.563(14.3)	.207(5.3)	C29	P1	D1	—	<a href="#">31-30220-1</a>	1 ▲
59	QUICKTRIM®		1.03(26.2)	.562(14.3)	.252(6.2)	C29	P1	D1	(IBM 1836444)	<a href="#">31-4541</a>	1 ▲
	QUICKTRIM®		1.03(26.2)	.562(14.3)	.252(6.2)	C29	P7	D23	—	<a href="#">31-4541-RFX</a>	1 ▲
	SURETWIST®		1.47(37.3)	.562(14.3)	.242(6.1)	C28	P5	D15	—	<a href="#">31-5136</a>	2 ▲
	SURETWIST®		1.48(37.6)	.571(14.5)	.242(6.1)	C28	P7	D23	—	<a href="#">31-5136-RFX</a>	2 ▲
	FCP	Pliers	1.06(27.0)	.563(14.3)	.259(6.56)	C30	P1	D1	—	<a href="#">31-4702*</a>	3 ▲
223	QUICKTRIM®		1.06(27.0)	.563(14.3)	.225(5.7)	C29	P1	D1	—	<a href="#">31-30220-8</a>	1
Belden 9268	QUICKTRIM®		1.06(27.0)	.563(14.3)	.275(6.99)	C29	P1	D1	(IBM 1836447)	<a href="#">31-4542</a>	1

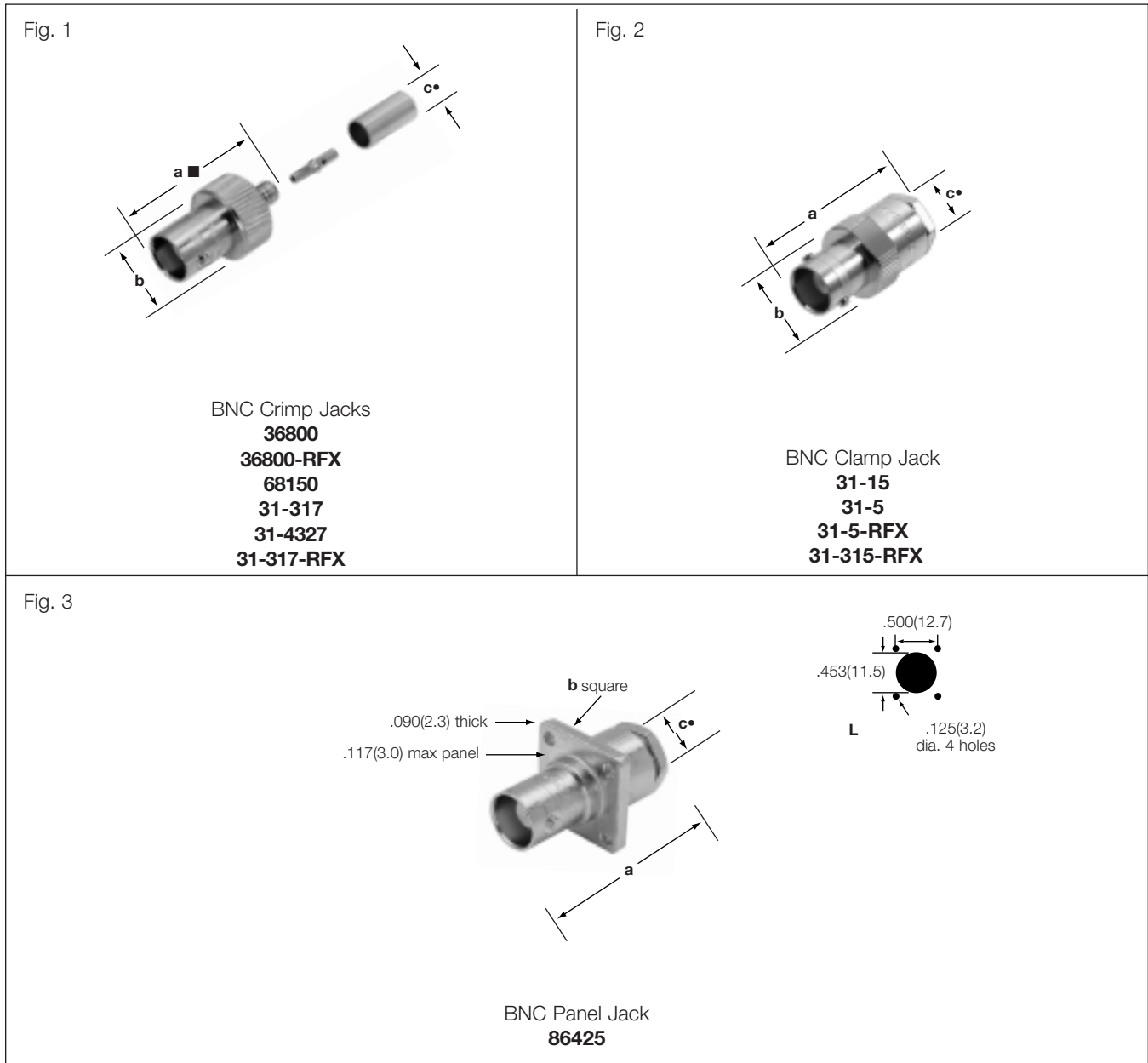
• accommodates cable diameter \* recognized under the component program of U.L., Inc. ▲ distributor stocked ■ includes outer ferrule



## BNC ANGLE CABLE PLUGS

Cable RG-/U	Cable Attachment		Dimensions, inches (millimeters)				Notes			Military Number	Amphenol Number	Fig.
	Outer	Inner	a	b	c •	d	CAI	Pt.	Ins.			
55, 58, 141, 142, 223, 400	Clamp	Solder	1.68(42.7)■	.562(14.3)	.214(5.5)	1.09(27.8)	C25	P1	D1	UG-913/U	31-204*	2
55, 142, 223, 400	Crimp	Crimp	1.19(30.2)■	.562(14.3)	.220(5.6)	1.59(40.5)	C26a	P15	D1	—	31-334*	1 ▲
58, 141	Crimp	Crimp	1.59(40.5)■	.562(14.3)	.206(5.2)	1.19(30.2)	C26a	P15	D1	—	31-335*	1
	Crimp	Crimp	1.66(42.2)■	.571(14.5)	.210(5.3)	1.07(27.2)	C26a	P7	D23	—	31-335-RFX	1
58, 141, 142, 400	Clamp	Solder	1.00(25.4)■	.562(14.3)	.212(5.4)	1.25(31.8)	C25	P1	D1	(Cubic Body)	8525*	3
59, 62, 71, 140, 210	Clamp	Solder	1.00(25.4)	.562(14.3)	.259(6.6)	1.25(31.8)	C25	P1	D1	—	8575*	3 ▲
	Clamp	Solder	1.25(31.6)	.562(14.3)	.259(6.6)	1.03(26.2)	C25	P1	D6	—	31-850*	3 ▲
59, 62, 140, 210	Crimp	Crimp	1.59(40.5)■	.562(14.3)	.259(6.6)	1.19(30.2)	C26a	P15	D1	—	31-336	1
	Crimp	Crimp	1.66(42.2)■	.571(14.5)	.260(6.6)	1.07(27.2)	C26a	P7	D23	—	31-336-RFX	1
174, 179, 187, 188	Clamp	Solder	1.25(31.6)	.562(14.3)	.115(2.9)	1.00(25.4)	C25	P1	D1	(Cubic Body)	33275*	3 ▲
174, 188, 316	Crimp	Crimp	1.19(30.2)■	.562(14.3)	.115(2.9)	1.59(40.5)	C26a	P15	D1	—	31-316*	1
58, 141	Crimp	Solder	.862(21.9)	.571(14.5)	.214(5.5)	1.07(27.2)	C26a	P7	D23	(Cubic Body)	31-5911-RFX	4
59	Crimp	Solder	.862(21.9)	.571(14.5)	.259(6.6)	1.07(27.2)	C26a	P7	D23	(Cubic Body)	31-5914-RFX	4
316	Crimp	Solder	.862(21.9)	.571(14.5)	.115(2.9)	1.09(27.8)	C26a	P7	D23	(Cubic Body)	31-5991-RFX	4
316 Die Cast	Crimp	Solder	.862(21.9)	.571(14.5)	.115(2.9)	1.07(27.2)	C26a	P7	D23	(Cubic Body)	31-316-RFX	1

■ includes outer ferrule • accommodates cable diameter \* recognized under the component program of U.L., Inc. ▲ distributor stocked



## BNC CABLE JACKS

Cable RG/U	Cable Attachment		Dimensions, inches (millimeters)			Construction Notes			Military Number	Amphenol Number	Fig.
	Outer	Inner	a ■	b	c •	CAI	Plt.	Ins.			
58, 141	Crimp	Crimp	1.17(29.8)	.562(14.3)	.206(5.2)	C26a	P33	D1	M39012/17-0013	31-4327*	1
	Crimp	Crimp	1.17(29.7)	.510(13.0)	.206(5.2)	C26a	P15	D1	—	36800*	1
	Crimp	Crimp	1.32(33.5)	.435(11.0)	.210(5.3)	C26a	P7	D23	—	36800-RFX	1
59, 62, 71, 140, 210	Clamp	Solder	1.14(29.0)	.562(14.3)	.259(6.6)	C25	P1	D1	UG-261/U	31-15*	2 ▲
174, 188, 316	Crimp	Crimp	1.19(30.2)	.571(14.5)	.106(2.7)	C26a	P15	D23	—	31-315-RFX	2
223	Clamp	Solder	1.14(29.0)	.562(14.3)	.220(5.0)	C25	P1	D1	UG-89/U	31-5	2 ▲
174, 188, 316	Crimp	Crimp	1.07(27.3)	.453(11.5)	.106(2.7)	C26a	P15	D23	—	31-317-RFX	1
174, 188, 316	Crimp	Crimp	1.39(35.3)	.562(14.3)	.125(3.2)	C26a	P15	D1	—	31-317*	1
174, 179, 187, 188, 316	Clamp	Solder	1.14(29.0)	.687(17.5)	.117(3.0)	C25	P1	D1	—	86425*	3
59, 62, 140, 210	Crimp	Crimp	1.18(30.0)	.510(13.0)	.261(6.6)	C26a	P15	D1	—	68150*	1 ▲
223	Clamp	Clamp	1.14(29.0)	.562(14.3)	.220(5.0)	C25	P1	D1	—	31-5-RFX	2

• accommodates cable diameter \* recognized under the component program of U.L., Inc. ▲ distributor stocked ■ includes outer ferrule



Fig. 1

BNC Crimp Bulkhead Jacks

<b>95700</b>	<b>31-318-RFX</b>
<b>31-245</b>	<b>31-342</b>
<b>31-245-RFX</b>	<b>31-342-RFX</b>
<b>31-318</b>	<b>31-343-1002</b>
<b>31-318-1001</b>	<b>31-343-RFX</b>

Fig. 2

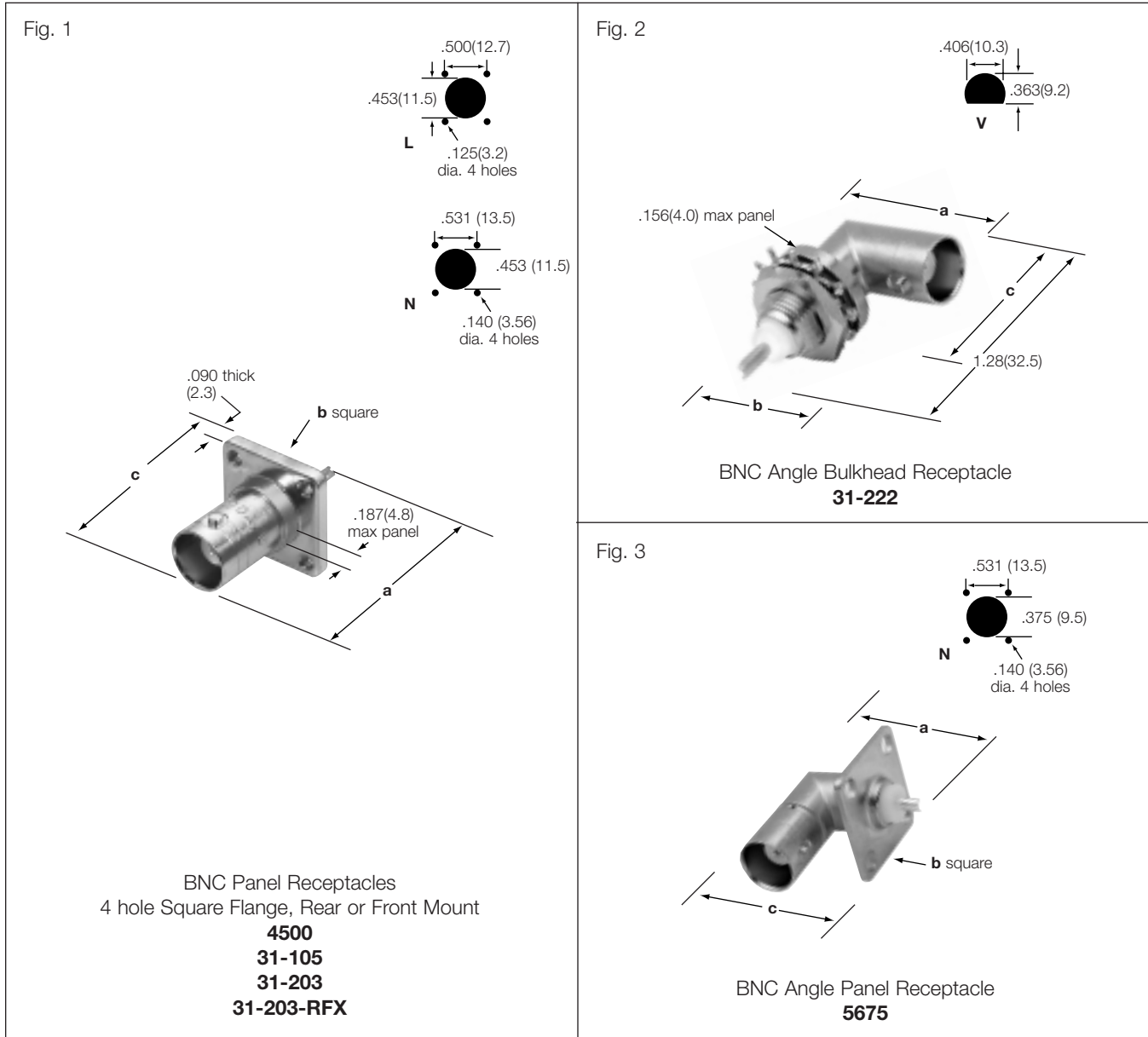
BNC Clamp Bulkhead Jacks

<b>86350</b>	<b>31-206</b>
<b>86850</b>	<b>31-207</b>

## BNC BULKHEAD CABLE JACKS

Cable RG-/U	Cable Attachment		Dimensions, inches (millimeters)					CAI	Pit.	Ins.	Mtg. Hole	Military Number	Amphenol Number	Fig.
	Outer	Inner	a ■	b	c •	d	e							
55, 142, 223	Crimp	Crimp	1.41(35.8)	.795(20.2) dia	.220(5.6)	.812(20.6)	.250(6.4)	C26a	P17	D1	Y	—	95700*	1
58, 141	Crimp	Crimp	1.41(35.7)	.795(20.2) dia	.206(5.2)	.812(20.6)	.250(6.4)	C26a	P15	D1	Y	—	31-342	1 ▲
58, 141, 142, 223	Crimp	Crimp	1.38(35.1)	.687(17.5) hex	.210(5.3)	.709(18.0)	.138(3.5)	C26a	P7	D23	Y	—	31-342-RFX	1 ▲
58, 141, 142, 400	Clamp	Solder	1.12(28.6)	.687(17.6) hex	.224(5.7)	.798(20.3)	.218(5.5)	C25	P1	D1	Y	UG-909/U	31-206*	2
59, 62, 140, 210	Clamp	Solder	1.12(28.6)	.687(17.6) hex	.257(6.5)	.798(20.3)	.218(5.5)	C25	P1	D1	Y	UG-910/U	31-207*	2
	Crimp	Crimp	1.38(35.1)	.687(17.5) hex	.260(6.6)	.709(18.0)	.138(3.5)	C26a	P7	D23	Y	—	31-343-RFX	1
Plenum 59 (20 AWG)	Crimp	Crimp	1.41(35.8)	.795(20.2) dia	.220(5.6)	.812(20.6)	.250(6.4)	C26a	P15	D1	Y	—	31-343-1002	1
174,179,187,188,316	Clamp	Solder	1.14(29.0)	.687(17.5) hex	.115(2.9)	.798(20.3)	.250(6.4)	C25	P1	D1	Y	—	86350*	2 ▲
174, 188, 316	Crimp	Crimp	1.48(37.0)	.795(20.2) dia	.120(3.0)	.812(20.6)	.250(6.4)	C26a	P16	D1	Y	—	31-318*	1 ▲
	Crimp	Crimp	1.43(36.4)	.687(17.5) hex	.106(2.7)	.812(20.6)	.138(3.5)	C26a	P7	D23	Y	—	31-318-RFX	1 ▲
178, 196	Clamp	Solder	1.14(29.0)	.687(17.5) dia	.098(2.5)	.798(20.3)	.250(6.4)	C25	P1	D1	Y	—	86850*	2
179, 187	Crimp	Crimp	1.49(37.8)	.795(20.2) dia	.120(3.0)	.812(20.6)	.250(6.4)	C26a	P15	D1	Y	—	31-245*	1
	Crimp	Crimp	1.43(36.3)	.687(17.4) hex	.106(2.7)	.709(18.0)	.138(3.5)	C26a	P7	D23	Y	—	31-245-RFX	1
Dbl. Br. 316	Crimp	Crimp	1.41(35.8)	.795(20.2) dia	.135(3.42)	.812(20.6)	.250(6.4)	C26a	P15	D1	Y	—	31-318-1001	1

● accommodates cable diameter \* recognized under the component program of U.L., Inc. ▲ distributor stocked ■ includes outer ferrule

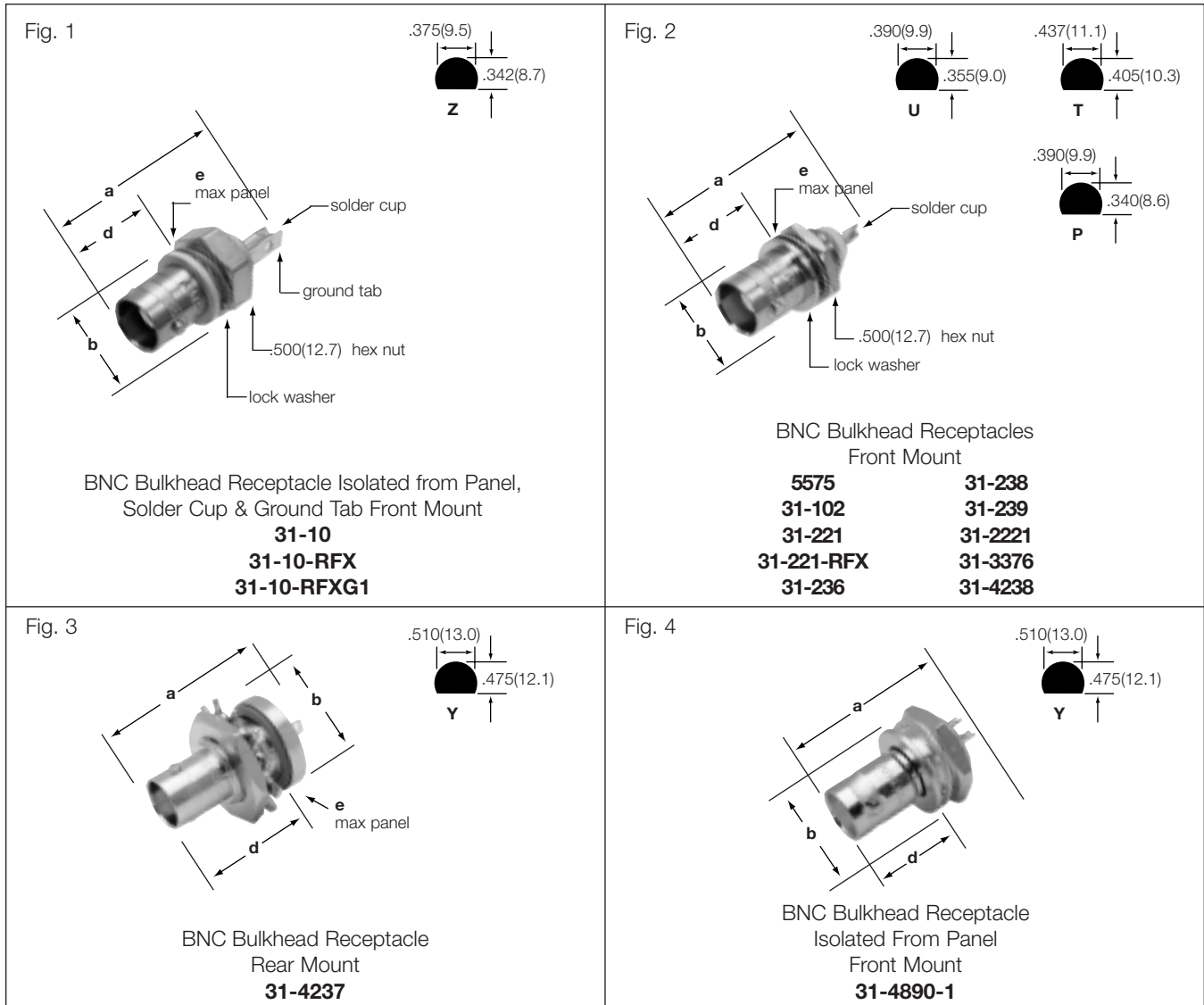


## BNC PANEL AND ANGLE BULKHEAD RECEPTACLES

Description	Terminal Type	Dimensions, inches (millimeters)			Notes		Mtg. Hole	Military Number	Amphenol Number	Fig.
		a	b	c	Pit.	Ins.				
Panel Receptacle 4 hole Square Flange No. 3-56 Tapped Flange Holes	Solder Cup	1.06(27.0)	.687(17.5)	.719(18.3)	P1	D1	L	UG-290A/U	<b>31-203</b>	1
Panel Receptacle 4 hole Square Flange .125" Dia. Flange Holes	Solder Cup	1.06(27.0)	.687(17.5)	.719(18.3)	P7	D23	L	—	<b>31-203-RFX</b>	
Panel Receptacle 4 hole Square Flange .120" Dia. Flange Holes, Styrene Ins.	Solder Cup	1.03(26.2)	.687(17.5)	.719(18.3)	P1	D6	L	—	<b>31-105*</b>	
Panel Receptacle 4 hole Square Flange .136" Dia. Flange Holes, Styrene Ins.	Turret	1.08(27.4)	.750(19.1)	.609(15.5)	P1	D6	N	UG-185/U	<b>4500*</b>	2
Angle, External Tooth Lockwasher	Solder Cup	.906(23.0)	.594(15.1)	.625(15.8)	P1	D1	V	UG-1098/U	<b>31-222*</b> □	
Angle Panel Receptacle 4 hole Flange .136"(3.5mm) Diameter Holes	Solder Cup	.928(23.6)	.642(16.3)	.642(16.3)	P1	D1	N	UG-535/U	<b>5675*</b>	

\* recognized under the component program of U.L., Inc. ▲ distributor stocked □ IBM 01620666

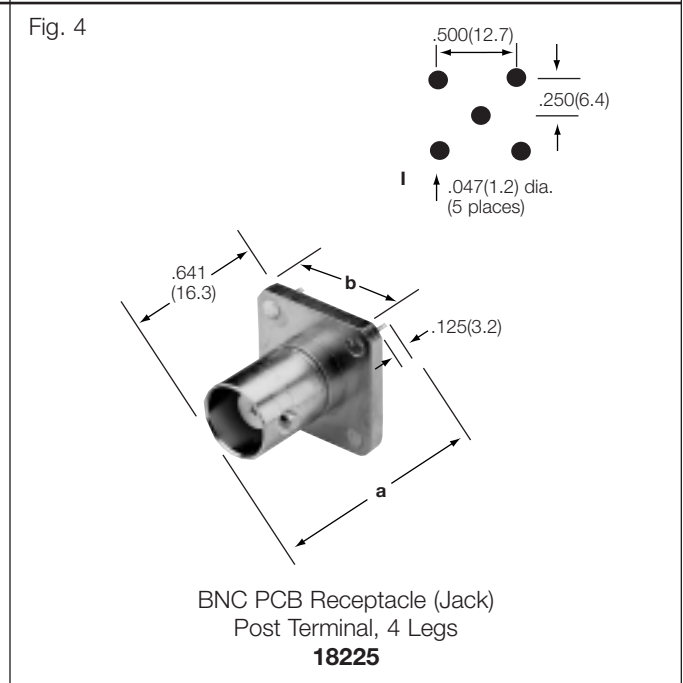
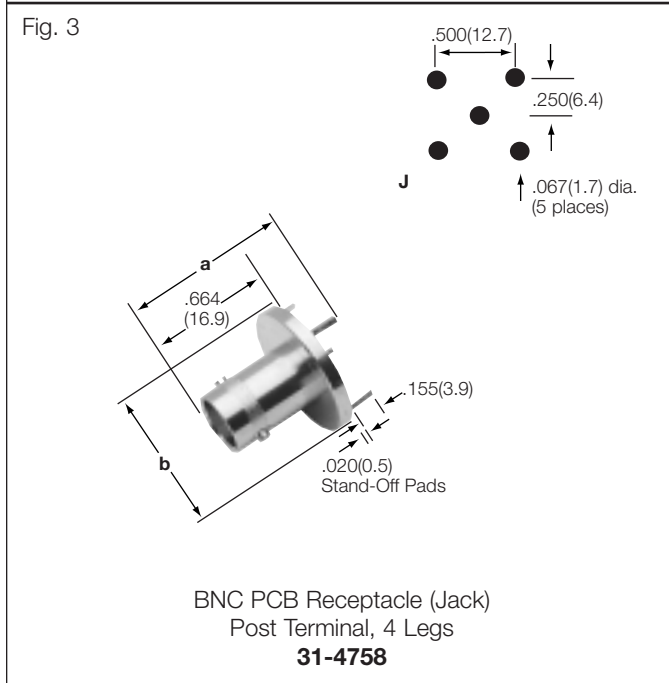
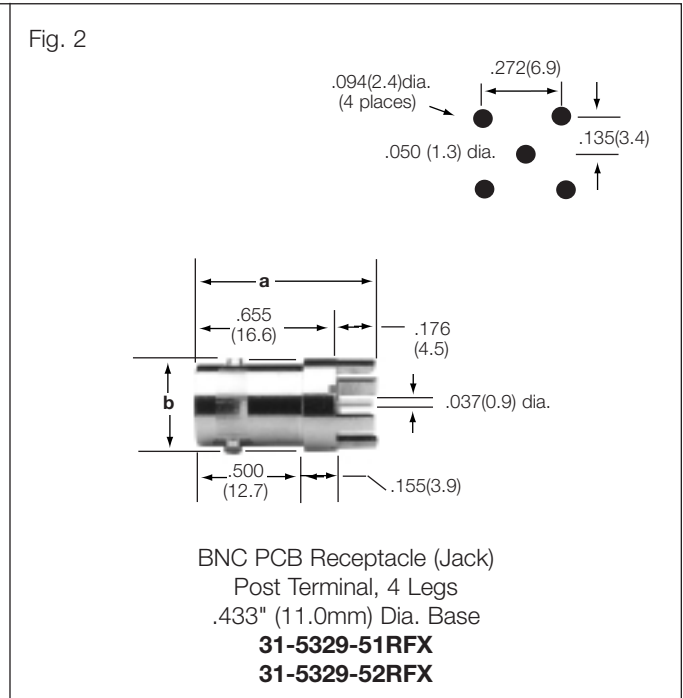
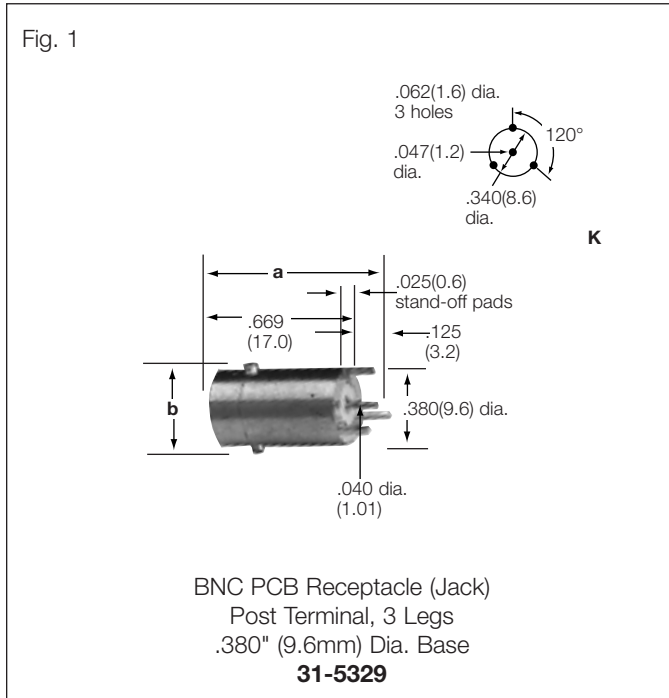
# BNC 50 ohm Bulkhead Receptacles



## BNC BULKHEAD RECEPTACLES

Description	Terminal Type	Dimensions, inches (mm)				Notes		Mtg. Hole	Military Number	Amphenol Number	Fig.
		a	b	d	e	Plt.	Ins.				
Front Mount, Isolated from Panel	Solder Cup	1.19(30.2)	.500(12.7)	.471(12.0)	.187(4.8)	P1	D22	Z	—	<b>31-10*</b>	1 ▲
	Solder Cup	1.18(30.0)	.500(12.7)	.471(12.0)	.125(3.2)	P1	D22	Z	—	<b>31-10-RFX</b>	1 ▲
Front Mount	Solder Cup	1.18(30.0)	.500(12.7)	.471(12.0)	.187(4.8)	P7	D22	Z	—	<b>31-10-RFXG1</b>	1 ▲
Front Mount	Solder Cup	1.06(27.0)	.500(12.7)	.484(12.3)	.125(3.2)	P1	D1	U	UG-1094/U	<b>31-221*†</b>	2 ▲
		1.06(27.0)	.500(12.7)	.472(12.0)	.125(3.2)	P7	D23	U	—	<b>31-221-RFX</b>	2 ▲
		1.06(27.0)	.500(12.7)	.469(11.9)	.156(4.0)	P1	D1	T	UG-625B/U	<b>31-236*</b>	2 ▲
		1.19(30.2)	.500(12.7)	.481(12.3)	.250(6.4)	P1	D1	U	UG-1094A/U	<b>31-2221</b>	2
Front Mount, Gold Plated Contact	Solder Cup	1.19(30.2)	.500(12.7)	.484(12.3)	.250(6.4)	P34	D1	U	M39012/21-0002	<b>31-3376*</b>	2
Front Mount, Pressurized	Solder Cup	1.30(32.9)	.578(14.7)	.594(15.1)	.250(6.4)	P1	D9	P	UG-657A/U	<b>31-239*</b>	2 ▲
Front Mount, Pressurized	Solder Cup	1.30(32.9)	.578(14.7)	.594(15.1)	.250(6.4)	P1	D9	P	UG-657/U	<b>31-102*</b>	2
Fr. Mount, Gold Plated Contact	Spade	1.20(30.6)	.594(15.1)	.516(13.1)	.250(6.4)	P33	D1	U	M39012/24-0002	<b>31-4238*</b>	2
Hermetic External Tooth Lockwasher	Spade	1.20(30.6)	.594(15.1)	.516(13.1)	.250(6.4)	P1	D1/11	U	UG-912/U	<b>31-238*</b>	2
Front Mount	Solder Cup	1.06(27.0)	.500(12.7)	.472(12.0)	.156(4.0)	P1	D1	T	UG-625/U	<b>5575*</b>	2 ▲
Rear Mount, Hermetic	Spade	1.34(34.0)	.687(17.4)	.831(21.1)	.250(6.4)	P33	D1/11	Y	M39012/24-0001	<b>31-4237*</b>	3
Front Mount Isolated from Panel Metal Mounting Threads	Solder Cup	1.06(27.0)	.625(15.9)	.571(14.5)	.187(4.7)	P4	D1	Y	—	<b>31-4890-1</b>	4

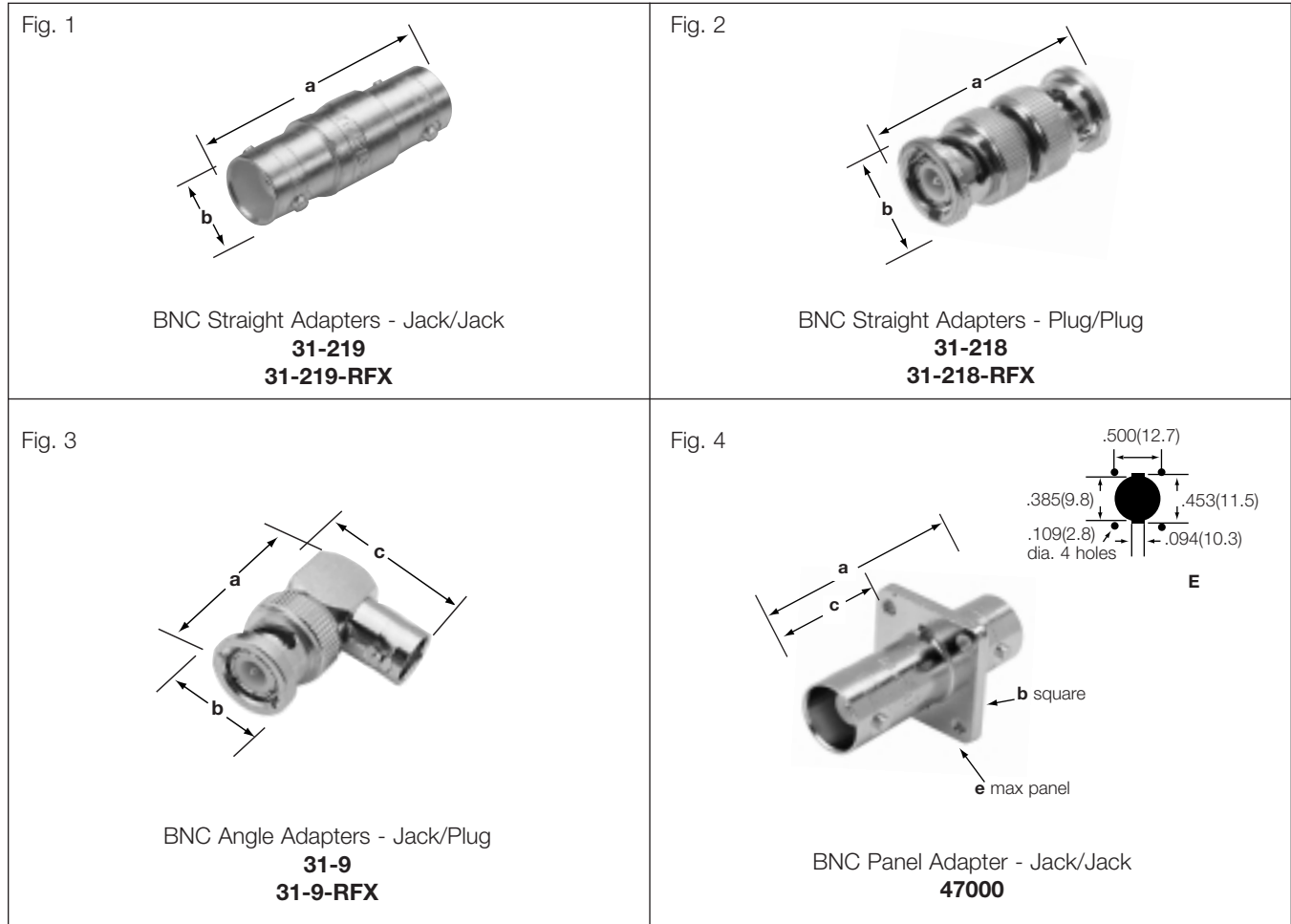
\* recognized under the component program of U.L., Inc. ▲ distributor stocked † includes grounding lug



## PRINTED CIRCUIT BOARD RECEPTACLES

Description	Terminal Type	Dimensions, inches (mm)		Notes			Mtg. Hole	Amphenol Number	Fig.
		a	b	Pit.	Ins.	Imp.			
PCB Receptacle, 3 Legs .125(3.2) Long/Post Terminal .040(1.0) Dia. x .125(3.2) Long/.025(0.6) Stand-off Pads	Blunt Post	.794(20.2)	.434(11.0)	P6	D1	50Ω	K	<b>31-5329</b>	1
PCB Receptacle, 4 Legs .176(4.5) Long/Post terminal .037(0.9) Dia.	Blunt Post	.831(21.1)	.433(11.0) dia	P1	D25	50Ω	F	<b>31-5329-51RFX</b>	2 ▲
PCB Receptacle, 4 Legs .176(4.5) Long/Post terminal .037(0.9) Dia.	Blunt Post	.831(21.1)	.433(11.0) dia	P17	D25	50Ω	F	<b>31-5329-52RFX</b>	2 ▲
PCB Receptacle, 4 Legs .155(3.9) Long/.020(0.5) Stand-off Pads/Post terminal .040(1.0) Dia.	Blunt Post	.819(20.8)	.812(20.6) dia	P1	D1	50Ω	J	<b>31-4758</b>	3
PCB Receptacle, 4 Legs and Post Terminal .040(1.0) Dia. x .125(3.2) Long	Blunt Post	.766(19.4)	.688(17.5) dia	P1	D1	50Ω	I	<b>18225</b>	4

▲ distributor stocked

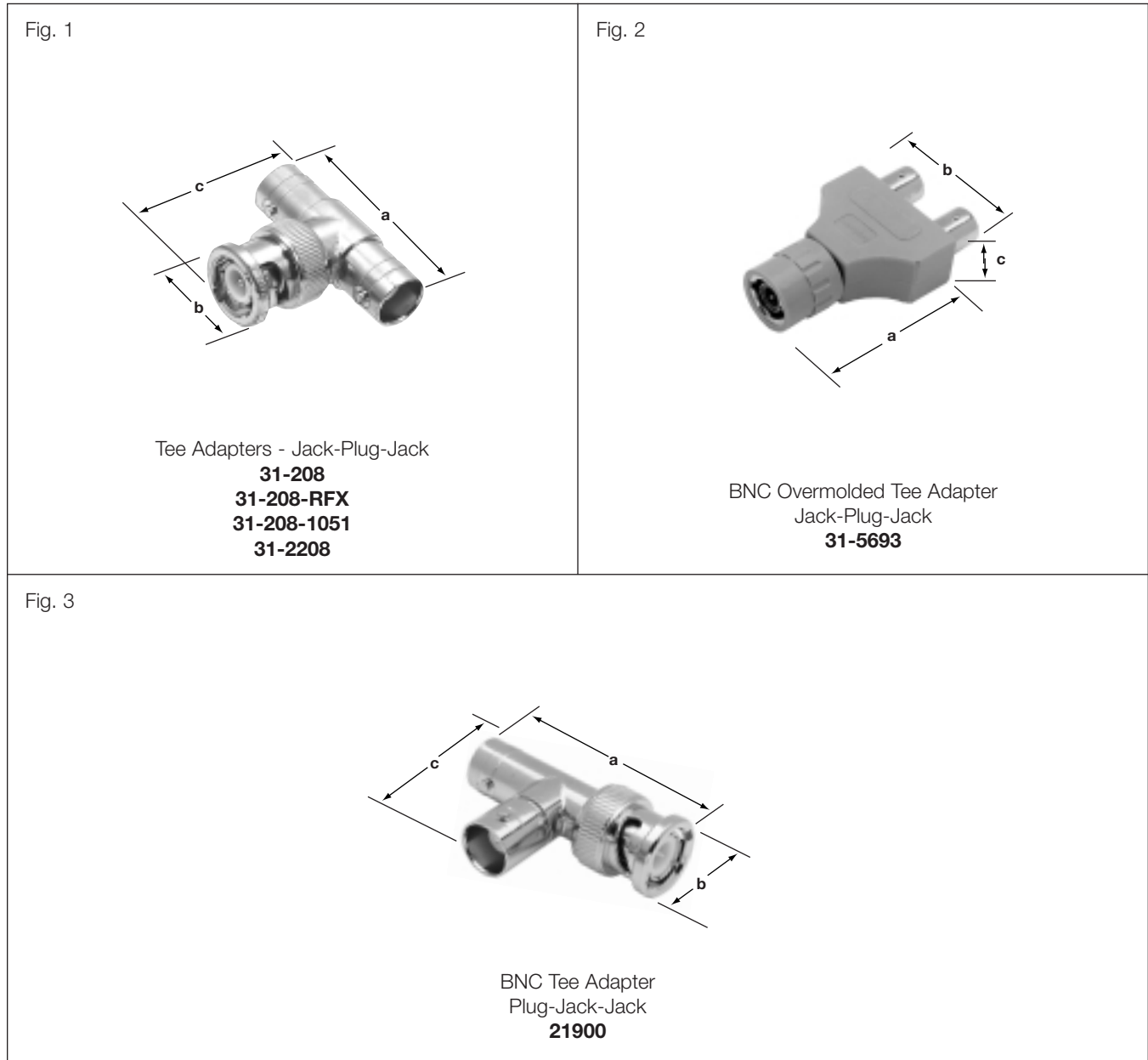


BNC

## BNC ADAPTERS - STRAIGHT, ANGLE, PANEL MOUNT

Description		Dimensions, inches (millimeters)				Notes		Mtg. Hole	Military Number	Amphenol Number	Fig.
		a	b	c	e	Plt.	Ins.				
Straight	Jack-Jack	1.28(32.5)	.437(11.1)	—	—	P1	D1	—	UG-914/U	<b>31-219*</b>	1 ▲
						P7	D26	—	—	<b>31-219-RFX</b>	1 ▲
Straight	Plug-Plug	1.25(31.8)	.562(14.3)	—	—	P1	D1	—	UG-491A/U	<b>31-218*</b>	2 ▲
						P7	D1	—	—	<b>31-218-RFX</b>	2 ▲
Angle	Jack-Plug	1.06(27.0)	.562(14.3)	1.02(25.8)	—	P1	D1	—	UG-306/U	<b>31-9*‡</b>	3 ▲
		1.06(27.0)	.562(14.3)	1.02(25.8)	—	P1	D1	—	—	<b>31-9-RFX</b>	3 ▲
		1.09(27.6)	.594(15.1)	1.02(25.8)	—	P34	D1	—	M55339/14-00306	<b>31-4561</b>	3
Panel, 3-56 Tapped Flange Holes	Jack-Jack	1.28(32.5)	.688(17.5)	.691(17.6)	.250(6.4)	P1	D1	E	—	<b>47000*</b>	4

\* recognized under the component program of U.L., Inc. ▲ distributor stocked ‡ IBM 6028521



## BNC TEE ADAPTERS

Description		Dimensions, inches (millimeters)			Notes		Military Number	Amphenol Number	Fig.
		a	b	c	Plt.	Ins.			
Tee	Jack-Plug-Jack	1.28(32.5)	.562(14.3)	1.06(27.0)	P1	D1	UG-274A/U	<a href="#">31-208*</a>	1 ▲
Tee	Jack-Plug-Jack	1.30(33.0)	.571(14.5)	1.04(26.3)	P7	D23	—	<a href="#">31-208-RFX</a>	1 ▲
Tee	Jack-Plug-Jack	1.28(32.5)	.562(14.3)	1.06(27.0)	P15	D1	—	<a href="#">31-208-1051</a>	1
Tee	Jack-Plug-Jack	1.28(32.5)	.562(14.3)	1.06(27.0)	P4	D1	UG-274B/U	<a href="#">31-2208*</a>	1
Tee, Overmolded	Jack-Plug-Jack	1.72(43.6)	1.32(33.5)	.550(14.0)	P7	D14	—	<a href="#">31-5693</a>	2 ▲
Tee	Plug-Jack-Jack	1.53(38.9)	.375(9.52)	1.00(25.4)	P1	D9	—	<a href="#">21900*</a>	3

\* recognized under the component program of U.L, Inc. ▲ distributor stocked

Fig. 1

BNC Bulkhead Adapters - Jack/Jack  
**4525**  
**31-220G-RFX**  
**31-220H**  
**31-220N**  
**31-220N-RFX**  
**31-3220**

Fig. 2

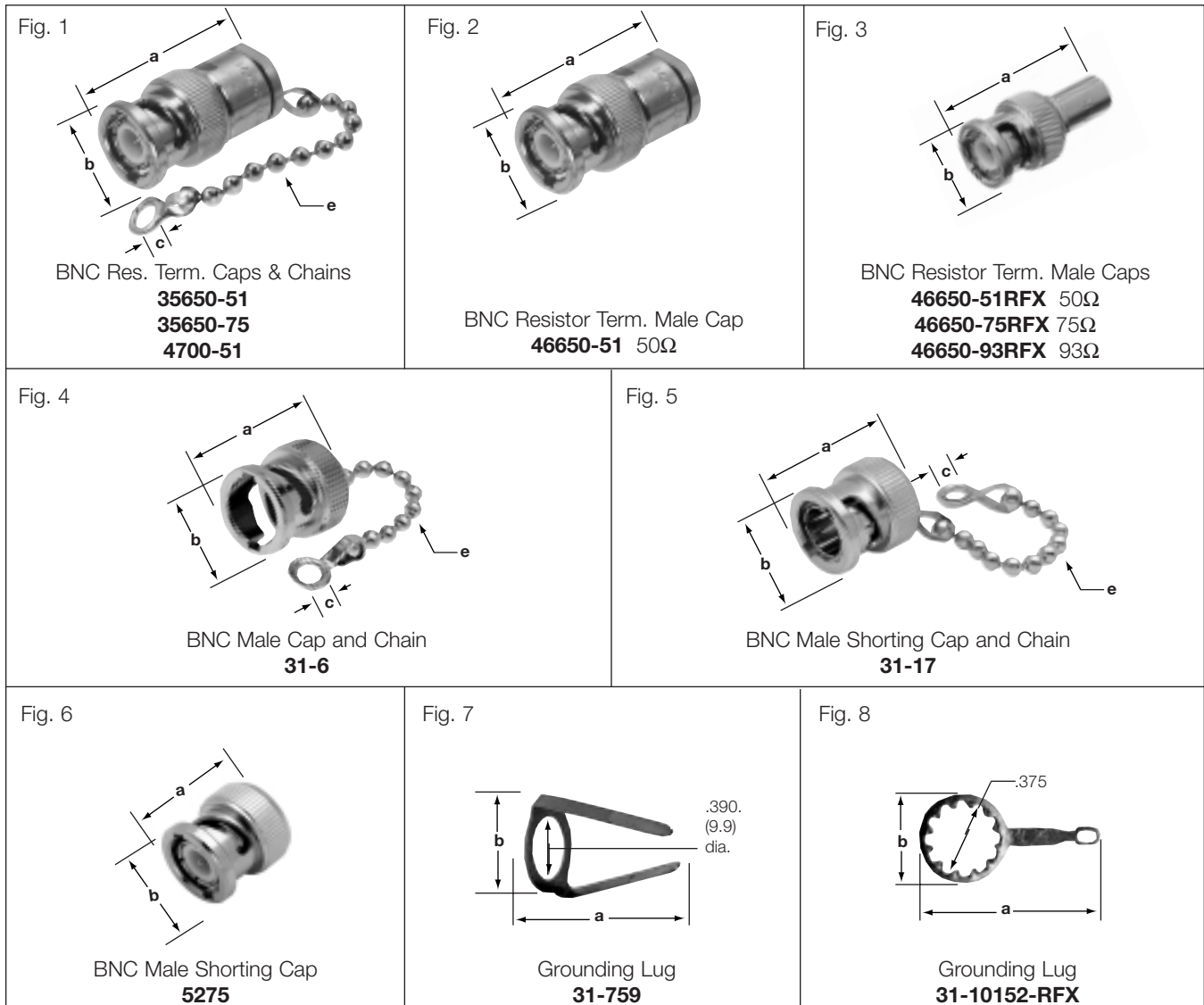
BNC Isolated Bulkhead Adapters  
 Jack-Jack  
**31-4803**  
**31-4803-1101**  
**31-4803-RFX**

BNC

## BNC BULKHEAD ADAPTERS

Description		Dimensions, inches (millimeters)				Notes		Mtg. Hole	Military Number	Amphenol Number	Fig.	
		a	b	c	e	Pit.	Ins.					
Sealed, 50 PSI	Jack-Jack	1.40(35.6)	.625(15.9)	.683(17.3)	.187(4.8)	P1	D1	Y	UG-492A/U	<b>31-220H</b> ‡	1	▲
	Jack-Jack	1.53(38.9)	.688(17.5)	.672(17.0)	.281(7.1)	P4	D1	Y	UG-492D/U	<b>31-3220*</b>	1	▲
Gasketed	Jack-Jack	1.56(39.6)	.689(17.5)	.681(17.3)	.295(7.5)	P7	D23	Y	—	<b>31-220G-RFX</b>	1	▲
	Jack-Jack	1.40(35.6)	.800(20.3)	.659(16.7)	.160(4.1)	P1	D1	Y	—	<b>4525*</b>	1	▲
Non-sealed	Jack-Jack	1.40(35.6)	.800(20.3)	.664(16.9)	.187(4.8)	P1	D1	Y	—	<b>31-220N</b>	1	▲
		1.28(32.5)	.610(15.5)	.492(12.5)	.216(5.5)	P7	D23	Y	—	<b>31-220N-RFX</b>	1	▲
Isolated from Panel	Jack-Jack	1.28(32.5)	.625(15.9)	.460(11.7)	.187(4.8)	P1	D12	Y	—	<b>31-4803</b>	2	▲
		1.28(32.5)	.625(15.9)	.460(11.7)	.187(4.8)	P15	D12	Y	—	<b>31-4803-1101</b>	2	
		1.28(32.5)	.625(15.9)	.460(11.7)	.187(4.8)	P15	D12	Y	—	<b>31-4803-RFX</b>	2	

\* recognized under the component program of U.L, Inc. ▲ distributor stocked ‡ IBM 5252764



## BNC CAPS & ACCESSORIES

Description	Dimensions, inches (millimeters)				Notes		Military Number	Amphenol Number	Fig.	
	a	b	c	e	Pt.	Ins.				
Male Cap & Chain Resistor Terminated, 1% 1/2watt	50Ω	1.19(30.2)	.562(14.3)	.144(3.7)	3.50(88.9)	P1	D1	—	35650-51*	1
	75Ω					P1	D1	—	35650-75*	1
	51Ω					P1	D6	MX-554	4700-51**	1
Male Cap, Resistor Terminated, 1% 1 watt	51Ω	1.12(28.6)	.562(14.3)	—	—	P1	D1	—	46650-51*	2
Male Cap, Resistor Terminated, 1% 1 watt	50Ω	1.11(28.1)	.571(14.5)	—	—	P1	D23	—	46650-51RFX	3
	75Ω								46650-75RFX	3
	93Ω								46650-93RFX	3
Male Cap & Chain		.688(17.5)	.563(14.3)	.130(3.3)	2.25(57.2)	P3	—	CW-123/U	31-6*	4
Male Shorting Cap & Chain		.688(17.5)	.563(14.3)	.144(3.7)	2.50(63.5)	P1	—	CW-159/U	31-17*	5
Male Shorting Cap		.594(15.1)	.563(14.3)	—	—	P1	—	—	5275*	6
Pkg. of 25 Lugs Used Inside Panel on Front Mount Bulkhead Receptacles to Ground Cable Shield*		.961(24.4)	.578(14.7)	—	—	P3	—	(IBM 2245373)	31-759*	7
Pkg. of 25 Lugs Used Inside Panel on Front Mount Bulkhead Receptacles for Ground Wire to Circuit		1.156(29.4)	.578(14.7)	—	—	P8	—	—	31-10152-RFX*	8

■ IBM 3110787 \* recognized under the component program of U.L., Inc. ▲ distributor stocked



**Description**

To meet the need for higher performance, impedance matched cable interconnections, Amphenol offers a full line of 75 ohm BNC connectors. These connectors can be used in a variety of applications where true 75 ohm performance is needed to insure lower signal distortion.



**Features/Benefits**

Designed for the most popular 75 ohm cables used in broadcast and CATV applications as well as for plenum cables and others — these connectors feature crimp-crimp cable affixment for quick and reliable installation.

Two distinct types of 75Ω BNCs are available. Both types mate with each other and with 50Ω BNCs.

- Type 1 is designated 75Ω BNC-T1 and provides constant 75Ω performance with low VSWR DC to 4 GHz.
- Type 2 is designated 75Ω BNC-T2 and is usable with low reflection DC to 1 GHz. For applications above 1 GHz, Type 1 is recommended.

**Applications**

- Broadcast
- Satellite TV Earth Stations
- Telecommunications
- LAN
- Test and Measurement
- Security Transmission Systems
- Telecom
- Computer Networks
- HDTV

**75 ohm**

75 ohm Connectors	123
BNC Plugs and Jacks	125-132
Adapters	133-134

# BNC 75 ohm Specifications

## ELECTRICAL

Impedance	75 ohms nominal
Frequency range	0-4 GHz
Voltage rating	500 volts rms
Dielectric withstanding voltage	1,500 volts rms.
Insulation resistance	5,000 megohms min.
VSWR	Type 1: 1.5 + 0.1 f(GHz) DC to 4 GHz Type 2: 1.00 + 0.25 f(GHz) DC to 1 GHz

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

## MATERIAL

Body, coupling sleeve, male contact	Brass
Female contact	Beryllium copper or phosphor bronze
Crimp ferrule	Copper alloy
Plating	Contacts: gold Other metal parts: Nickel

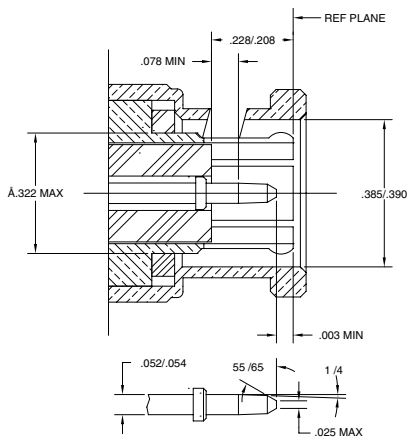
## MECHANICAL

Mating	2-stud bayonet lock
Cable affixment	Crimp-Crimp

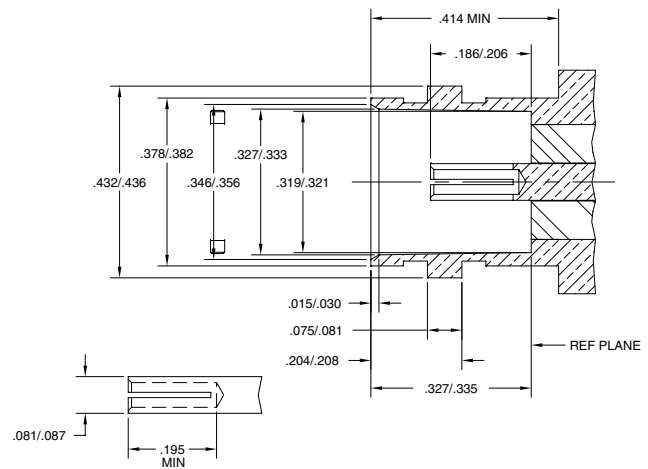
## ENVIRONMENTAL

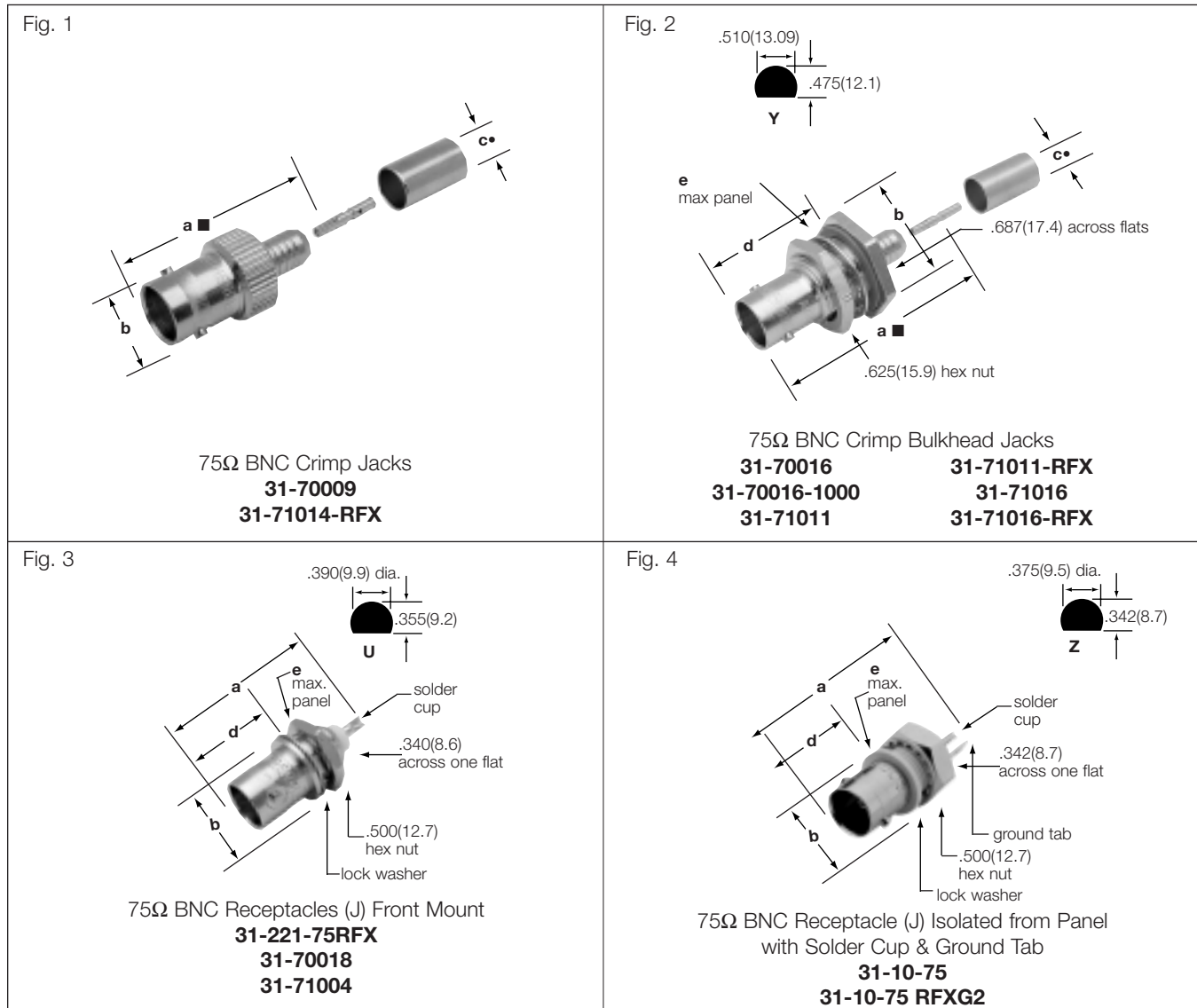
Temperature range	TFE insulators: - 65°C to + 165°C Copolymer of Styrene: - 55°C to + 85°C
Weatherproof	Clamps with clamp gaskets. Crimps with heat-shrink tubing.
Hermetic seals	Pass helium leak test of 2 X 10 <sup>-8</sup> cc/sec
Shock	MIL-Std. 202 method 202
Vibration	MIL-Std. 202 method 204 (test cond. D)
Moisture resistance	MIL-Std. 202 method 106
Corrosion	MIL-Std. 202 method 101 (test cond. B)
Temperature cycling	MIL-Std. 202 method 102 (test cond. D)
Altitude	MIL-Std. 202 method 105 (test cond. C)

## PLUG



## JACK

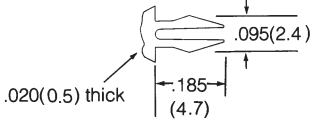

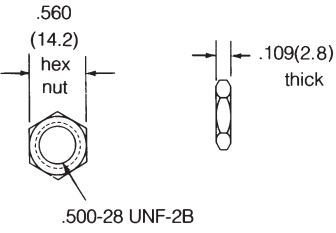

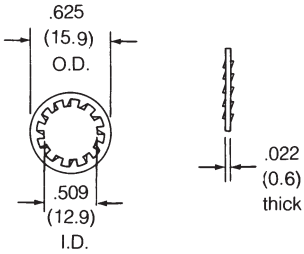
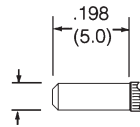




## 75Ω BNC JACKS & RECEPTACLES

Cable RG/U	Connector Type	Dimensions, inches (millimeters)					Notes			Mtg. Hole	75Ω Type	Amphenol Number	Fig.	
		a ■	b	c ●	d	e	CAI	Pit.	Ins.					
59, Belden	Jack	1.18(30.0)	.510(12.9)	.261(6.6)	—	—	C31	P17	D1	—	T1	<b>31-70009</b>	1	
8241, 8263	Bulkh. Jack	1.41(35.7)	.795(20.2)dia	.261(6.6)	.812(20.6)	.250(6.4)	C32	P15	D1	Y	T2	<b>31-71011</b>	2	
59, 62, 140, 210	Bulkh. Jack	1.38(35.1)	.687(17.5)	.260(6.6)	.710(18.0)	.138(3.5)	C32	P7	D23	Y	T2	<b>31-71011-RFX</b>	2	
179, 187	Jack	1.37(35.0)	.435(11.0)	.106(2.7)	—	—	C32	P7	D23	—	T2	<b>31-71014-RFX</b>	1	
	Bulkh. Jack	1.48(37.7)	.687(17.4)hex	.120(3.0)	.812(20.6)	.250(6.4)	C31	P17	D1	Y	T1	<b>31-70016</b>	2	
		1.41(35.7)	.795(20.2)dia	.120(3.0)	.812(20.6)	.250(6.4)	C32	P15	D1	Y	T2	<b>31-71016</b>		
1.43(36.4)	.687(17.4)hex	.106(2.7)	.710(18.0)	.138(3.5)	C32	P7	D23	Y	T2	<b>31-71016-RFX</b>	2			
Dbl. Br. 179 ATT 19224-L2	Bulkh. Jack	1.48(37.7)	.687(17.4)hex	.175(4.4)	.812(20.6)	.250(6.4)	C31	P15	D1	Y	T1	<b>31-70016-1000</b>	2	
		Bulkhead Receptacle (J) Front Mount	1.06(27.0)	.490(12.4)	—	.472(12.0)	.125(3.2)	—	P15	D1	U	T2	<b>31-71004</b>	3
			1.06(27.0)	.490(12.4)	—	.472(12.0)	.250(6.4)	—	P15	D1	U	T1	<b>31-70018</b>	
1.05(26.7)	.500(12.7)	—	.475(12.1)	.138(3.5)	—	P7	D23	U	T2	<b>31-221-75RFX</b>				
Bulkhead Receptacle (J) Frnt Mt, Iso. from Panel		1.19(30.2)	.490(12.4)	—	.472(12.0)	.187(4.7)	—	P15	D12	Z	T2	<b>31-10-75</b>	4	
Bulkhead Receptacle (J) Frnt Mt, Iso. from Panel		1.19(30.2)	.490(12.4)	—	.472(12.0)	.187(4.7)	—	P7	D12	Z	T2	<b>31-10-75-RFXG2</b>	4	

■ Includes outer ferrule ● accommodates cable diameter ▲ Distributor Stocked

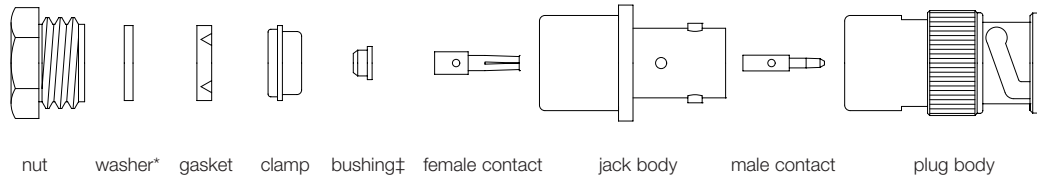
 <p>Fork Pin holds connectors rigidly to P.C. Board for high temperature and mass production assembly</p>	<p>Fig. 4</p>   <p>Pkg. of 100, Hex Nut for BNC Bulkhead PCB Receptacles <b>31-5652▲</b> Nickel Plated</p>	<p>Fig. 5</p>   <p>Pkg. of 100, Lockwasher for BNC PCB Bulkhead Receptacles <b>31-5653▲</b> Nickel Plated</p>
 <p>Round Pin (Standard)</p>		

## BNC PRINTED CIRCUIT BOARD BULKHEAD RECEPTACLES

Description	Terminal Type	Dimensions, inches (millimeters)			Notes		Mtg. Hole	Notes	Mtg. Pin Type	Imp	Amphenol Number	Fig.
		a	b	e	Plt.	Ins.						
Standard Height Printed Circuit Angle Bulkhead Receptacle (J)☆	Blunt Posts for Signal & Ground	1.40(35.6)	.810(20.6)	.250(6.4)	P26	D17	R/P	Iso. White Housing	Round	75Ω	<b>31-71047</b>	1
					P26	D17			Fork	75Ω	<b>31-71047-1010</b>	
					P26	D20	R/P	Iso. Black Housing	Round	75Ω	<b>31-71046</b>	
					P26	D20			Fork	75Ω	<b>31-71046-1010</b>	
					P26	D22	R/P	Metal Housing	Round	75Ω	<b>31-71043</b>	
P26	D22	Fork	75Ω	<b>31-71043-1010</b>								
Low Profile Printed Circuit Angle Bulkhead Receptacle (J)☆	Blunt Posts for Signal & Ground	1.40(35.6)	.810(20.6)	.250(6.4)	P26	D17	R/P	Iso. White Housing	Round	75Ω	<b>31-71052</b>	2
					P26	D17			Fork	75Ω	<b>31-71052-1010</b>	
					P26	D17	R/P	Iso. Black Housing	Fork	75Ω	<b>31-71052-10RFX</b>	
					P26	D20			Round	75Ω	<b>31-71053</b>	
					P26	D20	R/P	Metal Housing	Fork	75Ω	<b>31-71053-1010</b>	
P26	D22	Round	75Ω	<b>31-71042</b>								
Vertical Printed Circuit Bulkhead Receptacle (J)☆	Blunt Posts for Signal & Ground	1.40(35.6)	.810(20.6)	.250(6.4)	P26	D17	V/P	Iso. White Housing	Round	75Ω	<b>31-71058</b>	3
					P26	D17			Fork	75Ω	<b>31-71058-1010</b>	
					P26	D20	V/P	Iso. Black Housing	Round	75Ω	<b>31-71059</b>	
					P26	D20			Fork	75Ω	<b>31-71059-1010</b>	
					P26	D22	V/P	Metal Housing	Round	75Ω	<b>31-71045</b>	
P26	D22	Fork	75Ω	<b>31-71045-1010</b>								
Hex Nut for BNC Bulkhead PCB Receptacles, Package of 100 ea.					P3	—	—	Nickel Plated	—	—	<b>31-5652</b>	4
Lockwasher for BNC Bulkhead PCB Receptacles, Package of 100 ea.					P3	—	—	Nickel Plated	—	—	<b>31-5653</b>	5

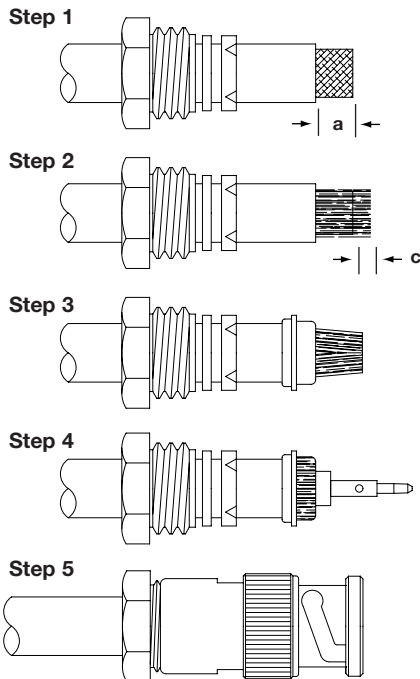
☆ Jam nuts and lockwashers sold separately. See Figs. 4 & 5 ▲ distributor stocked

## CLAMP CONNECTORS



\* Not supplied on all items ‡ For use on RG-62, 71, 122, 178, 180, 196, 210

Amphenol Number	Connector Type	Cable RG-/U	Stripping Dims, Inches (Millimeters)	
			a	c
6775	BNC Plug	8, 9, 11, 213, 214	.490(12.4)	.200(5.1)
6775-75	75Ω BNC Plug	11	.490(12.4)	.200(5.1)
8525	BNC Angle Plug	58, 141, 142, 400	.343(8.7)	.187(4.7)
8575	BNC Angle Plug	59, 62, 140, 210	.297(7.5)	.094(2.4)
9350	BNC Plug	6	.405(10.3)	.094(2.4)
15875	BNC Plug	178, 196	.156(3.96)	.078(1.98)
16300	BNC Plug	180	.250(6.4)	.094(2.4)
33275	BNC Angle Plug	174, 179, 187, 188, 316	.540(13.7)	.156(3.96)
69475	BNC Plug	174, 179, 187, 188, 316	.281(7.1)	.172(4.4)
84975	BNC Plug	122	.281(7.1)	.172(4.4)
86350	BNC Bulkhead Jack	174, 179, 187, 188, 316	.265(6.73)	.156(3.96)
86425	BNC Panel Jack	174, 179, 187, 188, 316	.313(7.95)	.203(5.15)
86850	BNC Bulkhead Jack	178, 196	.266(6.75)	.109(2.76)
31-2	BNC Plug	58, 141, 142, 400	.312(7.9)	.094(2.4)
31-2-RFX	BNC Plug	58, 141, 142A	.315(8.0)	.118(3.0)
31-15	BNC Jack	59, 62, 71, 140, 210	.297(7.54)	.109(2.75)
31-202	BNC Plug	55, 58, 141, 142, 223, 400	.274(6.95)	.094(2.4)
31-204	BNC Angle Plug	55, 58, 141, 142, 223, 400	.297(7.54)	.109(2.8)
31-206	BNC Bulkhead Jack	58, 141, 142, 400	.297(7.5)	.109(2.8)
31-207	BNC Bulkhead Jack	59, 62, 71, 140, 210	.297(7.54)	.109(2.75)
31-212	BNC Plug	59, 62, 71, 140, 210, 302	.250(6.4)	.094(2.4)
31-212-1005	BNC Plug	59 (20GA CC)	.250(6.4)	.094(2.4)
31-850	BNC Angle Plug	59, 62, 71, 140, 210	.375(9.52)	.125(3.17)
31-3202	BNC Plug	55, 58, 141, 142, 223, 400	.250(6.4)	.094(2.4)
31-3301	BNC Plug	58, 141, 142, 223	.250(6.4)	.094(2.4)
31-3302	BNC Plug	59, 62, 71, 140, 210	.250(6.4)	.094(2.4)



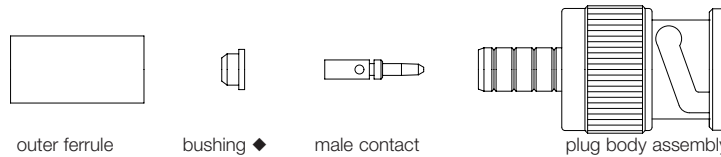
▲ For angle plugs only: (except 31-204) Solder center conductor to preassembled contact. Assemble cap and lightly punch center of cap for retention in body, or solder in place.

- Step 1** Place nut, washer (when supplied) and gasket over cable and strip jacket to dimension **a** shown in table above.
- Step 2** Comb out braid and fold out. Trim insulation off center conductor to dimension **c** shown in table above. [For RG-62, 71 and 210/U cable, trim an additional .032"(0.8mm) of insulation off center conductor and add bushing.] Tin center conductor.
- Step 3** Pull braid wires forward and taper toward center conductor. Place clamp over braid and push back against cable jacket.
- Step 4** Fold back braid wires as shown, trim to proper length [approximately .125" (3.2mm) long] and form over clamp as shown. Braid wire should not extend beyond step of braid clamp. Solder contact to center conductor, sliding bushing first (when supplied) over center conductor. ▲
- Step 5** Insert cable and parts into connector body. Make sure sharp edge of clamp seats properly in gasket. Tighten nut to approximately 15 inch pounds.

Assembly

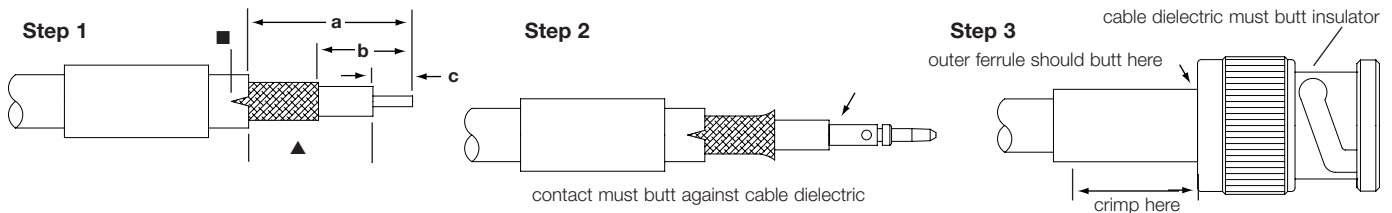
# Assembly Instructions-C26 BNC

## 3-PIECE CRIMP PLUGS



◆ used with RG-62, 71, 210 cable only

Amphenol Number	Connector Type	Cable RG-/U	Hex Crimp Data				Stripping Dimensions, inches (mm)		
			Cavity for Contact	Cavity for Outer Ferrule	Die Set for Tool 227-944*	CTL Series Tool Number	a	b	c
36650-1003	BNC Plug	Belden 82907, 88240 89907, Plenum 58	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
36650-3RFX	BNC Plug	Plenum 58	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.630(16.0)	.319(8.1)	.157(4.0)
36875	BNC Plug	55, 142, 223, 400	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
68175-1003	BNC Plug	Belden 9259	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
68175-1005	BNC Plug	59 (20AG CC)	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
68175-1011	BNC Plug	Belden 1560A, 82259, 89259, Plenum 59, 62	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
68175-11RFX	BNC Plug	Plenum 59, 62	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.630(16.0)	.303(7.7)	.157(4.0)
68175-5RFX	BNC Plug	59 (20GA CC)	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.630(16.0)	.303(7.7)	.157(4.0)
31-242	BNC Plug	179, 187	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-242-RFX	BNC Plug	179, 187	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.590(15.0)	.323(8.2)	.118(3.0)
31-315	BNC Plug	174, 188, 316	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-315-RFX	BNC Plug	174, 188, 316	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-315-1005	BNC Plug	Dbl. Br. 316	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-320	BNC Plug	58, 141	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-320-RFX	BNC Plug	58, 141, 142A	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.630(16.0)	.303(7.7)	.156(4.0)
31-320-1006	BNC Plug	Belden 9907, 89907	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-321	BNC Plug	59, 62	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-321-RFX	BNC Plug	59, 62	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.630(16.0)	.303(7.7)	.156(4.0)
31-321-1000	BNC Plug	Belden 8281, 88281	.068(1.7)	.324(8.2)	227-1221-32	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-321-10RFX	BNC Plug	Belden 8281	.068(1.7)	.324(8.2)	227-1221-32	CTL-2	.630(16.0)	.303(7.7)	.156(4.0)
31-325	BNC Plug	Belden 8218	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-326	BNC Plug	55, 142, 223	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-326-RFX	BNC Plug	55, 142, 223, 400	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-4320	BNC Plug	58, 141	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-4321	BNC Plug	59, 62	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-4411	BNC Plug	Belden 8213	.100(2.5)	.429(10.9)	227-1221-25	CTL-3	.650(16.5)	.250(6.4)	.156(4.0)
31-4427	BNC Plug	142, 400	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-5558-RFX	BNC Plug	6 Type (.314OD)	.068(1.7)	.324(8.2)	227-1221-32	CTL-2	.630(16.0)	.303(7.7)	.156(4.0)
31-5800	BNC Plug	58, 141, PL-58	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-5900	BNC Plug	59, 62, 59 (20GA CC), Plenum -59, 62	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)



**Step 1** Strip cable jacket, braid, and dielectric to dimensions in table above. [for RG-62,71,210/U cable, trim an additional .039"(1.0mm) of insulation off center conductor and add bushing] All cuts are to be sharp and square. Important: Do not nick braid, dielectric, and center conductor. Slide outer ferrule onto cable as shown.

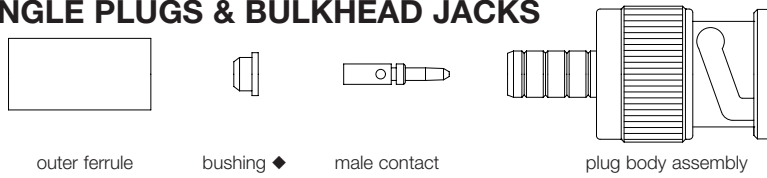
**Step 2** Flare slightly end of cable braid as shown to facilitate insertion of inner ferrule. Important: Do not comb out braid ▲. Place contact on cable center conductor so that it butts against cable dielectric. Crimp contact in place using Die Set Cavity indicated in table above. When using RG-62, 71, 210 cable, install bushing over center conductor before installing contact.

**Step 3** Install cable assembly into body assembly so that inner ferrule portion slides under braid. Push cable assembly forward until contact snaps into place in insulator. Slide outer ferrule over braid and up against connector body. Crimp outer ferrule using Die Set Cavity specified in table above.

▲ For RG-174, 179, 187, 188, 316/U cables only, slit jacket back .100"(2.5mm) as shown. Before attaching center contact, slide metal spacer/TFE sleeve (not shown) over cable dielectric and under braid. The center contact should butt against the dielectric and TFE sleeve.

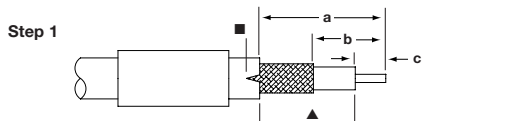
\* for pneumatic crimp tool 227-60, use die sets indicated in this column.

### 3-PIECE CRIMP ANGLE PLUGS & BULKHEAD JACKS

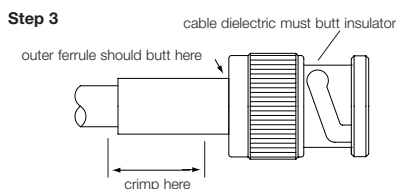
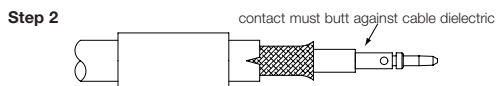


◆ used with RG-62, 71, 210 cable only

Amphenol Number	Connector Type	Cable RG-/U	Hex Crimp Data				Stripping Dimensions, inches (mm)		
			Cavity for Contact	Cavity for Outer Ferrule	Die Set for Tool 227-944*	CTL Series Tool Number	a	b	c
36800	BNC Jack	58, 141	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
36800-RFX	BNC Jack	58, 141	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.630(16.0)	.303(7.7)	.156(4.0)
68150	BNC Jack	59, 62, 140	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
95700	BNC Bulkhead Jack	55, 142, 223	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-245	BNC Bulkhead Jack	179, 187	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-316	BNC Angle Plug	174, 188, 316	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.578(14.6)	.328(8.3)	.125(3.1)
31-317	BNC Jack	174, 188, 316	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-318	BNC Bulkhead Jack	174, 188, 316	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-318-RFX	BNC Bulkhead Jack	174, 188, 316	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.630(16.0)	.362(9.2)	.156(4.0)
31-318-1001	BNC Bulkhead Jack	DbL Br. 316	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.593(15.1)	.250(6.4)	.156(4.0)
31-245-RFX	BNC Bulkhead Jack	179, 187	.068(1.7)	.178(4.5)	227-1221-9	CTL-2	.630(16.0)	.362(9.2)	.156(4.0)
31-334	BNC Angle Plug	55, 142, 223, 400	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.578(14.6)	.328(8.3)	.125(3.1)
31-335	BNC Angle Plug	58, 141	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.578(14.7)	.328(8.3)	.125(3.2)
31-335-RFX	BNC Angle Plug	58, 144	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.677(17.2)	.350(8.9)	.156(4.0)
31-336	BNC Angle Plug	59, 62	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.578(14.7)	.328(8.3)	.125(3.2)
31-336-RFX	BNC Angle Plug	59, 62	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.677(17.2)	.350(8.9)	.156(4.0)
31-342	BNC Bulkhead Jack	58, 141	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-342-RFX	BNC Bulkhead Jack	58, 141, 142, 223	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.689(17.5)	.362(9.2)	.157(4.0)
31-343-1002	BNC Bulkhead Jack	Pl. 59 (20 AWG)	.068(1.7)	.255(6.5)	227-1221-13	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-343-RFX	BNC Bulkhead Jack	59, 62, 140, 210	.068(1.7)	.255(6.5)	227-1221-11	CTL-1	.689(17.5)	.362(9.2)	.157(4.0)
31-4327	BNC Jack	58, 141	.068(1.7)	.213(5.4)	227-1221-11	CTL-1	.593(15.1)	.250(6.4)	.156(4.0)
31-5911-RFX	BNC Angle Plug	58,141	Solder	.213	227-1221-11	CTL-1,3,5	.709(18.0)	.382(9.7)	.161(4.1)
31-5914-RFX	BNC Angle Plug	59	Solder	.255	227-1221-13	CTL-1,5,6,8	.709(18.0)	.382(9.7)	.161(4.1)
31-5991-RFX	BNC Angle Plug	316	Solder	.128	227-1221-3	CTL-9,13	.618(15.7)	.350(8.9)	.157(4.0)
31-316-RFX	BNC Angle Plug	316	Solder	.128	227-1221-3	CTL-9,13	.618(15.7)	.350(8.9)	.157(4.0)
31-70239	BNC Angle Plug	734A	.042	.255	—	CTL-14	.630 (16.0)	.303 (7.7)	.157 (4.0)
31-70240	BNC Angle Plug	735A	.042	.187	—	CTL-15	.630 (16.0)	.303 (7.7)	.157 (4.0)
31-70234	BNC Plug	Beld 1694	.042	.319	—	CTL-14	.630 (16.0)	.303 (7.7)	.157 (4.0)
31-70235	BNC Plug	Beld 8281	.042	.324	—	CTL-14	.630 (16.0)	.303 (7.7)	.157 (4.0)
31-70236	BNC Plug	Beld 8218	.042	.178	—	CTL-15	.630 (16.0)	.303 (7.7)	.157 (4.0)
31-70237	BNC Plug	734A	.042	.255	—	CTL-14	.630 (16.0)	.303 (7.7)	.157 (4.0)
31-70238	BNC Plug	735A	.042	.187	—	CTL-15	.630 (16.0)	.303 (7.7)	.157 (4.0)
31-315-RFX	BNC Plug	174,188,316	.068	.178	227-1221-9	CTL-2	.593 (15.1)	.250 (6.4)	.156 (4.0)
31-317-RFX	BNC Jack	174,188,316	.068	.178	227-1221-9	CTL-2	.634 (16.1)	.303 (7.7)	.156 (4.0)
31-335-RFX	BNC Angle Plug	58,141,142	.068	.213	227-1221-11	CTL-1,5	.677 (17.2)	.350 (8.9)	.157 (4.0)
31-5998-RFX	BNC Plug	B8214,B9913,B9914	.118	.429	227-1221-61	CTL-11	.630 (16)	.303 (7.7)	.157 (4.0)
31-5999-RFX	BNC Plug	8x,LMR240	.068	.255	227-1221-13	CTL-1,5	.630 (16)	.303 (7.7)	.157 (4.0)
31-6004-RFX	BNC Angle Plug	B9913,B9914	Solder	.429	227-1221-25	CTL-4	.728 (18.5)	.401 (10.2)	.244 (6.2)
31-6005-RFX	BNC Angle Plug	8x,LMR240	Solder	.255	227-1221-13	CTL-1,5	.728 (18.5)	.401 (10.2)	.244 (6.2)
31-6006	BNC Plug	8x,LMR240	.068	.255	227-1221-13	CTL-1,5	.593 (15.1)	.250 (6.4)	.156 (4.0)



▲ For RG-174, 179, 187, 188, 316/U cables only, slit jacket back .100"(2.5mm) as shown. Before attaching center contact, slide metal spacer/TFE sleeve (not shown) over cable dielectric and under braid. The center contact should butt against the dielectric and TFE sleeve.



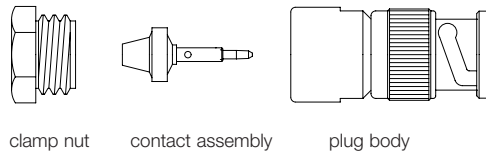
**Step 1** Strip cable jacket, braid, and dielectric to dimensions in table above. [for RG-62,71,210/U cable, trim an additional .039"(1.0mm) of insulation off center conductor and add bushing] All cuts are to be sharp and square. Important: Do not nick braid, dielectric, and center conductor. Slide outer ferrule onto cable as shown.

**Step 2** Flare slightly end of cable braid as shown to facilitate insertion of inner ferrule. Important: Do not comb out braid ▲. Place contact on cable center conductor so that it butts against cable dielectric. Crimp contact in place using Die Set Cavity indicated in table above. When using RG-62, 71, 210 cable, install bushing onto center conductor before installing contact.

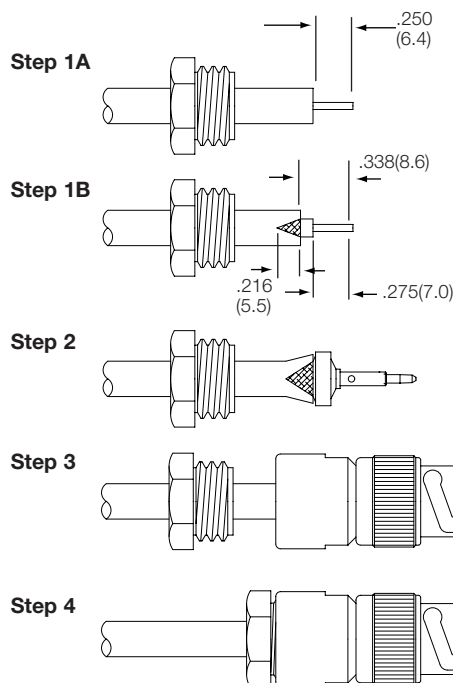
**Step 3** Install cable assembly into body assembly so that inner ferrule portion slides under braid. Push cable assembly forward until contact snaps into place in insulator. Slide outer ferrule over braid and up against connector body. Crimp outer ferrule using Die Set Cavity specified in table above.

\* for pneumatic crimp tool 227-60, use die sets indicated in this column

## QUICKTRIM® PLUG



Amphenol Number	Connector Type	Cable RG-/U	Center Contact Affixment		
			Hex Size	Die Set for Tool 227-944*	CTL Series Tool Number
31-4541	BNC Plug	59, 59A, 62, 62A	.068(1.7)	227-1221-13 Cavity B	CTL-1
31-4541-RFX					
31-4542	BNC Plug	Belden 9268 Montrose CBL-5098			
31-30220-1	BNC Plug	58			
31-30220-8	BNC Plug	223			



**Step 1A** For all connectors except 31-4541-RFX (see step 1B). Slide clamp nut over cable. Strip cable to dimension shown. Cut braid and dielectric square. Do not nick center conductor.

**Step 1B** For 31-4541-RFX.. Same as step 1A except use Step 1B strip dimensions, and then slit jacket back .125"(3.2 mm) in four places 90° apart as shown in illustration.

**Step 2** Slide contact assembly under braid and jacket until braid butts as shown. Use caution that braid slides over contact assembly and not inside of it. Be sure center conductor is visible through side hole of contact. Solder contact to center conductor. Contact may be crimped on applicable connectors using Amphenol CTL-1 crimp tool; or by using die set 227-1221-13 cavity B in tool frame 227-944 or equivalent tool.

**Step 3** Insert into connector body.

**Step 4** Tighten clamp nut to a torque of 35 lbf-in.

\* for pneumatic crimp tool 227-60, use die sets indicated in this column