

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.

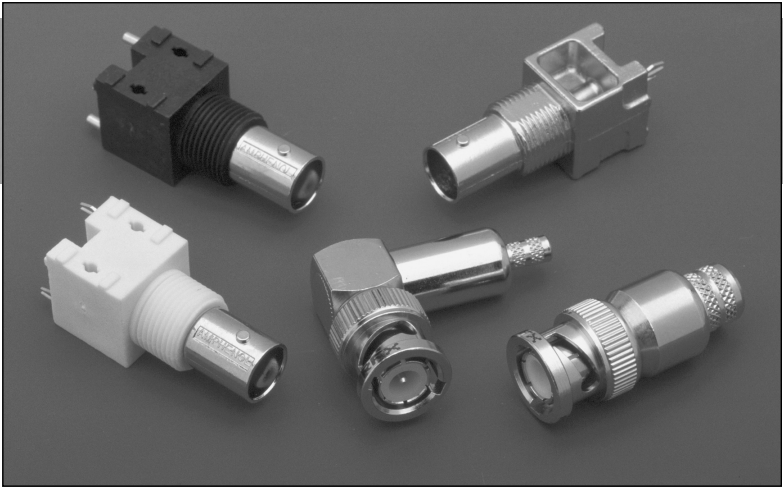
Primary Applications - Ideally suited for cable termination for miniature to subminiature coaxial cable (RG-58, 59, to RG-179, RG-316, etc.)

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 ⁻⁸ 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)

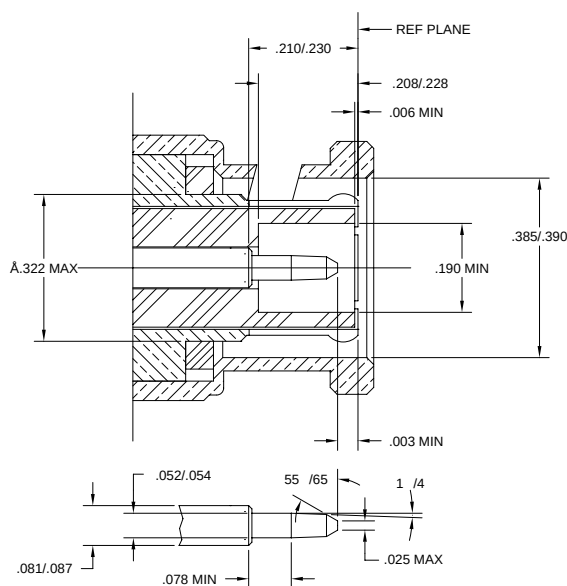
MILITARY SPECIFICATIONS

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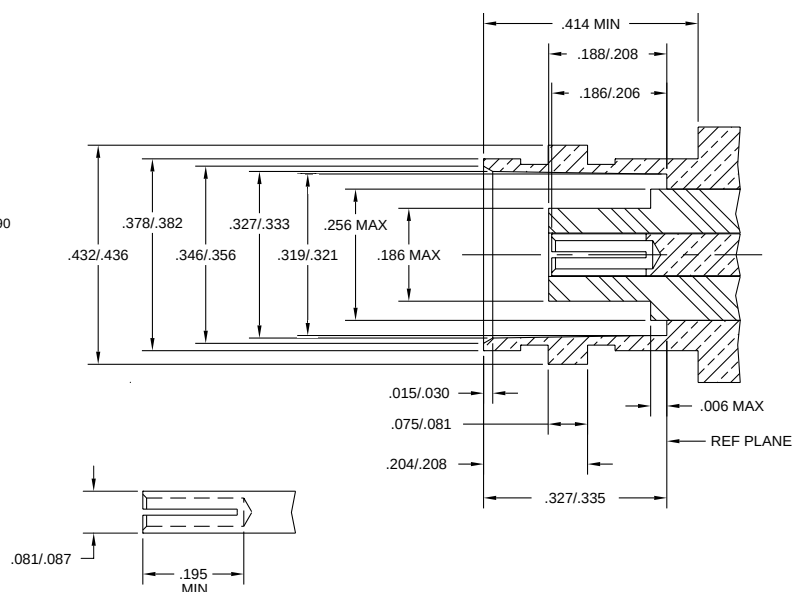
NOTE: These characteristics are typical and may not apply to all connectors.

■ Also see 75 ohm BNC connectors in the following section

PLUG



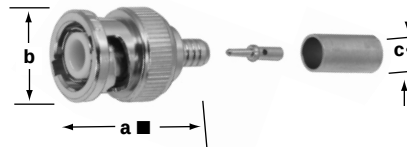
JACK



BNC 50 ohm 3-Piece Cable Crimp Plugs

Amphenol®

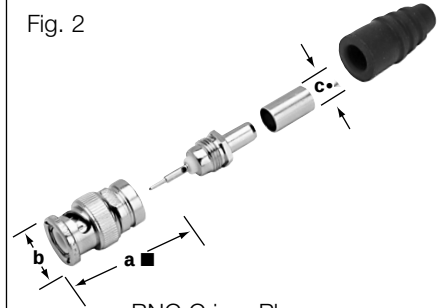
Fig. 1



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

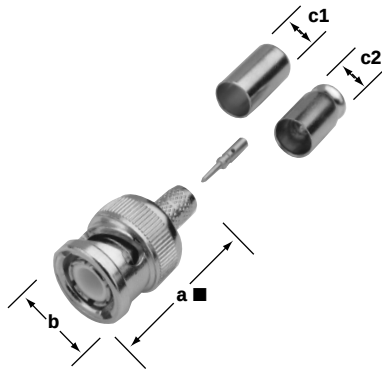
31-351
31-359
31-371

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	Plt.	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	Crimp	1.11(28.2)	.563(14.3)	.220(5.59)	C26	P7	D26	—	31-5557-RFX†	1
58	Crimp	Press Fit	1.31(33.3)	.571(14.5)	.212(5.4)	C7R	P7	D23	—	31-5800	☆
58, 141	Crimp	Crimp	1.11(28.2)	.563(14.3)	.206(5.2)	C26	P15	D1	M23329/3-01,3-03	31-320*	1
	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)	.261(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	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
Plenum 59, 62	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
174, 179, 187, 188, 316	Crimp	Crimp	1.19(30.2)	.562(14.3)	.125(3.2)	C26	P15	D1	—	31-315	☆
	Crimp	Crimp	1.19(30.2)	.571(14.5)	.106(2.7)	C26	P7	D23	—	31-315-RFX	1
179, 187	Crimp	Crimp	1.19(30.2)	.562(14.3)	.117(3.0)	C26	P15	D1	—	31-242*	1
	Crimp	Crimp	1.19(30.2)	.571(14.5)	.106(2.7)	C26	P7	D23	—	31-242-RFX	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

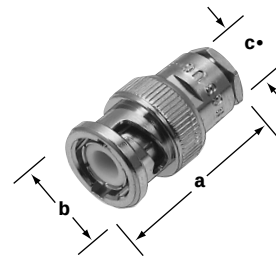
* recognized under the component program of U.L., Inc. • accommodates cable diameter ☆ see Fig. 1 and table on page 109. ▲ distributor stocked
■ includes outer ferrule † features preinstalled center contact

Fig. 1



BNC Crimp Plugs for Networking
31-5800
31-5900

Fig. 2



BNC Clamp Plugs

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

BNC CRIMP-CRIMP CABLE PLUGS FOR NETWORKING

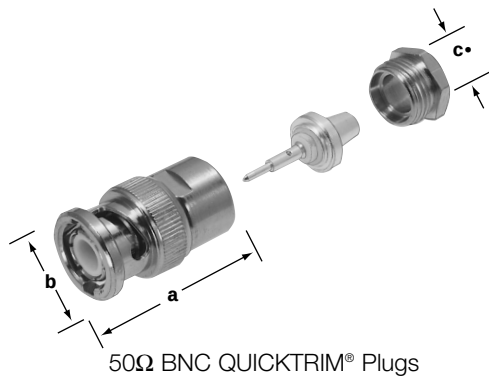
Cable RG-/U	Dimensions, inches (millimeters)				Notes			Amphenol Number	Fig.
	a ■	b	c • 1	c • 2	CAI	Plt.	Ins.		
58, 58A, 58B, 58C, 141, Plenum 58, Belden 9907, 89907, Comscope 2104K, 2135, 3104	1.11(28.2)	.563(14.3)	.209(5.3)	.181(4.60)	C26	P15	D26	31-5800	1
59 & 62, RG-59 20GACC, Plenum 59 & 62; Belden 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	31-5900	

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

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

Fig. 1



50Ω BNC QUICKTRIM® Plugs

31-30220-1
31-30220-8
31-4541
31-4541-RFX
31-4542

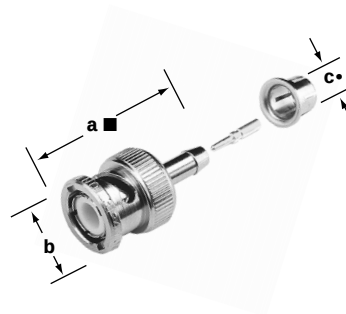
Fig. 2



BNC SURETWIST® Plugs

31-5136
31-5136-RFX
31-5137
31-5137-RFX

Fig. 3



BNC FCP Plugs

31-4700
31-4702

BNC CABLE PLUGS

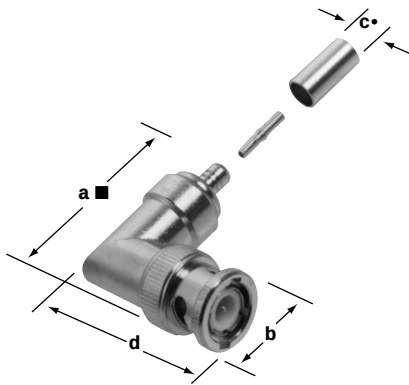
Cable RG-/U	Cable Attachment		Dimensions, inches (millimeters)			Notes			Military Number	Amphenol Number	Fig.
	Outer	Inner	a ■	b	c •	CAI	Plt.	Ins.			
58 B/U	SURETWIST®		1.47(37.3)	.562(14.3)	.181(4.6)	C28	P5	D15	—	31-5137	2 ▲
	SURETWIST®		1.48(37.6)	.571(14.5)	.185(4.7)	C28	P7	D23	—	31-5137-RFX	2 ▲
58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

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

BNC 50 ohm Angle Cable Plugs

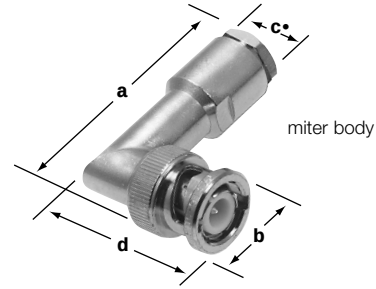
Amphenol®

Fig. 1



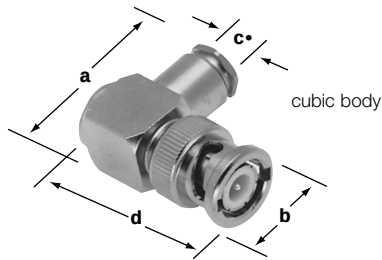
BNC Crimp Angle Plugs
31-316, 31-316-RFX
31-335, 31-335-RFX
31-336, 31-336-RFX
31-334

Fig. 2



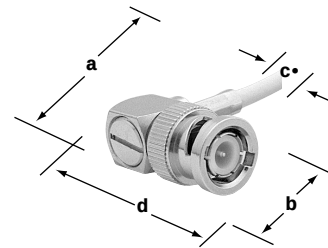
BNC Clamp Angle Plug
31-204

Fig. 3



BNC Clamp Angle Plugs
8525
8575
33275
31-850

Fig. 4



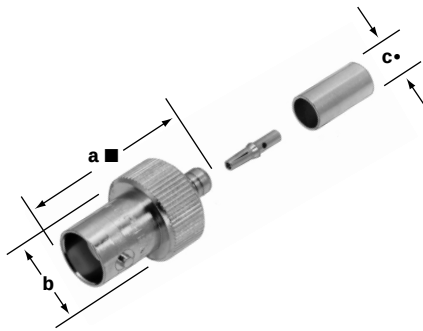
BNC Crimp-Crimp Cube
31-5911-RFX
31-5914-RFX
31-5991-RFX

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	Plt.	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	1.59(30.2)■	.562(14.3)	.220(5.6)	1.19(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

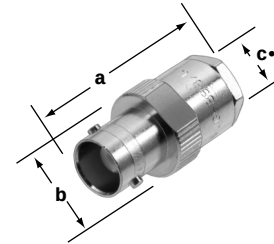
■ includes outer ferrule • accommodates cable diameter * recognized under the component program of U.L., Inc. ▲ distributor stocked

Fig. 1



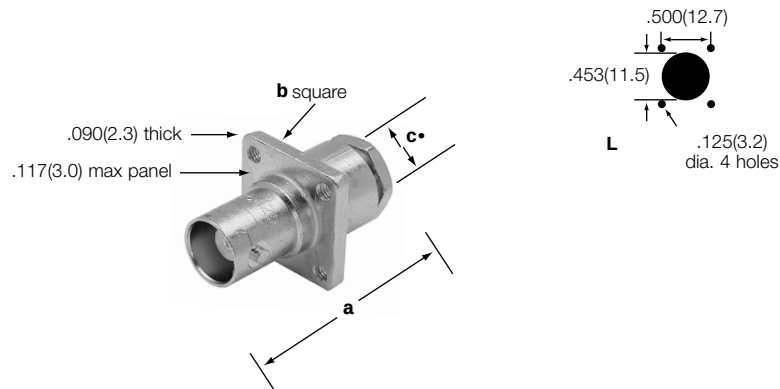
BNC Crimp Jacks
36800
36800-RFX
68150
31-317
31-4327
31-317-RFX

Fig. 2



BNC Clamp Jack
31-15
31-5
31-5-RFX
31-315-RFX

Fig. 3



BNC Panel Jack
86425

BNC CABLE JACKS

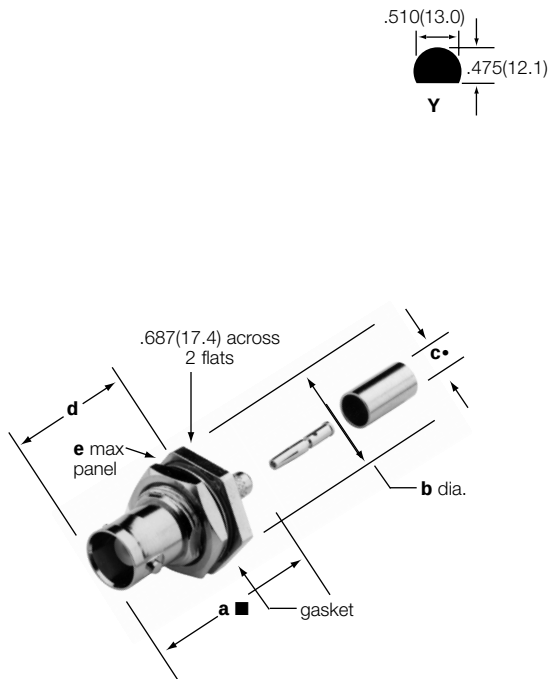
Cable RG/U	Cable Attachment		Dimensions, inches (millimeters)			Construction Notes			Military Number	Amphenol Number	Fig.
	Outer	Inner	a ■	b	c •	CAI	Plt.	Ins.			
58, 141	Crimp	Crimp	1.17(29.8)	.562(14.3)	.206(5.2)	C26a	P33	D1	M39012/17-0013	31-4327*	1
	Crimp	Crimp	1.17(29.7)	.510(13.0)	.206(5.2)	C26a	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

BNC 50 ohm Bulkhead Cable Jacks

Amphenol®

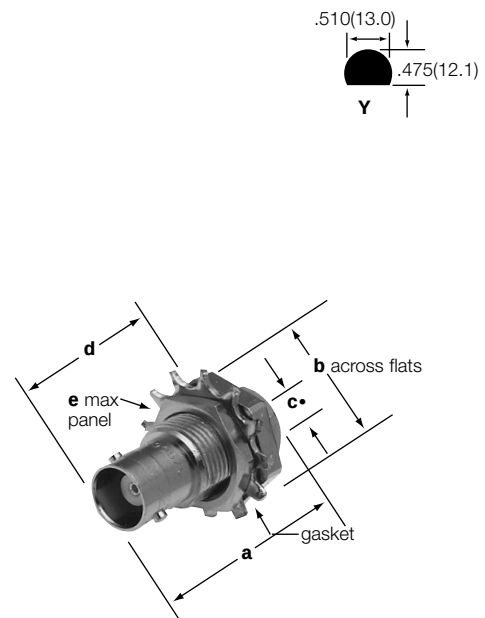
Fig. 1



BNC Crimp Bulkhead Jacks

95700 **31-318-RFX**
31-245 **31-342**
31-245-RFX **31-342-RFX**
31-318 **31-343-1002**
31-318-1001 **31-343-RFX**

Fig. 2



BNC Clamp Bulkhead Jacks

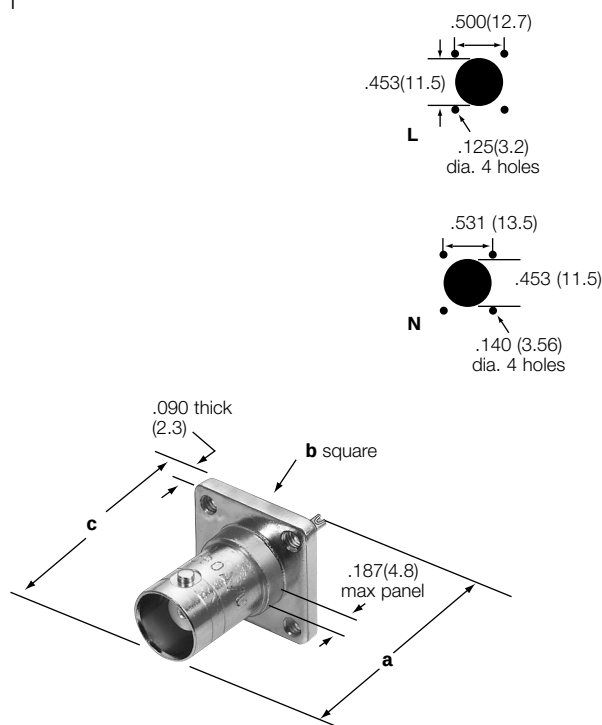
86350
86850
31-206
31-207

BNC BULKHEAD CABLE JACKS

Cable RG-/U	Cable Attachment		Dimensions, inches (millimeters)					CAI	Plt.	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

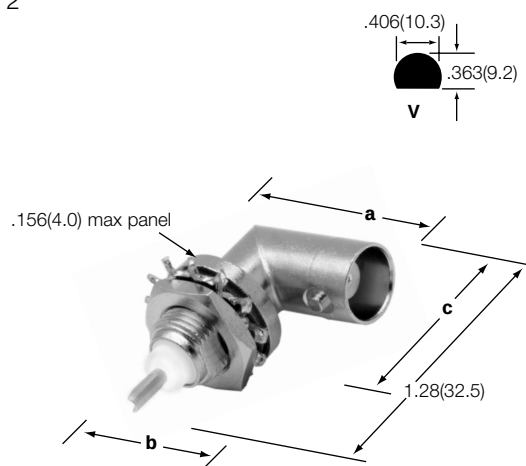
● accommodates cable diameter * recognized under the component program of U.L., Inc. ▲ distributor stocked ■ includes outer ferrule

Fig. 1



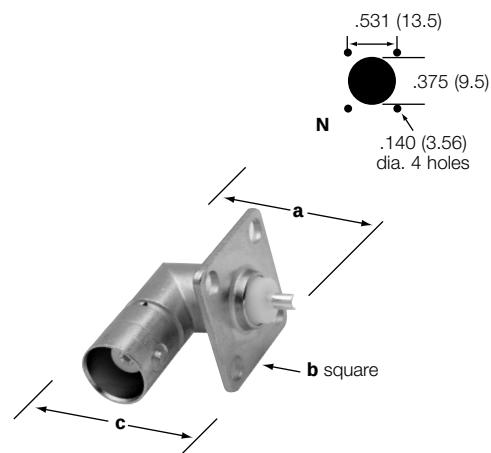
BNC Panel Receptacles
4 hole Square Flange, Rear or Front Mount
4500
31-105
31-203
31-203-RFX

Fig. 2



BNC Angle Bulkhead Receptacle
31-222

Fig. 3



BNC Angle Panel Receptacle
5675

BNC PANEL AND ANGLE BULKHEAD RECEPTACLES

Description	Terminal Type	Dimensions, inches (millimeters)			Notes		Mtg. Hole	Military Number	Amphenol Number	Fig.
		a	b	c	Plt.	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	31-203	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	—	31-203-RFX	
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	—	31-105*	
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	4500*	2
Angle, External Tooth Lockwasher	Solder Cup	.906(23.0)	.594(15.1)	.625(15.8)	P1	D1	V	UG-1098/U	31-222* □	
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	5675*	

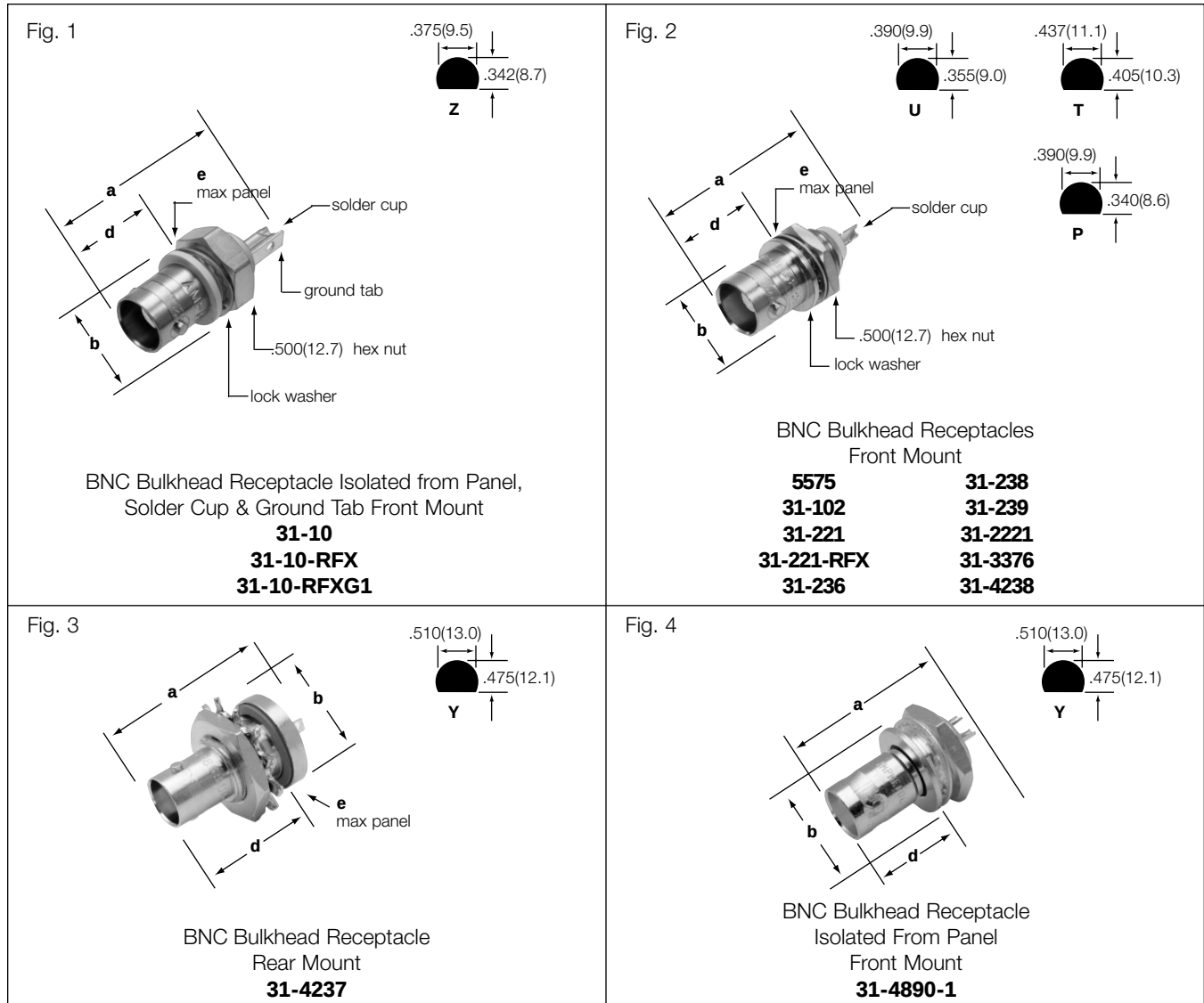
* recognized under the component program of U.L., Inc.

▲ distributor stocked

□ IBM 01620666

BNC 50 ohm Bulkhead Receptacles

Amphenol®



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	—	31-10*	1 ▲
	Solder Cup	1.18(30.0)	.500(12.7)	.471(12.0)	.125(3.2)	P1	D22	Z	—	31-10-RFX	1 ▲
Front Mount	Solder Cup	1.18(30.0)	.500(12.7)	.471(12.0)	.187(4.8)	P7	D22	Z	—	31-10-RFXG1	1 ▲
Front Mount	Solder Cup	1.06(27.0)	.500(12.7)	.484(12.3)	.125(3.2)	P1	D1	U	UG-1094/U	31-221*†	2 ▲
		1.06(27.0)	.500(12.7)	.472(12.0)	.125(3.2)	P7	D23	U	—	31-221-RFX	2 ▲
		1.06(27.0)	.500(12.7)	.469(11.9)	.156(4.0)	P1	D1	T	UG-625B/U	31-236*	2 ▲
		1.19(30.2)	.500(12.7)	.481(12.3)	.250(6.4)	P1	D1	U	UG-1094A/U	31-2221	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	31-3376*	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	31-239*	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	31-102*	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	31-4238*	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	31-238*	2 ▲
Front Mount	Solder Cup	1.06(27.0)	.500(12.7)	.472(12.0)	.156(4.0)	P1	D1	T	UG-625/U	5575*	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	31-4237*	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	—	31-4890-1	4

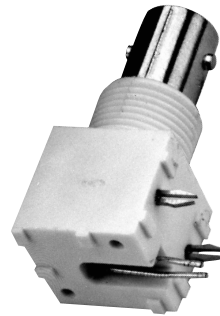
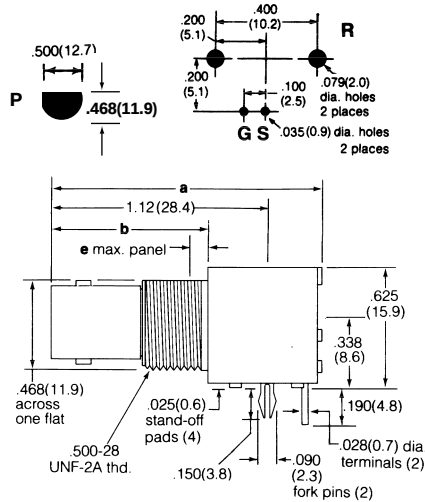
* recognized under the component program of U.L., Inc.

▲ distributor stocked

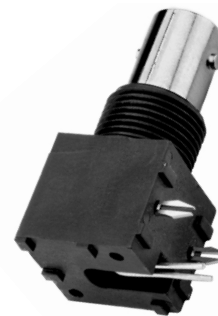
† includes grounding lug

Fig. 1

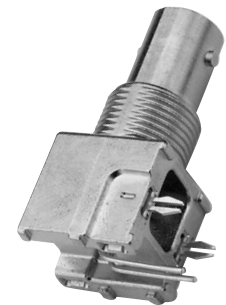
Standard Height 50 ohm BNC Printed Circuit Board Right Angle Bulkhead Receptacles ☆



Isolated from Panel
White Valox Housing
31-5431▲ (Round Pins)
31-5431-1010 (Fork Pins)
31-5431-10RFX



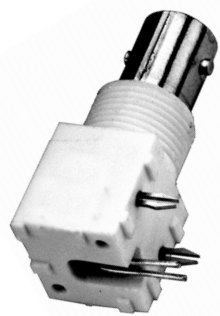
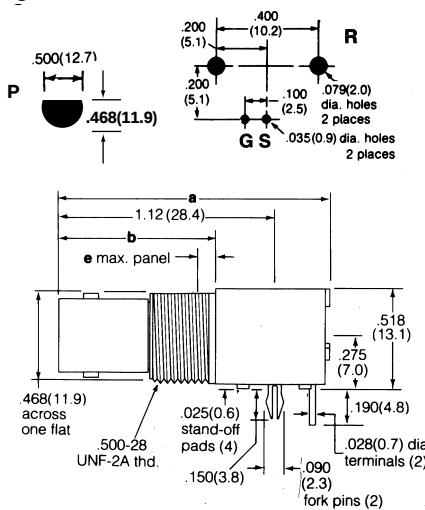
Isolated from Panel
Black Valox Housing
31-5538 (Round Pins)
31-5538-1010 (Fork Pins)
31-5538-10RFX



Metal Housing
31-5640▲ (Round Pins)
31-5640-1010 (Fork Pins)

Fig. 2

Low Profile 50 ohm BNC Printed Circuit Board Bulkhead Receptacles ☆



Isolated from Panel
White Valox Housing
31-5486▲ (Round Pins)
31-5486-1010 (Fork Pins)
31-5486-10RFX



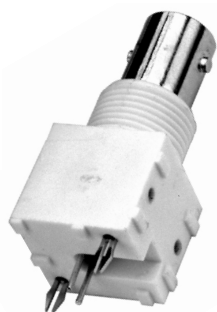
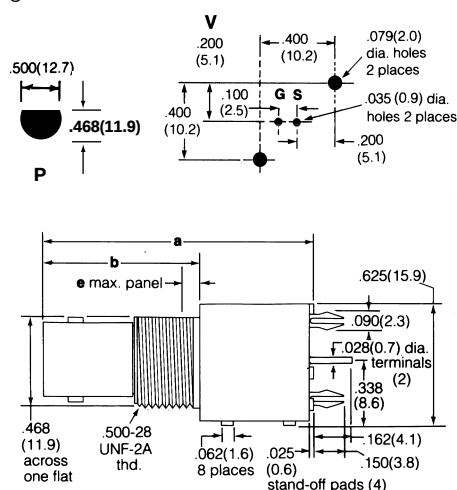
Isolated from Panel
Black Valox Housing
31-5540 (Round Pins)
31-5540-1010 (Fork Pins)
31-5540-10RFX



Metal Housing
31-5637 (Round Pins)

Fig. 3

Vertical 50 ohm BNC Printed Circuit Board Bulkhead Receptacles ☆



Isolated from Panel
White Valox Housing
31-5493▲ (Round Pins)
31-5493-1010 (Fork Pins)



Isolated from Panel
Black Valox Housing
31-5539 (Round Pins)
31-5539-1010▲ (Fork Pins)
31-5539-10RFX

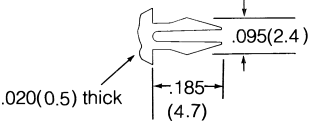
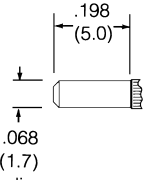
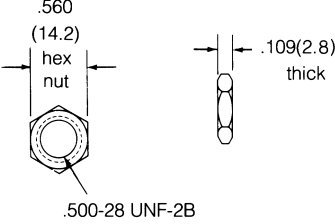
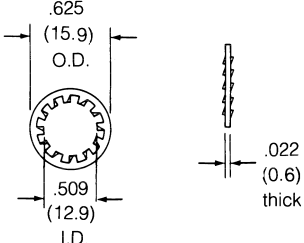


Metal Housing
31-5633 (Round Pins)
31-5633-1010 (Fork Pins)

▲ distributor stocked ☆ Jam nuts and lockwashers sold separately.

BNC 50 ohm PCB Receptacles and Accessories

Amphenol®

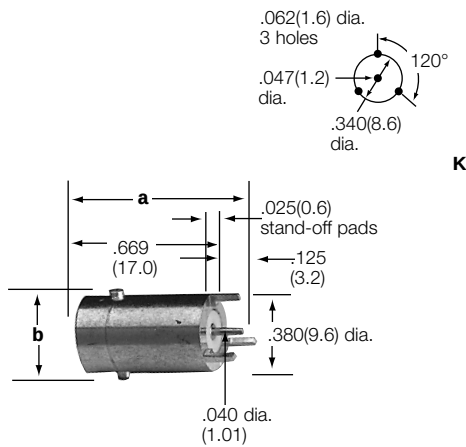
 Fork Pin holds connectors rigidly to P.C. Board for high temperature and mass production assembly	Fig. 4 	Fig. 5 
 Round Pin (Standard)	 Pkg. of 100, Hex Nut for BNC Bulkhead PCB Receptacles 31-5652▲ Nickel Plated	 Pkg. of 100, Lockwasher for BNC PCB Bulkhead Receptacles 31-5653▲ Nickel Plated

BNC PRINTED CIRCUIT BOARD BULKHEAD RECEPTACLES AND ACCESSORIES

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	50Ω	31-5431	1					
					P26	D17			Fork	50Ω	31-5431-1010						
					P26	D20	R/P	Iso. Black Housing	Round	50Ω	31-5538	1					
					P26	D20			Fork	50Ω	31-5538-1010						
					P25	D20	R/P		Stamp	50Ω	31-5538-10RFX						
					P26	D22	R/P	Metal Housing	Round	50Ω	31-5640						
					P26	D22			Fork	50Ω	31-5640-1010						
Low Profile Printed Circuit Angle Bulkhead Receptacle (J)☆	Blunt Posts for Signal & Ground	1.40(35.6)	.810(20.6)	.250(6.4)	P25	D17	R/P	Iso. White Housing	Fork	50Ω	31-5431-10RFX	1					
					P26	D17	R/P	Iso. White Housing	Fork	50Ω	31-5486						
					P26	D20	R/P	Iso. Black Housing	Round	50Ω	31-5540	2					
					P26	D20			Fork	50Ω	31-5540-1010						
					P26	D22	R/P	Metal Housing	Round	50Ω	31-5637						
					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	50Ω	31-5493
										P26	D17	Fork			50Ω	31-5493-1010	
P26	D20	V/P	Iso. Black Housing	Round						50Ω	31-5539						
P26	D20			Fork						50Ω	31-5539-1010						
P26	D22	V/P	Metal Housing	Round						50Ω	31-5633						
P26	D22			Fork						50Ω	31-5633-1010						
					P25	D13	R/P	Iso. White Housing	Fork	50Ω	31-5486-10RFX	2					
					P25	D20	R/P	Iso. Black Housing	Fork	50Ω	31-5540-10RFX	2					
Hex Nut for BNC Bulkhead PCB Receptacles, Package of 100 ea.					P3	—	—	Nickel Plated	—	—	31-5652	4					
Lockwasher for BNC Bulkhead PCB Receptacles, Package of 100 ea.					P3	—	—	Nickel Plated	—	—	31-5653	5					

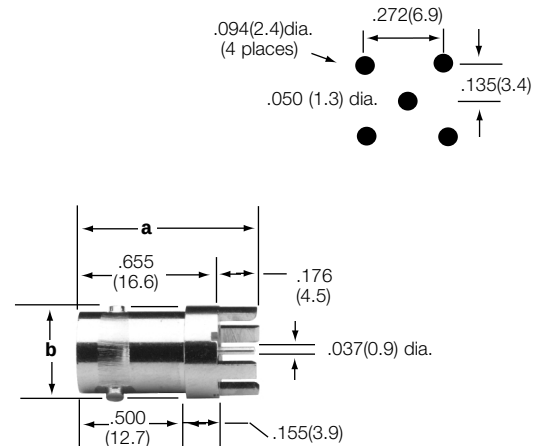
☆ Jam nuts and lockwashers sold separately. See Figs. 4 & 5 ▲ distributor stocked

Fig. 1



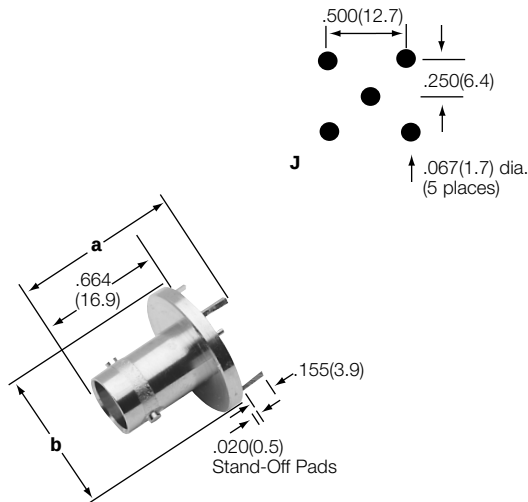
BNC PCB Receptacle (Jack)
Post Terminal, 3 Legs
.380" (9.6mm) Dia. Base
31-5329

Fig. 2



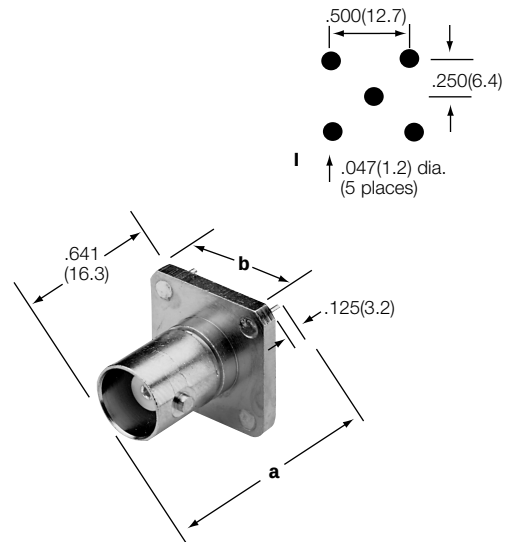
BNC PCB Receptacle (Jack)
Post Terminal, 4 Legs
.433" (11.0mm) Dia. Base
31-5329-51RFX
31-5329-52RFX

Fig. 3



BNC PCB Receptacle (Jack)
Post Terminal, 4 Legs
31-4758

Fig. 4

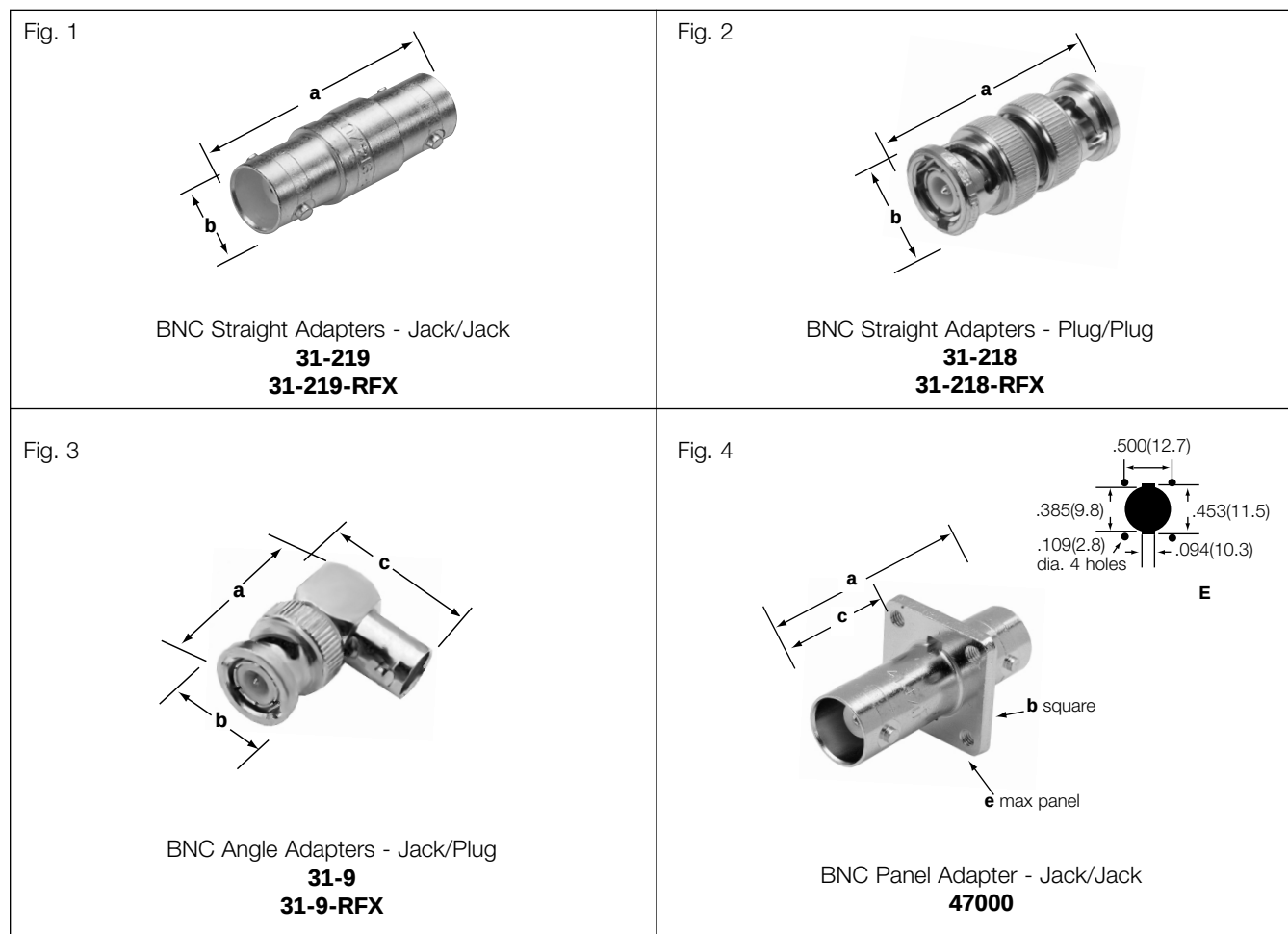


BNC PCB Receptacle (Jack)
Post Terminal, 4 Legs
18225

PRINTED CIRCUIT BOARD RECEPTACLES

Description	Terminal Type	Dimensions, inches (mm)		Notes			Mtg. Hole	Amphenol Number	Fig.
		a	b	Plt.	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	31-5329	1
PCB Receptacle, 4 Legs .176(4.5) Long/Post terminal .037(0.9) Dia. Silver Contact	Blunt Post	.831(21.1)	.433(11.0) dia	P1	D25	50Ω	F	31-5329-51RFX	2 ▲
PCB Receptacle, 4 Legs .176(4.5) Long/Post terminal .037(0.9) Dia. Gold Contact	Blunt Post	.831(21.1)	.433(11.0) dia	P17	D25	50Ω	F	31-5329-52RFX	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	31-4758	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	18225	4

▲ distributor stocked

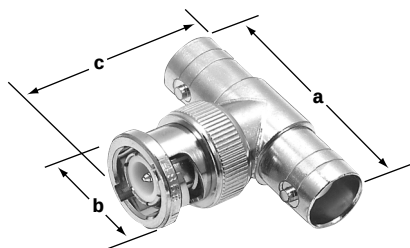


BNC ADAPTERS - STRAIGHT, ANGLE, PANEL MOUNT

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	31-219*	1 ▲
						P7	D26	—	—	31-219-RFX	1 ▲
Straight	Plug-Plug	1.25(31.8)	.562(14.3)	—	—	P1	D1	—	UG-491A/U	31-218*	2 ▲
						P7	D1	—	—	31-218-RFX	2 ▲
Angle	Jack-Plug	1.06(27.0)	.562(14.3)	1.02(25.8)	—	P1	D1	—	UG-306/U	31-9*‡	3 ▲
		1.06(27.0)	.562(14.3)	1.02(25.8)	—	P1	D1	—	—	31-9-RFX	3 ▲
		1.09(27.6)	.594(15.1)	1.02(25.8)	—	P34	D1	—	M55339/14-00306	31-4561	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	—	47000*	4

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

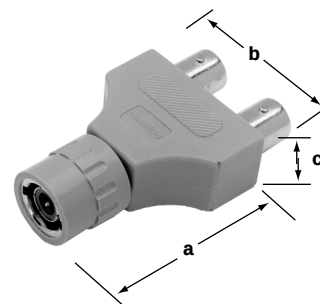
Fig. 1



Tee Adapters - Jack-Plug-Jack

31-208
31-208-RFX
31-208-1051
31-2208

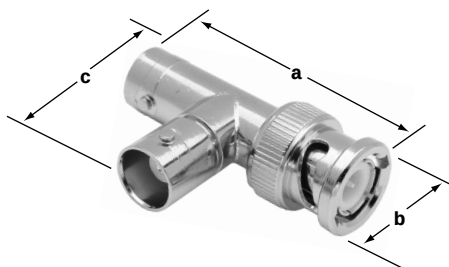
Fig. 2



BNC Overmolded Tee Adapter
Jack-Plug-Jack

31-5693

Fig. 3



BNC Tee Adapter
Plug-Jack-Jack

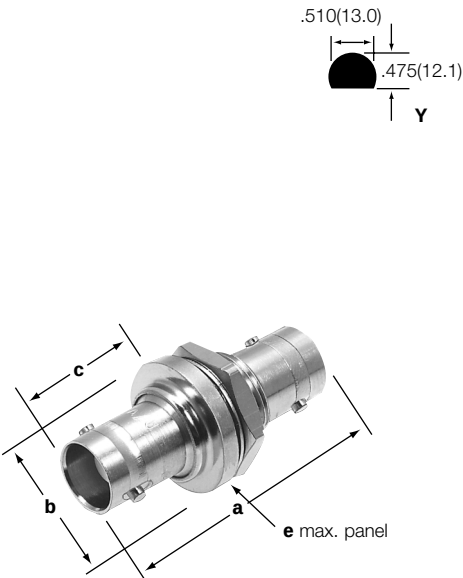
21900

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	31-208*	1	▲
Tee	Jack-Plug-Jack	1.30(33.0)	.571(14.5)	1.04(26.3)	P7	D23	—	31-208-RFX	1	▲
Tee	Jack-Plug-Jack	1.28(32.5)	.562(14.3)	1.06(27.0)	P15	D1	—	31-208-1051	1	
Tee	Jack-Plug-Jack	1.28(32.5)	.562(14.3)	1.06(27.0)	P4	D1	UG-274B/U	31-2208*	1	
Tee, Overmolded	Jack-Plug-Jack	1.72(43.6)	1.32(33.5)	.550(14.0)	P7	D14	—	31-5693	2	▲
Tee	Plug-Jack-Jack	1.53(38.9)	.375(9.52)	1.00(25.4)	P1	D9	—	21900*	3	

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

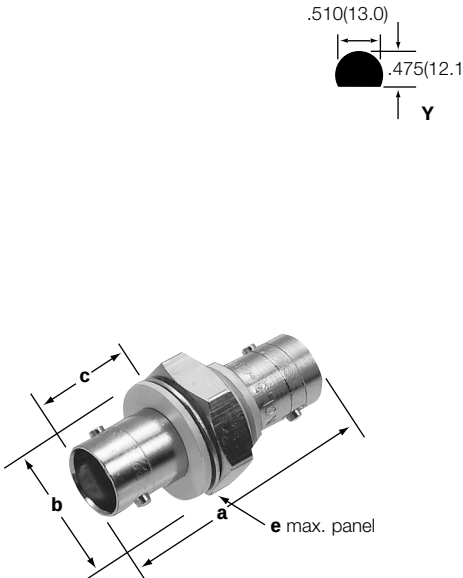
Fig. 1



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

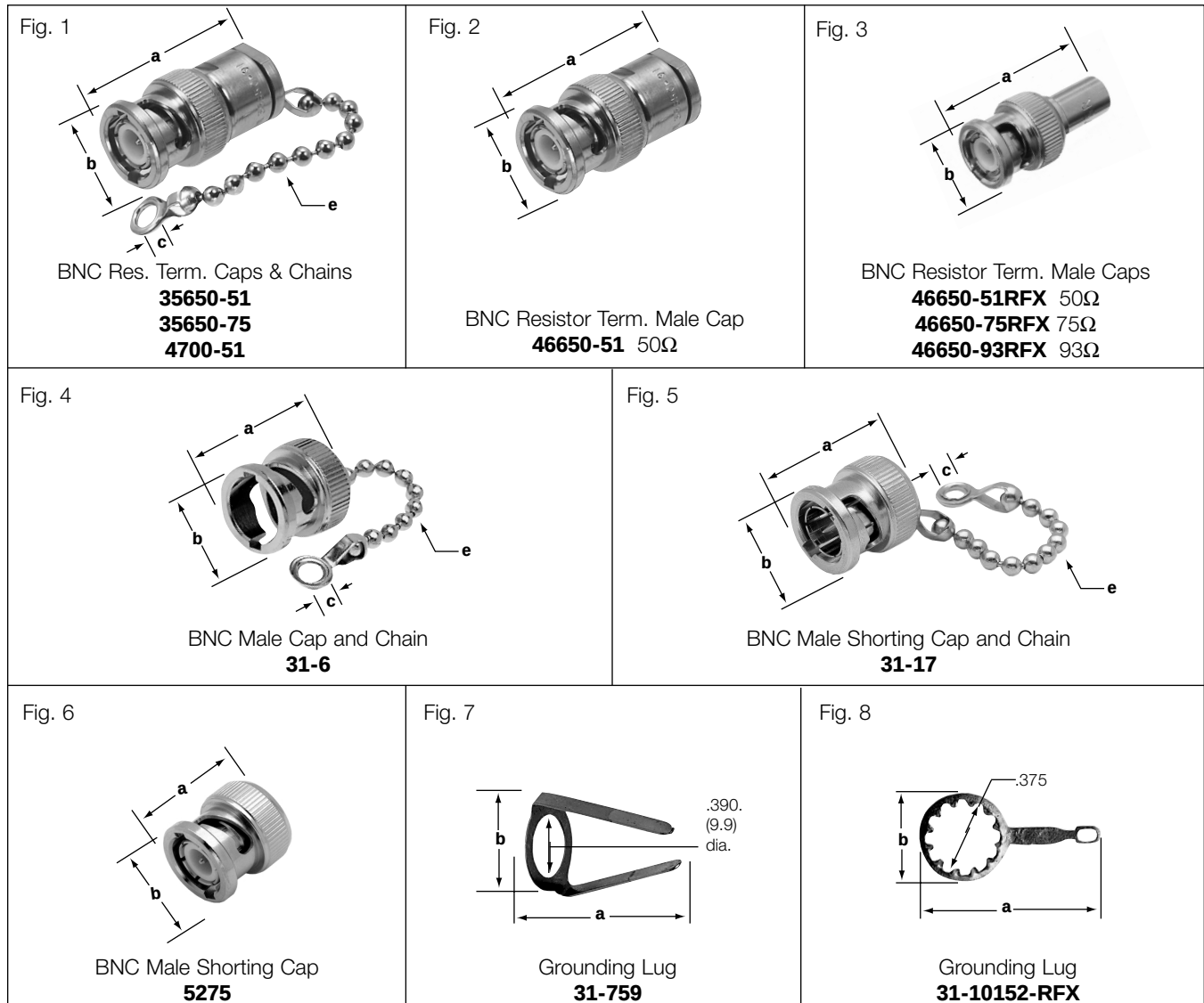
BNC BULKHEAD ADAPTERS

Description		Dimensions, inches (millimeters)				Notes		Mtg. Hole	Military Number	Amphenol Number	Fig.	
		a	b	c	e	Plt.	Ins.					
Sealed, 50 PSI	Jack-Jack	1.40(35.6)	.687(17.45)	.683(17.3)	.187(4.8)	P1	D1	Y	UG-492A/U	31-220H *‡	1	▲
	Jack-Jack	1.53(38.9)	.688(17.5)	.672(17.0)	.281(7.1)	P4	D1	Y	UG-492D/U	31-3220*	1	▲
Gasketed	Jack-Jack	1.56(39.6)	.689(17.5)	.681(17.3)	.295(7.5)	P7	D23	Y	—	31-220G-RFX	1	▲
	Jack-Jack	1.40(35.6)	.800(20.3)	.659(16.7)	.160(4.1)	P1	D1	Y	—	4525*	1	▲
Non-sealed	Jack-Jack	1.40(35.6)	.800(20.3)	.664(16.9)	.187(4.8)	P1	D1	Y	—	31-220N	1	▲
		1.28(32.5)	.610(15.5)	.492(12.5)	.216(5.5)	P7	D23	Y	—	31-220N-RFX	1	▲
Isolated from Panel	Jack-Jack	1.28(32.5)	.625(15.9)	.460(11.7)	.187(4.8)	P1	D12	Y	—	31-4803	2	▲
		1.28(32.5)	.625(15.9)	.460(11.7)	.187(4.8)	P15	D12	Y	—	31-4803-1101	2	
		1.28(32.5)	.625(15.9)	.460(11.7)	.187(4.8)	P15	D12	Y	—	31-4803-RFX	2	

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

BNC 50 ohm Caps & Accessories

Amphenol®



BNC CAPS & ACCESSORIES

Description		Dimensions, inches (millimeters)				Notes		Military Number	Amphenol Number	Fig.
		a	b	c	e	Plt.	Ins.			
Male Cap & Chain Resistor Terminated, 1% 1/2 watt	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

Amphenol®

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

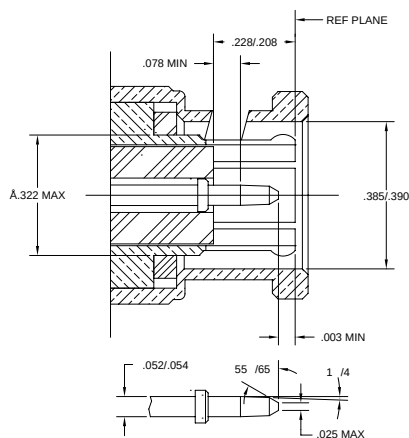
MECHANICAL

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 ⁻⁸ 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

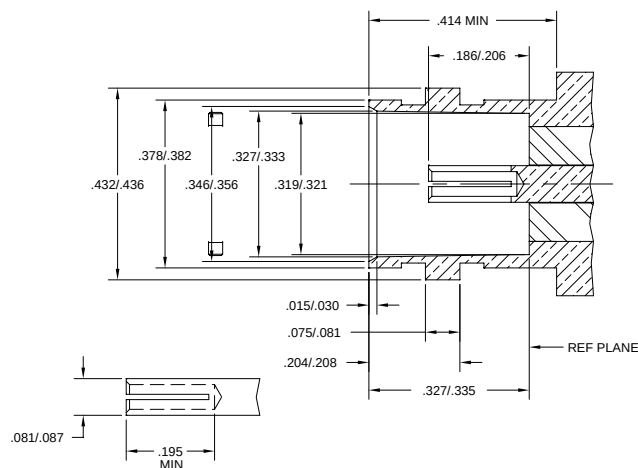
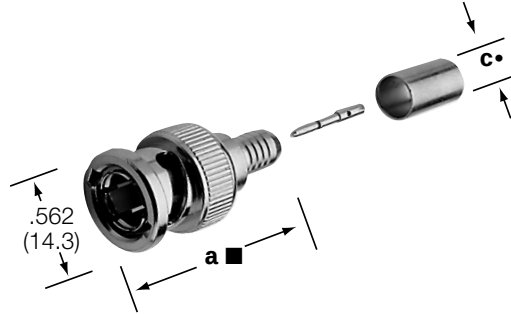


Fig. 1



75Ω BNC Crimp Plugs

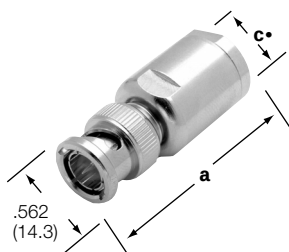
31-70000	31-70222	31-71008	31-71013-1000
31-70000-1000	31-70234	31-71008-1000	31-71032
31-70008	31-70235	31-71008-2000	31-71033
31-70008-1000	31-70236	31-71008-1RFX	31-71034
31-70008-3000	31-70237	31-71008-RFX	31-71035
31-70013	31-70238	31-71013	31-71064
31-70013-1000	31-71000-RFX	31-71013-RFX	31-71065
			31-71066

75Ω BNC PLUGS AND ANGLE PLUGS

Cable RG-/U	Connector Configuration	Cable Attachment		Dimensions, inches (millimeters)			Notes			75Ω Type	Amphenol Number	Fig.
		Outer	Inner	a ■	c •	d	CAI	Plt.	Ins.			
RG-6 Type .295" O.D. max. Belden 9248, 1694A (Single Shield)	Plug	Crimp	Crimp	1.35(34.3)	.300(7.6)	—	C31	P15	D1	T1	31-70000 ☆	1 ▲
	Plug	Crimp	Crimp	1.21(30.7)	.300(7.6)	—	C32	P7	D26	T2	31-71000-RFX ☆	1 ▲
	Plug	Crimp	Crimp	1.25(31.8)	.300(7.6)	—	C31	P15	D1	T1	31-70000-1000	1 ▲
	Plug	Crimp	Crimp	1.21(30.7)	.300(7.6)	—	C32	P15	D1	T2	31-71064	1 ▲
59, 62 Belden 8241, 8263, 8279, 9209	Plug	Crimp	Crimp	1.25(31.7)	.261(6.6)	—	C31	P16	D1	T1	31-70008	1 ▲
	Plug	Crimp	Crimp	1.12(28.6)	.261(6.6)	—	C32	P15	D1	T2	31-71008	1 ▲
	Plug	Crimp	Crimp	1.17(29.8)	.260(6.6)	—	C32	P7	D26	T2	31-71008-RFX	1 ▲
59 (20GA CC) Belden 1426A, 1505A 9100, 9278	Plug	Crimp	Crimp	1.25(31.8)	.261(6.6)	—	C31	P15	D1	T1	31-70008-3000	1 ▲
	Plug	Crimp	Crimp	1.12(28.5)	.261(6.6)	—	C32	P15	D1	T2	31-71008-1000	1 ▲
	Plug	Crimp	Crimp	1.17(29.8)	.261(6.6)	—	C32	P7	D26	T2	31-71008-1RFX	1 ▲
Plenum 59, Belden 88241 82259, 89259	Plug	Crimp	Crimp	1.11(28.2)	.220(5.6)	—	C32	P15	D1	T2	31-71008-2000	1 ▲
Plenum 59 (20GA CC) Belden 82108	Plug	Crimp	Crimp	1.11(28.2)	.220(5.6)	—	C32	P15	D1	T2	31-71035	1 ▲
DbI Shield 59 (20GA CC)	Plug	Crimp	Crimp	1.36(34.5)	.334(8.5)	—	C31	P15	D1	T1	31-70222	1 ▲
179, 187	Plug	Crimp	Crimp	1.33(33.5)	.120(3.0)	—	C31	P15	D1	T1	31-70013	1 ▲
	Plug	Crimp	Crimp	1.19(30.2)	.120(3.0)	—	C32	P15	D1	T2	31-71013	1 ▲
	Plug	Crimp	Crimp	1.19(30.2)	.106(2.7)	—	C32	P17	D23	T2	31-71013-RFX	1 ▲
DbI. Br. 179	Plug	Crimp	Crimp	1.25(31.7)	.175(4.4)	—	C31	P15	D1	T1	31-70013-1000	1 ▲
	Plug	Crimp	Crimp	1.11(28.2)	.175(4.4)	—	C32	P15	D1	T2	31-71013-1000	1 ▲
ATT 728B, Belden 9231	Plug	Crimp	Crimp	1.36(34.5)	.342(8.7)	—	C31	P16	D1	T1	31-70022	1 ▲
ATT 734A	Plug	Crimp	Crimp	1.25(31.7)	.261(6.6)	—	C31	P15	D1	T1	31-70008-1000	1 ▲
Belden 8218	Plug	Crimp	Crimp	1.11 (28.2)	.175(4.4)	—	C32	P15	D1	T2	31-71033	1 ▲
Belden 8281, 88281	Plug	Crimp	Crimp	1.21 (30.7)	.342(8.7)	—	C32	P15	D1	T2	31-71032	1 ▲
Belden 89248, (Plenum)	Plug	Crimp	Crimp	1.35 (34.3)	.250 (6.4)	—	C31	P15	D1	T1	31-70000 ☆	1 ▲
Belden 9290, 1152A (Double Shield)	Plug	Crimp	Crimp	1.21 (30.7)	.314(8.0)	—	C32	P7	D26	T2	31-71000-RFX ☆	1 ▲
	Plug	Crimp	Crimp	1.21 (30.7)	.314(8.0)	—	C32	P15	D1	T2	31-71065	1 ▲
Belden 89292	Plug	Crimp	Crimp	1.62 (41.1)	.418(10.6)	※	C32	P15	D1	T2	31-71034	1 ▲
Quad 59 Headend Cable	Plug	Crimp	Crimp	1.12 (28.6)	.287(7.3)	—	C32	P15	D1	T2	31-71066	1 ▲
Belden 1694	Plug	Crimp	Crimp	1.00(25.4)	.260(6.6)	—	C26a	P7	D1	T1	31-70234	1
Belden 8281	Plug	Crimp	Crimp	1.00(25.4)	.260(6.6)	—	C26a	P7	D1	T1	31-70235	1
Belden 8218	Plug	Crimp	Crimp	1.00(25.4)	.260(6.6)	—	C26a	P7	D1	T1	31-70236	1
Belden 734A	Plug	Crimp	Crimp	1.00(25.4)	.260(6.6)	—	C26a	P7	D1	T1	31-70237	1
Belden 735A	Plug	Crimp	Crimp	1.00(25.4)	.260(6.6)	—	C26a	P7	D1	T1	31-70238	1

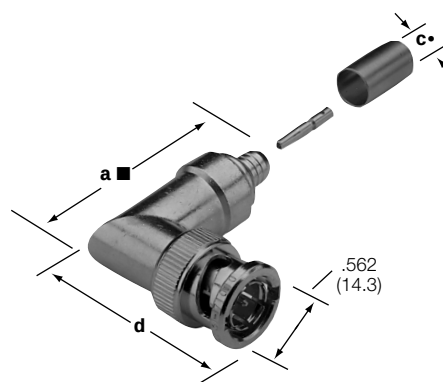
• accommodates cable diameter ■ includes outer ferrule ☆ supplied with two crimp ferrules ▲ Distributor Stocked ※ OD = .590(15.0)

Fig. 1



75Ω BNC Clamp Plug
6775-75

Fig. 2



75Ω BNC Crimp Angle Plugs
31-70015-1000 **31-71010-RFX**
31-70082 **31-70239**
31-71010 **31-70240**

75Ω BNC PLUGS AND ANGLE PLUGS

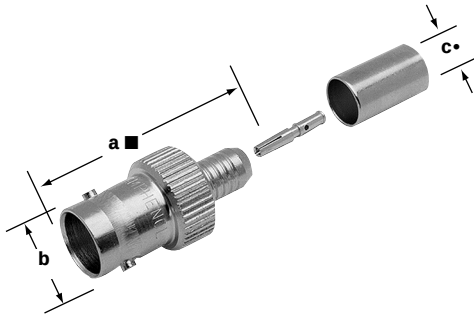
Cable RG-/U	Connector Configuration	Cable Attachment		Dimensions, inches (millimeters)			Notes			75Ω Type	Amphenol Number	Fig.
		Outer	Inner	a ■	c •	d	CAI	Plt.	Ins.			
11	Plug	Clamp	Solder	1.75(44.4)	.443(11.2)	—	C25	P1	D1	T2	6775-75	1
59, 62 Belden 8241, 8263, 8279, 9209	Angle Plug	Crimp	Crimp	1.66(42.2)	.261(6.6)	1.24(31.5)	C32	P15	D1	T2	31-71010	2
	Angle Plug	Crimp	Crimp	1.66(42.2)	.260(6.6)	1.07(27.3)	C32	P7	D23	T2	31-71010-RFX	2
ATT 735A	Angle Plug	Crimp	Solder	1.09(27.7)	.158(4.0)	.894(22.7)	C31	P15	D1	T1	31-70082	2
ATT 19224-L2	Angle Plug	Crimp	Crimp	1.63(41.4)	.175(4.4)	1.24(31.5)	C31	P16	D1	T1	31-70015-1000	2
AT&T 734A†	Angle Plug	Crimp	Crimp	.571(14.5)	.295(7.5)	1.36(34.5)	C31	P7	D1	T1	31-70239	2
AT&T 735A†	Angle Plug	Crimp	Crimp	.571(14.5)	.295(7.5)	1.36(34.5)	C31	P7	D1	T1	31-70240	2

• accommodates cable diameter ■ includes outer ferrule ☆ supplied with two crimp ferrules ▲ Distributor Stocked ※ OD = .590(15.0) † Low Cost

BNC 75 ohm Jacks & Receptacles

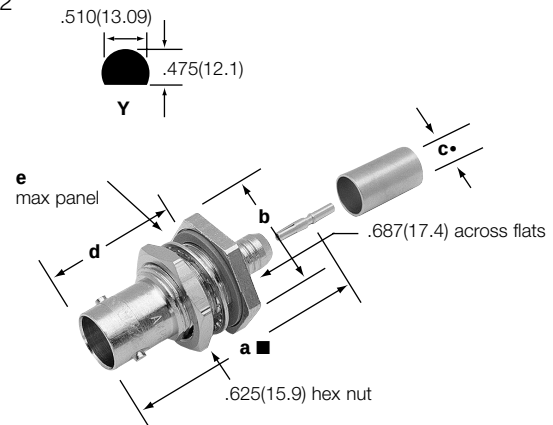
Amphenol®

Fig. 1



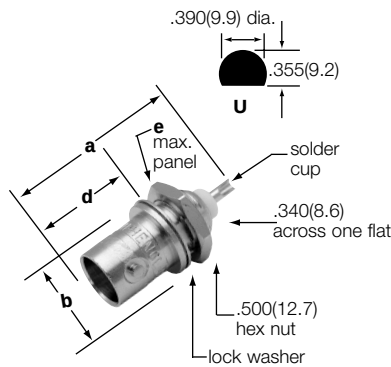
75Ω BNC Crimp Jacks
31-70009
31-71014-RFX

Fig. 2



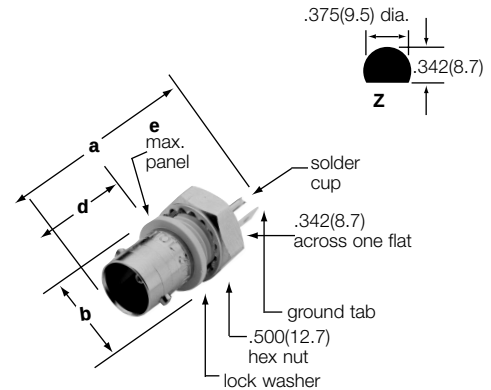
75Ω BNC Crimp Bulkhead Jacks
31-70016
31-70016-1000
31-71011
31-71011-RFX
31-71016
31-71016-RFX

Fig. 3



75Ω BNC Receptacles (J) Front Mount
31-221-75RFX
31-70018
31-71004

Fig. 4



75Ω BNC Receptacle (J) Isolated from Panel
with Solder Cup & Ground Tab
31-10-75
31-10-75 RFXG2

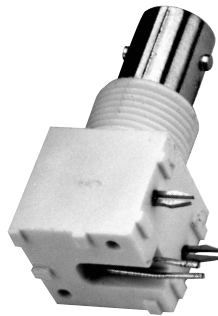
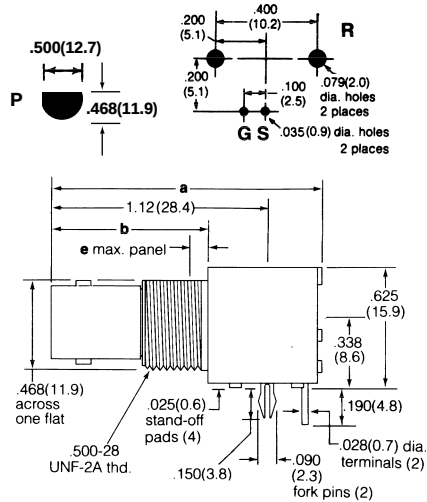
75Ω BNC JACKS & RECEPTACLES

Cable RG/U	Connector Type	Dimensions, inches (millimeters)					Notes			Mtg. Hole	75Ω Type	Amphenol Number	Fig.
		a ■	b	c •	d	e	CAI	Plt.	Ins.				
59, Belden	Jack	1.18(30.0)	.510(12.9)	.261(6.6)	—	—	C31	P17	D1	—	T1	31-70009	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	31-71011	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	31-71011-RFX	1
179, 187	Jack	1.37(35.0)	.435(11.0)	.106(2.7)	—	—	C32	P7	D23	—	T2	31-71014-RFX	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	31-70016	2
		1.41(35.7)	.795(20.2)dia	.120(3.0)	.812(20.6)	.250(6.4)	C32	P15	D1	Y	T2	31-71016	2
		1.43(36.4)	.687(17.4)hex	.106(2.7)	.710(18.0)	.138(3.5)	C32	P7	D23	Y	T2	31-71016-RFX	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	31-70016-1000	2
Bulkhead Receptacle (J) Front Mount		1.06(27.0)	.490(12.4)	—	.472(12.0)	.125(3.2)	—	P15	D1	U	T2	31-71004	3
		1.06(27.0)	.490(12.4)	—	.472(12.0)	.250(6.4)	—	P15	D1	U	T1	31-70018	3
		1.05(26.7)	.500(12.7)	—	.475(12.1)	.138(3.5)	—	P7	D23	U	T2	31-221-75RFX	3
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	31-10-75	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	31-10-75-RFXG2	4

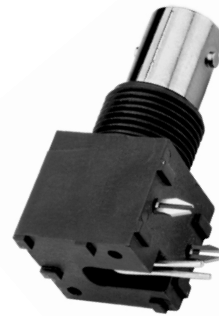
■ Includes outer ferrule • accommodates cable diameter ▲ Distributor Stocked

Fig. 1

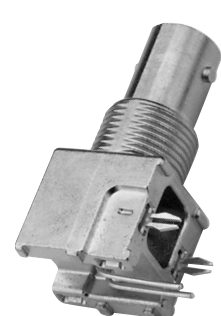
Standard Height BNC Printed Circuit Board Right Angle Bulkhead Receptacles ☆



Isolated from Panel
White Valox Housing
31-71047 (Round Pins)
31-71047-1010 (Fork Pins)



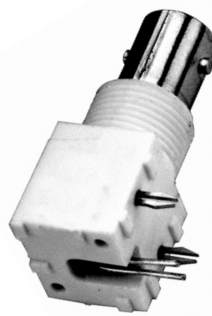
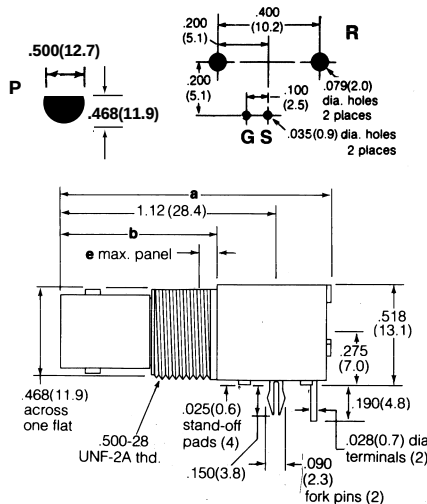
Isolated from Panel
Black Valox Housing
31-71046 (Round Pins)
31-71046-1010 (Fork Pins)



Metal Housing
31-71043 (Round Pins)
31-71043-1010▲
(Fork Pins)

Fig. 2

Low Profile BNC Printed Circuit Board Bulkhead Receptacles ☆



Isolated from Panel
White Valox Housing
31-71052 (Round Pins)
31-71052-1010 (Fork Pins)
31-71052-10RFX



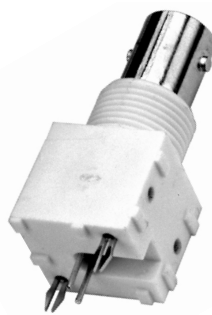
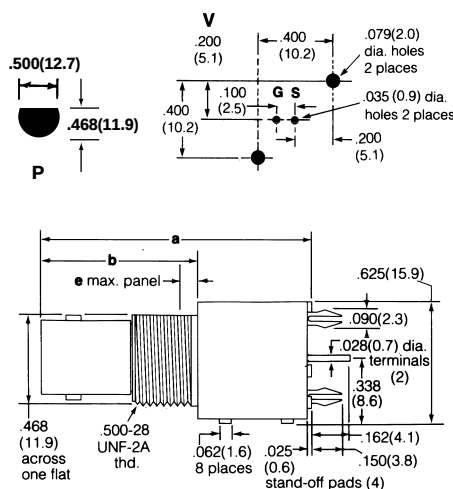
Isolated from Panel
Black Valox Housing
31-71053 (Round Pins)
31-71053-1010 (Fork Pins)



Metal Housing
31-71042 (Round Pins)

Fig. 3

Vertical BNC Printed Circuit Board Bulkhead Receptacles ☆



Isolated from Panel
White Valox Housing
31-71058 (Round Pins)
31-71058-1010 (Fork Pins)

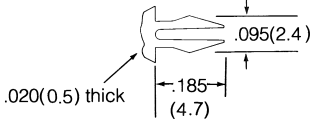
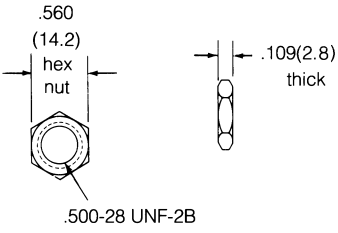
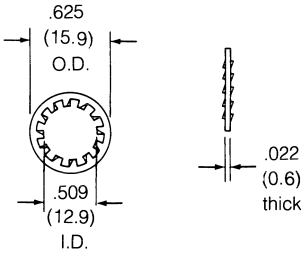
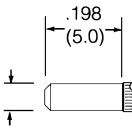


Isolated from Panel
Black Valox Housing
31-71059 (Round Pins)
31-71059-1010 (Fork Pins)



Metal Housing
31-71045 (Round Pins)
31-71045-1010
(Fork Pins)

☆ Jam nuts and lockwashers sold separately. ▲ distributor stocked

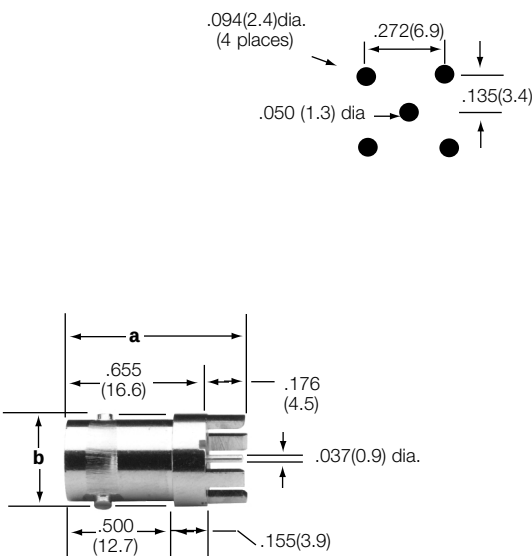
 Fork Pin holds connectors rigidly to P.C. Board for high temperature and mass production assembly	Fig. 4  Pkg. of 100, Hex Nut for BNC Bulkhead PCB Receptacles 31-5652▲ Nickel Plated	Fig. 5  Pkg. of 100, Lockwasher for BNC PCB Bulkhead Receptacles 31-5653▲ Nickel Plated
 Round Pin (Standard)		

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	31-71047	1
					P26	D17			Fork	75Ω	31-71047-1010	
					P26	D20	R/P	Iso. Black Housing	Round	75Ω	31-71046	
					P26	D20			Fork	75Ω	31-71046-1010	
					P26	D22	R/P	Metal Housing	Round	75Ω	31-71043	
					P26	D22			Fork	75Ω	31-71043-1010	
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	31-71052	2
					P26	D17			Fork	75Ω	31-71052-1010	
					P26	D17			Fork	75Ω	31-71052-10RFX	
					P26	D20	R/P	Iso. Black Housing	Round	75Ω	31-71053	
					P26	D20			Fork	75Ω	31-71053-1010	
					P26	D22	R/P	Metal Housing	Round	75Ω	31-71042	
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	31-71058	3
					P26	D17			Fork	75Ω	31-71058-1010	
					P26	D20	V/P	Iso. Black Housing	Round	75Ω	31-71059	
					P26	D20			Fork	75Ω	31-71059-1010	
					P26	D22	V/P	Metal Housing	Round	75Ω	31-71045	
					P26	D22			Fork	75Ω	31-71045-1010	
Hex Nut for BNC Bulkhead PCB Receptacles, Package of 100 ea.					P3	—	—	Nickel Plated	—	—	31-5652	4
Lockwasher for BNC Bulkhead PCB Receptacles, Package of 100 ea.					P3	—	—	Nickel Plated	—	—	31-5653	5

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

Fig. 1



BNC PCB Receptacle (Jack)
Post Terminal, 4 Legs
.433" (11.0mm) Dia. Base
31-5329-72RFX

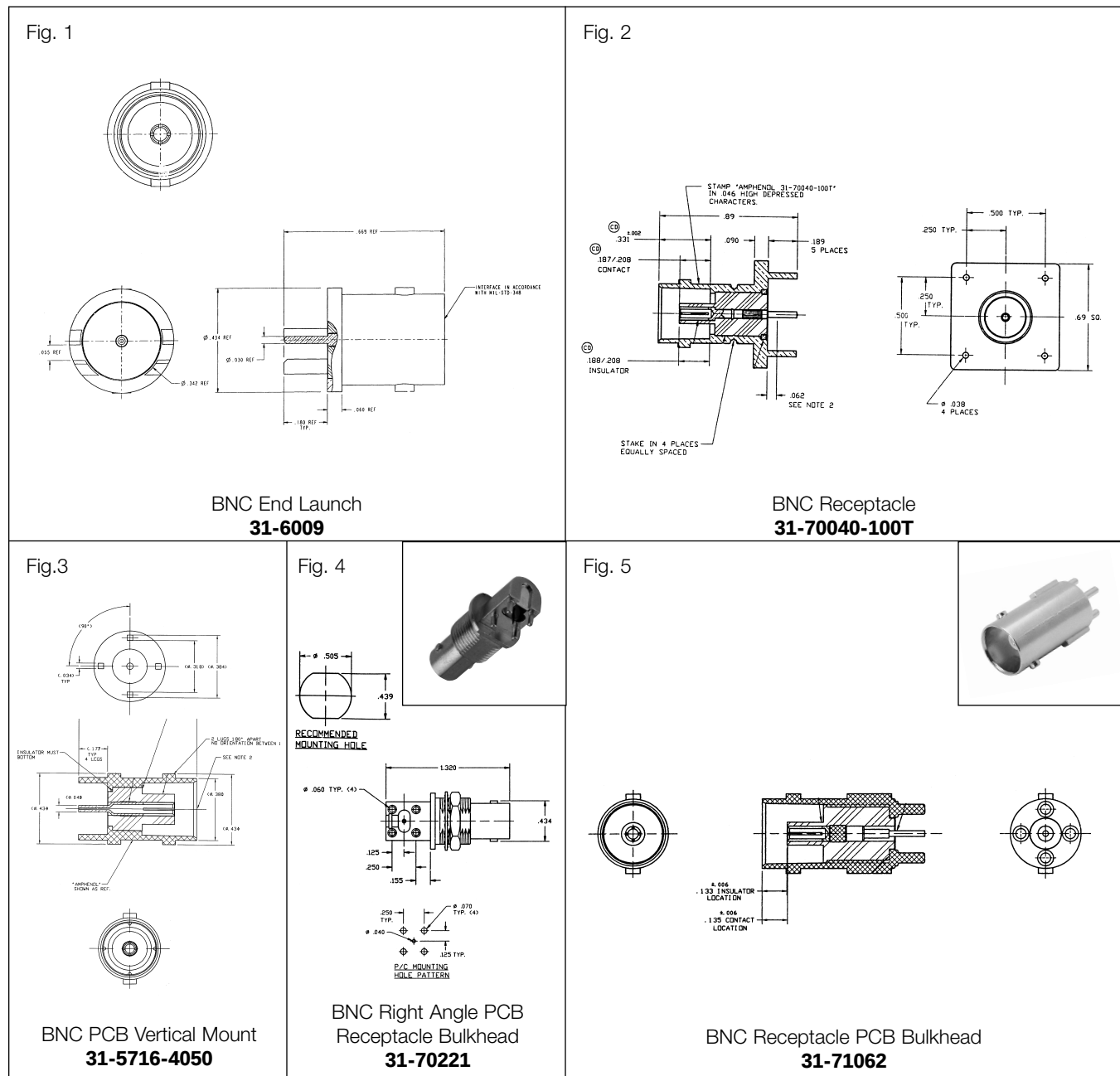
PRINTED CIRCUIT BOARD RECEPTACLE

Description	Terminal Type	Dimensions, inches (mm)		Notes		Mtg. Hole	Amphenol Number	Fig.
		a	b	Plt.	Ins.			
PCB Receptacle, Vertical, 4 Legs .176(4.5) Long/ Post terminal .037(0.9)" Dia.	Blunt Post	.831(21.1)	.433(11.0) dia	P17	D25	F	31-5329-72RFX	1

▲ distributor stocked

BNC 75 ohm Jacks - Printed Circuit Board

Amphenol®



75Ω BNC JACKS

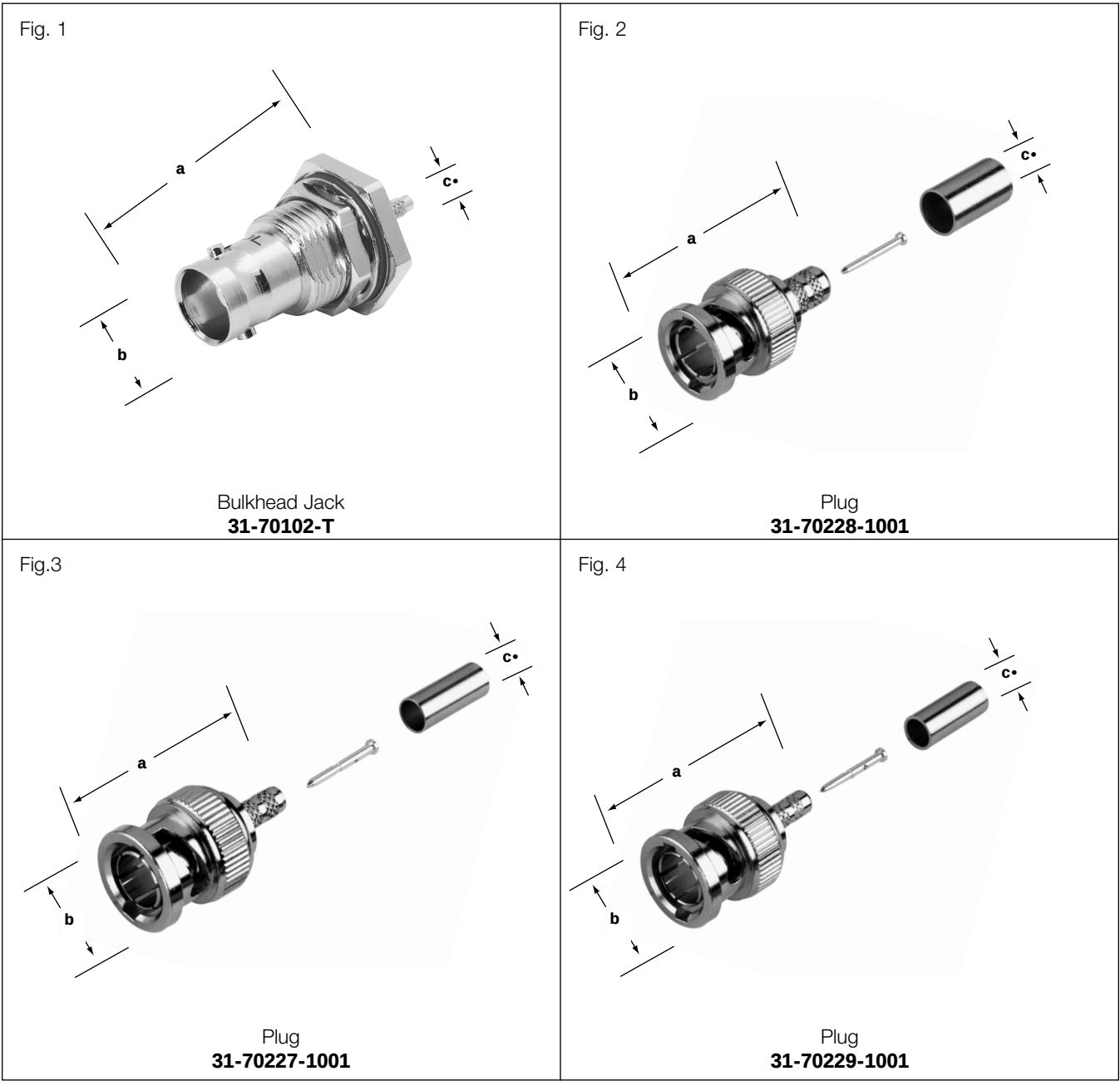
Description	Terminal Type	Dimensions, inches (millimeters)			Notes		Mtg. Hole	UG No.	75Ω	Amphenol Number	Fig.
		a	b	c	Plt.	Ins.					
PCB Vertical Mount	Blunt Post	.716(18.2)	.434(11.0)	.177(4.5)	P17	D1	—	—	T2	31-5716-4050	3
End Launch Rec.	Blunt Post	.668(17.0)	.434(11.0)	.060(1.5)	P17	D1	—	—	T1	31-6009	1
Receptacle	Blunt Post	.890(22.6)	.380(9.7)	.189(4.8)	P17	D1	—	—	T1	31-70040-100T	2
Rt. Angle PCB Rec Bulkhead	Blunt Post	1.32(33.5)	.434(11.0)	.158(4.0)	P17	D1	—	—	T1	31-70221	4
Rec. PCB Bulkhead	Blunt Post	.880(22.4)	.380(9.7)	.160(4.1)	P17	D1	—	—	T1	31-71062	5

▲ distributor stocked

BNC 75 ohm

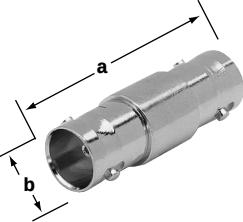
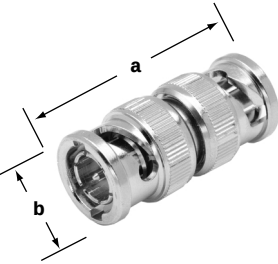
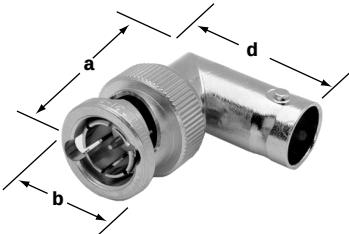
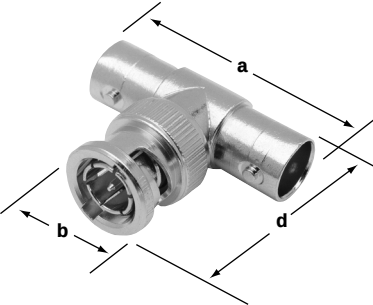
Amphenol®

High Performance Beryllium Copper Outer Contacts



HIGH PERFORMANCE

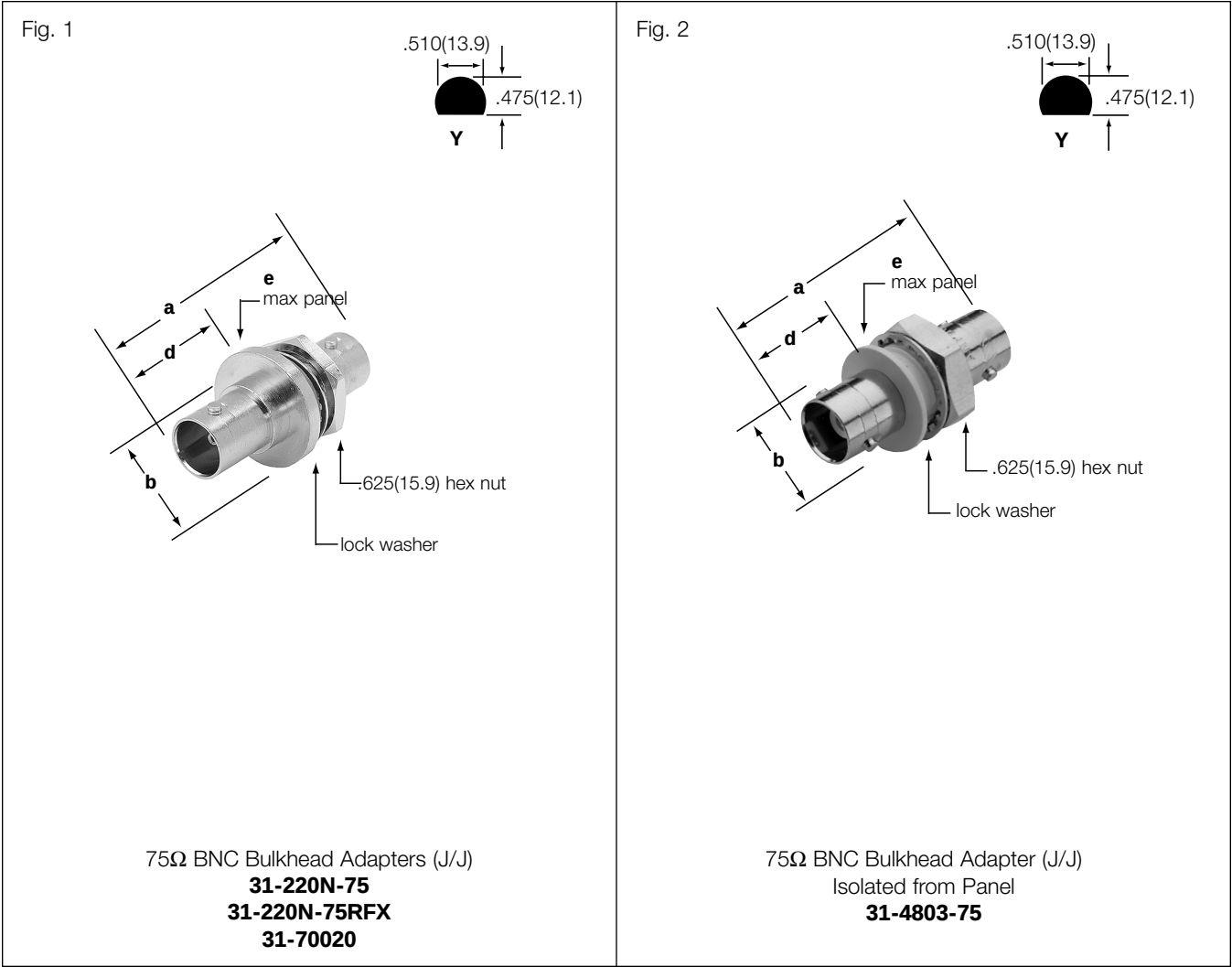
Description	Cable	Dimensions, inches (millimeters)			Notes		Mtg. Hole	UG No.	75Ω	Amphenol Number	Fig.
		a	b	c	Plt.	Ins.					
Bulkhead Jack	Rockwell 425-1129-000	1.417	.687	.128	P7	CA	—	—	T1	31-70102-T	1
Plug	734A	1.20	.563	.226	P7	CA	—	—	T1	31-70228-1001	2
Plug	L910	1.20	.563	.106	P7	CA	—	—	T1	31-70227-1001	3
Plug	735A	1.20	.563	.141	P7	CA	—	—	T1	31-70229-1001	4

Fig. 1  75Ω BNC Adapter (J/J) 31-219-75 31-70019	Fig. 2  75Ω BNC Adapter (P/P) 31-218-75RFX
Fig.3  75Ω BNC Adapter (P/J) 31-9-75 31-9-75-RFX	Fig. 4  75Ω BNC Tee Adapter (J/P/J) 31-70036

75Ω BNC ADAPTERS

Description		Dimensions, inches (millimeters)			Notes		Mtg. Hole	UG No.	75Ω Type	Amphenol Number	Fig.
		a	b	d	Plt.	Ins.					
Straight	Jack-Jack	1.28(32.5)	.434(11.0)	—	P15	D1	—	—	T2	31-219-75	1
Straight	Jack-Jack	1.40(35.6)	.434(11.0)	—	P17	D1	—	—	T1	31-70019	1 ▲
Straight	Plug-Plug	1.33(33.7)	.571(14.5)	—	P15	D1	—	—	T2	31-218-75RFX	2
Angle	Jack-Plug	1.02(25.9)	.562(14.3)	.405(10.3)	P15	D9	—	—	T2	31-9-75	3 ▲
Tee	Jack-Plug-Jack	1.28(32.5)	.562(14.3)	1.04(26.3)	P15	D1	—	—	T1	31-70036	4

▲ distributor stocked



75Ω BNC BULKHEAD ADAPTERS

Description		Dimensions, inches (millimeters)				Notes		Mtg. Hole	UG No.	75Ω Type	Amphenol Number	Fig.
		a	b	d	e	Plt.	Ins.					
Gasketed	Jack-Jack	1.40(35.6)	.750(19.0)	.666(16.9)	.172(4.4)	P15	D1	Y	—	T1	31-70020	1
Not Gasketed	Jack-Jack	1.28(32.5)	.750(19.0)	.492(12.5)	.216(5.5)	P7	D23	Y	—	T2	31-220N-75RFX	1
Not Gasketed	Jack-Jack	1.40(35.6)	.800(20.3)	.664(16.8)	.181(4.6)	P17	D1	Y	—	T2	31-220N-75	1
Isolated	Jack-Jack	1.28(32.5)	.625(15.9)	.460(11.7)	.190(4.8)	P17	D12	Y	—	T2	31-4803-75	2

▲ distributor stocked