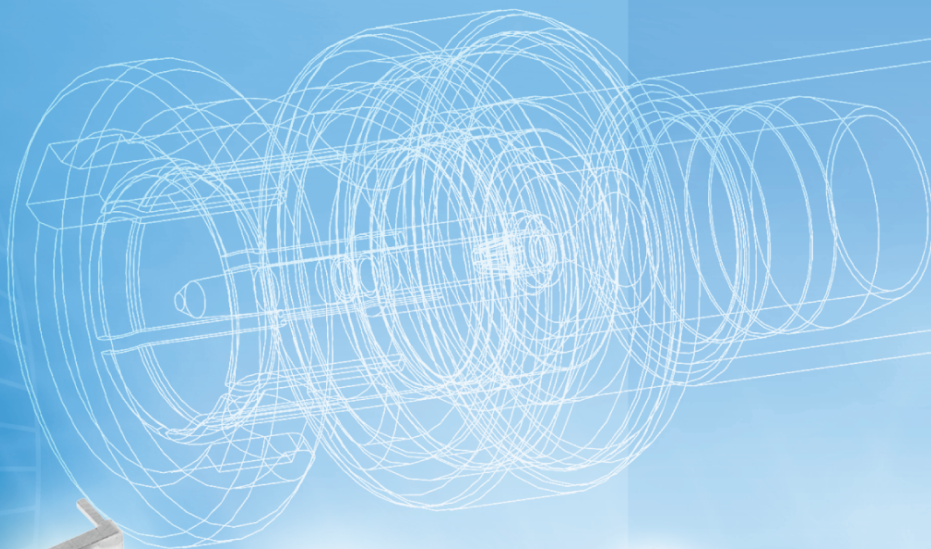


# HIGH PERFORMANCE 75 Ω BNC



High Performance  
75 Ω BNC Connectors

## High Performance 75 $\Omega$ BNC Connectors

### Description

Amphenol RF has worked hard to develop our High Performance 75 Ohm BNC product line and will continue to do so. Amphenol engineer Carl Concellman invented the BNC more the 60 years ago, and our engineers are still working to produce a variety of high quality RF solutions perfect for our customers' needs. We offer a full line of 75 Ohm BNC connectors designed to meet the need for higher performance, impedance-matched cable interconnections. These connectors can be used in a variety of applications where True 75 Ohm performance is needed to ensure low signal distortion.

Our connectors are designed for the most popular 75 Ohm cables used in Broadcast, Telecommunications and various other RF applications, and feature crimp-crimp cable affixment compatible with Trompeter tooling, requiring no new training for quick and reliable installation. They are ideally suited for 3 Gb/s serial data rates utilized in digital video transmission and conform to the SMPTE 424M-2006 specification.

Amphenol RF offers our High Performance 75 Ohm BNC connectors in a variety of configurations: Straight, 45 degree and 90 degree plugs; as well as bulkhead, PCB and receptacle jacks.

### Features/Benefits

- True 75 Ohm impedance end to end
- One piece spring alloy body/outer contact
- Strip/Crimp requirements consistent with all major industry providers
- Bayonet coupling provides a positive lock and allows for quick and easy connect / disconnects.

### Applications

- Network Routing and Switching
- Broadcast
- Custom Cable Assemblies
- DS3/DS4
- Satellite Headends
- Instrumentation
- Military / Aerospace
  - Digital Video - HDTV

# High Performance 75 Ω BNC

## 75 Ω BNC Specifications

### Electrical

Impedance	75 Ω, nominal
Frequency Range	DC - 4 GHz (useable to 6 GHz)
VSWR	< 1.10 (DC to 2.0 GHz) < 1.16 (DC to 3.0 GHz)
RF-leakage	55 dB minimum @ 3 GHz
Voltage Rating (at sea level)	500 Vrms (depending on cable)
Contact Resistance	center contact: ≤ 1.5 mΩ outer contact: ≤ 0.2 mΩ braid to body: ≤ 0.1 mΩ
Insulation resistance	5,000 MΩ minimum
Insertion loss maximum	0.2 dB max. @ 3 GHz
Dielectric withstanding voltage	1,500 Vrms (at sea level)

### Mechanical

Mechanical	Durability 500 cycles minimum
Center Contact	Retention 6 lbs. minimum
Coupling Mechanism	100 lbs. minimum
Cable Pulloff Force	Dependent on cable size
Cable Bend and Twist	500 cycles minimum
Force to Engage/Disengage	1.5 lbs minimum, 5 lbs maximum/12 oz. minimum
Mating	2-stud bayonet lock

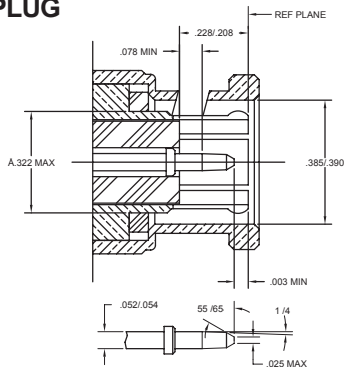
### Environmental

Temperature Range	-40°C to + 85°C
Moisture Resistance	0% to 95%; MIL-STD-202 Method 106
Corrosion (Salt Spray)	MIL-STD-202 Method 101, Test Condition B
Flammability	UL 94-VO rated (center conductor insulator)
Vibration	MIL-STD-202 Method 201, Condition B
Solvent Resistance	MIL-STD-202 Method 215
Finish	Tarnish-resistant electroless nickel plating

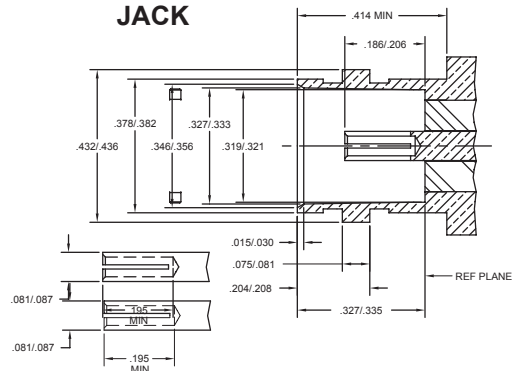
### Material

Inner Body	Phosphor bronze
Crimp Ferrule	Copper alloy
Contact Plating	Gold
Insulator	TFE, copolymer of styrene, glass-TFE (hermetically sealed)

### PLUG



### JACK



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

**High Performance 75Ω Cable Connectors****Straight Crimp-Crimp Plugs**

Cable Group	Part Number	Plating		Type	Grade
		Body	Contact		
B1	031-80101	Nickel	Gold	1	Performance
B2	031-80107	Nickel	Gold	1	Performance
B	031-80106	Nickel	Gold	1	Performance
E	031-80103	Nickel	Gold	1	Performance
E2	031-80108	Nickel	Gold	1	Performance
H1	031-80109	Nickel	Gold	1	Performance
I	031-80104	Nickel	Gold	1	Performance
I2	031-80105	Nickel	Gold	1	Performance
K3	031-80102	Nickel	Gold	1	Performance

**Angle Crimp-Crimp Plugs**

Cable Group	Part Number	Plating		Type	Grade
		Body	Contact		
B1	031-80901	Nickel	Gold	1	Performance
I	031-80904	Nickel	Gold	1	Performance
I2	031-80905	Nickel	Gold	1	Performance

**45° Crimp-Crimp Plugs**

Cable Group	Part Number	Plating		Type	Grade
		Body	Contact		
B1	031-80401	Nickel	Gold	1	Performance
I	031-80404	Nickel	Gold	1	Performance
I2	031-80405	Nickel	Gold	1	Performance

# Notes

Cable Group	Cable Type
A	RG-178, 196
B	RG-174, 188A, 316, Belden 7805
B1	RG-179, 187, Belden 9221
B2	RD-188/U, RD-316/U
B3	RD-179/U, AT&T 19224L2
C	RG-58, 58A, 58C, 141, 303, LMR195, Belden 7806A, 9907
C1	RG-55, 142, 223, 400
C2	LMR200, Belden 7807A
D	RG-58/U Plenum, Thinnet, RG-122/U, Belden 88240, 89907
E	RG-59, 62, 140, 210, Belden 8241, 8263, 8279, 9209
E1	RG-59/U 20 AWG center conductor, Belden 1426A, 1505A, 9100, 9278
E2	RD-59/U, Belden 8281, 9141, 9231
E3	RG-59/U Quad Shield, Belden 1152A
F	RG-59/U Plenum, Belden 1560A, 9259, 82259, 89259, 88241
F1	RG-59/U Plenum 20 AWG center conductor, Belden 82108
G1	RG-6, 143, 212
G2	8X, LMR240, Belden 7808A, 9258
G3	LMR400, Belden 7810A, 8214, 9913
G4	RG-8, 8A, 9, 87A, 213, 214, 225, 393
G5	RD-6/U
H	RG-11
H1	Belden 1694A, 9248
H2	Belden 1859A, 7731, 8213, 9292
H3	RG-54A/U
I	AT&T 734A, Belden 1505A
I2	AT&T 735A, Belden 735A1
J	Quad 59 headend cable
K	LMR600
K2	Belden 1695A
K3	RG-122, 180, 195, Belden 1855, 1865A, 8218
L	.141 semi-rigid, RG-402/U
L2	.085, .086, .087 semi-rigid, RG-405/U
L3	.250 semi-rigid
L4	.047 semi-rigid, Belden 1674
M	1/2 inch annular corrugated
M1	1 1/4 inch annular corrugated
M2	1 5/8 inch annular corrugated
M3	7/8 inch annular corrugated
N	1/4 Helical
N1	3/8 Helical
N2	1/2 Helical
N3	7/8 inch SFC
P1	.81 mm OD micro-cable
P2	1.13 mm OD micro-cable, TCB-068
P3	1.32 mm OD micro-cable
P4	1.37 mm OD micro-cable