



12G SDI Broadcast Solutions

Amphenol[®] RF

www.amphenorlf.com



12G SDI BROADCAST SOLUTIONS

12G High-Frequency BNC & HD-BNC Connectors for Broadcast

Ultra High Definition Video (also known as “Ultra HD” or “4K”), with 4x the resolution of 1080P HD video, requires an interconnect system that can transfer data at a rate of up to 12 Gbps. Using legacy BNC connectors often supporting a max frequency of 3 GHz, this could require 2 or 4 channels.

Amphenol RF’s line of 12G BNC and HD-BNC products are optimized for 4K Ultra HD Broadcast, providing fully intact signal transmission on a single channel. These connectors are designed for 12G-SDI video applications, and come in a variety of PCB mounting and cable terminations. Peak performance can be reached when Amphenol RF 12G connectors are used as a mated pair.

BNC PCB Connectors



031-70530



034-1065-12G



034-1018-12G

Part Number	Description
031-70530	BNC Straight PCB Jack, 16.22 mm
031-70536-12G	BNC Straight PCB Jack, 20.95 mm
031-70535-12G	BNC Right Angle PCB Jack
031-70526-13	BNC Edge Mount PCB Jack, Spanner Nut
031-70526-11	BNC Edge Mount PCB Jack, Hex Nut

034-1065-12G	HD-BNC Straight PCB Jack
031-1030-12G	HD-BNC Right Angle PCB Jack
034-1018-12G	HD-BNC Edge Mount PCB Jack

Cable Mount Connectors



031-70537-12G



031-70538-12G



034-1025-12G

Part Number	Description
031-70534	BNC Straight Crimp Plug for Belden 4794R Cable
031-70537-12G	BNC Straight Crimp Plug for Belden 4855R Cable
112955-11	BNC Straight Crimp Plug for Belden 1855A Cable
112957-11	BNC Straight Crimp Plug for Belden 1694A Cable
112985-11	BNC Straight Crimp Plug for Belden 1505A Cable
031-70538-12G	BNC Straight Jack for Belden 4855R Cable

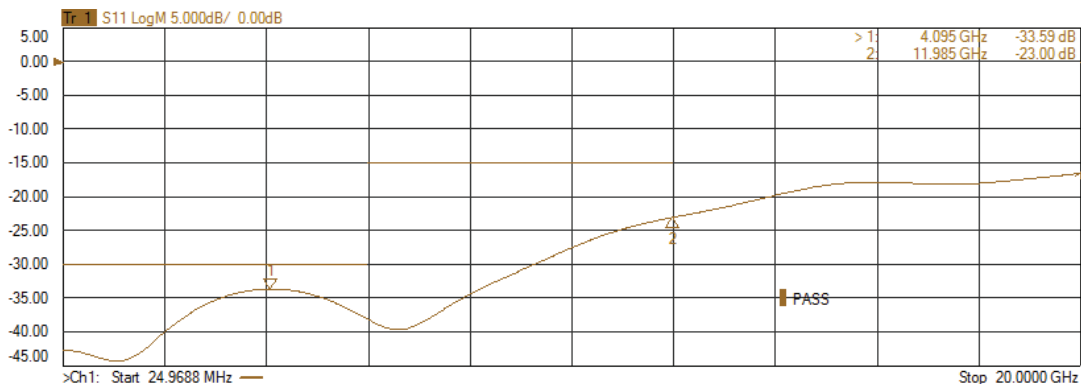
034-1104-12G	HD-BNC Straight Crimp Plug for Belden 4794R Cable
034-1107-12G	HD-BNC Straight Crimp Plug for Belden 4855R Cable
034-1026-12G	HD-BNC Straight Crimp Plug for Belden 1855A Cable
034-1017-12G	HD-BNC Straight Crimp Plug for Belden 1694A Cable
034-1025-12G	HD-BNC Straight Crimp Plug for Belden 1505A Cable

Features and Benefits

- One channel for 4K or Ultra-HD quality
- Familiar BNC bayonet coupling mechanism in HD-BNC options
- Designs available for common and 12G-specific broadcast cable types

Applications

- Mobile Broadcast
- Patch Panels
- HD Cameras
- Digital Signage
- Video Encoders
- Video Routers
- Remote Viewing



Performance Data
12 Gb/s performance per SMPTE standard 2082-1

12G Cable Assemblies



095-850-187xxxx



095-850-188xxxx



095-850-189xxxx

Straight Plug to Straight Plug Cable Assemblies

Part Number	Configuration	Cable Type
095-850-186xxxx	BNC to BNC	Belden 4794R
095-850-187xxxx	BNC to BNC	Belden 4855R
095-850-188xxxx	HD-BNC to HD-BNC	Belden 4855R
095-850-189xxxx	HD-BNC to BNC	Belden 4855R

Standard Lengths Available

Code	Length in Inches (Meters)
-006	6.00 [0.152]
-012	12.00 [0.305]
-018	18.00 [0.457]
-024	24.00 [0.610]
-036	36.00 [0.914]
-048	48.00 [1.219]
-060	60.00 [1.524]
-072	72.00 [1.829]
-120	120.00 [3.048]
-144	144.00 [4.572]
-180	180.00 [7.620]
-300	300.00 [15.240]
-600	600.00 [22.860]
-900	900.00 [30.480]

Code	Length in Inches (Meters)
M025	9.84 [0.25]
M050	19.69 [0.50]
M075	29.53 [0.75]
M100	39.37 [1.00]
M125	49.21 [1.25]
M150	59.06 [1.50]
M200	78.74 [2.00]
M300	118.11 [3.00]
M500	196.85 [5.00]
M10L	393.70 [10.00]
M20L	787.40 [20.00]
M30L	1181.10 [30.00]

Straight Plug to Straight Jack Cable Assemblies

Part Number	Configuration	Cable Type
095-850-192xxxx	HD-BNC to BNC	Belden 4794R
095-850-193xxxx	HD-BNC to BNC	Belden 4855R

*XXXX denotes length code. See standard lengths options.

12G Adapters

Part Number	Description
031-220N-75-12G	BNC Jack to BNC Jack Bulkhead
112444-12G	BNC Jack to BNC Jack Bulkhead, Isolated
031-9-75-12G	BNC Jack to BNC Plug Right Angle
112446-12G	BNC Jack to BNC Jack
031-218-12G	BNC Plug to BNC Plug



031-220N-75-12G



031-9-75-12G

Technical Specifications (Connectors)

Electrical		BNC	HD-BNC
Impedance		75 Ω	
Frequency range		DC-12 GHz	DC -18 GHz
Return Loss		≥ 30 dB @ DC -6 GHz	≥ 15 dB @ DC -12 GHz
Dielectric Withstanding Voltage		1500 VRMS	1000 VRMS
Insulation Resistance		5000 C	10000 MΩ
Contact Resistance	Center Contact:	≤ 1.5 mΩ	≤ 5 mΩ
	Outer Contact:	≤ 0.2 mΩ	≤ 2.5 mΩ

Mechanical

Coupling Style	2-stud bayonet coupling
Mating Cycles	500 cycles min.
Cable Attachment	Crimp
Assembly Tool	CTL-17

Environmental

Temperature Range	-65 °C to +165 °C
RoHS	Compliant with exemption 6C

Materials

Body and Outer Contacts	Brass or zinc die-cast, nickel or gold plated
Male Contact	Brass or phosphor bronze, gold plated
Female Contact	Beryllium copper, gold plated
Crimp Ferrule	Brass, nickel plated
Spring	Stainless steel, nickel plated
Insulator	PTFE
Gasket	Silicone rubber

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