

«Real» 75 Ω BNC Connectors for Applications up to 3 GHz



«Real» 75 Ω BNC connectors are suitable for applications up to 3 GHz, contrary to the conventional 75 Ω BNC connector types, which are applicable up to 1 GHz only. With our HUBER+SUHNER full crimp technique, they can be assembled quick and easy to all convenient cable types. Thanks to good electrical properties they are suitable for different applications, such as broadcast, telecommunication, etc.. Mechanically they are mateable with all conventional BNC connectors (50 and 75 Ω).

Properties

- True 75 Ω impedance
- DC - 3 GHz
- Good return loss properties

Benefits

- Fast and easy mounting (HUBER+SUHNER full crimp)
- Intermateable with standard BNC 50 Ω and BNC 75 Ω connectors

«Real» 75 Ω BNC Connectors

Technical data

Electrical data	Requirements
Impedance	75 Ω
Frequency range	DC ... 3 GHz
Return loss	see table below
Dielectric withstanding voltage (at sea level)	1.5 kV rms, 50 Hz (depending on cable)
Working voltage (at sea level)	500 V rms, 50 Hz (depending on cable)
Insulation resistance	$\geq 5 \times 10^3 \text{ M}\Omega$
Contact resistance	
- Centre conductor	$\leq 1.5 \text{ m}\Omega$
- Outer conductor	$\leq 1.0 \text{ m}\Omega$

Connector type	Typical RL (dB) values			Cable
	1 GHz	2 GHz	3 GHz	
Straight cable plugs (11_BNC-75..)	30	28	24	Draka 0.6/2.8
	30	28	24	Draka 0.8/3.7 AF
	30	28	–	G_04233_D*
	30	28	24	Draka 1.0/4.8 AF
Right angle cable plug (16_BNC-75..)	28	21	–	G_04233_D*
Straight bulkhead cable jacks (24_BNC-75..)	35	24	24	Draka 0.8/3.7 AF
	30	25	–	G_04233_D*
	35	26	24	Draka 1.0/4.8 AF
Adapters (31_BNC-75../34_BNC-75..)	35	24	23	

*for applications up to 2 GHz

Mechanical data	Requirements
Coupling nut torque	7 Ncm ... 28 Ncm / 0.6 ... 2.5 in.lbs
Coupling nut retention force	$\geq 450 \text{ N} / 101.2 \text{ lbs}$
Contact captivation	$\geq 27 \text{ N} / 6.1 \text{ lbs}$
Durability (matings)	500

Environmental data	Requirements
Temperature range	$-65 \text{ }^\circ\text{C} \dots +165 \text{ }^\circ\text{C} / -85 \text{ }^\circ\text{F} \dots +329 \text{ }^\circ\text{F}$
Climatic category IEC	55/155/21
Thermal shock	MIL-STD-202, Method 107, Condition B
Moisture resistance	MIL-STD-202, Method 106
Corrosion	Saltspray test acc. to MIL-STD-202, Method 101, Condition B
Vibration	MIL-STD-202, Method 204, Condition B
Shock	MIL-STD-202, Method 213, Condition G

Material data		
Connector part	Material	Plating
Bodies	brass / sping bronze	SUCOPLATE®
Pin contacts	brass	gold / SUCOPRO®
Socket contacts	copper-beryllium alloy	gold / SUCOPRO®
Crimp ferrules	copper	SUCOPLATE®
Insulators	PTFE or PFA	
Gaskets	silicon rubber	

Cable connectors

Straight cable plugs (male)

- For flexible cables
- HUBER+SUHNER® full crimp



HUBER+SUHNER type	Item no.	Cable	Packaging	Assembly instruction	Crimp insert*
11_BNC-75-3-38/133_NE	84070521	Draka 0.6/2.8	single	0000270344	76_Z-0-3-26
11_BNC-75-4-39/133_NE	84070591	Draka 0.8/3.7 AF	single	0000270231	76_Z-0-4-24
11_BNC-75-4-40/133_NE	84112535	G_04233_D	single	0000270231	76_Z-0-4-24
11_BNC-75-5-20/133_NE	84070641	Draka 1.0/4.8 AF	single	0000270280	76_Z-0-5-22

* suitable for the large HUBER+SUHNER crimping tool

Right angle cable plug (male)

- For flexible cable
- Cable entry crimp
- Centre contact soldered



HUBER+SUHNER type	Item no.	Cable	Packaging	Assembly instruction	Crimp insert*
16_BNC-75-4-14/133_NE	84135532	G_04233_D	single	3038	76_Z-0-4-24

* suitable for the large HUBER+SUHNER crimping tool

Straight bulkhead cable jacks (female)

- For flexible cables
- HUBER+SUHNER® full crimp
- Mounting hole ML 4
- Panel thickness max. 3.5 mm



HUBER+SUHNER type	Item no.	Cable	Packaging	Assembly Instruction	Crimp insert*
24_BNC-75-4-18/133_NE	84135127	Draka 0.8/3.7 AF	single	0000365601	76_Z-0-4-24
24_BNC-75-4-19/133_NE	84135191	G_04233_D	single	0000365657	76_Z-0-4-24
24_BNC-75-5-7/133_NE	84135216	Draka 1.0/4.8 AF	single	0000365714	76_Z-0-5-22

* suitable for the large HUBER+SUHNER crimping tool

«Real» 75 Ω BNC Connectors

Receptacles with solder end

Receptacles, jacks (female)

- Bulkhead mounted
- Flange with O-ring



HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Panel thickness
22_BNC-75-0-16/133_NE	84135058	single	ML 1	5.5 mm max.

Adapters within series

- Jack-jack (female)



HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Notes
31_BNC-75-0-2/133_NE	84119590	single	–	–

- Jack-jack (female)
- Bulkhead mounted
- Flange with O-ring

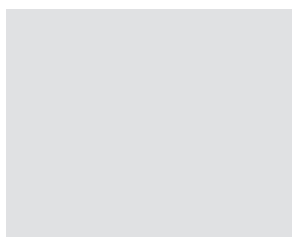


HUBER+SUHNER type	Item no.	Packaging	Mounting hole	Panel thickness
34_BNC-75-0-5/133_NE	84095130	single	ML 4	3.5 mm max.

HUBER+SUHNER is certified according to ISO 9001, ISO 14001, ISO/TS 16949 and IRIS.

WAIVER

It is exclusively in written agreements that we provide our customers with warrants and representations as to the technical specifications and/or the fitness for any particular purpose. The facts and figures contained herein are carefully compiled to the best of our knowledge, but they are intended for general informational purposes only.



HUBER+SUHNER AG
Radio Frequency Division
Degersheimerstrasse 14
9100 Herisau
Switzerland
Tel. +41 71 353 4111
Fax +41 71 353 4590
info@hubersuhner.com

