

### BNCmicro 75 Ohm – made in Germany

BNCmicro is a miniature coaxial connector with bayonet catch that is preferably used for video router and similar applications, because a high packing density is required there.

BNCmicro connectors have a surge impedance of 75 Ohm and use the pin-socket-principle as contact system. Cable installation is performed by simply crimping the inner and outer conductor and there by contributes to a high level of efficiency.

This new version of the BNCmicro series made by Damar & Hagen was developed and perfected regarding its electrical and mechanical properties on the basis of our 40 years of experience as a manufacturer of BNC connectors and latest insights. It combines the customer's request for highest quality with simple usage and assemblage.

### High packing density

The connectors of the series BNCmicro with 75 Ohm were developed for SDI-applications acc. to SMPTE 424M up to 6 GHz. They have a 4-fold higher packing density due to its 50 % reduction compared to usual BNC-connectors.

### Robust and durable

Due to their construction BNCmicro cable plugs made by Damar & Hagen guarantee a duration of at least 1.000 connections (customary are only approx. 500 connections).

### Return loss -23 dB up to 6 GHz (12G)

All return loss values of the BNCmicro series are extreme low and were measured considering practical relevant application (e.g. with Patch cable).



Cable Plug



Cable Adaptor



Terminator Plug



Adapter



Patch Cable



Adapter Cable  
BNCmicro-BNCpro



Patch Panel

BNCmicro made by Damar & Hagen is intermateable with HD-BNC™ from Amphenol®

## Electrical characteristics (at 20°C and 65 % relative humidity)

Impedance.....	75 Ω
Frequency range .....	0 up to 12 GHz (24 Gbit/s)
Return loss* .....	≥ 32 dB up to 3 GHz ≥ 23 dB up to 6 GHz ≥ 19 dB up to 9 GHz ≥ 13 dB up to 12 GHz
VSWR (plug).....	≤ 1.05 up to 3 GHz ≤ 1.15 up to 6 GHz ≤ 1.25 up to 9 GHz ≤ 1.60 up to 12 GHz
Reflection factor (plug) .....	≤ 2.5 % up to 3 GHz ≤ 7.1 % up to 6 GHz ≤ 11.2 % up to 9 GHz ≤ 22.4 % up to 12 GHz

## Contact resistance (plug and socket connected)

Inner conductor.....	≤ 5 mΩ
Outer conductor.....	≤ 2 mΩ
Insulation resistance.....	≥ 5 GΩ

## Test voltage $U_{eff}$

Connectors for cable diameter .....	≤ 4 mm 500 V
Connectors for cable diameter .....	≥ 5 mm 500 V

## Operating voltage $U_{eff}$

Connectors for cable diameter .....	≤ 4 mm 170 V
Connectors for cable diameter .....	≥ 5 mm 170 V

**Operating temperature range**..... -60 °C up to +165 °C

## Mechanical characteristics

Durability (mating cycles)* .....	≥ 1000
RoHS .....	conform

## Construction plug

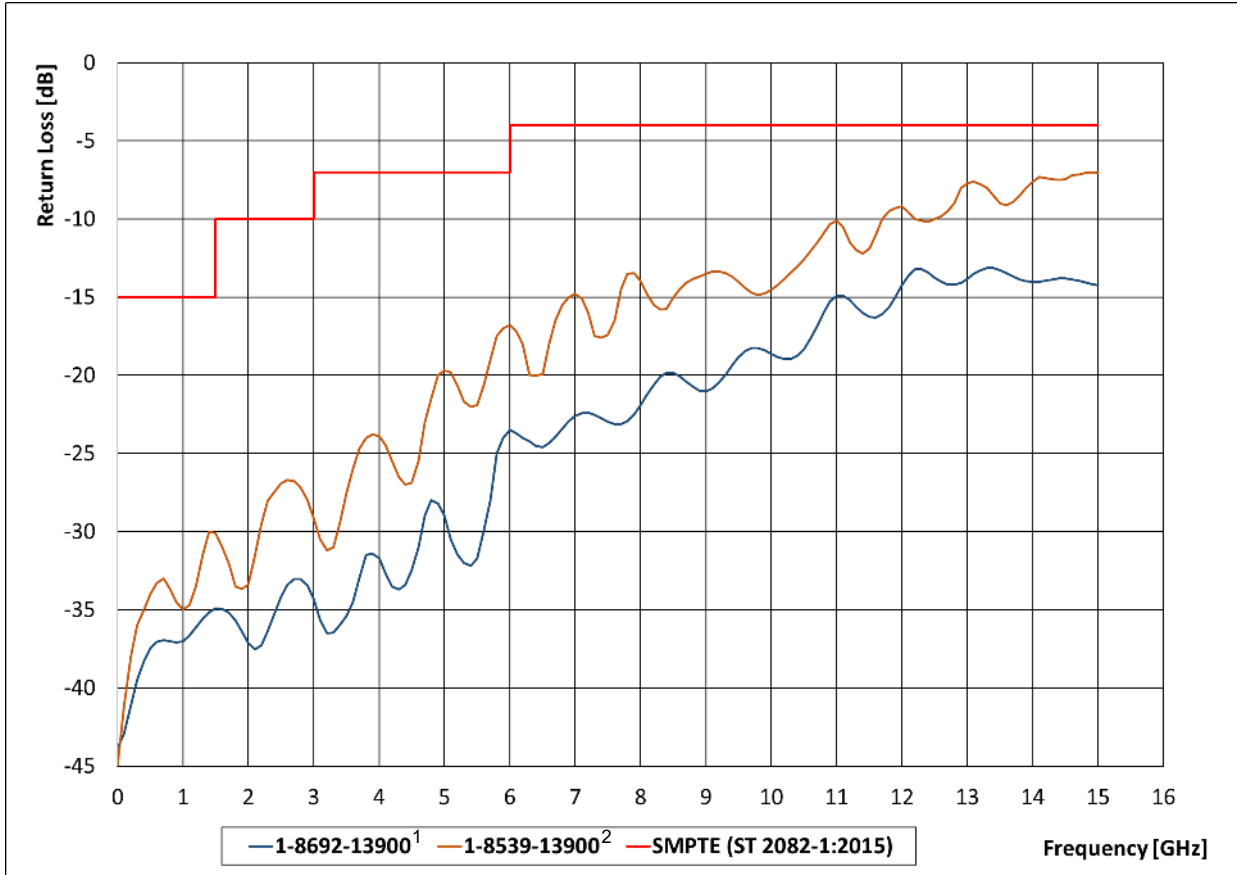
Inner conductor.....	Brass non-magnetic hard gold-plated
Dielectric.....	PTFE
Outer conductor.....	Brass non-magnetic hard gold-plated
Spring elements.....	Stainless steel
Other material parts.....	Brass nickel-plated
Gasket .....	Silicon
Coupling ring .....	Brass nickel-plated
Crimp sleeve.....	Copper nickel-plated

\* Divergent data mentioned at the respective product.

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## Comparative measurement of Cable Plugs (BNCmicro):



Measured: Patch cable 0.3 m with cable plugs of the series BNCmicro in different specifications.  
 Instrument: Time domain reflectometer (TDR) of Tektronix.

Part Number	R <sub>L</sub> [dB] (Return loss)				VSWR (Voltage standing wave ratio)				r [%] (Reflection)			
	3 GHz	6 GHz	9 GHz	12 GHz	3 GHz	6 GHz	9 GHz	12 GHz	3 GHz	6 GHz	9 GHz	12 GHz
1-8692-13900 <sup>1)</sup>	-32	-23	-19	-13	1.05	1.15	1.25	1.6	2.5	7.1	11.2	22.4
1-8539-13900 <sup>2)</sup>	-26	-16	-13	-9	1.1	1.4	1.6	2.1	5	16	22.4	35.5

The specified data serve only to describe the product and should not be considered legally binding, guaranteed properties. Depending on the application, design, type of cable and assembly method the specified values may differ. We reserve the right to make constructional changes, determine delivery and are not responsible for any errors and omissions.

<sup>1)</sup> Improved version  
<sup>2)</sup> Previous version (still available)

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## Individual customized High Performance Cable Connectors

On the basis of our 90 years of experience as Developer and Producer of high quality cable connectors we are able to provide customer-specific solutions by manufacturing individual precision cable connectors from Damar & Hagen.

### Options

Surface .....	special surfaces according to customers requirement, for the layer structure and also for the layer thicknesses
Cable connections.....	halogen-free cables, two braids cable, multi-wire cable, unusual cable diameter, different cable length, additional clamping of the cable sheath, Assembly by our company,
Dimensions.....	all dimensions, distances, nuts, tread length mounting holes, insulation bases etc. are variable according to customers requirement
Electrically variable.....	special resistors, circuits, contacts are possible According to customers requirement
Insulating parts, gaskets and contacts .....	other colours and materials are possible (e. g. Beryllium bronze for outer conductor contact)