



TECHNICAL DATA SHEET

50 ohm Connectors for RF Cables

Kabelwerk | **EUPEN** AG

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cable

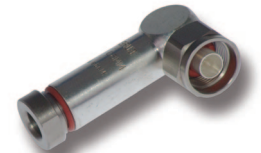
Connector 1/4" Hiflex for EC1-50-HF (5042)

FEATURES

- **Low reflection coefficient**
- **High contact force through inner contacts made in a high-strength copper alloy**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **Quick trimming tool**
- **Installation "screw it on and tighten it"**
- **No soldering**
- **Same preparation for straight and right angle connectors**



43MB14X



NM50BL14X

The connectors are designed according to the standard interfaces as N or DIN 7/16. Contacts components are silver or trimetal plated to minimize insertion loss and passive intermodulation products; mechanical parts are nickel plated for heavy-duty handling and best corrosion resistance. Watertightness is achieved simultaneously on the outer conductor and on the jacket by using a special silicone gasket. This watertight solution allows the use of our connectors in the toughest environmental conditions. For a cost effective, easy and reliable installation, special trimming tools are recommended.

SPECIFICATIONS

Connector type	N-male	N-female	7-16 male	7-16 male right angle	N-male right angle	4.3-10 male
Electrical specifications						
• Nominal impedance [Ω]			50			
• Reflection coefficient @ 3 GHz		≤ 0.02			≤ 0.03	≤ 0.02
• Insulation resistance [G Ω]	≥ 5		≥ 10			≥ 5
• Test voltage (at sea level) [kV rms, 50Hz]	2.5*		4*			2.5*
• Working voltage (at sea level) [kV rms, 50Hz]	1		2.7			1
• Max. peak power [kW]	10		40		10	15
• Screening effectiveness up to 1 GHz [dB]			> 128			
• Contact resistance (outer contact) [m Ω]			≤ 1			
• Contact resistance (inner contact) [m Ω]			≤ 1.5			
• PIM ratio (2 x 20 W carrier) [dBc]		≤ -155 (Typical -163)			-	≤ -155 (Typical -163)
Mechanical specifications						
• Torque of coupling mechanism [Nm]	8		30		8	4
• Tensile strength of coupling mechanism [N]	400		1000		250	500
• Cable retention [N]	> 400		> 600		> 250	> 500
• Mechanical endurance (Nr of couplings)			≥ 500			≥ 100
• Outer diameter [mm]	22		32.5	39.5	22	24
• Length [mm]	52		53	66	58 x 31	50
• Weight [g]	72	80	136	182	88	79
Environmental specifications						
• Temperature range	-40 °C to +85 °C (-40 °F to +185 °F)					
• Degree of protection	IP67/IP68 (mated connectors)					
• Climatic & moisture resistance test	acc. ANSI/SCTE 72 2002 R2007 (-40 °C / +60 °C @ 75% r.h.) for 2 weeks					
• Corrosion resistance test	acc. IEC 60068-2-11-Test Ka					
• Vibration test	acc. IEC 60068-2-6 (10 to 500 Hz @ 10 G)					
Materials						
• External parts	Brass with passivated silver or trimetal or nickel plating					
• Outer contact	Brass with passivated silver or trimetal plating					
• Inner contact	Passivated silver plated high-strength copper alloy and brass					
• Dielectric	TPX/PTFE		TPX		TPX / PTFE	
• Gaskets	High quality silicone					
Cable dimensions [mm]						
• Inner conductor outer diameter	1.85 to 1.95					
• Outer conductor outer diameter	6.2 to 6.6					
• Jacket outer diameter	7.0 to 8.0					
Order codes						
• Connector type	NM50B14X	NF50B14X	716MB14X	716MBL14X	NM50BL14X	43MB14X
• Special trimming tool	SPTC50B14X – Silver color					

* The 7-16 and 4.3-10 interface (respectively the N interface) withstands a proof voltage of 4 kV rms (respectively 2.5 kV rms), but the cable size limits the voltage at the end of the cable to a lower value (refer to the datasheet of the cable, where the peak voltage is given with a safety margin).