



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**



XMB14X



43MB14X



NM50BL14X

The connectors are designed according the standard interfaces as N, DIN 7/16, 4.3-10 or Nex10. 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	Nex10 male	
Electrical specifications								
• Nominal impedance [Ω]	50							
• Reflection coefficient @ 3 GHz	≤ 0.02		≤ 0.03			≤ 0.02		
• Insulation resistance [GΩ]	≥ 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			15		
• Screening effectiveness up to 1 GHz [dB]	> 128							
• Contact resistance (outer contact) [mΩ]	≤ 1							
• Contact resistance (inner contact) [mΩ]	≤ 1.5							
• PIM ratio (2 x 20 W carrier) [dBc]	≤ -155 (Typical -163)			-			≤ -155 (Typical -163)	
Mechanical specifications								
• Torque of coupling mechanism [Nm]	3 to 5		30			1.5		
• Tensile strength of coupling mechanism [N]	400		1000			500		
• Cable retention [N]	> 400		> 600			> 500		
• Mechanical endurance (Nr of couplings)	≥ 500		≥ 500			≥ 100		
• Outer diameter [mm]	22		32.5			24		
• Length [mm]	52		53			50		
• Weight [g]	72		136			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	XMB14X	
• 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).