TECHNICAL DATA SHEET
50 ohm Connectors for RF Cables

Kabelwerk EUPEN AG
cable
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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		10	15	5
• 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]	8		30		8	4	1.5
• 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	18
• Length [mm]	52		53	66	58 x 31	50	57
• Weight [g]	72	80	136	182	88	79	67
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							
• Externals 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).

ISO Certified Company KABELWERK EUPEN AG - Malmedyer Straße 9 - 4700 EUPEN - BELGIUM Tel.: +32(0) 87.59.70.00 - Fax : +32(0) 87.59.71.00 - http://www.eupen.com - e-mail: info@eupen.com