



TECHNICAL DATA SHEET

50 ohm Connectors for RF Cables

Kabelwerk

EUPEN AG

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cable

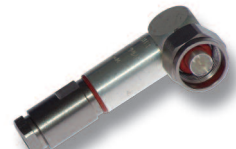
Connector 1/4" for EC1-50 (5062)

FEATURES

- Low reflection coefficient (up to 2.5 GHz)
- Low PIM level
- High contact force through inner contacts made in a high-strength copper alloy
- Silver plated
- Gland on the cable
- Watertight (IP67/IP68)
- Corrosion resistant
- Quick trimming tool
- O-ring seal integrated in connector



NF50A14



NM50AL14

The connectors are designed according the standard interfaces as N or DIN 7/16. Contact components are silver plated to minimize insertion loss and passive intermodulation products; mechanical parts are nickel plated for heavy-duty handling and best corrosion resistance. The watertightness is made using silicone o-rings and a gland with nitrile o-ring on the cable to resist 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 female	N-male right angle
Electrical specifications					
• Nominal impedance [Ω]	50				
• Reflection coefficient @ 2.5 GHz	≤ 0.02				
• Insulation resistance [$G\Omega$]	≥ 5		≥ 10		≤ 0.03
• 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
• Screening effectiveness up to 1 GHz [dB]	> 128				
• Contact resistance (outer contact) [$m\Omega$]	≤ 1				
• Contact resistance (inner contact) [$m\Omega$]	≤ 1.5				
• PIM ratio (2 x 20 W carrier) [dBc]	≤ -155 (Typical -163)				
Mechanical specifications					
• Torque of coupling mechanism [Nm]	8		30		8
• Tensile strength of coupling mechanism [N]	400		1000		400
• Cable retention [N]	> 400		> 700		> 400
• Mechanical endurance (Nr of couplings)	≥ 500				
• Outer diameter [mm]	22	22	32.5	29	22
• Length [mm]	65	65	65	65	69 x 31
• Weight [g]	62	56	120	120	90
Environmental specifications					
• Temperature range	-40°C to $+85^{\circ}\text{C}$ (-40°F to $+185^{\circ}\text{F}$)				
• Degree of protection	IP67/IP68 (mated connectors)				
• Climatic & moisture resistance test	acc. ANSI/SCTE 72 2002 R2007 (-40°C / $+60^{\circ}\text{C}$ @ 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	Passivated silver plated or electroless nickel plated brass				
• Outer contact	Passivated silver plated brass				
• Inner contact	Passivated silver plated high-strength copper alloy and brass				
• Dielectric	PTFE		TPX		PTFE & TPX
• O-rings	High quality silicone & nitrile				
Cable dimensions [mm]					
• Inner conductor (helicoids) inner diameter	2.3 to 2.43				
• Outer conductor outer diameter	6.5 to 7.8				
• Jacket outer diameter	9.0 to 10.2				
Order codes					
• Connector type	NM50A14	NF50A14	716MA14	716FA14	NM50AL14
• Special trimming tool	SPTC50A14 - Silver color				

* The 7-16 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).