



TECHNICAL DATA SHEET

50 ohm Connectors for RF Cables

Kabelwerk

EUPEN AG

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cable

Connector 1-5/8" for EC7-50-A (5438A) and EA7-50 (5437)

FEATURES

- Low reflection coefficient (up to 2.7 GHz)
- Low PIM level
- High force integrated center contact made with high-strength copper alloy
- Watertight (IP67/IP68)
- Corrosion resistant
- Quick trimming tool
- O-ring sealing
- Fully compatible with copper & aluminium cable



NF50V158N1



43FV158N1



716MV158N1

The connectors are designed according the standard interfaces as N, 4.3-10 or DIN 7-16. Contact 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 by using silicone o-rings 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	4.3-10 female	7-16 male	7-16 female
Electrical specifications					
• Nominal impedance [Ω]	50				
• Reflection coefficient @ 2.7 GHz [dB]	≥ 35				
• Insulation resistance [GΩ]	≥ 5		≥ 10		
• Test voltage (at sea level) [kV rms, 50Hz]	2.5		4		
• Working voltage (at sea level) [kV rms,50Hz]	1		2.7		
• Max. peak power [kW]	10		22.5*		40
• Screening effectiveness up to 1 GHz [dB]	> 128				
• Contact resistance (outer contact) [mΩ]	≤ 1				
• Contact resistance (inner contact) [mΩ]	≤ 1				
• PIM ratio (2 x 20 W carrier) [dBc]	≤ -155 (Typical -163)				
Mechanical specifications					
• Torque of coupling mechanism [Nm]	8		5 to 8		30
• Tensile strength of coupling mechanism [N]	400		500		700
• Cable retention [N]	> 1500				
• Mechanical endurance (Nr of couplings)	> 500				
• Outer diameter [mm]	63				
• Length [mm]	80	75	81	71	70
• Weight [g]	681	670	730	686	681
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 electroless 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				
• O-rings	High quality silicone				
Cable dimensions [mm]					
• Inner conductor (helicoïds) inner diameter	14.3 to 14.7				
• Outer conductor outer diameter	46.3 to 46.9				
• Jacket outer diameter	49.4 to 50.6				
Order codes					
• O-ring connector type	NM50V158N1	NF50V158N1	43FV158N1	716MV158N1	716FV158N1
• Special trimming tool	F-158				

* 4.3-10 interface according to IEC61169-54