



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 [$G\Omega$]		≥ 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) [$m\Omega$]			≤ 1		
• Contact resistance (inner contact) [$m\Omega$]			≤ 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 (helicooids) 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