



TECHNICAL DATA SHEET

50 ohm Connectors for RF Cables

Kabelwerk | **EUPEN** AG

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cable

Connector 7/8" for EC5-50-A (5228A) and EA5-50 (5227)

FEATURES

- **Low reflection coefficient (up to 3.0 GHz)**
- **Low PIM level**
- **High contact force through inner contacts made in a high-strength copper alloy**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **Quick trimming tool for cable preparation**
- **Fully compatible with copper & aluminium cable**



NM50V78N1



43FV78N1



716FV78N1

The connectors are designed according the standard interfaces as N, DIN 7-16 or 4.3-10. 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 @ 3.0 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		15*		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]			> 1000		
• Mechanical endurance (Nr of couplings)			≥ 500		
• Outer diameter [mm]			35		
• Length [mm]	62	57	56	53	52
• Weight [g]	164	153	160	170	160
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				
• O-rings	High quality silicone				
Cable dimensions [mm]					
• Inner conductor inner diameter	8.26 to 8.46				
• Outer conductor outer diameter	24.6 to 25.4				
• Jacket outer diameter	27.8 to 28.2				
Order codes					
• O-ring connector type	NM50V78N1	NF50V78N1	43FV78N1	716MV78N1	716FV78N1
• Special trimming tool	SPTC50AV78M – Blue color				

* ambient temperature 90 °C max.