



# 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
<b>Electrical specifications</b>					
• Nominal impedance [ $\Omega$ ]			50		
• Reflection coefficient @ 3.0 GHz [dB]			$\geq 35$		
• Insulation resistance [G $\Omega$ ]		$\geq 5$			$\geq 10$
• 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 $\Omega$ ]			$\leq 1$		
• Contact resistance (inner contact) [m $\Omega$ ]			$\leq 1$		
• PIM ratio (2 x 20 W carrier) [dBc]			$\leq -155$ (Typical -163)		
<b>Mechanical specifications</b>					
• 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)			$\geq 500$		
• Outer diameter [mm]			35		
• Length [mm]	62	57	56	53	52
• Weight [g]	164	153	160	170	160
<b>Environmental specifications</b>					
• 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)		
<b>Materials</b>					
• 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		
<b>Cable dimensions [mm]</b>					
• 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		
<b>Order codes</b>					
• O-ring connector type	NM50V78N1	NF50V78N1	43FV78N1	716MV78N1	716FV78N1
• Special trimming tool			SPTC50AV78M – Blue color		

\* ambient temperature 90 °C max.