



# TECHNICAL DATA SHEET

## 50 ohm Connectors for RF Cables

Kabelwerk | **EUPEN** AG

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cable

### Connector 7/8" for EC5-50 and EC5-50-HF (5228 and 5228X)

#### FEATURES

- **Low reflection coefficient (up to 2.5 GHz)**
- **Low PIM level**
- **High contact force through Cu-Be inner contacts**
- **Silver plated**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **Quick trimming tool for cable preparation**
- **One piece "fit on and tighten it"**
- **Sealant injection or o-ring sealing**



NM50A78M



716FV78M

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 or silicone sealant injection, filling up all interstices to resist in the toughest environmental conditions. In addition of this proved quality the 7/8" connectors are compatible with standard and hiflex 7/8" Eupen cables offering excellent electrical specifications. 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
<b>Electrical specifications</b>				
• Nominal impedance [ $\Omega$ ]			50	
• Reflection coefficient @ 2.5 GHz			$\leq 0.02$	
• 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
• Screening effectiveness up to 1 GHz [dB]			$> 128$	
• Contact resistance (outer contact) [ $m\Omega$ ]			$\leq 0.7$	
• Contact resistance (inner contact) [ $m\Omega$ ]			$\leq 1$	
• PIM ratio (2x25 W carrier) [dBc]			$\leq -155$ (Typical -163)	
<b>Mechanical specifications</b>				
• Torque of coupling mechanism [Nm]	8			30
• Tensile strength of coupling mechanism [N]	400			1000
• Cable retention [N]	$> 400$			$> 1000$
• Mechanical endurance (Nr of couplings)			$\geq 500$	
• Outer diameter [mm]			34.5	
• Length [mm]	75	74	71	71
• Weight [g]	180	178	200	192
<b>Environmental specifications</b>				
• Temperature range	-40 °C to +85 °C (-40 °F to +185 °F)			
• Degree of protection	IP67/IP68 (mated connectors)			
<b>Materials</b>				
• Externals parts	Passivated silver plated or electroless nickel plated brass			
• Outer contact	Passivated silver plated brass			
• Inner contact	Passivated silver plated Cu-Be and brass			
• Dielectric	TPX / PTFE			
• O-rings	High quality silicone			
<b>Cable dimensions [mm]</b>				
• Inner conductor (helicoids) inner diameter	7.3 (6.9) to 8.1			
• Outer conductor outer diameter	24.6 to 25.2			
• Jacket outer diameter	27.5 to 28.5			
<b>Order codes</b>				
• Sealant injection connector type	NM50A78M	NF50A78M	716MA78M	716FA78M
• O-ring connector type	NM50V78M	NF50V78M	716MV78M	716FV78M
• Special trimming tool for standard cable	SPTC50AV78M – Blue color			
• Special trimming tool for hiflex cable	SPTC50AV78X – Green color			
• Special silicone sealant kit	SIL 744			

