



TECHNICAL DATA SHEET

50 ohm Connectors for RF Cables

Kabelwerk **EUPEN** AG

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cable

Connector 1/2" for EC4-50 (5128)

FEATURES

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



NF50A12



716FV12



716MAL12

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 of our connectors is made using silicone o-rings or silicone sealant injection, filling up all interstices, 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	7-16 male	7-16 female	N-male right angle	7-16 male right angle
Electrical specifications						
• Nominal impedance [Ω]			50			
• Reflection coefficient @ 2.5 GHz			≤ 0.02		≤ 0.03	
• Insulation resistance [$G\Omega$]	≥ 5		≥ 10		≥ 5	≥ 10
• Test voltage (at sea level) [KV rms, 50Hz]	2.5		4		2.5	4
• Working voltage (at sea level) [KV rms, 50Hz]	1		2.7		1	2.7
• Screening effectiveness up to 1 GHz [dB]			> 128			
• Contact resistance (outer contact) [$m\Omega$]			≤ 1			
• Contact resistance (inner contact) [$m\Omega$]			≤ 1			
• PIM ratio (2x25 W carrier) [dBc]			≤ -155 (Typical -163)			
Mechanical specifications						
• Torque of coupling mechanism [Nm]	8		30		8	
• Tensile strength of coupling mechanism [N]	400		1000		400	
• Cable retention [N]	> 500		> 1000		> 400	
• Mechanical endurance (Nr of couplings)			≥ 500			
• Outer diameter [mm]	22	22	32.5	42	22	35
• Length [mm]	61	59	59	60	54 x 40.4	60 x 39.5
• Weight [g]	90	88	140	138	164	188
Environmental specifications						
• Temperature range			$-40\text{ }^{\circ}\text{C}$ to $+85$ ($-40\text{ }^{\circ}\text{F}$ to $+185\text{ }^{\circ}\text{F}$)			
• Degree of protection			IP67/IP68 (mated connectors)			
Materials						
• 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	PTFE		TPX		TPX / PTFE	
• O-rings			High quality silicone			
Cable dimensions [mm]						
• Inner conductor outer diameter			4.75 to 4.85			
• Outer conductor outer diameter			13.6 to 13.9			
• Jacket outer diameter			15.5 to 16.5			
Order codes						
• Sealant injection connector type	NM50A12	NF50A12	716MA12	716FA12	NM50AL12	716MAL12
• O-ring connector type	NM50V12	NF50V12	716MV12	716FV12	NM50VL12	716MVL12
• Special trimming tool			SPTC50AV12 – Silver color			
• Special silicone sealant kit			SIL 744			