



# TECHNICAL DATA SHEET

## 50 ohm Connectors for RF Cables

Kabelwerk | **EUPEN** AG

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cable

# Connector 1/2" for EC4-50 (5128) and EA4-50 (5127)

### FEATURES

- **Low reflection coefficient (up to 3 GHz)**
- **Low PIM level**
- **High contact force through inner contacts made in a high-strength copper alloy**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **Installation "fit on and tighten it"**
- **O-ring sealing**



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 male	4.3/10 female	7/16 male	7/16 female	N-male right angle	7/16 male right angle
<b>Electrical specifications</b>								
• Nominal impedance [ $\Omega$ ]	50							
• Return loss @ 3 GHz	$\geq 35$ dB							
• Insulation resistance [ $G\Omega$ ]	$\geq 5$				$\geq 10$		$\geq 5$	$\geq 10$
• 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
• Max. peak power [kW]	10				40		10	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		8	30
• Tensile strength of coupling mechanism [N]	400		500		1000		400	1000
• Cable retention [N]	$> 500$		$> 500$		$> 1000$		$> 400$	$> 700$
• Mechanical endurance (Nr of couplings)	$\geq 500$							
• Outer diameter [mm]	22	22	24	24	35	29	22	35
• Length [mm]	61	59	59	66	59	60	54 x 40.4	60 x 39.5
• Weight [g]	90	88	90	110	140	138	164	188
<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 / PTFE							
• O-rings	High quality silicone							
<b>Cable dimensions [mm]</b>								
• Inner conductor outer diameter	4.75 to 4.85							
• Outer conductor outer diameter	13.6 to 13.9							
• Jacket outer diameter	15.6 to 16.4							
<b>Order codes</b>								
• Connector code	NM50V12	NF50V12	43MV12N1	43FV12N1	716MV12N1	716FV12N1	NM50VL12	716MVL12
• Special trimming tool	SPTC50AV12 – Silver color							