TECHNICAL DATA SHEET
50 ohm Connectors for RF Cables

Kabelwerk EUPEN AG

Rev.: 16/2019-10-02 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***

NF50V12 | 43MV12N1 | 716FV12N1 | 716MVL12

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
Electrical specifications								
• Nominal impedance [Ω]	50							
• Return loss @ 3 GHz	≥ 35 dB						≥ 30 dB	
• Insulation resistance [GΩ]	≥ 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
• Max. peak power [kW]*	10		22,5**		40		10	40
• Screening effectiveness up to 1 GHz [dB]	> 128							
• Contact resistance (outer contact) [mΩ]	≤ 1							
• Contact resistance (inner contact) [mΩ]	≤ 1							
• PIM ratio (2 x 20 W carrier) [dBc]	≤ -155 (Typical -163)							
Mechanical specifications								
• 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)	≥ 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
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 / 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	15.6 to 16.4							
Order codes								
• Connector code	NM50V12	NF50V12	43MV12N1	43FV12N1	716MV12N1	716FV12N1	NM50VL12	716MVL12
• Special trimming tool	SPTC50AV12 – Silver color							

* ambient temperature 20 °C
** 4.3-10 interface according to IEC61169-54

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