



TECHNICAL DATA SHEET

50 ohm Connectors for RF Cables

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Rev.: 20/2026-01-19

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	straight						right angled		
	N-male	N-female	4.3-10 male	4.3-10 female	7-16 male	7-16 female	N-male	7-16 male	4.3-10 male
Electrical specifications									
• Nominal impedance [Ω]	50								
• Return loss @ 3 GHz [dB]	≥ 35								
• Insulation resistance [GΩ]	≥ 5		≥ 10			≥ 5		≥ 10	≥ 5
• Test voltage (at sea level) [kV rms, 50Hz]	2.5		4			2.5		4	2.5
• Working voltage (at sea level) [kV rms, 50Hz]	1		2.7			1		2.7	1
• Max. peak power [kW]*	10		27**			40		10	22.5
• 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]	3 to 5		5 to 8		30		3 to 5	30	5 to 8
• Tensile strength of coupling mechanism [N]	400		500		1000		400	1000	500
• Cable retention [N]	> 500		> 500		> 1000		> 400	> 700	> 500
• Mechanical endurance (Nr of couplings)	≥ 500								
• Outer diameter [mm]	22	22	24	24	35	29	22	35	35
• Length [mm]	61	59	59	66	59	60	54 x 40.4	60 x 39.5	61.5 x 35
• Weight [g]	90	88	90	110	140	138	164	188	150
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	43MVL12
• Special trimming tool	SPTC50AV12 – Silver color								

* ambient temperature 20 °C

** 4.3-10 interface according to IEC61169-54