



TECHNICAL DATA SHEET

50 ohm Connectors for Radiating Cables

Kabelwerk

EUPEN AG

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cable

Connector for RMC 158 (1" 5/8) radiating cables

FEATURES

- **Low reflection coefficient (up to 2.8 GHz)**
- **High contact force through inner contacts made in a high-strength copper alloy**
- **Monoblock mounting**
- **Silver plated**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **Quick trimming tool for cable preparation**
- **O-ring sealing**



NF50R158MPA



716FR158MPA

The connectors are designed according the standard interfaces as N, 4.3-10 or DIN 7/16. Contact components are silver plated to minimize insertion loss; mechanical parts are nickel plated for heavy-duty handling and best corrosion resistance. Watertightness is achieved using silicone o-rings to resist in the toughest environmental conditions. Special trimming tools are recommended.

SPECIFICATIONS

Connector type	N-female	7-16 female	4.3-10 female
Electrical specifications			
• Nominal impedance [Ω]	50	50	50
• Reflection coefficient @ 3 GHz [dB]	≥ 35	≥ 35	≥ 35
• Insulation resistance [$G\Omega$]	≥ 5	≥ 10	≥ 5
• Test voltage (at sea level) [KV rms, 50Hz]	2.5	4	2.5
• Working voltage (at sea level) [KV rms,50Hz]	1.0	2.7	1.0
• Screening effectiveness up to 1 GHz [dB]	> 128	>128	>128
• Contact resistance (outer contact) [$m\Omega$]	≤ 1.0	≤ 1.0	≤ 1.0
• Contact resistance (inner contact) [$m\Omega$]	≤ 1.0	≤ 1.0	≤ 1.0
• PIM ratio (2 x 20 W carrier) [dBc]	≤ -155	≤ -155	≤ -155
Mechanical specifications			
• Torque of coupling mechanism [Nm]	3 to 5	30	5 to 8
• Tensile strength of coupling mechanism [N]	400	700	500
• Cable retention [N]	> 1000	> 1000	> 1000
• Mechanical endurance (Nr of couplings)	≥ 500	≥ 500	≥ 500
• Outer diameter [mm]	63	63	63
• Length [mm]	88	83	92
• Weight [g]	710	725	925
Environmental specifications			
• Temperature range	-40°C to $+85^{\circ}\text{C}$ (-40°F to $+185^{\circ}\text{F}$)		
• Degree of protection	IP67/IP68 (mated connectors)		
Materials			
• Externals parts	Electroless nickel plated brass		
• Outer contact	Passivated silver plated brass		
• Inner contact	Passivated silver plated high-strength copper alloy		
• Dielectric	TPX		
• O-rings	High quality silicone & Nitrile		
Cable dimensions [mm]			
• Inner conductor inner diameter	14.3 to 14.7		
• Jacket outer diameter	47.0 to 49.0		
Order codes			
• O-ring connector type	NF50R158MPA	716FR158MPA	43FR158MPA
• Special trimming tool		SPTC50R158	