



# TECHNICAL DATA SHEET

## 50 ohm Connectors for Radiating Cables

Kabelwerk | **EUPEN** AG

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**cable**

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

### FEATURES

- **Optimized long-term PIM stability**
- **Low reflection coefficient (up to 2.8 GHz)**
- **Silver plated**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **Quick trimming tools for cable preparation**
- **Strong Profile Seal**



43FR158S1

Connectors for Radiating Cables optimized for long term stable, zero Passive Intermodulation. The connectors are designed according the standard interfaces as 4.3-10 or DIN 7-16\*. Watertightness is achieved using a strong profile seal to resist in the toughest environmental conditions. Special trimming tools are recommended.

### SPECIFICATIONS

| Connector type                                     | 4.3-10 female   | 7-16 female*               |
|--|---|----------------------------|
| <b>Electrical specifications</b>                   |   |                            |
| • Nominal impedance [ $\Omega$ ]                   |   | 50                         |
| • Reflection coefficient @ 2.8 GHz [dB]            |   | $\geq 34$ (typical 40)     |
| • PIM ratio (2 x 20 W carrier) [dBc]               |   | $\leq -155$ (typical -163) |
| • Insulation resistance [ $G\Omega$ ]              | $\geq 5$  | $\geq 10$                  |
| • Test voltage (at sea level) [kV rms, 50Hz]       | 2.5   | 4                          |
| • Working voltage (at sea level) [kV rms, 50Hz]    | 1.0   | 2.7                        |
| • Screening effectiveness up to 2.8 GHz [dB]       |   | $> 128$                    |
| • Contact resistance (outer contact) [m $\Omega$ ] |   | $\leq 1.0$                 |
| • Contact resistance (inner contact) [m $\Omega$ ] |   | $\leq 1.0$                 |
| <b>Mechanical specifications</b>                   |   |                            |
| • Torque of coupling mechanism [Nm]                | 5 to 8  | 30                         |
| • Tensile strength of coupling mechanism [N]       | 500   | 700                        |
| • Cable retention [N]                              | $> 500$   | $> 1000$                   |
| • Mechanical endurance (No. of couplings)          |   | $\geq 500$                 |
| • Outer diameter [mm]                              | 60.0  | 62.5                       |
| • Length [mm]                                      | 92  | 90                         |
| • Weight [g]                                       | 650   | 600                        |
| <b>Environmental specifications</b>                |   |                            |
| • Temperature range                                | - 40 °C to +85 °C (-40 °F to +185 °F)                                 |                            |
| • Climatic & moisture resistance test              | acc. ANSI/SCTE 72 2002 R2007 (-40 °C / +60 °C @ 75% v.h.) for 2 weeks |                            |
| • Degree of protection                             | IP67/IP68 (mated connectors)  |                            |
| • Corrosion resistance test                        | acc. to IEC 60068-2-11  |                            |
| <b>Materials</b>                                   |   |                            |
| • Externals parts (Front & Rear part)              | Passivated white bronze plated brass & nickel plated brass            |                            |
| • Outer contact                                    | Passivated silver plated brass  |                            |
| • Inner contact                                    | Passivated silver plated brass  |                            |
| • Dielectric                                       | PTFE  |                            |
| • O-rings  | High quality silicone & Nitrile                                       |                            |
| <b>Cable dimensions</b>                            |   |                            |
| • Inner conductor inner diameter [mm]              | 14.3 to 14.7  |                            |
| • Jacket outer diameter [mm]                       | 47.0 to 49.0  |                            |
| <b>Order codes</b>                                 |   |                            |
| • O-ring connector type                            | 43FR158S1   | 716FR158S1*                |
| • Special trimming tools                           | F-158R-A & F-158R-B   |                            |

\* available on request and MOQ