



DATA SHEET

50 Ω Adapters

Kabelwerk | **EUPEN** AG

Rev.: 03/2011-12-01

cable

50 Ω Adapters

FEATURES

- **Low reflection coefficient (up to 2.7 GHz)**
- **Fully LTE compatible**
- **Low PIM level**
- **Silver plated**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **High contact force and inner contacts made in a high-strength copper alloy**



The adapters are designed according to the standard interfaces as N or DIN 7-16. Contact components are silver plated to minimize insertion loss and passive intermodulation products; mechanical parts are nickel plated for heavy-duty handling and best corrosion resistance. The watertightness is made using silicone o-rings to resist in the toughest environmental conditions. For measurements, precision adapters (PR) having the reflection coefficient ≤ 0.01 @ 2.7 GHz are available on request.

ADAPTER TYPES

STANDARD ADAPTERS				
Reference (Part#)	N male	N female	7-16 male	7-16 female
N male	AD50NMM	AD50NMF	AD50NM716M	AD50NM716F
N female	AD50NMF	AD50NFF	AD50NF716M	AD50NF716F
7-16 male	AD50NM716M	AD50NF716M	AD716MM	AD716MF
7-16 female	AD50NM716F	AD50NF716F	AD716MF	AD716FF

PRECISION ADAPTERS				
Reference (Part#)	N male	N female	7-16 male	7-16 female
N male	-	-	PRAD50NM716M	PRAD50NM716F
N female	-	-	PRAD50NF716M	PRAD50NF716F
7-16 male	PRAD50NM716M	PRAD50NF716M	PRAD716MM	-
7-16 female	PRAD50NM716F	PRAD50NF716F	-	PRAD716FF

SPECIFICATIONS

Adapter type	N (male, female) to 7-16 (male, female)		N (male, female) to N (male, female)	7-16 (male, female) to 7-16 (male, female)
Electrical specifications				
• Nominal impedance [Ω]	50			
• Reflection coefficient @ 2.7 GHz	Typ. ≤ 0.02 (for precision adapters ≤ 0.01)			
• PIM ratio (2 x 20 W carrier) [dBc]	≤ -155 (Typical -163)			
• Insulation resistance [GΩ]	≥ 5			≥ 10
• Test voltage (at sea level) [KV rms, 50Hz]	2.5			4
• Working voltage (at sea level) [KV rms, 50Hz]	1			2.7
• Screening effectiveness up to 1 GHz [dB]			> 128	
• Contact resistance (outer contact) [mΩ]			≤ 0.5	
• Contact resistance (inner contact) [mΩ]	≤ 1			≤ 0.5
Mechanical specifications				
• Torque of coupling mechanism [Nm]	8 (N)	30 (7-16)	8	30
• Strength of coupling mechanism [N]	≤ 400 (N)	≤ 1000 (7-16)	≤ 400	≤ 1000
• Mechanical endurance (Nr of couplings)		≥ 500	≥ 500	≥ 500
• Outer diameter [mm]		33	21	33
• Length [mm]		41 to 50	33 to 37	27 to 46
• Weight [g]		140	50	140
Environmental specifications				
• Temperature range	-40 °C to +85 °C (-40 °F to +185 °F)			
• Leakage testing	IP67/IP68			
Materials				
• Externals parts	Passivated silver plated or electroless nickel plated brass			
• Outer contact	Passivated silver plated brass			
• Inner contact	Passivated silver plated high-strength copper alloy and brass			
• Dielectric	PTFE and (or) TPX			
• Gaskets	High quality silicone			