



# TECHNICAL DATA SHEET

## 50 ohm Connectors for RF Cables

Kabelwerk | **EUPEN** AG

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cable

# Connector 1/2" Hiflex for EC4-50-HF (5092)

### FEATURES

- **Low reflection coefficient (up to 2.5 GHz)**
- **Low PIM level**
- **High contact force through inner contacts made in a high-strength copper alloy**
- **Silver plated**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **Quick trimming tool for cable preparation**
- **On piece "screw on and tighten it"**



716MBL12X



NF50B12X



716MB12X

The connectors are designed according 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 simultaneously on the outer conductor and on the jacket using a special silicone gasket. This watertightness solution allows the use of ours connectors 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	7-16 male	7-16 female	N-male right angle	7-16 male right angle
<b>Electrical specifications</b>						
Nominal impedance [ $\Omega$ ]	50					
Reflection coefficient @ 2.5 GHz	$\leq 0.02$			$\leq 0.03$		
Insulation resistance [ $G\Omega$ ]	$\geq 5$		$\geq 10$		$\geq 5$	$\geq 10$
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		40		10	40
Screening effectiveness up to 1 GHz [dB]	$> 128$					
Contact resistance (outer contact) [ $m\Omega$ ]	$\leq 1$					
Contact resistance (inner contact) [ $m\Omega$ ]	$\leq 1$					
PIM ratio (2 x 20 W carrier) [dBc]	$\leq -155$ (Typical -163)					
<b>Mechanical specifications</b>						
Torque of coupling mechanism [Nm]	8		30		8	30
Tensile strength of coupling mechanism [N]	400		1000		400	1000
Cable retention [N]	$> 400$		$> 700$		$> 400$	$> 700$
Mechanical endurance (Nr of couplings)	$\geq 500$					
Outer diameter [mm]	22	22	35	29	23	23
Length [mm]	61	59	50	51	51 x 41	55 x 39.5
Weight [g]	100	100	120	115	138	160
<b>Environmental specifications</b>						
Temperature range	$-40\text{ }^\circ\text{C}$ to $+85\text{ }^\circ\text{C}$ ( $-40\text{ }^\circ\text{F}$ to $+185\text{ }^\circ\text{F}$ )					
Degree of protection	IP67/IP68 (mated connectors)					
Climatic & moisture resistance test	acc. ANSI/SCTE 72 2002 R2007 ( $-40\text{ }^\circ\text{C}$ / $+60\text{ }^\circ\text{C}$ @ 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)					
<b>Materials</b>						
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		TPX		TPX / PTFE	
Gaskets	High quality silicone					
<b>Cable dimensions [mm]</b>						
Inner conductor outer diameter	3.5 to 3.6					
Outer conductor outer diameter	12 to 12.4					
Jacket outer diameter	13 to 13.8					
<b>Order codes</b>						
Connector type	NM50B12X	NF50B12X	716MB12X	716FB12X	NM50BL12X	716MBL12X
Special trimming tool	SPTC50B12X – Silver color SPTC50BL12X-Black color					