



# TECHNICAL DATA SHEET

## 50 ohm Connectors for RF Cables

Kabelwerk

**EUPEN** AG

Rev.: 01/2007-02-22

cable

### Connector 7/8" for EC5-50-A (5228A)

#### FEATURES

- **Low reflection coefficient (up to 2.5 GHz)**
- **Low PIM level**
- **High contact force through Cu-Be inner contacts**
- **Silver plated**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **Quick trimming tool for cable preparation**
- **One piece "fit on and tighten it"**
- **Sealant injection or o-ring sealing**



NM50A78MA



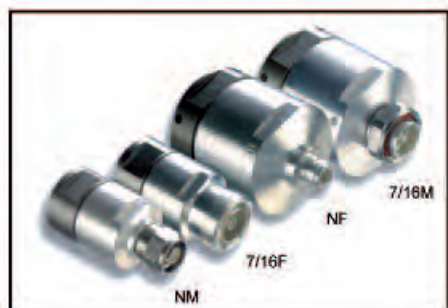
716FV78MA



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 using silicone o-rings or silicone sealant injection, filling up all interstices to resist in the toughest environmental conditions. In addition of this proved quality the 7/8" connectors offering excellent electrical specifications. 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
Electrical specifications					
• Nominal impedance [ $\Omega$ ]			50		
• Reflection coefficient @ 2.5 GHz			$\leq 0.02$		
• 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			2.7	
• Screening effectiveness up to 1 GHz [dB]			$> 128$		
• Contact resistance (outer contact) [ $m\Omega$ ]			$\leq 0.7$		
• Contact resistance (inner contact) [ $m\Omega$ ]			$\leq 1$		
• PIM ratio (2x25 W carrier) [dBc]			$\leq -155$ (Typical -163)		
Mechanical specifications					
• Torque of coupling mechanism [Nm]	8			30	
• Tensile strength of coupling mechanism [N]	400			1000	
• Cable retention [N]	$> 400$			$> 1000$	
• Mechanical endurance (Nr of couplings)			$\geq 500$		
• Outer diameter [mm]			34.5		
• Length [mm]	78		73	71	71
• Weight [g]	182		173	200	192
Environmental specifications					
• Temperature range	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$ ( $-40^{\circ}\text{F}$ to $+185^{\circ}\text{F}$ )				
• Degree of protection	IP67/IP68 (mated connectors)				
Materials					
• Externals parts	Passivated silver plated or electroless nickel plated brass				
• Outer contact	Passivated silver plated brass				
• Inner contact	Passivated silver plated Cu-Be and brass				
• Dielectric	TPX				
• O-rings	High quality silicone				
Cable dimensions [mm]					
• Inner conductor (helicooids) inner diameter	8.1 to 8.5				
• Outer conductor outer diameter	24.6 to 25.2				
• Jacket outer diameter	27.5 to 28.5				
Order codes					
• Sealant injection connector type	NM50A78MA	NF50A78MA	716MA78MA	716FA78MA	
• O-ring connector type	NM50V78MA	NF50V78MA	716MV78MA	716FV78MA	
• Special trimming tool	SPTC50AV78M – Blue color				
• Special silicone sealant kit	SIL 744				

### 7/8", 1-1/4" & 1-5/8" Connectors - N1 (O-ring)

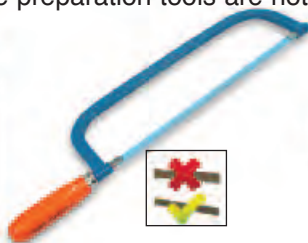


Cable	Preparation tool
	
5228A / EC5-50-A (7/8") 5227 / EA5-50 (7/8" Alu)	SPTC50AV78M / US: F-78
5328A / EC6-50-A (1-1/4") 5327 / EA6-50 (1-1/4" Alu) 5328X / EC6-50-HF (1-1/4" Hiflex)	SPTC50AV114M / US: F-114 SPTC50AV114X
5438A / EC7-50-A (1-5/8") 5437 / EA7-50 (1-5/8" Alu)	SPTC50AV158M / US: F-158


We strongly advise the use of cable preparation tools. Please refer to their instructions for use.


#### Manual method



Follow the instruction process below only if the cable preparation tools are not available.



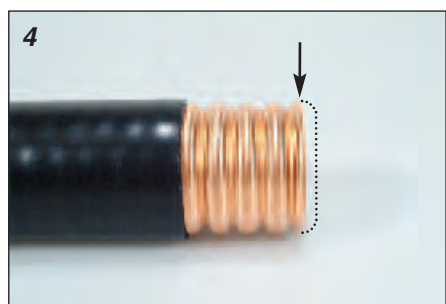
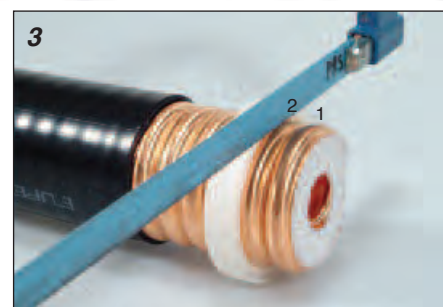
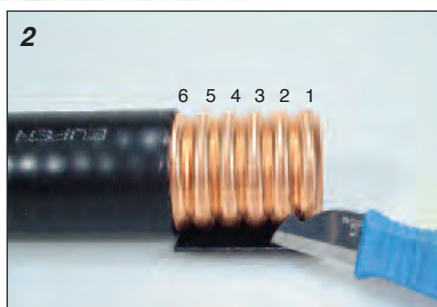
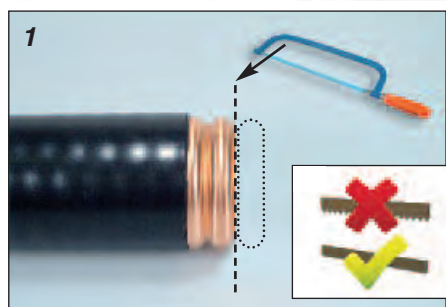
\* A Butyl mastic tape is available in our Weatherproofing Tape Kit (ref. 2849996)

	NM	7/16M
	19 mm	32 mm

	7/8"
	30 mm

	1 1/4"
	1-11/16"
	ø 4 mm ø 48 mm

	1 5/8"
	2-1/4"
	ø 5 mm ø 63 mm





# INSTALLATION INSTRUCTIONS

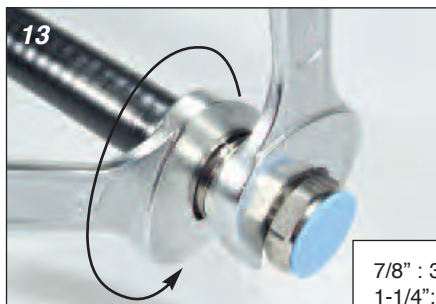
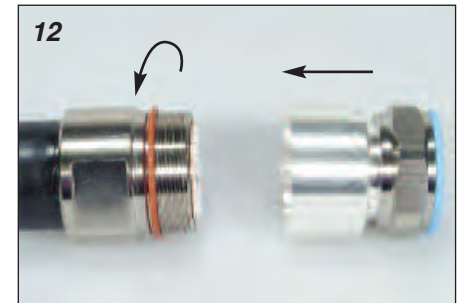
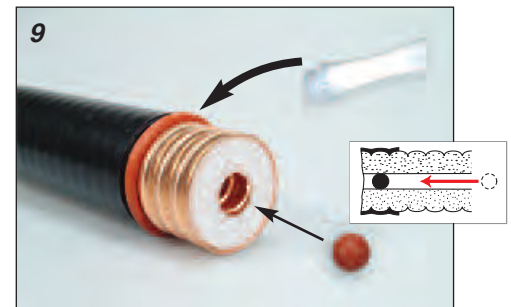
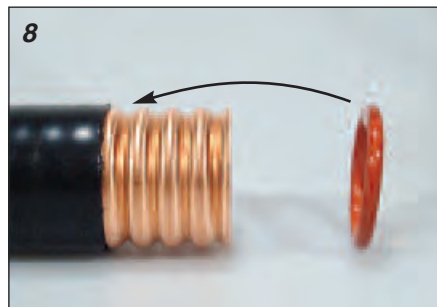
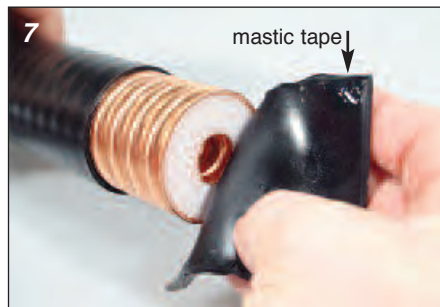
## 50 Ohm Connectors

Kabelwerk **EUPEN** AG

Rev.: 03/2011-11-10

cable

### *7/8", 1-1/4" & 1-5/8" Connectors - N1 (O-ring)*



7/8" : 30 Nm (22 ft-lb)  
1-1/4" : 40 Nm (29 ft-lb)  
1-5/8" : 50 Nm (37 ft-lb)

For the installation on cables 5227/EA5-50, 5327/EA6-50 and 5437/EA7-50, an additional sealing is mandatory. It can be achieved with one of the following methods:

#### Weatherproofing Tape Kit



#### Eucaseal



#### Cold Shrink Tube



For any questions please contact KABELWERK EUPEN AG / for US Customer service call 1-800-419-5100