



# TECHNICAL DATA SHEET

## 50 ohm Connectors for RF Cables

Kabelwerk

**EUPEN** AG

Rev.: 05/2009-04-23

cable

### Connector 1/2" for EC4-50 (5128)

#### FEATURES

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



NF50A12



716FV12



716MAL12

The connectors 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 of our connectors is made using silicone o-rings or silicone sealant injection, filling up all interstices, to resist 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
Electrical specifications						
• 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
• 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 (2x20 W carrier) [dBc]	$\leq -155$ (Typical -163)					
Mechanical specifications						
• Torque of coupling mechanism [Nm]	8		30		8	30
• Tensile strength of coupling mechanism [N]	400		1000		400	1000
• Cable retention [N]	$> 500$		$> 1000$		$> 400$	$> 700$
• Mechanical endurance (Nr of couplings)	$\geq 500$					
• Outer diameter [mm]	22	22	35	29	22	35
• Length [mm]	61	59	59	60	54 x 40.4	60 x 39.5
• Weight [g]	90	88	140	138	164	188
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	PTFE		TPX		TPX / PTFE	
• O-rings	High quality silicone					
Cable dimensions [mm]						
• Inner conductor outer diameter	4.75 to 4.85					
• Outer conductor outer diameter	13.6 to 13.9					
• Jacket outer diameter	15.5 to 16.5					
Order codes						
• Sealant injection connector type	NM50A12	NF50A12	716MA12	716FA12	NM50AL12	716MAL12
• O-ring connector type	NM50V12	NF50V12	716MV12	716FV12	NM50VL12	716MVL12
• Special trimming tool	SPTC50AV12 – Silver color					
• Special silicone sealant kit	SIL 744					



# INSTALLATION INSTRUCTIONS

## 50 Ohm Connectors

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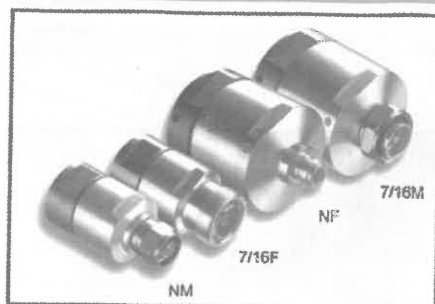
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Rev.: 05/2016-11-30

cable

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



#### Cable



5228A / EC5-50-A (7/8")

5227 / EA5-50 (7/8" Alu)

5328A / EC6-50-A (1-1/4")

5327 / EA6-50 (1-1/4" Alu)

5328X / EC6-50-HF (1-1/4" Hiflex)

5438A / EC7-50-A (1-5/8")

5437 / EA7-50 (1-5/8" Alu)

#### Preparation tool



SPTC50AV78M / US: F-78

SPTC50AV114M / US: F-114

SPTC50AV114X

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.



Vaseline  
Vasolina



Guide-scie  
Saw-guide  
Sägeführung



Mastic tape\*

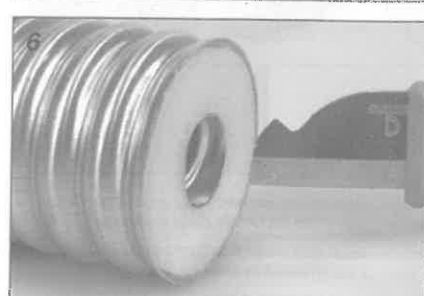
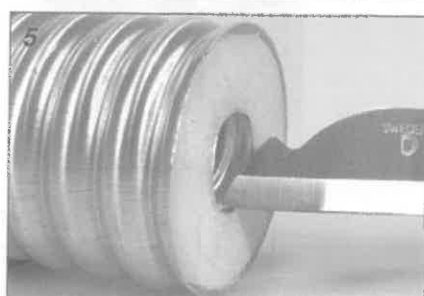
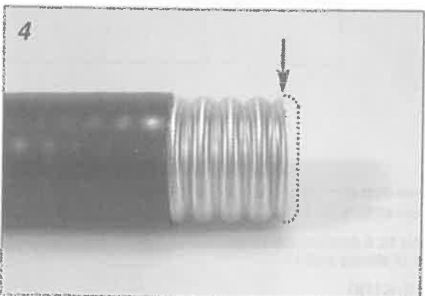
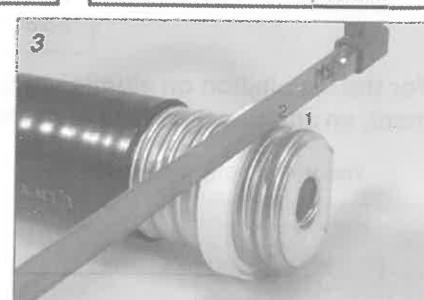
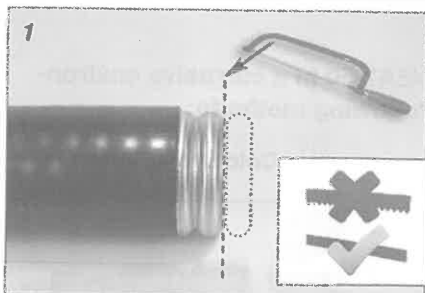
\* A Butyl mastic tape is available in our Weatherproofing Tape Kit (ref. 2849996)

	NM	7/16M
	19 mm	32 mm

	7/8"
	30 mm

	1 1/4"
	1-11/16"
	φ 4 mm φ 48 mm

	1 5/8"
	2-1/4"
	φ 5 mm φ 63 mm





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## 50 Ohm Connectors

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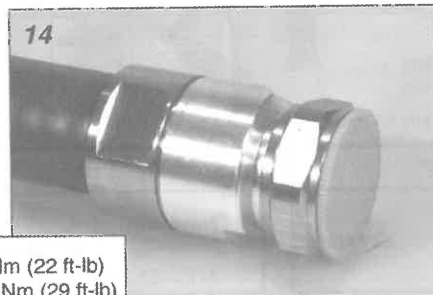
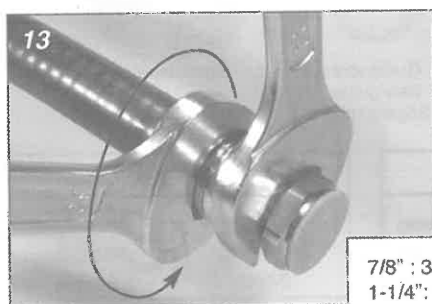
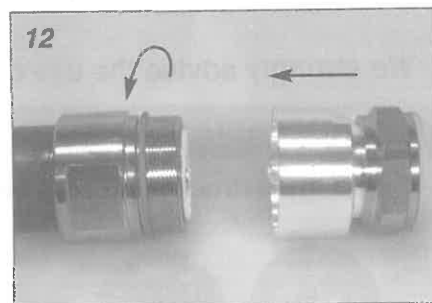
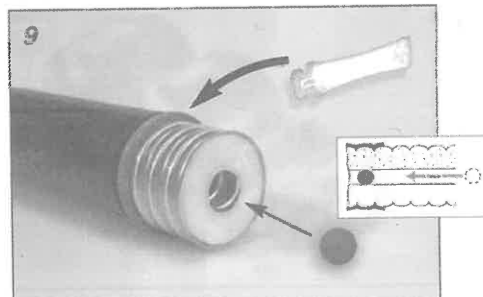
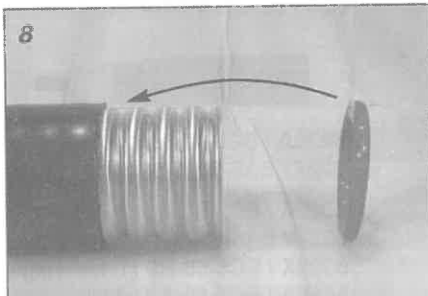
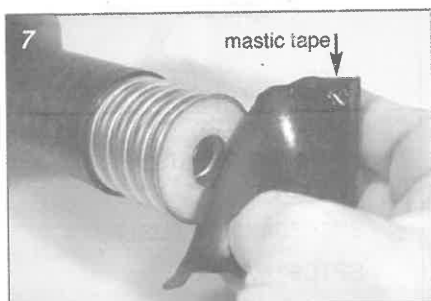
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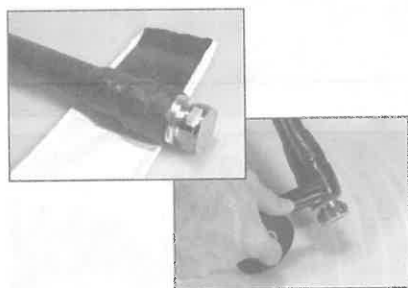
### 7/8", 1-1/4" & 1-5/8" Connectors - N1 (O-ring)



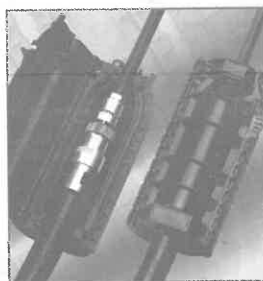
7/8" : 30 Nm (22 ft-lb)  
1-1/4" : 40 Nm (29 ft-lb)  
1-5/8" : 50 Nm (37 ft-lb)

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

#### Weatherproofing Tape Kit



#### Eucaseal



#### Cold Shrink Tube



(D) Verarbeitung nur durch eine Elektrofachkraft.  
Es besteht die Gefahr eines elektrischen Schlages!

(F) Installation uniquement par une personne qualifiée en électricité.  
Il y a un risque de choc électrique!



(NL)

Installatie alleen door een vakman voor elektriciteit.  
Er is gevaar van elektrische schok!

(GB)

Processing only by a qualified electrician.  
There is a risk of electric shock!

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

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Certified  
Company

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