



# TECHNICAL DATA SHEET

## EIA Connectors

Kabelwerk | **EUPEN** AG

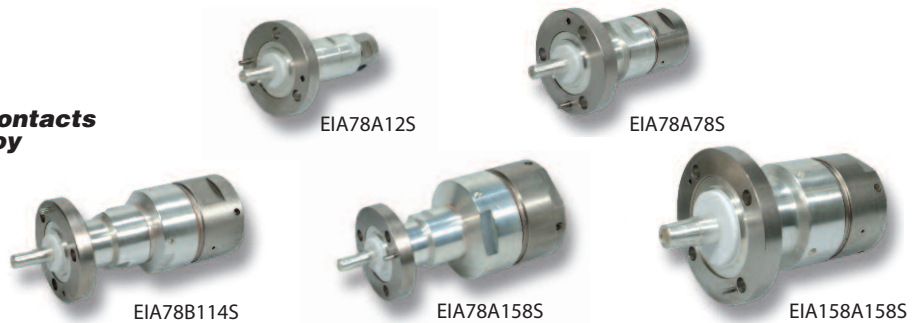
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cable

### EIA Connector for 1/2", 7/8", 1-1/4" and 1-5/8" cables

#### FEATURES

- **Low reflection coefficient**
- **High contact force through inner contacts made in a high-strength copper alloy**
- **Silver plated**
- **Watertight (IP67/IP68)**
- **Corrosion resistant**
- **O-ring or sealant injection for watertightness on the cables**



Connectors with EIA 7/8" or EIA 1-5/8" flanges for 1/2", 7/8", 1-1/4" and 1-5/8" cables. The two-part connectors are easy to install. Contact surfaces are silver plated to obtain a low contact resistance and very low intermodulation. The watertightness is obtained by sealant injection or o-ring gasket. The straight coupling adapter is included.

#### SPECIFICATIONS

Cable type	1/2"	7/8"	1-1/4"	1-5/8"	
Flange type	EIA 7/8"	EIA 7/8"	EIA 7/8"	EIA7/8"	EIA 1-5/8"
<b>Electrical specifications</b>					
• Nominal impedance [ $\Omega$ ]	50				
• Reflection coefficient @ 2.5 GHz	$\leq 0.025$ ( $\geq 32$ dB)				
• Insulation resistance [ $G\Omega$ ]	$\geq 15$			$\geq 30$	
• Test voltage at sea level [kV rms, 50Hz]	6			11	
• Working voltage at sea level [kV rms, 50Hz]	2.8			5.2	
• Max. peak power [kW]	90			313	
• Screening effectiveness @ 1 GHz [dB]	$> 128$				
• Contact resistance (outer contact) [ $m\Omega$ ]	$\leq 0.5$	$\leq 0.3$	$\leq 0.3$	$\leq 0.3$	$\leq 0.3$
• Contact resistance (inner contact) [ $m\Omega$ ]	$\leq 0.5$	$\leq 0.5$	$\leq 0.5$	$\leq 0.3$	$\leq 0.3$
• PIM ratio (2 x 20 W carrier) [dBc]	$\leq -155$ (typical -163)				
• Maximum power rating* [kW]					
800 - 1000 MHz	0.72		1.6		3.3
1700 - 2200 MHz	0.47		0.94		1.9
<b>Mechanical specifications</b>					
• Tensile strength of coupling mechanism [N]	1000				
• Cable retention [N]	$> 130$	$> 170$	$> 200$	$> 250$	
• Mechanical endurance (Nr. of couplings)	$\geq 100$				
• Overall outer diameter [mm]	57	57	57	57	90
• Length [mm]	84	81	100	100	100
• Weight [g]	406	418	622	875	1550
<b>Environmental specifications</b>					
• Temperature range	-40 to +85 °C (-40 to +185 °F)				
• Degree of protection	IP67 / IP68 (mated connectors)				
<b>Materials</b>					
• External 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				
• Insulators	PTFE				
• Retention parts	Nickel plated brass				
• Gaskets	High quality silicone				
<b>Cable dimensions</b>					
• Compatible EUPEN cables	EC4-50	EC5-50-A	EC6-50-A	EC7-50-A	
• Inner conductor outer diameter [mm]	4.75 to 4.85	-	-	-	
• Inner conductor inner diameter [mm]	-	7.8 to 8.5	11.6 to 12.0	17.1 to 18.4	
• Outer conductor outer diameter [mm]	13.6 to 13.9	24.6 to 25.2	35.3 to 36.6	46.3 to 46.9	
• Jacket outer diameter [mm]	15.5 to 16.5	27.5 to 28.5	38.5 to 39.5	49.4 to 50.9	
<b>Product references**</b>					
• Sealant injection connector type	<b>EIA78A12S</b>	<b>EIA78A78S</b>	<b>EIA78B114S</b>	<b>EIA78A158S</b>	<b>EIA158A158S</b>
• Order Nr.	8203996	6865996	7443996	A023996	7458996
• O-ring connector type	<b>EIA78V12S</b>	<b>EIA78V78S</b>	<b>EIA78V114S</b>	<b>EIA78V158S</b>	<b>EIA158V158S</b>
• Order Nr.			on request		

\* 40 °C ambient temperature, 80 °C inner conductor temperature

\*\* Reference „...S“ : Straight coupling adapter included