

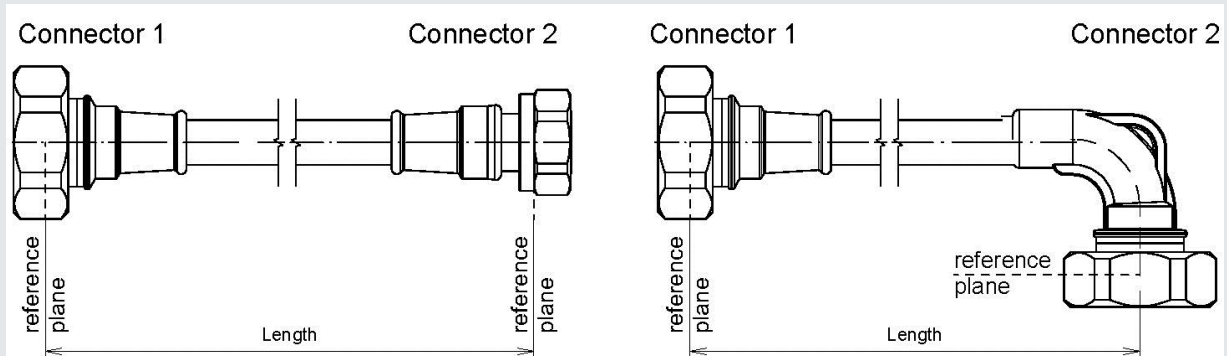
SpinnerFlex® TopFit Jumper SF 3/8"-50-PE and SF 3/8"-50-FR



Electrical Specification						
Impedance	50 Ω					
IM3 (2 x 43 dBm) <sup>1)</sup>	≤ -160 dBc / typ. -165 dBc					
1) Jumper cables with improved IM3 values are available on request.						
VSWR <sup>2;3)</sup>	Length ≤ 6 m			Length > 6 m		
Frequency range	straight/ straight	straight/ right angle	right angle/ right angle	straight/ straight	straight/ right angle	right angle/ right angle
≤ 960 MHz	≤ 1.05 typ. 1.03	≤ 1.06 typ. 1.04	≤ 1.07 typ. 1.05	≤ 1.07 typ. 1.04	≤ 1.08 typ. 1.05	≤ 1.09 typ. 1.06
≤ 2,200 MHz	≤ 1.06 typ. 1.05	≤ 1.08 typ. 1.06	≤ 1.10 typ. 1.07	≤ 1.08 typ. 1.06	≤ 1.10 typ. 1.07	≤ 1.12 typ. 1.08
≤ 2,700 MHz	≤ 1.10 typ. 1.06	≤ 1.12 typ. 1.07	≤ 1.14 typ. 1.08	≤ 1.12 typ. 1.07	≤ 1.14 typ. 1.08	≤ 1.16 typ. 1.09
≤ 3,800 MHz	≤ 1.12 typ. 1.10	≤ 1.14 typ. 1.11	≤ 1.16 typ. 1.12	≤ 1.14 typ. 1.11	≤ 1.16 typ. 1.12	≤ 1.18 typ. 1.13
≤ 5,825 MHz <sup>4)</sup>	≤ 1.18 typ. 1.14	≤ 1.20 typ. 1.16	≤ 1.22 typ. 1.18	≤ 1.20 typ. 1.15	≤ 1.22 typ. 1.17	≤ 1.24 typ. 1.19
2) The given VSWR values are maintained within all global cellular frequency bands.						
3) VSWR ≤ 1.20 for low PIM Jumper at frequencies ≤ 3,800 MHz; valid for all connector types and lengths ≤ 6m						
4) Extended frequency range for premium quality. Please specify before order.						
	960 MHz	2200 MHz	3000 MHz	4000 MHz	6000 MHz	
Insertion loss, nominal (20 °C cable temperature values without connectors, typ. connector attenuation is ≤ 0.01 dB)	13.8 dB/100m	21.7 dB/100m	25.8 dB/100m	30.4 dB/100m	38.4 dB/100m	
max. Power rating (40 °C ambient temperature)	0.57 kW	0.36 kW	0.31 kW	0.26 kW	0.20 kW	

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Mechanical Specification						
Minimum bending radius	25 mm (repeated bends)					
Crush resistance	18.4 N/mm					
Recommended clamp spacing	250 mm					
Cable jacket	PE black (grey jacket available on request)					
Nominal outer jacket diameter	10.2 mm					
Length [m]	0.5 - 2.9	3.0 - 3.9	4.0 - 7.9	8.0 - 10.9	11.0 - 14.9	15.0 - 19.9
Tolerances [mm]	+20 / -10	+30 / -15	+50 / -30	+80 / -50	± 100	± 120
Connector	Material			Surface		
Inner conductor	Cu-alloy			Ag-plated		
Outer conductor	Cu-alloy			Ag-plated		
Other metal parts	Cu-alloy			Ni-plated		
Insulation	PTFE, PE					
Sealing	Silicone rubber					
Installation instruction	M30804					
Length definition						



Environmental Specification			
Degree of protection	IP 68 (0.1 bar / 6 hours / unmated) IP 68 (1 bar / 1 hour / mated)		
Recommended temperature range	Storage	Installation	Operation
SF 3/8"-50-PE	-70 °C to +85 °C	-40 °C to +60 °C	-50 °C to +85 °C
SF 3/8"-50-FR	-70 °C to +85 °C	-25 °C to +60 °C	-50 °C to +85 °C
Cable jacket	Halogen free acc. to IEC 60754-1 and IEC 60754-2		
SF 3/8"-50-PE	Fire retardant acc. to IEC 60332-1, IEC 60332-3.C, IEC 61034 and UL 1581-1991		
SF 3/8"-50-FR	Fire retardant acc. to IEC 60332-1, IEC 60332-3.C, IEC 61034 and UL 1581-1991		
RoHS 2002/95/EC	Compliant		

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Sales article numbers

Jumper	Cable type	Cable size	Cable jacket	Connector 1	Connector 2	Length	Unit	Length	Extra features
<b>J</b>	<b>Z</b>	<b>X</b>	<b>Z</b>	<b>XZ</b>	<b>XZ</b>	<b>X</b>	<b>Z</b>	<b>X</b>	<b>-Z</b>
LF SF	<b>L</b> <b>S</b>	1/4" 3/8" 1/2"	Blank for PE	Any combination of connectors below is possible. Please specify XZ combination for connectors 1 and 2. In case of pigtail, blank for connector 2.					Blank if not applicable
		<b>14</b> <b>38</b> <b>12</b>	<b>F</b> <b>G</b>						
X =		Z =		X	Z				
Connector system		Connector style							
7-16		male		<b>7</b>	<b>M</b>				
4.1-9.5		male right angle		<b>41</b>	<b>R</b>				
N		female		<b>N</b>	<b>F</b>				
		female bulk head			<b>B</b>				
		female panel four hole			<b>P</b>				
4.3-10		male screw		<b>43</b>	<b>MS</b>				
		male hand screw			<b>MH</b>				
		male push-pull			<b>MP</b>				
		male right angle screw			<b>RS</b>				
		male right angle hand screw			<b>RH</b>				
		male right angle push-pull			<b>RP</b>				
		female			<b>F</b>				
		female bulk head			<b>B</b>				
		female panel four hole			<b>P</b>				
Length in meter/feet (dependent on unit specified)									
Meter								<b>M</b>	
Feet								<b>F</b>	
Length in decimeter/inch (dependent on unit specified)									
low PIM Jumper (only available with PE jacket)									
- IM3 (2 x 43 dBm) ≤ -160 dBc*, inspection certificate 3.1**, per jumper									<b>I0</b>
- IM3 (2 x 43 dBm) ≤ -160 dBc*, inspection certificate 3.1**, per order									<b>I1</b>
- IM3 (2 x 43 dBm) ≤ -165 dBc*, inspection certificate 3.1**, per jumper									<b>I2</b>
- IM3 (2 x 43 dBm) ≤ -165 dBc*, inspection certificate 3.1**, per order									<b>I3</b>
- IM3 (2 x 43 dBm) ≤ -170 dBc*, inspection certificate 3.1**, per jumper									<b>I4</b>
- IM3 (2 x 43 dBm) ≤ -170 dBc*, inspection certificate 3.1**, per order									<b>I5</b>
Phase length defined									<b>P</b>
Extended frequency range (> 3.800 MHz)									<b>E</b>
Connector specified on side B kitted to the jumper									<b>K</b>
Jumperset									<b>S</b>

\*) according to IEC 62037-2 and WN 20 000

\*\*) according to EN 10204

Examples, see next page

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Sales article numbers – Examples for Jumper

- **JL12-7M43RS-2M5**  
Jumper LF 1/2", connectors 7-16 male and 4.3-10 male right angle screw type, length 2.5 meter
- **JS12-43MS-20F5**  
Jumper SF 1/2", connectors 4.3-10 male screw type and pigtail; length 20 feet 5 inch
- **JL12-7M7MR-10M-K**  
Jumper LF 1/2", connectors 7-16 male and 7-16 male right angle, length 10 meter, 7-16 male right angle MultiFit connector is kitted to the loose end

Sales article numbers – Examples for measurement cables

- **JS38-7M7F-2M-I3**  
Jumper SF 3/8", connectors 7-16 male and 7-16 female, length 2 meter, low PIM performance with  $\leq -165$  dBc, inspection certificate 3.1 per order
- **JS12-7M43RS-1M3-I4**  
Jumper SF 1/2", connectors 7-16 male and 4.3-10 male right angle screw type, length 1.3 meter, low PIM performance with  $\leq -170$  dBc, inspection certificate 3.1 per jumper

Customized jumpers

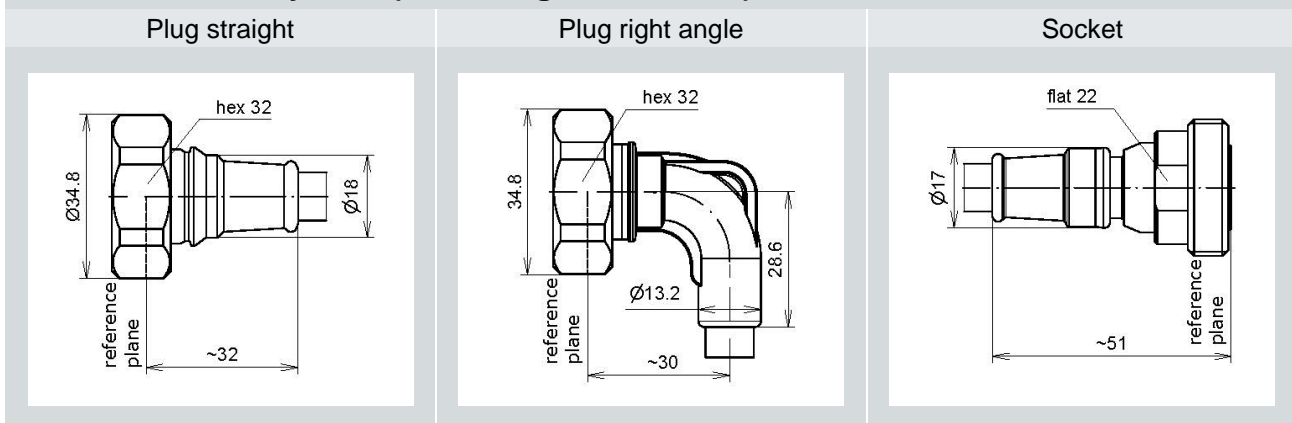
The jumpers shown above can be customized to meet specific requirements such as grey cable jacket, extended frequency range, predefined phase length or for measurement purpose. In latter case please specify required inspection certificate 3.1. In case of low PIM test cables please specify the required IM3 thresholds (e.g. -170 dBc max.).



Figure shows low PIM measurement jumpers with 4.3-10 male screw type and 7-16 interfaces.

Available connectors

7-16 connector system (according IEC 61169-4)



Dimensions in mm.

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**4.3-10 connector system (according IEC 61169-54)**

Plug straight (screw)	Plug right angle (screw)	Socket
Plug straight (hand-screw)	Plug right angle (hand-screw)	
Plug straight (push pull)	Plug right angle (push pull)	

**N connector system (according IEC 61169-16)**

Plug straight	Plug right angle	Socket

Dimensions in mm.