

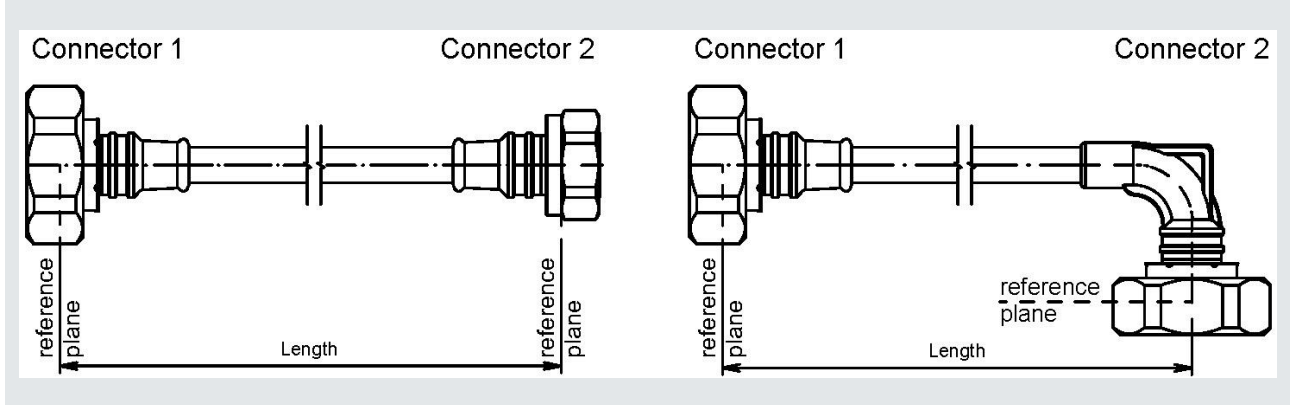
SpinnerFlex® TopFit Jumper SF 1/4"-50-PE; SF 1/4"-50-FR and SF 1/4"-50-CPR



| Electrical Specification | | | | | | |
|---|----------------------------|--------------------------|-----------------------------|-----------------------|--------------------------|-----------------------------|
| Impedance | 50 Ω | | | | | |
| IM3 (2 x 20 W) ¹⁾ | ≤ -156 dBc / typ. -165 dBc | | | | | |
| 1) Jumper cables with improved IM3 values are available on request. | | | | | | |
| VSWR ²⁾ | 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 ³⁾ | ≤ 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) Extended frequency range for premium quality. Please specify before order. | | | | | | |
| | 960 MHz | 2,200 MHz | 2,700 MHz | 3,800 MHz | 5,825 MHz | |
| Insertion loss, nominal <small>(20 °C cable temperature values without connectors, typ. connector attenuation is ≤ 0.01 dB)</small> | 19.1 dB/100m | 30.1 dB/100m | 33.7 dB/100m | 40.4 dB/100m | 53.4 dB/100m | |
| max. Power rating <small>(40 °C ambient temperature)</small> | 0.35 kW | 0.22 kW | 0.19 kW | 0.16 kW | 0.12 kW | |

SpinnerFlex® TopFit Jumper SF 1/4"-50-PE; SF 1/4"-50-FR and SF 1/4"-50-CPR

| Mechanical Specification | | | | | | | | |
|-------------------------------|---|-------------|-------------|-------------|----------------------------|--------------|---------------|---------------|
| Minimum bending radius | 25 mm (repeated bends) | | | | | | | |
| Crush resistance | 18.4 N/mm | | | | | | | |
| Recommended clamp spacing | 200 mm | | | | | | | |
| Cable jacket | PE black (grey jacket available on request) | | | | | | | |
| Nominal outer jacket diameter | 7.8 mm | | | | | | | |
| Connector | Material | | | | Surface | | | |
| Inner conductor | Cu-alloy | | | | Ag-plated | | | |
| Outer conductor | Cu-alloy | | | | Ag-plated or CuSnZn-plated | | | |
| Other metal parts | Cu-alloy | | | | Ni-plated | | | |
| Insulation | PTFE, PE | | | | | | | |
| Sealing | Silicone rubber | | | | | | | |
| Installation instruction | M30804 | | | | | | | |
| Length definition | | | | | | | | |
| Length [m] | > 0.5 - 1.0 | > 1.0 - 1.5 | > 1.5 - 2.5 | > 2.5 - 4.0 | > 4.0 - 6.0 | > 6.0 - 10.0 | > 10.0 - 15.0 | > 15.0 - 20.0 |
| Tolerances [mm] | ± 10 | ± 15 | ± 25 | ± 40 | ± 60 | ± 100 | ± 150 | ± 200 |



| 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 1/4"-50-PE | -70 °C to +85 °C | -40 °C to +60 °C | -50 °C to +85 °C |
| SF 1/4"-50-FR | -70 °C to +85 °C | -25 °C to +60 °C | -50 °C to +85 °C |
| SF 1/4"-50-CPR | -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 1/4"-50-PE | Fire retardant acc. to IEC 60332-1, IEC 60332-3.C, IEC 61034 and UL 1581-1991 | | |
| SF 1/4"-50-FR | Fire class B2ca, s1a, d0, a1 acc. to CPR: EN 50575 | | |
| SF 1/4"-50-CPR | Fire class B2ca, s1a, d0, a1 acc. to CPR: EN 50575 | | |
| RoHS | compliant to directive 2011/65/EU and amendment (EU) 2015/863 | | |

SpinnerFlex® TopFit Jumper SF 1/4"-50-PE; SF 1/4"-50-FR and SF 1/4"-50-CPR

Sales product numbers

| Jumper | Cable Type | Cable Size | Cable Jacket | Connector 1 | Connector 2 | Length | Unit | Length | Extra Features | | |
|---|--------------------------------------|------------|--------------|--|-------------|-----------|----------|----------|----------------|----------|-------------------------------|
| J | Z | X | Z | - | XZ | XZ | - | X | Z | X | -Z |
| LF | L | | Blank for PE | Any combination of connectors below is possible. | | | | | | | Leave blank if not applicable |
| SF | S | | | Please specify an XZ combination for connectors 1 and 2. | | | | | | | |
| 1/4" | | 14 | | In case of pigtail leave blank for connector 2 | | | | | | | |
| 3/8" | | 38 | | | | | | | | | |
| 1/2" | | 12 | | | | | | | | | |
| Fire retardant | | | F | | | | | | | | |
| Construction Products Regulation (CPR) | | | C | | | | | | | | |
| Gray | | | G | | | | | | | | |
| X = Connector System | Z = Connector Style | | | X | Z | | | | | | |
| 7-16 | Male | | | 7 | M | | | | | | |
| 4.1-9.5 | Male right angle | | | 41 | R | | | | | | |
| N | Female (right angle) | | | N | F(R) | | | | | | |
| | Female bulkhead (right angle) | | | | B(R) | | | | | | |
| | Female four-hole panel (right angle) | | | | P(R) | | | | | | |
| 4.3-10 | Male; screw | | | 43 | MS | | | | | | |
| 2.2-5 | Male; hand screw | | | 22 | MH | | | | | | |
| NEX10® | Male; push-pull | | | X | MP | | | | | | |
| | Male right angle; screw | | | | RS | | | | | | |
| | Male right angle; hand screw | | | | RH | | | | | | |
| | Male right angle; push-pull | | | | RP | | | | | | |
| | Female (right angle) | | | | F(R) | | | | | | |
| | Female bulkhead (right angle) | | | | B(R) | | | | | | |
| | Female four-hole panel (right angle) | | | | P(R) | | | | | | |
| Length in meters/feet (depending on unit specified) | | | | | | | | | | | |
| Meters as unit | | | | | | | | M | | | |
| Feet as unit | | | | | | | | F | | | |
| Length in decimeters/inches (depending on unit specified) | | | | | | | | | | | |
| Low PIM Measurement Cable (only available with PE jacket) | | | | | | | | | | | |
| - Passive intermodulation (IM3) @ 2 x 20 W ≤ -160 dBc ¹⁾ , inspection certificate 3.1 ²⁾ , per jumper | | | | | | | | | I0 | | |
| - Passive intermodulation (IM3) @ 2 x 20 W ≤ -160 dBc ¹⁾ , inspection certificate 3.1 ²⁾ , per order | | | | | | | | | I1 | | |
| - Passive intermodulation (IM3) @ 2 x 20 W ≤ -165 dBc ¹⁾ , inspection certificate 3.1 ²⁾ , per jumper | | | | | | | | | I2 | | |
| - Passive intermodulation (IM3) @ 2 x 20 W ≤ -165 dBc ¹⁾ , inspection certificate 3.1 ²⁾ , per order | | | | | | | | | I3 | | |
| - Passive intermodulation (IM3) @ 2 x 20 W ≤ -170 dBc ¹⁾ , inspection certificate 3.1 ²⁾ , per jumper | | | | | | | | | I4 | | |
| - Passive intermodulation (IM3) @ 2 x 20 W ≤ -170 dBc ¹⁾ , inspection certificate 3.1 ²⁾ , per order | | | | | | | | | I5 | | |
| Defined phase length | | | | | | | | | P | | |
| Extended frequency range (> 3800 MHz) | | | | | | | | | E | | |
| Connector specified on side B kitted to the jumper | | | | | | | | | K | | |
| Jumper set | | | | | | | | | S | | |

1) According to IEC 62037-2 and WN 20 000
 2) According to EN 10204

Examples:

JS14-7M43RS-2M5 (SF 1/4" jumper with 7-16 male and 4.3-10 male right angle screw type; length 2.5 meter)

JS38-43MS-20F5 (SF 3/8" jumper with 4.3-10 male screw type and pigtail; length 20 feet + 5 inch)

JL12-7M7M-10M-K (LF 1/2" jumper with 7-16 male and loose end with 7-16 male as MultiFit kitted to the loose end: length 10.0 meter)

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

| Plug straight | Plug right angle | Socket |
|---------------|------------------|--------|
| | | |

4.3-10 connector system (according to 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) | |
| | | |

Dimensions in mm.

SpinnerFlex® TopFit Jumper SF 1/4"-50-PE; SF 1/4"-50-FR and SF 1/4"-50-CPR

4.1-9.5 connector system (according to IEC 60169-11)

| Plug straight | Plug right angle |
|---------------|------------------|
| | |

N connector system (according to IEC 61169-16)

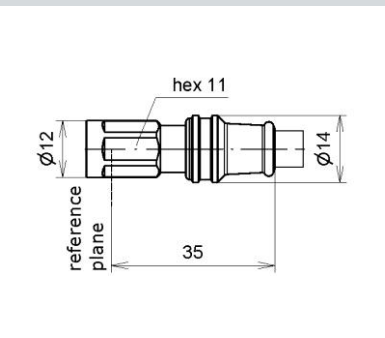
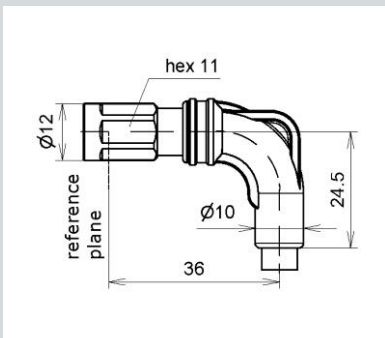
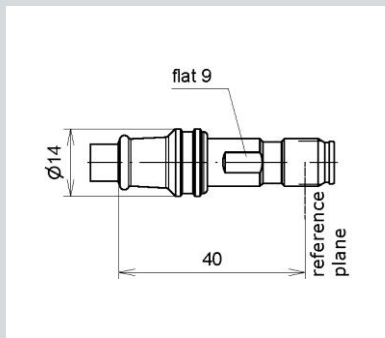
| Plug straight | Plug right angle | Socket |
|---------------|------------------|--------|
| | | |

2.2-5 connector system (according to IEC 61169-66)

| Plug straight | Plug right angle | Socket |
|---------------|------------------|--------|
| | | |

Dimensions in mm.

SpinnerFlex® TopFit Jumper SF 1/4"-50-PE; SF 1/4"-50-FR and SF 1/4"-50-CPR

| NEX10 connector system (according to IEC 61169-71) | | |
|---|---|---|
| Plug straight | Plug right angle | Socket |
|  |  |  |

Dimensions in mm.