



Jumper cables are used for the connection of the antenna feeder with the antenna itself or with the transmission/receiving system of the base station. FlexLine jumper cables are ideal for daily use even under difficult conditions and are distinguished by the following features:

- Long trouble-free field life as a result of tried and tested materials and production technologies.
- Designed for outdoor applications under extreme climatic conditions (longitudinal waterproofing)
- High flexibility and small bending diameters
- Specially developed connectors using soldering technology that guarantees superior electrical characteristics:
- Screening attenuation > 120 dB
- Low intermodulation product IM3 > 160 dBc
- Excellent return loss due to silver-plated connectors and attenuation-optimised cable materials
- Integrated lightning protection technology saves setup time, is site-optimized and reduces system attenuation
- Hot-polyamide moulding between connector and cable jacket
- Waterproof to safety class IP 68 (acc. to IEC 529)
- Used cable jackets of flame retardant, halogen-free material (FRNC)

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Technical Specification

Electrical data		1/4" S	3/8" S	1/2" S	1/2" R
Frequency range		DC to 2700 MHz			
Peak power rating		8 kW	13 kW	18 kW	57 kW
Nominal impedance		50 Ω			
Return loss 30 – 1000 MHz		< – 30 dB			
1000 – 2200 MHz		< – 28 dB			
2200 – 2700 MHz		< – 26 dB			
Insertion los 900 MHz	≤ 0.18 dB/m (cable)	≤ 0.13 dB/m (cable)	≤ 0.10 dB/m (cable)	≤ 0.07 dB/m (cable)	
	+ 0.10 dB (2 connectors)	+ 0.10 dB (2 connectors)	+ 0.10 dB (2 connectors)	+ 0.10 dB (2 connectors)	
1800 MHz	≤ 0.26 dB/m (cable)	≤ 0.20 dB/m (cable)	≤ 0.16 dB/m (cable)	≤ 0.10 dB/m (cable)	
	+ 0.10 dB (2 connectors)	+ 0.10 dB (2 connectors)	+ 0.10 dB (2 connectors)	+ 0.10 dB (2 connectors)	
2200 MHz	≤ 0.30 dB/m (cable)	≤ 0.22 dB/m (cable)	≤ 0.17 dB/m (cable)	≤ 0.11 dB/m (cable)	
	+ 0.10 dB (2 connectors)	+ 0.10 dB (2 connectors)	+ 0.10 dB (2 connectors)	+ 0.10 dB (2 connectors)	
Relatice velocity of propagation		82 % bis 84 %			
Intermodulation at 900 MHz + 1800 MHz + 2200 MHz		> 160 dBc (3rd order product with 2 x 43 dBm)			
Mechanical data					
Bending diameter repeated bending		> 50 mm	> 50 mm	> 60 mm	> 240 mm
Bending diameter single bending		> 25 mm	> 25 mm	> 30 mm	> 140 mm
Max. tensile strength		max. 350 N	max. 600 N	max. 1000 N	max. 1200 N
Environment					
Waterproof to safety class (IEC 529)		IP 68			
Max operating temperature range		– 40 °C to + 80 °C			
Installation temperature range		– 15 °C to + 60 °C			
Mechanical ossillation		MIL STD 202 Meth. 204/B			
Shock resistance		MIL STD 202 Meth. 213/B			
Corrosion resistance		MIL STD 202 Meth. 101			
Materials					
Cable	Inner conductor	copper wire	copper clad	copper clad	copper clad
			aluminum wire	aluminum wire	aluminum wire
	Dielectric	highly foamed polyethylene			
	Outer conductor	spiral corrugated	spiral corrugated	spiral corrugated	annular corrugated
		copper tube	copper tube	copper tube	copper tube
	Jacket options	FRNC, black and PE black			
Connector	Inner conductor	brass / CuBe, silver-plated			
	Outer conductor	brass, silver-plated			
	Insulator	PP / PE / PTFE			
	Sealing	hot-polyamide moulding			

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Standard Jumper Cable	Connector 1	Connector 2	Length	Order Number
FlexLine 1/4" S FRNC	N plug right angle	N jack straight	1 m	V45594-A4015-A100
			1.5 m	V45594-A4015-A150
			2 m	V45594-A4015-A200
			2.5 m	V45594-A4015-A250
			3 m	V45594-A4015-A300
	N plug straight	N jack straight	1 m	V45594-A4515-A100
			1.5 m	V45594-A4515-A150
			2 m	V45594-A4515-A200
			2.5 m	V45594-A4515-A250
			3 m	V45594-A4515-A300
	N plug straight	N plug right angle	1 m	V45594-A4540-A100
			1.5 m	V45594-A4540-A150
			2 m	V45594-A4540-A200
			2.5 m	V45594-A4540-A250
			3 m	V45594-A4540-A300
	N plug straight	N plug straight	1 m	V45594-A4545-A100
			1.5 m	V45594-A4545-A150
			2 m	V45594-A4545-A200
			2.5 m	V45594-A4545-A250
			3 m	V45594-A4545-A300
	7-16 plug right angle	7-16 jack straight	1 m	V45594-A8055-A100
			1.5 m	V45594-A8055-A150
			2 m	V45594-A8055-A200
			2.5 m	V45594-A8055-A250
			3 m	V45594-A8055-A300
	7-16 plug straight	N plug straight	1 m	V45594-A8545-A100
			1.5 m	V45594-A8545-A150
			2 m	V45594-A8545-A200
			2.5 m	V45594-A8545-A250
			3 m	V45594-A8545-A300
	7-16 plug straight	7-16 jack straight	1 m	V45594-A8555-A100
			1.5 m	V45594-A8555-A150
			2 m	V45594-A8555-A200
			2.5 m	V45594-A8555-A250
			3 m	V45594-A8555-A300
	7-16 plug straight	7-16 plug right angle	1 m	V45594-A8580-A100
			1.5 m	V45594-A8580-A150
			2 m	V45594-A8580-A200
			2.5 m	V45594-A8580-A250
			3 m	V45594-A8580-A300
	7-16 plug straight	7-16 plug straight	1 m	V45594-A8585-A100
			1.5 m	V45594-A8585-A150
			2 m	V45594-A8585-A200
			2.5 m	V45594-A8585-A250
			3 m	V45594-A8585-A300

For other combinations of connectors and cables please look at page 32 –“Jumper cables custom made”.

Jumper Cables

Standard Jumper Cable	Connector 1	Connector 2	Length	Order Number
FlexLine 3/8" S FRNC	N plug right angle	N jack straight	1 m	V45594-A4015-B100
			1.5 m	V45594-A4015-B150
			2 m	V45594-A4015-B200
			2.5 m	V45594-A4015-B250
			3 m	V45594-A4015-B300
	N plug straight	N jack straight	1 m	V45594-A4515-B100
			1.5 m	V45594-A4515-B150
			2 m	V45594-A4515-B200
			2.5 m	V45594-A4515-B250
			3 m	V45594-A4515-B300
	N plug straight	N plug right angle	1 m	V45594-A4540-B100
			1.5 m	V45594-A4540-B150
			2 m	V45594-A4540-B200
			2.5 m	V45594-A4540-B250
			3 m	V45594-A4540-B300
	N plug straight	N plug straight	1 m	V45594-A4545-B100
			1.5 m	V45594-A4545-B150
			2 m	V45594-A4545-B200
			2.5 m	V45594-A4545-B250
			3 m	V45594-A4545-B300
	7-16 plug right angle	7-16 jack straight	1 m	V45594-A8055-B100
			1.5 m	V45594-A8055-B150
			2 m	V45594-A8055-B200
			2.5 m	V45594-A8055-B250
			3 m	V45594-A8055-B300
	7-16 plug straight	N plug straight	1 m	V45594-A8545-B100
			1.5 m	V45594-A8545-B150
			2 m	V45594-A8545-B200
			2.5 m	V45594-A8545-B250
			3 m	V45594-A8545-B300
	7-16 plug straight	7-16 jack straight	1 m	V45594-A8555-B100
			1.5 m	V45594-A8555-B150
			2 m	V45594-A8555-B200
			2.5 m	V45594-A8555-B250
			3 m	V45594-A8555-B300
	7-16 plug straight	7-16 plug right angle	1 m	V45594-A8580-B100
			1.5 m	V45594-A8580-B150
			2 m	V45594-A8580-B200
			2.5 m	V45594-A8580-B250
			3 m	V45594-A8580-B300
	7-16 plug straight	7-16 plug straight	1 m	V45594-A8585-B100
			1.5 m	V45594-A8585-B150
			2 m	V45594-A8585-B200
			2.5 m	V45594-A8585-B250
			3 m	V45594-A8585-B300

For other combinations of connectors and cables please look at page 32 – "Jumper cables custom made".

Jumper Cables

Standard Jumper Cable	Connector 1	Connector 2	Length	Order Number
FlexLine 1/2" S FRNC	N plug right angle	N jack straight	1 m	V45594-A4015-C100
			1.5 m	V45594-A4015-C150
			2 m	V45594-A4015-C200
			2.5 m	V45594-A4015-C250
			3 m	V45594-A4015-C300
	N plug straight	N jack straight	1 m	V45594-A4515-C100
			1.5 m	V45594-A4515-C150
			2 m	V45594-A4515-C200
			2.5 m	V45594-A4515-C250
			3 m	V45594-A4515-C300
	N plug straight	N plug right angle	1 m	V45594-A4540-C100
			1.5 m	V45594-A4540-C150
			2 m	V45594-A4540-C200
			2.5 m	V45594-A4540-C250
			3 m	V45594-A4540-C300
	N plug straight	N plug straight	1 m	V45594-A4545-C100
			1.5 m	V45594-A4545-C150
			2 m	V45594-A4545-C200
			2.5 m	V45594-A4545-C250
			3 m	V45594-A4545-C300
	7-16 plug right angle	7-16 jack straight	1 m	V45594-A8055-C100
			1.5 m	V45594-A8055-C150
			2 m	V45594-A8055-C200
			2.5 m	V45594-A8055-C250
			3 m	V45594-A8055-C300
	7-16 plug straight	N plug straight	1 m	V45594-A8545-C100
			1.5 m	V45594-A8545-C150
			2 m	V45594-A8545-C200
			2.5 m	V45594-A8545-C250
			3 m	V45594-A8545-C300
	7-16 plug straight	7-16 jack straight	1 m	V45594-A8555-C100
			1.5 m	V45594-A8555-C150
			2 m	V45594-A8555-C200
			2.5 m	V45594-A8555-C250
			3 m	V45594-A8555-C300
	7-16 plug straight	7-16 plug right angle	1 m	V45594-A8580-C100
			1.5 m	V45594-A8580-C150
			2 m	V45594-A8580-C200
			2.5 m	V45594-A8580-C250
			3 m	V45594-A8580-C300
	7-16 plug straight	7-16 plug straight	1 m	V45594-A8585-C100
			1.5 m	V45594-A8585-C150
			2 m	V45594-A8585-C200
			2.5 m	V45594-A8585-C250
			3 m	V45594-A8585-C300

For other combinations of connectors and cables please look at page 32 – "Jumper cables custom made".

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Standard Jumper Cable	Connector 1	Connector 2	Length	Order Number
FlexLine 1/2" R FRNC	N plug right angle	N jack straight	1 m	V45594-A4015-D100
			1.5 m	V45594-A4015-D150
			2 m	V45594-A4015-D200
			2.5 m	V45594-A4015-D250
			3 m	V45594-A4015-D300
	N plug straight	N jack straight	1 m	V45594-A4515-D100
			1.5 m	V45594-A4515-D150
			2 m	V45594-A4515-D200
			2.5 m	V45594-A4515-D250
			3 m	V45594-A4515-D300
	N plug straight	N plug right angle	1 m	V45594-A4540-D100
			1.5 m	V45594-A4540-D150
			2 m	V45594-A4540-D200
			2.5 m	V45594-A4540-D250
			3 m	V45594-A4540-D300
	N plug straight	N plug straight	1 m	V45594-A4545-D100
			1.5 m	V45594-A4545-D150
			2 m	V45594-A4545-D200
			2.5 m	V45594-A4545-D250
			3 m	V45594-A4545-D300
	7-16 plug right angle	7-16 jack straight	1 m	V45594-A8055-D100
			1.5 m	V45594-A8055-D150
			2 m	V45594-A8055-D200
			2.5 m	V45594-A8055-D250
			3 m	V45594-A8055-D300
	7-16 plug straight	N plug straight	1 m	V45594-A8545-D100
			1.5 m	V45594-A8545-D150
			2 m	V45594-A8545-D200
			2.5 m	V45594-A8545-D250
			3 m	V45594-A8545-D300
	7-16 plug straight	7-16 jack straight	1 m	V45594-A8555-D100
			1.5 m	V45594-A8555-D150
			2 m	V45594-A8555-D200
			2.5 m	V45594-A8555-D250
			3 m	V45594-A8555-D300
	7-16 plug straight	7-16 plug right angle	1 m	V45594-A8580-D100
			1.5 m	V45594-A8580-D150
			2 m	V45594-A8580-D200
			2.5 m	V45594-A8580-D250
			3 m	V45594-A8580-D300
	7-16 plug straight	7-16 plug straight	1 m	V45594-A8585-D100
			1.5 m	V45594-A8585-D150
			2 m	V45594-A8585-D200
			2.5 m	V45594-A8585-D250
			3 m	V45594-A8585-D300

For other combinations of connectors and cables please look at page 32 – "Jumper cables custom made".

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Standard Jumper Cable	Connector 1	Connector 2	Length	Order Number
FlexLine 1/2" S PE	N plug right angle	N jack straight	1 m	V45594-A4015-G100
			1.5 m	V45594-A4015-G150
			2 m	V45594-A4015-G200
			2.5 m	V45594-A4015-G250
			3 m	V45594-A4015-G300
	N plug straight	N jack straight	1 m	V45594-A4515-G100
			1.5 m	V45594-A4515-G150
			2 m	V45594-A4515-G200
			2.5 m	V45594-A4515-G250
			3 m	V45594-A4515-G300
	N plug straight	N plug right angle	1 m	V45594-A4540-G100
			1.5 m	V45594-A4540-G150
			2 m	V45594-A4540-G200
			2.5 m	V45594-A4540-G250
			3 m	V45594-A4540-G300
	N plug straight	N plug straight	1 m	V45594-A4545-G100
			1.5 m	V45594-A4545-G150
			2 m	V45594-A4545-G200
			2.5 m	V45594-A4545-G250
			3 m	V45594-A4545-G300
	7-16 plug right angle	7-16 jack straight	1 m	V45594-A8055-G100
			1.5 m	V45594-A8055-G150
			2 m	V45594-A8055-G200
			2.5 m	V45594-A8055-G250
			3 m	V45594-A8055-G300
	7-16 plug straight	N plug straight	1 m	V45594-A8545-G100
			1.5 m	V45594-A8545-G150
			2 m	V45594-A8545-G200
			2.5 m	V45594-A8545-G250
			3 m	V45594-A8545-G300
	7-16 plug straight	7-16 jack straight	1 m	V45594-A8555-G100
			1.5 m	V45594-A8555-G150
			2 m	V45594-A8555-G200
			2.5 m	V45594-A8555-G250
			3 m	V45594-A8555-G300
	7-16 plug straight	7-16 plug right angle	1 m	V45594-A8580-G100
			1.5 m	V45594-A8580-G150
			2 m	V45594-A8580-G200
			2.5 m	V45594-A8580-G250
			3 m	V45594-A8580-G300
	7-16 plug straight	7-16 plug straight	1 m	V45594-A8585-G100
			1.5 m	V45594-A8585-G150
			2 m	V45594-A8585-G200
			2.5 m	V45594-A8585-G250
			3 m	V45594-A8585-G300

For other combinations of connectors and cables please look at page 32 – "Jumper cables custom made".

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Standard Jumper Cable	Connector 1	Connector 2	Length	Order Number
FlexLine 1/2" R PE	N plug right angle	N jack straight	1 m	V45594-A4015-H100
			1.5 m	V45594-A4015-H150
			2 m	V45594-A4015-H200
			2.5 m	V45594-A4015-H250
			3 m	V45594-A4015-H300
	N plug straight	N jack straight	1 m	V45594-A4515-H100
			1.5 m	V45594-A4515-H150
			2 m	V45594-A4515-H200
			2.5 m	V45594-A4515-H250
			3 m	V45594-A4515-H300
	N plug straight	N plug right angle	1 m	V45594-A4540-H100
			1.5 m	V45594-A4540-H150
			2 m	V45594-A4540-H200
			2.5 m	V45594-A4540-H250
			3 m	V45594-A4540-H300
	N plug straight	N plug straight	1 m	V45594-A4545-H100
			1.5 m	V45594-A4545-H150
			2 m	V45594-A4545-H200
			2.5 m	V45594-A4545-H250
			3 m	V45594-A4545-H300
	7-16 plug right angle	7-16 jack straight	1 m	V45594-A8055-H100
			1.5 m	V45594-A8055-H150
			2 m	V45594-A8055-H200
			2.5 m	V45594-A8055-H250
			3 m	V45594-A8055-H300
	7-16 plug straight	N plug straight	1 m	V45594-A8545-H100
			1.5 m	V45594-A8545-H150
			2 m	V45594-A8545-H200
			2.5 m	V45594-A8545-H250
			3 m	V45594-A8545-H300
	7-16 plug straight	7-16 jack straight	1 m	V45594-A8555-H100
			1.5 m	V45594-A8555-H150
			2 m	V45594-A8555-H200
			2.5 m	V45594-A8555-H250
			3 m	V45594-A8555-H300
	7-16 plug straight	7-16 plug right angle	1 m	V45594-A8580-H100
			1.5 m	V45594-A8580-H150
			2 m	V45594-A8580-H200
			2.5 m	V45594-A8580-H250
			3 m	V45594-A8580-H300
	7-16 plug straight	7-16 plug straight	1 m	V45594-A8585-H100
			1.5 m	V45594-A8585-H150
			2 m	V45594-A8585-H200
			2.5 m	V45594-A8585-H250
			3 m	V45594-A8585-H300

For other combinations of connectors and cables please look at page 32 – "Jumper cables custom made".