



MRC Flex

High Flexible 50Ω Cables



Application

The radio-frequency cables described in this chapter are used in transmitter and receiver installations in radio communications as well as in the entire field of commercial radio-frequency technology and electronics. Due to the selection of the inner conductor and the sheath material these cables can be used where high flexibility and high electrical performance is needed.

Standards

EN 50117-1, IEC 61196-1

Flame resistance

EN 60332-1

Construction

		MRC 195 FLEX (0.96/2.79)	MRC 200 FLEX (1.17/2.95)	MRC 240 FLEX (1.4/3.81)	MRC 400 FLEX (2.7/7.24)
Inner conductor	Stranded bare copper wires	0.96 mm	1.17 mm	1.4 mm	2.7 mm
Insulation	Foam-PE	2.79 mm	2.95 mm	3.81 mm	7.24 mm
Outer conductor		Al-PET Foil, bonded to the dielectric + Copper braid, tinned			
Sheath	Universal indoor/outdoor, UV stabilized	4.95 mm ± 0.3	4.95 mm ± 0.3	6.1 mm ± 0.3	10.3 mm ± 0.3
Printing		DRAKA MRC 195 FLEX + batch number + meter marking	DRAKA MRC 200 FLEX + batch number + meter marking	DRAKA MRC 240 FLEX + batch number + meter marking	DRAKA MRC 400 FLEX + batch number + meter marking

Mechanical properties

Minimum bending radius	without load	5 x D (D= outer diameter)
	with load	10 x D (D= outer diameter)
Temperature range	during operation	- 40° C to + 85° C
	during installation	- 15° C to + 55° C
Corrosivity		acc. to IEC 60754-1/2

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Electrical properties

nominal

at 20°C

		MRC 195 FLEX (0.96/2.79)	MRC 200 FLEX (1.17/2.95)	MRC 240 FLEX (1.4/3.81)	MRC 400 FLEX (2.7/7.24)
DC resistance (Ω /km)	Inner conductor	32.1	21.6	16.3	4.1
	Outer conductor	17.3	17.4	12.3	7.55
Mutual capacitance	pF/m	90	80	85	85
Velocity ratio	%	75	83	80	80
Characteristic impedance	at 200 MHz	50 $\Omega \pm 2$	50 $\Omega \pm 2$	50 $\Omega \pm 2$	50 $\Omega \pm 2$
Transfer impedance	at 10 MHz	≤ 5 m Ω /m	≤ 5 m Ω /m	≤ 5 m Ω /m	≤ 5 m Ω /m
Screening factor	at 100-1000 MHz	90 dB	90 dB	90 dB	90 dB
Operating voltage		0.7 kV _{rms}	0.8 kV _{rms}	1.0 kV _{rms}	1.2 kV _{rms}
Test voltage	Inner/Outer conductor	1.4 kV _{rms}	1.6 kV _{rms}	2.0 kV _{rms}	3.0 kV _{rms}
Insulation resistance		≥ 10 G Ω *km	≥ 10 G Ω *km	≥ 10 G Ω *km	≥ 10 G Ω *km

Attenuation (dB/100m)

nominal

at 20°C

Frequency (MHz)	MRC 195 FLEX (0.96/2.79)	MRC 200 FLEX (1.17/2.95)	MRC 240 FLEX (1.4/3.81)	MRC 400 FLEX (2.7/7.24)
30	7.8	6.5	5.5	2.8
150	17.4	14.6	12.4	6.2
220	21.2	17.8	15.1	7.5
450	30.6	25.6	21.8	10.7
900	43.7	36.4	31.2	15.6
1800	62.6	52.2	44.1	22.2
2500	74.7	61.4	52.6	26.4
5200	110.7	90.4	79.1	40.5
5800	116.9	96.1	83.4	42.7

Max. power rating (Watts)

Ambient temperature 40°C and max. inner conductor temperature 100°C

Frequency (MHz)	MRC 195 FLEX (0.96/2.79)	MRC 200 FLEX (1.17/2.95)	MRC 240 FLEX (1.4/3.81)	MRC 400 FLEX (2.7/7.24)
30	760	1050	1400	3300
150	330	450	635	1470
220	270	370	515	1200
450	200	270	360	830
900	130	180	245	580
1800	90	130	170	400
2500	80	110	140	330
5200	52	75	100	220
5800	49	70	95	210

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Return loss (dB)

Several peaks are allowed

at 20°C

Frequency (MHz)	MRC 195 FLEX (0.96/2.79)	MRC 200 FLEX (1.17/2.95)	MRC 240 FLEX (1.4/3.81)	MRC 400 FLEX (2.7/7.24)
50-450	≥ 26	≥ 26	≥ 26	≥ 26
450-1000	≥ 23	≥ 23	≥ 23	≥ 23
1000-2500	≥ 15	≥ 15	≥ 15	≥ 15

Technical data

Product code	Designation	Type	Brand name	Outer diameter mm	Weight kg/km	Standard delivery length m	Drum size **PWD	Copper content Kg/km	Tensile force N
1025495	02Y(St) CH	0.96L/2.79 AFB	MRC 195 FLEX	4.95	29	1000	400/120/ 330	15.6	78
1025496	02Y(St) CH	1.17L/2.95 AFB	MRC 200 FLEX	4.95	31	1000	400/120/ 330	18.5	83
1025497	02Y(St) CH	1.4L/3.81 AFB	MRC 240 FLEX	6.1	45	1000	500/200/ 360	27.9	140
1025498	02Y(St) CH	2.7L/7.24 AFB	MRC 400 FLEX	10.3	120	1000	760/470/ 500	76.7	380

**PWD (plywood drum)