



1/2" - Hiflex flame-retardant

B2_{ca}

DESCRIPTION

Cable type : *5092-HLFRB*
Reference : *EC4-50-HF-FRB*

Cable with UV resistant, halogen free, low smoke, flame retardant jacket according to IEC 60754, IEC 60332-1, IEC 60332-3 cat. C, IEC 61034 and EN 50399 B2_{ca}-s1a,d1,a1.
Compliant to EN 50575.

CHARACTERISTICS

Construction

• Inner conductor		
Material	copper clad aluminium wire	
Diameter (mm)	3.55	
• Dielectric		
Material	gas-injected cellular polyethylene	
Diameter (mm)	9.0	
• Outer conductor		
Material	corrugated copper tube	
Diameter (mm)	12.1	
• Outer sheath		
Material	flame retardant polyolefin	
Thickness (mm)	0.7	
Diameter (mm)	13.6	

Mechanical characteristics

• Minimum bending radius	
a) single bending (cm)	3
b) 15 repeated bends	3
• Maximum pulling strength (daN)	68
• Recommended temperature range	
- Storage	-70 to +85 °C
- Installation	-40 to +60 °C
- Operation	-55 to +85 °C
• Max. length per hoisting grip (m)	70
• Maximum hanger spacing (m)	0.5
• Flat plate crush res. (kg/mm)	2.1
• Bending moment (Nm)	2
• Approximate weight (kg/km)	203

Electrical characteristics

• Characteristic impedance (Ω)	50.3 ± 0.5
• Nominal capacity (pF/m)	82
• Relative propagation velocity (%)	82
• Inductance (μ H/m)	0.204
• DC-resistance at 20°C	
- inner conductor (Ω /km)	2.76
- outer conductor (Ω /km)	3.5
• RF peak voltage (kV)	1.1
• RF peak power (kW)	12.7
• Cut-off-frequency (GHz)	13.2
• Insulation resistance (M Ω .km)	>> 5000
• Attenuation^[1] and power rating	

Frequency (MHz)	Attenuation at 20°C (68° F) ^[2]		Mean power rating ^[3] (kW)
	(MHz)	(dB/100m)	
10	1.01	9.45	
20	1.43	6.66	
30	1.76	5.43	
80	2.89	3.30	
100	3.24	2.94	
150	3.98	2.39	
200	4.62	2.06	
300	5.69	1.67	
400	6.61	1.44	
450	7.03	1.36	
500	7.43	1.28	
600	8.17	1.17	
700	8.86	1.08	
800	9.51	1.00	
894	10.09	0.95	
960	10.47	0.91	
1000	10.70	0.89	
1500	13.30	0.72	
1700	14.23	0.67	
1800	14.67	0.65	
1880	15.02	0.63	
2000	15.54	0.61	
2170	16.24	0.59	
2200	16.36	0.58	
2300	16.77	0.57	
2400	17.16	0.56	
2500	17.55	0.54	
2700	18.31	0.52	
3000	19.40	0.49	
4000	22.77	0.42	
6000	28.63	0.33	

[1] The attenuation can be approximated by the formula:

$$\alpha(f[\text{MHz}]) = A \cdot \sqrt{f[\text{MHz}]} + B \cdot f[\text{MHz}] \quad (\text{dB}/100\text{m})$$

$$A = 0.317$$

$$B = 0.00068$$

[2] Nominal values

[3] Ambient temperature = 40°C; temperature of inner conductor = 100°C;
VSWR = 1.0; no solar loading