



1 5/8" -A

STANDARD

Cable type : *5438 A*
Reference : *EC7-50-A*

Cable with standard UV resistant PE jacket,
halogen free according to IEC 60754

CHARACTERISTICS

Construction

• Inner conductor	
Material	corrugated copper tube
Diameter (mm)	17.7
• Dielectric	
Material	gas-injected cellular polyethylene
Diameter (mm)	43.0
• Outer conductor	
Material	corrugated copper tube
Diameter (mm)	46.6
• Outer sheath	
Material	black polyethylene
Thickness (mm)	1.7
Diameter (mm)	50.0

Mechanical characteristics

• Minimum bending radius	
a) single bending (cm)	20
b) 15 repeated bends (cm)	40
• Maximum pulling strength (daN)	250
• 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)	1.5
• Flat plate crush resistance (kg/mm)	2.4
• Bending moment (Nm)	42
• Approximate weight ^[4] (kg/km)	1019 / 1131

FLAME RETARDANT

Cable type : *5438 A-HLFR*
Reference : *EC7-50-A-FR*

Cable with UV resistant, halogen free, low smoke
flame retardant jacket according to IEC 60754,
IEC 60332-1, IEC 60332-3 cat. C and IEC 61034

Electrical characteristics

• Characteristic impedance (Ω)	50 ± 1
• Nominal capacity (pF/m)	75
• Relative propagation velocity (%)	89
• Inductance (μ H/m)	0.187
• DC-resistance at 20°C	
- inner conductor (Ω /km)	1.37
- outer conductor (Ω /km)	0.5
• RF peak voltage (kV)	5.5
• RF peak power (kW)	302
• Cut-off-frequency (GHz)	2.8
• Insulation resistance (M Ω .km)	>> 5000
• Attenuation ^[1] and power rating	

Frequency (MHz)	Attenuation at 20°C ^[2] (dB/100m)	Mean power rating ^[3] (kW)
10	0.20	49.42
20	0.29	34.76
30	0.36	28.27
80	0.59	17.09
100	0.67	15.22
150	0.82	12.32
200	0.96	10.60
300	1.18	8.55
400	1.38	7.33
450	1.47	6.88
500	1.56	6.50
600	1.72	5.89
700	1.87	5.41
800	2.01	5.03
894	2.14	4.73
960	2.23	4.55
1000	2.28	4.45
1500	2.86	3.54
1700	3.07	3.30
1800	3.17	3.19
1880	3.25	3.12
2000	3.37	3.01
2170	3.53	2.87
2200	3.56	2.85
2300	3.65	2.77
2400	3.74	2.71
2500	3.83	2.64
2700	4.01	2.53
3000	-	-
4000	-	-
6000	-	-

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

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

$$A = 0.064$$

$$B = 0.000253$$

[2] Nominal values

[3] Ambient temperature = 40°C; temperature of inner conductor = 100°C;

VSWR = 1.0; no solar loading

[4] Standard PE jacket / HLFR Jacket

