



1/2" - Plenum Rated

FLAME RETARDANT

Cable type : **5129-PL**

Reference : **EC4-50-PL**

Cable with UV resistant, low smoke
flame retardant jacket according to UL-910 / NFPA 262
CATVP rated (Plenum)

CHARACTERISTICS

Construction

• Inner conductor	
Material	copper clad aluminium wire
Diameter (mm) (in)	4.8 (0.19)
• Dielectric	
Material	polyethylene
Diameter (mm) (in)	11.8 (0.46)
• Outer conductor	
Material	corrugated copper tube
Diameter (mm) (in)	13.8 (0.54)
• Outer sheath	
Thickness (mm) (in)	0.9 (0.04)
Diameter (mm) (in)	15.6 (0.61)

Mechanical characteristics

• Minimum bending radius	
a) single bending (cm) (in)	12.5 (5.0)
b) 15 repeated bends (cm) (in)	12.5 (5.0)
• Maximum pulling strength (daN) (lb)	
	100 (225)
• Recommended temperature range	
- Storage	-15 to +85 °C (+5 to +185 °F)
- Installation	-15 to +60 °C (+5 to +140 °F)
- Operation	-15 to +85 °C (+5 to +185 °F)
• Max. length per hoisting grip (m) (ft)	
	70 (230)
• Maximum hanger spacing (m) (ft)	
	1 (3.3)
• Flat plate crush res. (kg/mm) (lb/in)	
	1.3 (75)
• Bending moment (Nm) (lb-ft)	
	6.0 (4.4)
• Approximate weight (kg/m) (lb/ft)	
	0.260 (0.176)

VSWR characteristics

• VSWR^[4]_{max}	600 - 1000 MHz	< 1.15
• VSWR^[4]_{max}	1700 - 2300 MHz	< 1.15
• VSWR^[4]_{max}	2500 - 2700 MHz	< 1.15

[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 = 0.175
B = 0.001374



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Electrical characteristics

• Characteristic impedance (Ω)	50 ± 1
• Nominal capacity (pF/m) (pF/ft)	76 (23.2)
• Relative propagation velocity (%)	88
• Inductance ($\mu\text{H}/\text{m}$) ($\mu\text{H}/\text{ft}$)	0.189 (0.058)
• DC-resistance at 20°C (68°F)	
- inner conductor (Ω/km) ($\Omega/1000\text{ft}$)	1.48 (0.45)
- outer conductor (Ω/km) ($\Omega/1000\text{ft}$)	1.85 (0.56)
• RF peak voltage (kV)	1.5
• RF peak power (kW)	22.5
• Cut-off-frequency (GHz)	6.1
• Insulation resistance ($M\Omega \cdot \text{km}$)	>> 5000
• Attenuation^[1] and power rating	

Frequency (MHz)	Attenuation at 20°C (68°F) ^[2]		Mean power rating ^[3] (kW)
	(dB/100m)	(dB/100ft)	
10	0.57	0.174	18.90
20	0.81	0.247	13.20
30	1.00	0.305	10.73
80	1.68	0.512	6.40
100	1.89	0.576	5.68
150	2.35	0.716	4.57
200	2.75	0.838	3.90
300	3.44	1.05	3.12
400	4.05	1.23	2.65
450	4.3	1.32	2.48
500	4.6	1.40	2.33
600	5.1	1.56	2.10
700	5.6	1.70	1.92
800	6.1	1.84	1.77
894	6.5	1.97	1.66
960	6.7	2.05	1.59
1000	6.9	2.11	1.55
1500	8.8	2.70	1.21
1700	9.6	2.91	1.12
1800	9.9	3.02	1.08
1880	10.2	3.10	1.05
2000	10.6	3.22	1.01
2170	11.1	3.39	0.96
2200	11.2	3.42	0.96
2300	11.6	3.52	0.93
2400	11.9	3.62	0.90
2500	12.2	3.72	0.88
2700	12.8	3.90	0.84
3000	13.7	4.18	0.78
4000	16.6	5.05	0.65
6000	21.8	6.65	0.49

[2] Nominal values

[3] Ambient temperature = 40°C (104°F); temperature of inner conductor = 100°C (212°F); VSWR = 1.0; no solar loading

[4] Maximum VSWR value, measured on standard reel length