

Low Loss 400-Series Cable Assemblies w/Integral 5.8 GHz Lightning Protector

Applications

- Protect wireless devices and networks from damage due to lightning strikes
- IEEE 802.11a/b/g/n wireless systems
- Premade cables ideal for rapid deployment applications
- Distributed Antenna Systems (DAS) protection

Features

- Low loss CA-400 series coax cable
- Integral 5.8 GHz coax lightning surge protector with multi-strike capability and replaceable gas tube
- Premade cable assemblies available with N-Male or N-Female connectors
- Custom lengths and connectors available



Description

The CA4NMLP and CA4NFLP series are high performance low loss 400-series cable assemblies that feature an in-line gas discharge tube lightning protector attached directly to the cable. This not only reduces the cost since a connector is eliminated, but helps reduce return loss and insertion loss.

These cable assemblies feature L-com's CA-400 which is a UV resistant polyethylene jacketed high performance flexible low loss coaxial cable. Attached directly to the cable is either L-com's AL6-NM-14-6 or AL6-NF-14-9 coaxial lightning protectors. They feature wide-band operation up to 5.8 GHz.

Available with either N-Male or N-Female connectors, these cables can be purchased in standard lengths of 2ft, 4ft, 10ft or 20ft. Custom lengths and connectors are also available. Contact L-com sales for more information.

Standard Assembly Models

Assembly Series	Connector Type	Protector Connector	Length Suffix (XXX)
CA4NMLPNMXXX	N-Male	N-Male	002 = 2ft
CA4NMLPNFXXX	N-Male	N-Female Bulkhead	004 = 4ft
CA4NFLPNMXXX	N-Female	N-Male	010 = 10ft
CA4NFLPNFXXX	N-Female	N-Female Bulkhead	020 = 20ft

Contact L-com for custom lengths and connector options



Coax Lightning Protector Specifications

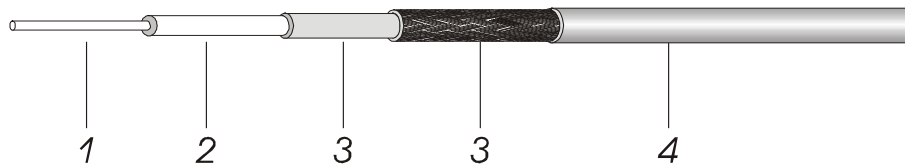
Electrical Specifications

Frequency Range	DC ~ 5.8 GHz
Impedance	50 Ohms
VSWR	<1.3
Insertion Loss	<0.7 dB
Dielectric Withstanding Voltage	2500V (RMS)
Contact Resistance	Center Conductor $\leq 1\text{m}\Omega$ / Outer Conductor $\leq 1\text{m}\Omega$
Insulation Resistance	$\geq 5000\text{M}\Omega$
Gas Discharge Breakdown Voltage	90V

Mechanical Specifications

Connector	N-Male or N-Female Bulkhead
Cable Type	Low-Loss 400-Series Coax (LMR [®] 400, CA-400, etc)
Shell/ Body Material	Nickel Plated Brass
Contact	Gold Plated Phosphor Bronze/Beryllium
Insulator	PTFE
Dimensions L x W x H (max)	2.7 x 0.9 x 1.2 in. (68.2 x 23.1 x 30.6 mm)
Weight	0.23 lbs (0.10 kg)

CA-400 Series Cable Specifications



Construction Specification

	Material	Diameter (mm / in)
1. Inner Conductor	Copper/Aluminum	2.74 / 0.108
2. Dielectric	Physical Foam Polyethylene	7.24 / 0.285
3. Outer Conductor	Bonded Aluminum Foil + Tinned Copper Braid	8.13 / 0.320
4. Jacket	Black Polyethylene	10.29 / 0.405

Electrical Characteristics

Capacitance (pF/m)	77.1
Impedance (ohm)	50
Velocity (%)	85
Inner Conductor DC Resistance(Ω /km)	2.92
Outer Conductor DC Resistance(Ω /km)	5.41
Shielding Effectiveness (dB)	>90
Cutoff Frequency	16.2
Peak Power	16KW

Mechanical and Environmental Characteristics

Min. Bend Radius (mm / in)	51 / 2.0
Operating Temp. ($^{\circ}$ C)	-40 to +80
Tensile Strength (kg / lb)	72.6 / 160
Cable Weight (kg/m-lb/ft)	0.099kg/m – 0.068lb/ft
RoHS Compliant	Yes

Attenuation and Avg. Power (20 $^{\circ}$ C)

Frequency (MHz)	Attenuation dB (100m / 100ft)	Avg. Power (KW)
30	2.2 /0.7	3.30
50	2.9/0.9	2.60
150	5.0 /1.5	1.50
220	6.10/1.86	1.20
450	8.9 /2.7	0.83
900	12.8 /3.9	0.58
1500	16.8/5.13	0.44
1800	18.6/5.67	0.40
2000	19.6/6.0	0.37
2500	22.2 /6.8	0.33
5800	35.5 / 10.8	0.21