

Lightning / Surge Protectors



Lightning / Surge Protectors Tutorial

■ What are Lightning and Surge Protectors?

Lightning and surge protectors are devices whose purpose is to eliminate transients on a conductor which are induced by nearby lightning activity. They are used to prevent damage to valuable electronic equipment from these high-voltage surges and spikes.

■ How are Lightning and Surge Protectors used?

A lightning and surge protector is used inline between devices such as antennas and amplifiers and radios or between connections on Ethernet switches and routers. They are connected via copper cabling (Coaxial, UTP etc.).

■ Where are Lightning and Surge Protectors used?

Lightning and surge protectors are used in many different applications including outdoor wireless networks, indoor Ethernet network installations and in any instance where the potential for a power surge could damage or destroy communications equipment. They can also be used to protect video equipment which utilizes outdoor mounted PoE cameras.



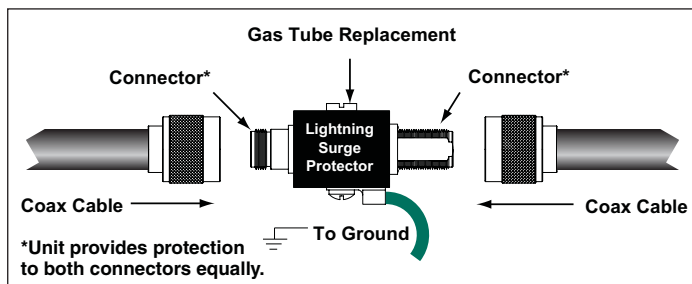
For more useful information go to....
www.L-com.com/Resources

Coaxial Lightning and Surge Protectors

L-com's HyperLink brand coaxial lightning and surge protectors are available in two types, Quarter Wave and Gas Discharge models.

Quarter Wave coaxial protectors are designed to pass the desired frequency while suppressing lightning surges, much like a signal filter. Lightning strike electrical surges which operate at low frequencies are diverted through the protector's short-circuit to the ground.

Gas Discharge coaxial protectors are a type of lightning arrestor which employs a replaceable gas discharge tube, which is a component containing a small amount of gas. The gas tube dumps extremely high amounts of surge energy directly to the ground of the protector. HyperLink brand coaxial lightning protectors are available for 0-3 GHz operation or 0-6 GHz operation.



Data line Lightning and Surge Protectors

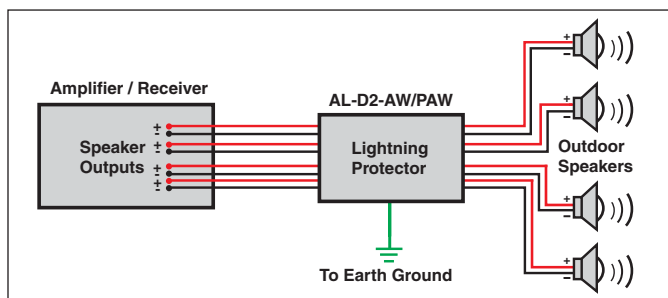
The use of surge protectors to protect sensitive equipment from lightning strikes and surges on Ethernet data lines has become more important than ever with the advent of faster standards like 100 and 1000 Base-T Ethernet. The faster data speeds have required equipment manufacturers to use fragile high speed components.

Designed for CAT5, CAT5e and CAT6 applications, L-com's HyperLink brand data line protectors are available in different power levels. From low power models for typical hub or client installations to high-power 3-stage protectors designed for maximum surge protection.

In addition to our data line protectors, we offer protectors for Telephone, DSL, T1, RS422/485, RS232 applications.

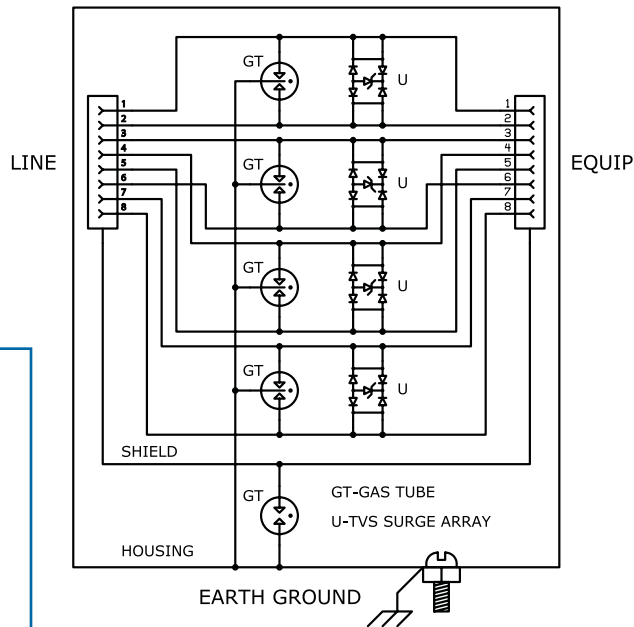
Outdoor Audio System Lightning and Surge Protectors

Lightning strikes on outdoor speakers can damage expensive home audio systems and public address systems. To reduce the risk of damage to these systems, we recommend one of our audio system protectors. These devices are placed between the audio amplifier and the outdoor speakers.



CAT6 High Power Lightning Protector Schematic

AL-CAT6HPJW, HGLN-CAT6-HP



Grounding Note:

Proper grounding of lightning and surge protectors is required to ensure proper operation. Connecting the ground lug on the protectors to an earth ground is the recommended method. Please refer to the National Electric Code (or your local codes) for additional information or contact a licensed electrician for assistance.

Item #	Description	1-9	10-24	25-99	100-249	250-499
--------	-------------	-----	-------	-------	---------	---------

HyperLink's Brand Lightning and Surge Protectors - Protect Valuable Communications Equipment

L-com's data line lightning and surge protectors are designed to protect CAT5 10/100 Base-T Ethernet systems as well as CAT6 10/100/1000 Base-T systems (CAT6 models only). Indoor and outdoor versions are available as well as compact weather resistant models and high-power industrial grade three-stage protectors. Many of these models are also Power-over-Ethernet (PoE) compatible.

RoHS Category 5 Data Line Protectors

HGLN-CAT5-2	Indoor, 10/100 Base-T, Shielded, RJ45	37.99	34.19	30.39	26.59	22.79
HGLN-CAT5-HP	Indoor, 10/100 Base-T, 3-Stage, RJ45	59.99	53.99	47.99	41.99	35.99
AL-CAT5HPJW	Weather Resistant, 10/100 Base-T, 3-Stage, RJ45	49.99	47.99	45.99	42.49	37.49
AL-CAT5VW	Weather Resistant, 10/100 Base-T, RJ45	35.99	32.39	28.79	25.19	21.59
AL-CAT5JW	Weather Resistant, 10/100 Base-T, RJ45	29.99	28.79	27.59	25.49	22.49
AL-CAT5PW	Weather Resistant, 10/100 Base-T, Punch Down Block	29.99	28.79	27.59	25.49	22.49
AL-CAT5SW	Weather Resistant, 10/100 Base-T, Screw Terminal	29.99	28.79	27.59	25.49	22.49
AL-CAT5W	Weatherproof, 10/100 Base-T, RJ45 and Screw Terminal	44.99	43.19	41.39	38.24	33.74
AL-CAT5HPW	Weatherproof, 10/100 Base-T, 3-Stage, RJ45 and Terminal Block	69.99	67.19	64.39	59.49	52.49
AL-CAT5HPW-4	Weatherproof, 10/100 Base-T, 3-Stage, Multi-Port, RJ45 and Terminal Block	179.99	161.99	143.99	125.99	107.99

RoHS Category 5E Data Line Protectors

HGLN-CAT5EJW	Indoor, 10/100 Base-T, Shielded RJ45	44.99	42.29	39.59	36.89	CALL
AL-CAT5EJW	Weather Resistant, 10/100 Base-T, RJ45	39.99	38.39	36.79	33.99	29.99
AL-CAT5EPW	Weather Resistant, 10/100 Base-T, Punch Down Block	39.99	38.39	36.79	33.99	29.99
AL-CAT5EW	Weatherproof, 10/100 Base-T, Screw Terminal	39.99	38.39	36.79	33.99	29.99

RoHS Category 6 Data Line Protectors

HGLN-CAT6	Indoor, 10/100/1000 Base-T, Shielded, RJ45	39.99	35.99	31.99	27.99	23.99
AL-CAT6JW	Weather Resistant, 10/100/1000 Base-T, RJ45	31.99	30.71	29.43	27.19	23.99
AL-CAT6PW	Weather Resistant, 10/100/1000 Base-T, Punch Down Block	31.99	30.71	29.43	27.19	23.99
AL-CAT6W	Weatherproof, 10/100/1000 Base-T, Screw Terminal	49.99	47.99	45.99	43.99	41.99
HGLN-CAT6-HP	Indoor 10/100/1000 Base-T, Hi-Pwr, Shielded RJ45	61.99	55.79	49.59	43.39	CALL
AL-CAT6HPJW	Weather Resistant, 10/100/1000 Base-T, Hi-Pwr Shielded RJ45	51.99	49.91	47.83	44.19	38.99

RoHS Telephone/DSL/T1/ISDN/RS232/RS422/RS485 Protectors

HGLN-DC-12	Indoor, 12Vdc Power Line, Screw Terminal	37.99	36.85	35.71	34.57	CALL
HGLN-DSL	Indoor, Phone/DSL, 3-Stage, RJ11	49.99	45.99	41.99	37.99	33.99
AL-DSLJW	Weather Resistant, Phone/DSL, 3-Stage, RJ11	49.99	44.99	39.99	34.99	29.99
HGLN-D2-05	Indoor, RS422/485, RTDs, T1/E1/J1, 3-Stage, Screw Terminal	49.99	47.99	45.99	42.49	37.49
AL-D2W-05	Weather Resistant, RS422/485, RTDs, T1/E1/J1, 3-Stage, Screw Terminal	49.99	47.99	45.99	42.49	37.49
HGLN-D2-12	Indoor, RS232, Control Lines, Sensors, 3-Stage, Screw Terminal	49.99	47.99	45.99	42.49	37.49
AL-D2W-12	Weather Resistant, RS232, Control Lines, Sensors, 3-Stage, Screw Terminal	49.99	47.99	45.99	42.49	37.49
HGLN-D2-DT	Indoor, Phone/DSL, 3-Stage, Screw Terminal	49.99	46.99	43.99	40.99	37.99
AL-D2LSW	Weather Resistant, Phone/DSL, 3-Stage, Screw Terminal	49.99	45.99	41.99	37.99	33.99
AL-D4W-DT	Weather Resistant, Phone/DSL, T1/E1/J1, Screw Terminal	39.99	38.39	36.79	33.99	29.99
AL-D4W-05	Weather Resistant, RS422/485, Screw Terminal	39.99	38.39	36.79	33.99	29.99
AL-D8W-12	Weather Resistant, RS232, Screw Terminal	39.99	38.39	36.79	33.99	29.99
AL-D2VW-9	Weather Resistant, 90V Dedicated Line w/o Ring Voltage, Screw Terminal	9.99	9.59	9.19	8.49	7.49
AL-D2VW-2	Weather Resistant, DSL, 230V Phone, ISDN, T1/E1/J1, Screw Terminal	9.99	9.59	9.19	8.49	7.49
AL-D0VW-9	90V Replacement Suppression Module for AL-D2VW	4.99	4.79	4.59	4.24	3.74
AL-D0VW-2	230V Replacement Suppression Module for AL-D2VW	4.99	4.79	4.59	4.24	3.74

RoHS Audio System Protectors

AL-D2-AW	Weatherproof, 4/8 Ohm Audio Systems, Screw Terminal	49.99	48.49	46.99	45.49	CALL
AL-D2-PAW	Weatherproof, 70.7/100V Public Address Systems, Screw Terminals	49.99	48.49	46.99	45.49	CALL

RoHS 0-3 GHz Coaxial Protectors

AL-NFNFB-9	N-Female to N-Female Bulkhead, 90V	18.99	17.09	15.19	13.29	11.39
AL-NFNFBHP-9	N-Female to N-Female Bulkhead, Indoor, High Power, 90V	24.99	23.99	22.99	21.24	18.74
AL-NMNFNB-9	N-Male to N-Female Bulkhead, 90V	18.99	17.09	15.19	13.29	11.39
AL-BMBFB-9	BNC Male to BNC Female Bulkhead, 90V	14.99	14.39	13.79	12.74	11.24
AL-FFFF-9	F-Female to F-Female, 90V	23.99	21.59	19.19	16.79	14.39
AL-RBPRB-9	RP-BNC Plug to RP-BNC Jack Bulkhead, 90V	14.99	14.39	13.79	12.74	11.24
AL-RTPRJ-9	RP-TNC Plug to RP-TNC Jack Bulkhead, 90V	23.99	23.03	22.07	20.39	17.99
AL-TMIFB-9	TNC Male to TNC Female Bulkhead, 90V	23.99	23.03	22.07	20.39	17.99
AL-JUFUB-6	UHF Female to UHF Female Bulkhead, 90V	14.99	14.39	13.79	12.74	11.24

RoHS 0-6 GHz Coaxial Protectors

AL6-NFNFB-9	N-Female to N-Female Bulkhead, 90V	29.99	27.59	25.19	22.79	20.39
AL6-NMNFNB-9	N-Male to N-Female Bulkhead, 90V	29.99	27.59	25.19	22.79	20.39

RoHS 2.4 GHz Quarter Wave Coaxial Protectors

ALQ2-NMNFNB	N-Male to N-Female Bulkhead, 1/4 Wave	34.99	33.59	32.19	29.74	26.24
-------------	---------------------------------------	-------	-------	-------	-------	-------

RoHS Replacement Gas Tubes

LPX090G	0-6 GHz, 90V, Replacement Gas Tube	9.99	8.99	7.99	6.99	5.99
LPX090	0-3 GHz, 90V, Replacement Gas Tube	4.99	4.49	3.99	3.49	2.99
LPX230	0-3 GHz, 230V, Replacement Gas Tube	4.99	4.49	3.99	3.49	2.99
LPX350	0-3 GHz, 350V, Replacement Gas Tube	4.99	4.49	3.99	3.49	2.99
LPX600	0-3 GHz, 600V, Replacement Gas Tube	4.99	4.49	3.99	3.49	2.99

RoHS Accessories

HGX-LPMOUNT01	ALQ2 Mounting Bracket	4.99	4.49	3.99	3.49	2.99
---------------	-----------------------	------	------	------	------	------



HGLN-CAT5-HP
INDOOR



AL-CAT5HPJW
WEATHER RESISTANT



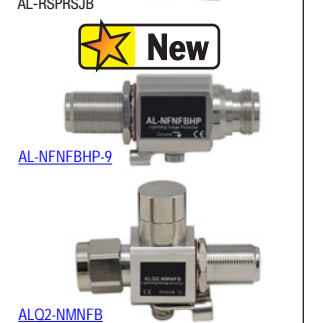
AL-CAT6W
WEATHERPROOF



AL-CAT6JW
WEATHER RESISTANT



AL-NFNFB



AL-RSPRSJB



AL-NFNFBHP-9

ALQ2-NMNFNB



Same day shipping

Orders placed before 4:00 EST ship the same day.