Surge Protection Module

LED Lighting Surge Protection Module > LSP10

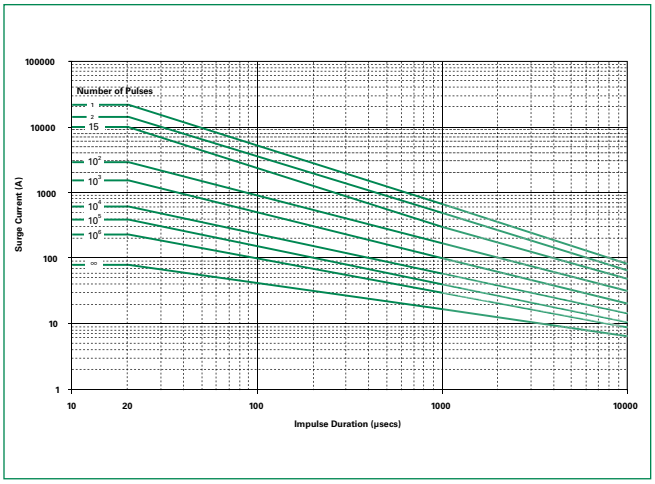
LSP10 Series Device Ratings & Specifications

Part Number[8]	Operating Voltage (VAC)	MCOV/Uc (VAC)[6]	Maximum Discharge Current (Imax)(A)[3]	Nominal Discharge Current (In)(A)[2]	MLV (V)[4]	Up (V)[5]	Safety Compliance	
							IEC/EN 61643-11[7]	UL1449
LSP10120*	120	150	20,000	10,000	L-N:740 L-G:740 N-G:670	900	-	X
LSP10240*	240	275	20,000	10,000	L-N:1130 L-G:1130 N-G:1060	1200	X	X
LSP10277*	277	320	20,000	10,000	L-N:1330 L-G:1330 N-G:1260	1400	X	X
LSP10347*	347	420	20,000	10,000	L-N:1750 L-G:1750 N-G:1680	1900	-	X
LSP10480*	480	510	20,000	10,000	L-N:2020 L-G:2020 N-G:1960	2100	-	X
LSP10240LL*	L-L:240	L-L:275	20,000	10,000	L-L:1130	L-L:1200	-	X
	L-N/G:120	L-N/G:150			L-N/G:740	L-N/G:900	-	X
LSP10480LLP	L-L:480	L-L:510	20,000	10,000	L-L:2020	L-L:2100	-	X
	L-N/G:277	L-N/G:320			L-N/G:1330	L-N/G:1400	-	X
LSP10480LLS	L-L:480	L-L:510	20,000	10,000	L-L:2030	L-L:2100	-	X
	L-N/G:277	L-N/G:320			L-N/G:1480	L-N/G:1400	-	X

Notes:

1. 5A max. continuous current for series connection.
2. Nominal Discharge Current (In)(A): The nominal discharge current is a measure of the SPDs endurance capability; 15 impulses of discharge current uses the 8/20us current waveform.
3. Maximum Discharge Current (Imax)(A): The maximum discharge current is a measure of the SPDs maximum capability; single impulse of discharge current uses the 8/20us current waveform. All Devices pass maximum discharge current with possible, safe opening of thermal disconnect.
4. MLV – UL1449 Measured limiting voltage; the highest value of residual voltage measurements during the application of impulses of 8/20us nominal discharge current (In); an average voltage value of 15 impulses.
5. Up – IEC 61643-11 Voltage protection level; the highest value of residual voltage measurements during the application of impulses of 8/20us nominal discharge current (In); a rounding voltage value of maximum measurement.
6. MCOV/UC: Maximum Continuous Operating Voltage - maximum r.m.s. voltage that could be continuously applied to the SPD.
7. The series modules can be used in parallel connections for the indication circuit connection.
8. * = - P or PM
9. Repetitive Surge Withstanding: 15 strikes at 10,000A (8/20us) with steady MLV/Up.
10. LSP10480* passed Operational Voltage Test (552Vac, 30 minutes) based on UL 1449 4th edition clause 43.

Figure 1. Repetitive Surge Capability for LSP10



Pulse Rating (8x20µSec)	
Strikes	Surge
1	20,000A
2	15,000A
15	10,000A
100	3,000A
1,000	1,600A
10,000	650A
100,000	400A
1,000,000	240A

Revised: 12/03/19

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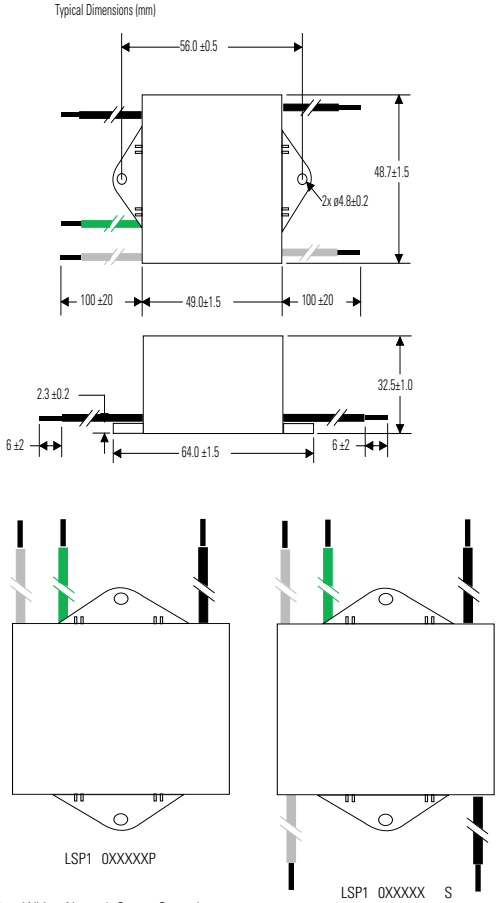
Dimensions



Notes:
1. Black: Line; White: Neutral; Green: Ground.
   (P/N with suffix X3333/X3316: Brown: Line; Blue: Neutral; Green-Yellow stripe: Ground)
2. Wire Gauge: AWG16 wire Line in/out; Wire Length: 100mm or customized.

Part Numbering System

LSP 10 480LL P Xxxxx

Device Family
Littelfuse Surge Protection Module

Nominal Discharge Current (In)

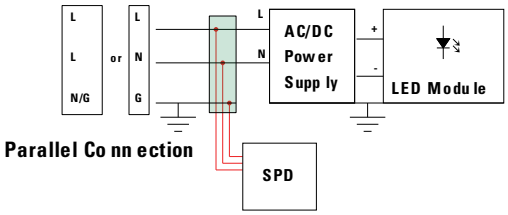
Operating Voltage
Connection mode
LL: for L, L, N/G
Blank: L-N, L-G, N-G

P or S
(P: parallel connection; S: series connection)

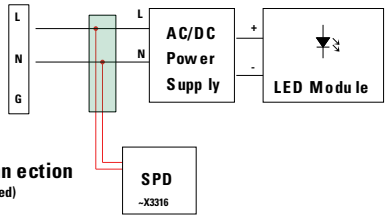
Other non-standard option
X3333: with GND wire connection, available in 240 and 277Vac, CE marked, Class I installations, earthed
Wire Color: Line: Brown, Neutral: Blue, Ground/P: Green with yellow stripe

X3316: without GND wire connection, available in 240 and 277Vac ratings, CE marked for Class II installations, unearthed
Wire Color: Line: Brown, Neutral: Blue

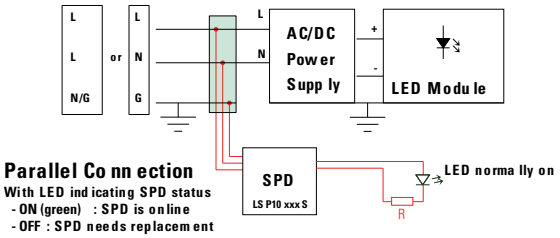
Application/Installation Schematic



Parallel Connection

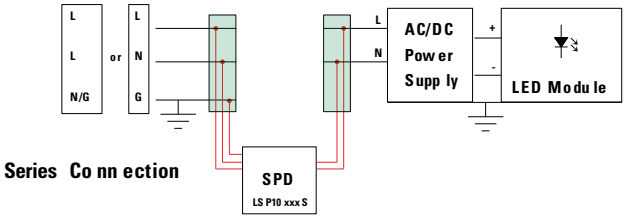


Parallel Connection
(for Class II Unearthed)

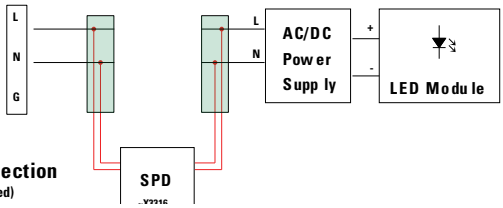


Parallel Connection
With LED indicating SPD status
- ON (green) : SPD is online
- OFF : SPD needs replacement

Notes:
1. Series module used in parallel connection for indication circuit connection.
2. LED indicator and associated circuitry are not included in the module.
3. Black wire is AC line voltage (hot); white wire is AC neutral voltage.
4. Black wire voltage is cut off when SPD needs replacement.
5. R is current limiting resistor; it resistance/wattage is determined by AC line voltage and desired current driving LED. Example: AC line voltage 240V, LED: 1.6mA, resistor: 150Kohm/0.5W.



Series Connection



Series Connection
(for Class II Unearthed)

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