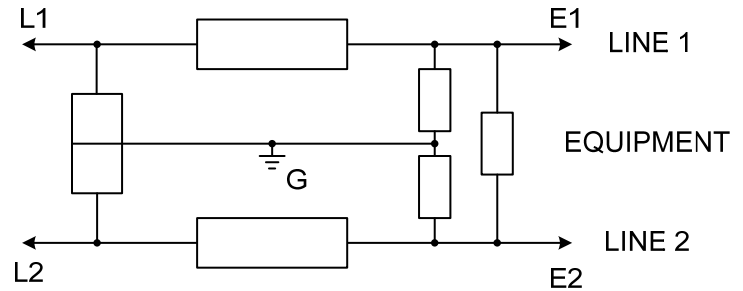


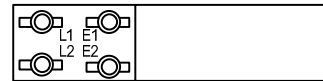
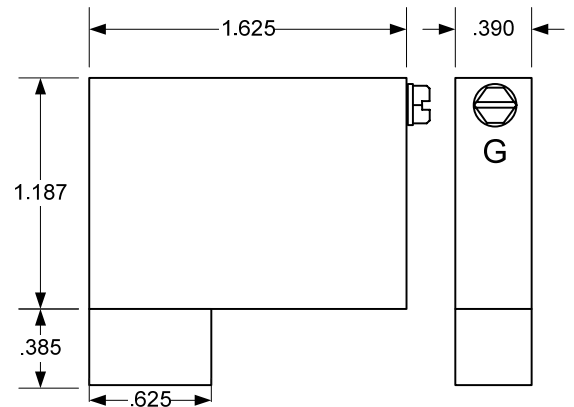
# LIGHTNING PROTECTION CORPORATION

## WIRE PAIR DATA COMMUNICATIONS LIGHTNING AND SURGE PROTECTIVE DEVICE (SPD) MODEL LPC 10643-485-3

The LPC 10643-485-3 is a 5-terminal SPD connected in-line on RS422 twisted pair wires. Also for use on RS 485 and other applicable wire pair systems. Mounting and connection for S66M1 blocks with standard spacing (0.40 in.) and single clip terminations, line input (L1, L2), surge-protected output to equipment (E1, E2), screw ground terminal.



Equipment to be protected is connected to wires E1 and E2. The line side (transmission line experiencing surges) is connected to wires L1 and L2. Screw terminal G is connected to ground. In-line, non-inductive  $10\Omega$  resistance provided L1 to E1 and L2 to E2.



LPC 10643-485-3 features :

Designed for operating voltages of maximum 9 V peak.

Lightning and surge protection is provided line to line and each line to ground.

Either polarity of the transient is equally clamped.

Conduction starts "instantaneously" at 12 V peak and stops automatically, the instant the transient passes and voltage drops below 12 V.

Destructive surge current is in excess of 35,000 amperes for an 8/20  $\mu$ s wave. Note : 24 AWG wire fuses at lower current levels.



**SPECIFICATIONS**

- 1) **System operating voltage** : Maximum 9 VDC or peak.
- 2) **Installation** : In-line, on S66M1 blocks.
- 3) **Applications** : RS 422, RS 485, wire pair, 5 terminal.  
 Note : Signal strength should be within limits of RS 422 when placed in series with a RSS 422 differential line at 4000 ft.
- 4) **Protection** : Line to line and each line to ground.
- 5) **Bipolar operation** : Either polarity of surge equally clamped.
- 6) **Response time** : Less than one nanosecond.
- 7) **Surge current rating** : Maximum 35,000 amperes on 8/20  $\mu$ s wave.
- 8) **Breakdown voltage** : At 1 ma – 11 to12 volts line to line and each line to ground.
- 9) **Standoff voltage** : 10.2 V for maximum 9 V peak operation.
- 10) **Clamping voltage**

**Clamping voltage, each line to ground and line to line :**

<b>Surge Current (peak) 8/20 <math>\mu</math>s wave</b>	<b>Clamp Voltage (volts)</b>
low amperage	11.5
10 amps	12
100	15
1000	17
2500	21
5000	25
10,000	27
15,000	29
20,000	30
35,000	50*

\* Lead inductance creates significant voltage at high current.



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