

## TECHNICAL DATA SHEET

### LPI<sup>®</sup> Lightning Strike Recorder LSR1

#### Features

- 7 Digits
- Up to 9,999,999 counts
- Testable using LSR-Tester



#### Product Description

LPI<sup>®</sup> Lightning Strike Recorder (LSR1) is a lightning event counter. The LSR1 is simply mounted at any location along the down-conductor route. Its purpose is to record the number of strikes captured by the lightning air terminal and conveyed by the down-conductor.

The LSR1 operates by sensing current by means of an inductive pick up loop. The loop passes along the inside surface of the bottom of the enclosure. This loop detects lightning current impulses on the down-conductor and sends a trigger to the counter, which turns the counter over to register the event. The Recorder is mounted in a polycarbonate enclosure rated IP 67.

#### Installation/ Operating Instruction

The Lightning Strike Recorder (LSR1) can be installed at any location on the down-conductor route between the air terminal and the earthing system. Where possible, avoid installing the LSR1 in a position where it is exposed to direct sunlight. This can be achieved by installing the LSR1 in a suitable mounting cabinet.

The LSR should be mounted in line with the down-conductor as shown in Figure 1. If using flat down-conductor use the plastic spacer provided, as per Figure 2. To remove or relocate the LSR, use a small flat bladed screwdriver to release the clip on the latching mechanism on the cable tie.



Figure 1:



Figure 2:

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**LPI® Lightning Strike Recorder Tester LSR1-TESTER MKII**

**Product Description**

LPI® Lightning Strike Recorder Tester (LSR1-TESTER MKII) is a high current device designed to trigger a reading on an LPI Lightning Strike Recorder (LSR).

The tester is light and compact, and is powered by 8 x AA NiMH rechargeable batteries.

**Features**

- Ideal for maintenance and testing of LPI® Lightning Strike Recorder
- Simple operation
- Portable



Figure 3: Step 1



Figure 4: Step 2



Figure 5: Step 3

1. To test the LSR, the supplied 'pulse cable' is positioned parallel to the down-conductor, through the mounting saddles as shown in Figure 3.
2. Complete the loop around the LSR, making sure that pulse cable is positioned vertically across the top of the LSR as shown in Figure 4.
3. Holding down the red button initiates the impulse circuit charging and firing process. Correct charging operation is indicated by the illumination of the red LED, as shown in Figure 5.
4. After a period of 10-15 seconds an audible 'clunk' should be heard. This indicates that the charging process has finished and a current pulse has been sent through the pulse cable. If the LSR and LSR Tester are working correctly then the strike count on the LSR will increase by one (1).

If the LED fails to light when pressing the red button, or if no 'clunk' is heard after a period longer than 30 seconds then the batteries need to be recharged using the supplied charger. The charger unit has two indication LEDs to indicate battery/charge status.

Red	Green	Status
		Charging, Battery Flat
		Charging, Battery has sufficient charge for a quick test
		Charging (Red LED dimmed) Tester suitable for normal use

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## Technical Data

## Product Code: LSR1

<b>Description</b>	Lightning Strike Recorder
<b>Current Sensitivity</b>	1500A 8/20 $\mu$ s
<b>Operating Range</b>	Min. 1500A, 8/20 $\mu$ s Max. 220kA, 8/20 $\mu$ s
<b>Display</b>	Mechanical 7 digits display (non-resettable)
<b>Dimensions</b>	100mm (L) x 100mm (H) x 55mm (D)
<b>Weight</b>	0.56 kg
<b>Mounting</b>	Releasable UV resistant plastic cable ties Suitable for up to $\varnothing$ 40 mm cable or 50 x 5mm flat tape
<b>Construction</b>	Polycarbonate Enclosure
<b>Colour</b>	Light Grey
<b>Environment</b>	IP 67 (IEC 529)
<b>Working Temperature</b>	-15°C to 65°C

## Product Code: LSR1-TESTER MKII

<b>Description</b>	Lightning Strike Recorder Tester
<b>Impulse Output</b>	2kA Peak Simulated Lightning Impulse
<b>Open Circuit Output</b>	55 Volts
<b>Time Between Impulses</b>	20 Seconds
<b>Display</b>	Red "Testing" LED Indicator
<b>Dimensions</b>	190mm (L) x 100mm (W) x 35mm (H)
<b>Mounting</b>	Portable Unit No mounting required
<b>Construction</b>	Polycarbonate Enclosure, IP 30 rating
<b>Colour</b>	Light Grey
<b>Weight</b>	0.58kg
<b>Working Temperature</b>	-15°C to 65°C
<b>Batteries</b>	8 x AA 2000mAh NiMH Rechargeable Recharge time up to 16 hours

## Warranty

This product is guaranteed to be free from materials and workmanship defects for a period of 5 years from the date of shipment from the manufacturer.

As lightning is a natural event containing unpredictable energy levels, 100% protection is not guaranteed. These energy levels may exceed the product rating. In this case the manufacturer's liability is limited to repair or replacement at the manufacturer's discretion.

This warranty does not offer any cover for consequential damage, loss of operation or loss of profit.