furse


# Furse Lightning Strike Counters

**Furse ESP LSC lightning strike counters, to BS EN 62561-6, detect and count the lightning strikes as part of a structure's Lightning Protection System (LPS).**

Furse ESP LSC lightning strike counters are available in two formats - **ESP LSC-A**, an advanced lightning strike counter with charge, time and date recorder, and **ESP LSC-B**, a standard lightning strike counter.

Lightning strike counters are typically located on the down conductors of the LPS, to record the number of direct lightning strokes received to the structure.

The ESP LSC-A advanced counter also records the time and date of the event as well as key characteristics of the lightning discharge (peak current and charge).

## Features & benefits

- Suitable for both indoor and outdoor installation
- Virtually maintenance free, with all key components stored in a robust polycarbonate housing
- Anticipated battery life of 12 years (ESP LSC-B), for reliable, long-standing performance
- Straightforward mounting around down conductors utilising the mounting plate and screws without the need to remove the enclosure
- No manual reset function ensures accurate continued recording of lightning strokes
- Records lightning strikes regardless of the polarity of the discharge current
- Can be used to record surge current events when fitted with Surge Protection Devices (SPDs)


Thomas&Betts
A Member of the ABB Group

# ESP LSC-A & ESP LSC-B


Furse ESP LSC-B secured to down conductor of building's lightning protection system

## Installation

Connect the counter to the conductor using the mounting plate and screws provided (maximum torque of 2 Nm).

For simplicity of installation, particularly on existing installations, the ESP LSC-B unit is best sited in a suitable position above the test clamp of the down conductor (for convenient periodic inspection).

The test clamp point is where the conductor can be easily disconnected.

Ensure the conductor is reconnected to the test clamp after installation of the ESP LSC-B unit.

For additional security, install down conductor clips 25 cm either side of the unit.

Contact Furse for advice on suitable clips.

## Technical specification

### Electrical specification

| | ESP LSC-A | ESP LSC-B |
|---|---|---|
| **Threshold current $I_{tc}$ (minimum)** | 1 kA | |
| **Maximum counting withstand current $I_{mcw}$** | 100 kA | |
| **Power source** - battery type | 3 x AA alkaline | Internal cell - non user replaceable |
| - battery life (normal operation) | 2 years approx. | 12 years approx. |

### Display specification

| | ESP LSC-A | ESP LSC-B |
|---|---|---|
| **Maximum display reading** | 99 | 999999 |
| **Memory capacity** | last 99 events data stored | - |
| **Time and date format** | hh:mm (24 hr format) dd/mm/yy | - |
| **Clock stability** | typically ± 30 s/month | - |
| **Current display format**[1] | xx,x kA | - |
| **Charge display format**[2] | yy,yy As | - |
| **Remote data transfer option** | /RDT | - |

### Mechanical specification

| | ESP LSC-A | ESP LSC-B |
|---|---|---|
| **Temperature range** | -20 to +60 °C | |
| **Connection type** | Aluminium mounting plate, screw mounted | |
| **Conductor size**[3] - flat tape | 30 x 6 mm | |
| - solid circular/stranded | 6 - 10 mm Ø | |
| **Case material** | Polycarbonate, ingress rated to IP67 | Polycarbonate, ingress rated to IP47 |
| **Weight** | 0.3 kg | 0.15 kg |
| **Dimensions** | 80 x 80 x 65 mm | 65 X 50 X 45 mm |

[1] This current display limit depends on the waveshape of the current pulse. Accuracy of current measurement ≤ 5 %.
[2] For larger charge values the display is given as yy,y As. For smaller charges values, it is given as y,yy As. Accuracy of charge measurements ≤ 10 %.
[3] Conductor size includes any outer PVC sheathing.

Thomas & Betts Ltd., Furse, Wilford Road, Nottingham, NG2 1EB, UK
Tel +44 (0)115 964 3700 • Fax +44 (0)115 986 0538
Email enquiry@furse.com • Web www.furse.com



Thomas&Betts
A Member of the ABB Group