# Surge Protection Certificate

| | | | | | |
|---|---|---|---|---|---|
| Reference | | Certificate Number | | | |
| Site / Address | | | | | |
| Engineer / Inspector | | Date of inspection | | Next Inspection Due | |

| Test Equipment | | | |
|---|---|---|---|
| MFT / Earth Loop Test Equipment | | Serial Number | |
| SPD Test Equipment | | Serial Number | |

**Condition Summary**

| | Source Protected | Location | Surge Protection Device | Comments (See Code Key below) | Status |
|---|---|---|---|---|---|
| 1 | | | | | |
| 2 | | | | | |
| 3 | | | | | |
| 4 | | | | | |
| 5 | | | | | |
| 6 | | | | | |
| 7 | | | | | |
| 8 | | | | | |
| 9 | | | | | |
| 10 | | | | | |

***Database SPD activation voltages are as per published manufacturer data. Where manufacturer data is not available, empirical evidence based measurements have been used.***

| **Overall** | |
|---|---|

This inspection and testing certificate is provided as required under the building owner or occupier obligations of Statutory Instrument No. 635, the Electricity at Work Act 1989 regulations 4&5.
Surge protection shall be provided under regulation 443 the IET wiring regulations from BS7671-17th edition amendment 1 2008 to the latest 18th Edition 2018 inclusive of the latest May 15th 2023 corrigendum and is a mandatory requirement where a lightning protection system is present see reg. 443.4 also see BSEN 62305.

**Regulation 443**

**(i) (To prevent harm and loss of life)** This includes prevention of loss of sensitive electrical/ electronic systems and critical systems within the building under regulations 534.4.1.1 & 534.4.4.2 and as regulated in other legislations such as fire prevention etc. On page 225, chapter 56, of BS7671 there is a non-exhaustive list of many such systems.

**(iii) (To provide protection against significant financial loss and/or loss of data)**

All mains voltage surge protection units shall be installed to regulation 534, and for DC PV 534.721.
Regular periodic testing and inspection of SPDs is of vital importance in order to maintain effective life safety measures against shock, fire or explosion and to prevent damage to electrical systems, sensitive electronic systems and protect critical operational services from interruption/loss. This is a "shall do" action under the IET wiring regulation BS7671 17th & 18th Editions. It is also a required "shall do" action of the lightning protection standard BSEN 62305.
The relevant regulations for inspection and testing under BS7671 18th Edition IET wiring regulations are 534.4.1.1, 642, 643.10, 651.2 (v, vi), note 1, 651.4, 652.1 & annex 6 page 516. Also see BSEN 62305-3 standard E.7 and BSEN 62305-4 standard 9.3 where a lightning protection system is present.

**REPORT FAULT CONDITIONS BS7671 EICR (Electrical Installation Condition Report)**
**Code C2** - Potentially dangerous (urgent remedial action required)
Incorrect application/position of installed surge units, incorrect classification/ types of surge units installed, incorrect OCPDs to surge units installed, incorrect cable size or lengths of connecting leads, surge units visibly faulty, surge units have been functionally tested and found to be faulty.
**Code C3** - Improvement recommended.
Absence of Surge Protective Device (SPD) where required by 443.4.1 (534.4.1.1) for 443.4.1 (i) see BS7671 Chapter 56 non-exhaustive list.

**Code Key**

(1) No surge protection present contrary to BS7671 443/534.4.1.1
(2) Incorrect type selection of SPD at this position contrary to BS7671 534.4.4.2 note 1
(3) Incorrect wiring installation to the SPD, contrary to BS7671 534.4.8 & On-Site Guide table 3.7.3
(4) Incorrect OCPD has been installed to the SPD circuit contrary to BS7671 534.4.5.1
(5) Surge protection device has failed under inspection/test and requires replacing

Signature

# Surge Protection Certificate

| | Circuit Details | | | | Test Results | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | SPD Activation Voltage | | | | | | | ELI |
| | Source Protected | Circuit No. | SPD Make/Model | SPD Type | L1-PE | L2-PE | L3-PE | N-PE | L1-N | L2-N | L3-N | Zs |
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
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| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |

| | Circuit Details | | | | | | | | Test Results (Install only) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Protective Device | | | | Conductor Details | | | | | | |
| | Location | BS(EN) | Type | Rating(A) | Short-circuit Capacity(kA) | Reference Method | Live($mm^2$) | CPC($mm^2$) | R2 | Insulation Resistance at 500V L-L | Insulation Resistance at 500V L-PE | Polarity |
| 1 | | | | | | | | | | | | |
| 2 | | | | | | | | | | | | |
| 3 | | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | | | | | | | | | | | | |
| 7 | | | | | | | | | | | | |
| 8 | | | | | | | | | | | | |
| 9 | | | | | | | | | | | | |
| 10 | | | | | | | | | | | | |