

1 **UK-TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres**
UKSI 2016:1107 (as amended) – Schedule 3A, Part 1

3 UK-Type Examination Certificate Number: **BAS21UKEX0561X**

4 Product: **SLP Series Surge Protection Devices**

5 Manufacturer: **Eaton Electric Limited**

6 Address: **Great Marlings, Butterfield, Luton, Bedfordshire, LU2 8DL**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS Baseefa, Approved Body number 1180, in accordance with Regulation 43 of the Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 2016, UKSI 2016:1107 (as amended), certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Schedule 1 of the Regulations.

The examination and test results are recorded in confidential Report No. **21(C)0386/36**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-11:2012

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign “X” is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

11 This UK-TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Regulations apply to the manufacturing process and supply of this product. These are not covered by this certificate.

12 The marking of the product shall include the following :

⊕ II 1G Ex ia IIC T4 Ga (-30°C ≤ Ta ≤ See Schedule)

SGS Baseefa Customer Reference No. **0703**

Project File No. **21/0386**

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R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

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Schedule

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Certificate Number BAS21UKEX0561X

15 Description of Product

The SLP Series Surge Protection Devices are designed to provide protection for sensitive electronic equipment, and it is intended to be mounted within a Hazardous Area. Three different break-over voltages, SLP07D - 7V, SLP16D - 16V and SLP32D - 32V are available but all units have the same safety input parameters for intrinsic safety purposes. Each unit has four active channels and an earth connection, but all channels must form part of the same intrinsically safe circuit.

The SLP Series Surge Protection devices can also be used as a Dual Channel IS Surge Protection Devices when the maximum permitted signal voltage is reduced. With the signals limited to $U_i = 30V$ per channel, the two channels may be considered as separate intrinsically safe circuits. This alternative use of the SLP Series Surge Protection Devices applies to the range of three different nominal break-over voltages, SLP07D - 7V, SLP16D - 16V and SLP32D - 32V, but all units have the same safety input parameters for intrinsic safety purposes.

The units comprise four series resistors, four diode bridge circuits, two 3-terminal gas discharge tubes and one or two silicon avalanche diodes mounted on a printed circuit board. This assembly is housed within an MTL7700 Series plastic enclosure, which is provided with four input and four output terminals in addition to a base spring, which provides the earth connection and the mounting for a DIN earthing rail. The lower part of the enclosure is encapsulated to consolidate the mounting arrangement.

All units are marked $\langle \text{Ex} \rangle$ II 1G Ex ia IIC T4 Ga For the Ambient Temperature limits, see below.

When U_i is 60v all channels must form part of the same IS circuit, the parameters for each channel are:-

Input : Field Terminals 1 to 4

$$U_i = 60V$$

$$P_i = 1W \quad (-30^\circ C \leq T_a \leq 80^\circ C) \text{ or}$$

$$P_i = 1.2W \quad (-30^\circ C \leq T_a \leq 60^\circ C) \text{ or}$$

$$P_i = 1.3W \quad (-30^\circ C \leq T_a \leq 40^\circ C)$$

$$C_i = 0$$

$$L_i = 0$$

Output : Surge Protected Terminals 5 to 8

$$U_o = U_i$$

$$I_o = I_i$$

$$P_o = P_i$$

When U_i is limited to 30v each dual channel may be considered as a separate IS circuit, the parameters for each channel are:-

Input : Field Terminals 1 & 2 (3 & 4)

$$U_i = 30V$$

$$P_i = 1W \quad (-30^\circ C \leq T_a \leq 80^\circ C) \text{ or}$$

$$P_i = 1.2W \quad (-30^\circ C \leq T_a \leq 60^\circ C) \text{ or}$$

$$P_i = 1.3W \quad (-30^\circ C \leq T_a \leq 40^\circ C)$$

$$C_i = 0$$

$$L_i = 0$$

The terminal identification for the second channel is shown in brackets and each channel may be considered as a separate intrinsically safe circuit.

Output : Surge Protected Terminals 5 & 6 (7 & 8)

$$U_o \leq U_i$$

$$I_o \leq I_i$$

$$P_o \leq P_i$$

The surge protected output parameters are equal to the parameters of the device connected to the field terminals.

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17 Specific Conditions of Use

1. The plastic enclosure may present an electrostatic risk and must not be rubbed with a dry cloth or cleaned with solvents.
2. The SLP Series Surge Protection Devices will not meet the 500V insulation requirements to earth, therefore suitable precautions must be taken when installing the apparatus.

18 Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product:

Clause	Subject	Compliance
13	Protection against other hazards (LVD type requirements, etc.)	Manufacturer responsibility
14	Overloading of equipment (protection relays, etc.)	User/Installer responsibility
22(1)	External effects	User/Installer responsibility
22(2)	Aggressive substances, etc.	User/Installer responsibility

19 Drawings and Documents

Number	Sheet	Issue	Date	Description
1100437	1 to 8	E	11AUG04	SLP SERIES CERTIFICATION DRAWING FOR ATEX

For other current drawings not re-submitted for this assessment see Baseefa04ATEX0303X.