IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	**IECEx BAS 21.0030X**	Page 1 of 5	Certificate history:
Status:	**Current**	Issue No: 2	Issue 1 (2022-08-24) Issue 0 (2021-07-12)
Date of Issue:	2023-05-31		

Applicant: **Eaton Electric Limited**
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

Equipment: **IOP32(D) / SLP*(D) Series Surge Protection Device**

Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking: **Ex ia IIC T4 Ga (-30°C ≤ Ta ≤ +40°C / +60°C / +80°C)**

Approved for issue on behalf of the IECEx Certification Body: **Mr R S Sinclair**

Position: **Technical Manager**

Signature: (for printed version)

Date: (for printed version) 31/5/2023

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

SGS UK Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire SK17 9RZ
United Kingdom

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Certificate No.: **IECEx BAS 21.0030X**

Date of issue: 2023-05-31

Issue No: 2

Manufacturer: **Eaton Electric Limited**
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

Manufacturing locations: **Eaton Electric Limited**
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

MTL Instruments PVT Limited
No 3 Old Mahabalipuram Road
Sholinganallur
Chennai 600119
India

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/BAS/ExTR21.0075/00 GB/BAS/ExTR22.0103/00 GB/BAS/ExTR23.0023/00

Quality Assessment Reports:

GB/BAS/QAR06.0022/10 GB/BAS/QAR07.0017/10

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The IOP32(D) / SLP*(D) Series Surge Protection Devices are designed to provide protection for sensitive electronic equipment, and are intended to be mounted within a Hazardous Area.

The dual channel IOP32D Dual Channel IS Surge Protection Device is designed such that the channels may be considered as separate intrinsically safe circuits. Each SLP* device has four active channels and an earth connection, but all channels must form part of the same intrinsically safe circuit except when signals are reduced to 30V max and the SLP* may operate as a dual channel device (forming an SLP*D) such that the channels may be considered separate intrinsically safe circuits.

The equipment comprises series resistors, 3-terminal gas discharge tubes and silicon avalanche diodes mounted on a printed circuit board with the number of each component depending upon type and number of channels. The printed circuit board assembly is housed within an MTL7700 Series plastic enclosure, which is provided with input and output terminals, the number varying by type, in addition to the base spring, which provides the earth connection and the mounting of the units on a DIN earthing rail. The lower part of the enclosure is encapsulated to consolidate the mounting arrangement.

Different break-over voltages are available as follows:

IOP32: 90V
IOP32D: 90V (both channels have the same safety input parameters for intrinsic safety purposes)
SLP07(D): 7V
SLP16(D): 16V
SLP32(D): 32V (all SLP variants have the same safety input parameters for intrinsic safety purposes)

For Ambient Temperature limitations, see input/output parameters below.

See next page.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. The plastic enclosure may present an electrostatic risk and must not be rubbed with a dry cloth or cleaned with solvents.
2. The IOP32(D)/SLP*(D) Series Surge Protection Devices will not meet the 500V insulation requirements to earth, therefore suitable precautions must be taken when installing the apparatus.

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Equipment (continued):

Input/Output Parameters

IOP32 **Input:** Field Terminals J1-1/2: U_i = 60V P_i = 1W (Ta = +80C) or P_i = 1.2W (Ta = +60C) or P_i = 1.3W (Ta = +40C) C_i = 0 L_i = 0 **Output:** Surge Protected Terminals J3-3/4: $U_o = U_i$ $I_o = I_i$ $P_o = P_i$	**IOP32D** **Input:** Field Terminals J1-1/2 & J2-3/4: U_i = 45V P_i = 1W (Ta = +80C) P_i = 1.2W (Ta = +60C) P_i = 1.3W (Ta = +40C) C_i = 0 L_i = 0 **Output:** Surge Protected Terminals J3-5/6 & J4-7/8: $U_o = U_i$ $I_o = I_i$ $P_o = P_i$
SLP* **Input:** Field Terminals 1-4: Ui = 60V Pi = 1W (Ta = +80C) or Pi = 1.2W (Ta = +60C) or Pi = 1.3W (Ta = +40C) Ci = 0 Li = 0 **Output:** Surge Protected Terminals 5-8: $U_o = U_i$ $I_o = I_i$ $P_o = P_i$	**SLP*D** **Input:** Field Terminals 1-2 & 3-4: U_i = 30V P_i = 1W (Ta = +80C) or P_i = 1.2W (Ta = +60C) or P_i = 1.3W (Ta = +40C) C_i = 0 L_i = 0 **Output:** Surge Protected Terminals 5-6 & 7-8: $U_o = U_i$ $I_o = I_i$ $P_o = P_i$

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 2.1

To permit drawing changes to the PCB layout for the IOP32.

ExTR: **GB/BAS/ExTR23.0023/00**	File Reference: **23/0177**