IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification Scheme for Explosive Atmospheres

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

Certificate No.: IECEx BAS 13.0136X

Issue No: 2

Certificate history:
Issue No. 2 (2018-01-19)
Issue No. 1 (2017-11-20)
Issue No. 0 (2014-02-14)

Status: **Current**

Date of Issue: **2018-01-19**

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

Equipment: **The Range of Surge Protection Devices "ZoneBarrier" CAT 6**

Optional accessory:

Type of Protection: **Intrinsic Safety**

Marking:

Ex ia IIC T4 Ga (-30°C ≤ Ta ≤ +60°C)
ZB24596 – (5V), Ui = 7V Ii = 0.8A Pi = 1.2W
ZB24598 – (12V) Ui = 17V Ii = 0.3A Pi = 1.2W
ZB24597 – (57V) Ui = 85V Ii = 0.1A Pi = 1.2W

Approved for issue on behalf of the IECEx Certification Body:

R S Sinclair PP D BREARLEY CERTIFICATION MANAGER

Position:

Technical Manager

Signature:
(for printed version)

D Brearley

Date:

14/1/18

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 the Official IECEx Website.

Certificate issued by:

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

IECEx Certificate of Conformity

Certificate No:	IECEx BAS 13.0136X	Issue No: 2
Date of Issue:	**2018-01-19**	Page 2 of 4

Manufacturer:

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

Additional Manufacturing location(s):

MTL Instruments PVT Limited
No 3 Old Mahabalipuram Road,
Sholinganallur,
Chennai
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 electrical apparatus 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-11 : 2011 Edition:6.0	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"

*This Certificate **does not** indicate compliance with electrical 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 Report:

GB/BAS/ExTR13.0296/00 GB/BAS/ExTR16.0330/00 GB/BAS/ExTR17.0355/00

Quality Assessment Report:

GB/BAS/QAR06.0022/07 GB/BAS/QAR07.0017/06

IECEx Certificate of Conformity

Certificate No:	IECEx BAS 13.0136X	Issue No: 2
Date of Issue:	**2018-01-19**	Page 3 of 4

Schedule

EQUIPMENT:

Equipment and systems covered by this certificate are as follows:

The Surge Protection Devices "ZoneBarrier" CAT 6 are designed to provide surge protection for sensitive electronic Ethernet communication equipment, and are intended to be mounted in a Safe Area immediately following a certified [Ex ia IIC] intrinsically safe source or within an intrinsically safe circuit in the Hazardous Area.

The units do not in themselves provide any voltage or current limiting functions and must be supplied from a suitably certified intrinsically safe source. They provide surge protection for four pairs of communication lines, which must all form part of the same intrinsically safe circuit.

Three units with different nominal operating voltages, ZB24596 - 5V, ZB24598 - 12V and ZB24597 - 57V are included within the range.

The units comprises a gas discharge tube, and a diode array for each of the four pairs of communication lines along with common Varistors and transient suppression diodes mounted on a printed circuit board. This assembly is housed within a plastic enclosure, which is provided with a connector with four pairs of conductors, at each end of the enclosure in addition to a metallic earthing base spring, which provides for mounting on a DIN earthing rail.

The Surge Protection Device "ZoneBarrier" CAT 6 is considered to be coded Ex ia IIC T4 Ga (-30°C ≤ Ta ≤ +60°C) when supplied from a Certified [Ex ia] Group IIC source.

"Unprotected" Connector - Input parameters across any of the four pairs, and with respect to Earth.

ZB24596 – (nominal operating voltage 5V) Ui = 7V, Ii = 0.8A Pi = 1.2W
ZB24598 – (nominal operating voltage 12V) Ui = 17V, Ii = 0.3A Pi = 1.2W
ZB24597 – (nominal operating voltage 57V) Ui = 85V, Ii = 0.1A Pi = 1.2W

All units:-

Ci = 0
Li = 0

Surge "Protected" Connector - Output parameters across any of the four pairs, and with respect to Earth.

Uo ≤ Ui
Io ≤ Ii
Po ≤ Pi

The output parameters at the Surge "Protected" Connector are equal to the parameters of the device connected to the "Unprotected" Connector and all four pairs of conductors must form part of the same intrinsically safe circuit.

The cable parameters associated with the "Protected" and "Unprotected" Connectors all form part of the same intrinsically safe circuit and will be determined by the source supplying the intrinsically safe circuit.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1. A Surge Protection Device "ZoneBarrier" CAT 6 must not to be considered as an Intrinsically Safe Barrier and must always be supplied from an Intrinsically Safe source. Also although it may be marked with the term "Isolated Loop" it must not to be considered as providing any Intrinsically Safe Galvanic Isolation.

2. The metallic base spring provides for mounting the Surge Protection Device "ZoneBarrier" CAT 6 units and provides a discharge path to the DIN earthing rail, which must not be locally connected to any safety earth for intrinsically safe interfaces.

3. The Intrinsically Safe connections at both the "protected" and "unprotected" sides of the Surge Protection Device must remain segregated from any non-Intrinsically Safe circuits meeting the requirements of EN60079-11, Clause 6.2.1.

4. The Surge Protection Device "ZoneBarrier" CAT 6 is not capable of withstanding the 500V voltage withstand test for one minute without breakdown to earth. This must be taken into consideration in any installation.

5. When the Surge Protection Device "ZoneBarrier" CAT 6 is mounted within a Hazardous Area the plastic enclosure is considered to present a potential electrostatic risk. Do not rub or clean with solvents.

IECEx Certificate of Conformity

Certificate No: IECEx BAS 13.0136X Issue No: 2

Date of Issue: **2018-01-19** Page 4 of 4

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

Variation 2.1

To permit the use of an alternative TVS device in the ZoneBarrier, model ZB24597 and allow changes to working voltage and Ui parameters for other units in the range.

ExTR: **GB/BAS/ExTR17.0355/00** File Reference: 17**/0748**