

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: **BAS21UKEX0564X**

4 Product: **FS32/FS32G Fieldbus Surge Protection Device**

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)0386/38**

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 IIB T3 Ga or Ex ia IIC T4 Ga (See Schedule)
(-40°C ≤ Ta ≤ +50°C or +75°C) (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 BAS21UKEX0564X

15 Description of Product

The FS32/FS32G Fieldbus Surge Protection Devices are designed as a FISCO Field Device, to provide protection for sensitive electronic Fieldbus compatible equipment, and are intended to be mounted either in a Safe Area immediately following a certified FISCO Power Supply having an intrinsically safe output or within a Hazardous Area connected in an intrinsically safe circuit.

The FS32/FS32G Fieldbus Surge Protection Devices have identical circuits but differ in the physical arrangement of the connecting pins. Both units do not in themselves provide any intrinsically safe voltage or current limiting functions and must be supplied from a suitably certified intrinsically safe FISCO source. They connect across the positive and negative lines with screen and earth, and all connections must form part of the same intrinsically safe circuit.

The units comprise a diode bridge circuit, two gas discharge tubes, a silicon avalanche diode and two metal oxide varistors mounted on a printed circuit board. This assembly is housed within a plastic enclosure, with the lower section encapsulated, which is provided with a three pin input connector and a three pin output connector. An additional central M3 screw provides the earth connection and two M2.5 screws provide the mounting arrangement.

IIB Source

The FS32/FS32G Fieldbus Surge Protection Devices are considered to be coded Ex ia IIB T3 Ga ($-40^{\circ}\text{C} \leq T_a \leq 50^{\circ}\text{C}$) when supplied from a Certified FISCO [Ex ia] Group IIB source.

FS32/FS32G Fieldbus Surge Protection Device, either Top Connector J1 or Bottom Connector J2 Pins "+", "S" or "-".

$U_i = 17.5\text{V}$
 $I_i = 380\text{mA}$
 $P_i = 5.32\text{W}$
 $C_i = 0$
 $L_i = 0$

FS32/FS32G Fieldbus Surge Protection Device, either Top Connector J1 or Bottom Connector J2 Pins "+", "S" or "-".

$U_o = U_i$
 $I_o = I_i$
 $P_o = P_i$

The cable parameters associated with the Field and Surge Protected Connectors will be determined by the source supplying the intrinsically safe circuit.

IIC Source

The FS32/FS32G Fieldbus Surge Protection Devices are considered to be coded Ex ia IIC T4 Ga ($-40^{\circ}\text{C} \leq T_a \leq 50^{\circ}\text{C}$) when supplied from a Certified FISCO [Ex ia] Group IIC source.

FS32/FS32G Fieldbus Surge Protection Device, either Top Connector J1 or Bottom Connector J2 Pins "+", "S" or "-".

$U_i = 17.5\text{V}$
 $I_i = 183\text{mA}$
 $P_i = 2.56\text{W}$
 $C_i = 0$
 $L_i = 0$

FS32/FS32G Fieldbus Surge Protection Device, either Top Connector J1 or Bottom Connector J2 Pins “+”, “S” or “-”.

$$U_o = U_i$$

$$I_o = I_i$$

$$P_o = P_i$$

IIC 1.8W Source

The FS32/FS32G Fieldbus Surge Protection Devices are considered to be coded Ex ia IIC T4 Ga ($-40^{\circ}\text{C} \leq T_a \leq 75^{\circ}\text{C}$) when supplied from a Certified [Ex ia] Group IIC source.

FS32/FS32G Fieldbus Surge Protection Device, either Top Connector J1 or Bottom Connector J2 Pins “+”, “S” or “-”.

$$I_i = 380\text{mA}$$

$$P_i = 1.8\text{W}$$

$$C_i = 0$$

$$L_i = 0$$

FS32/FS32G Fieldbus Surge Protection Device, either Top Connector J1 or Bottom Connector J2 Pins “+”, “S” or “-”.

$$U_o = U_i$$

$$I_o = I_i$$

$$P_o = P_i$$

16 Report Number

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17 Specific Conditions of Use

1. The FS32/FS32G Fieldbus Surge Protection Devices may not be capable of withstanding the 500V voltage withstand test for one minute without breakdown to earth. This must be taken into consideration in any installation.
2. When the FS32/FS32G Fieldbus Surge Protection Devices are mounted within a Hazardous Area the plastic enclosure is considered to present a potential electrostatic risk. Do not rub or clean with solvents.
3. The FS32/FS32G Fieldbus Surge Protection Devices do not meet the requirements of IP20 at the top and bottom connectors. This must be taken into consideration in any installation and once installed the overall assembly must meet the requirements of IP20.

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
1100526	1 of 6	C	8.21	FS32/FS32G CERTIFICATION DRAWING

For other current drawings not re-submitted for this assessment see Baseefa09ATEX0180X.