1 # EU - TYPE EXAMINATION CERTIFICATE

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

3 EU - Type Examination Certificate Number: **Baseefa09ATEX0180X – Issue 2**

3.1 In accordance with Article 41 of Directive 2014/34/EU, EC-Type Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Supplementary Certificates to such EC-Type Examination Certificates, and new issues of such certificates, may continue to bear the original certificate number issued prior to 20 April 2016.

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

5 Manufacturer: **Eaton Electric Limited**

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

7 This re-issued certificate extends EC Type Examination Certificate No. Baseefa09ATEX0180X to apply to product designed and constructed in accordance with the specification set out in the Schedule of the said certificate but having any variations specified in the Schedule attached to this certificate and the documents therein referred to.

8 SGS Baseefa, Notified Body number 1180, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, 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 Annex II to the Directive.

The examination and test results are recorded in confidential Report No. **See Certificate History**

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

EN 60079-0:2012 + A11: 2013 **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 EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive 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 :

⟨Ex⟩ **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. **16/0371**

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R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

13 **Schedule**

14 **Certificate Number Baseefa09ATEX0180X – Issue 2**

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.

The FS32/FS32G Fieldbus Surge Protection Devices are considered to be coded ⟨Ex⟩ II 1G Ex ia IIB T3 Ga (-40°C ≤ Ta ≤ 50°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 = 17.5V
I_i = 380mA
P_i = 5.32W
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.

The input power and current may be reduced from 5.32W and 380mA to 2.56W and 183mA respectively. The FS32/FS32G Fieldbus Surge Protection Devices are considered to be coded ⟨Ex⟩ II 1G Ex ia IIC T4 Ga (-40°C ≤ T_a ≤ 50°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 = 17.5V
I_i = 183mA
P_i = 2.56W
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 input power may be further reduced to 1.8W. The FS32/FS32G Fieldbus Surge Protection Devices are considered to be coded ⟨Ex⟩ II 1G Ex ia IIC T4 Ga (-40°C ≤ Ta ≤ 75°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 = 380mA
P_i = 1.8W
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

GB/BAS/ExTR16.0326/00

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, and conformity is demonstrated in the report:

Clause	Subject
1.4.1	External effects
1.4.2	Aggressive substances, etc.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
1100526	1-6	B	8.16	FS32 / FS32G Certification Drawing

The above drawing is associated and held with IECEx BAS 09.0083X Iss. 3

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
1301923	1	B	23-APR-13	Heatsink

The above drawing is associated and held with IECEx BAS 09.0083X

20 Certificate History

Certificate No.	Date	Comments
Baseefa09ATEX0180X	30 September 2009	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0: 2006 And EN60079-7: 2007 is documented in Test Report No. GB/BAS/ExTR/09.0118/00 and project 09/0095.
Baseefa09ATEX0180X/1	24 October 2013	To confirm that the equipment conforms to the requirements of EN60079-0: 2012 and EN60079-11: 2012
Baseefa09ATEX0180X Issue 2	12 June 2017	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate and confirms the current design meets the requirements of EN 60079-0: 2012 + A11: 2013. The certificate also permits the manufacturer's name to be changed on the certificate and the equipment marking. No other changes are made to the equipment design. The associated assessment is documented in Certification Report No. GB/BAS/ExTR16.0326/00, Project File No. 16/0371.
For drawings applicable to each issue, see original of that issue.		