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: **Baseefa14ATEX0288X – Issue 1**

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: **93ZX-FB-**-** Fieldbus Barrier System**

5 Manufacturer: **Eaton Electric Limited**

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

7 This re-issued certificate extends EC Type Examination Certificate No. Baseefa14ATEX0288X 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 Fimko Oy, Notified Body number 0598, 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.

8.1 The original certificate was issued by SGS Baseefa Ltd (UK Notified Body 1180). It, and any supplements previously issued by SGS Baseefa Ltd have been transferred to the supervision of SGS Fimko Oy (EU Notified Body 0598). The original certificate number is retained.

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 IEC 60079-0:2018 EN 60079-1:2014 EN IEC 60079-7:2015+A1:2018 EN 60079-11:2012 EN 60079-18:2015+A1:2017 EN 60079-31:2014

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:

Ⓔx II 2(1)GD Ex db eb ib mb [ia Ga] IIC T4 Gb Ex tb IIIC T80°C Db (-30°C ≤ T_a ≤ +65°C)

SGS Fimko Oy Customer Reference No. **0703** Project File No. **16/0371**

SGS Fimko Oy
Takomotie 8
FI-00380 Helsinki, Finland
Telephone +358 (0)9 696 361
e-mail sgs.fimko@sgs.com
web site www.sgs.fi
Business ID 0978538-5 Member of the SGS Group (SGA SA)

Mikko Välimäki
SGS Fimko Oy

13 **Schedule**

14 **Certificate Number Baseefa14ATEX0288X – Issue 1**

15 Description of Product

The 93ZX-FB-**-** Fieldbus Barrier System comprises one or two 937X-FB-**-** Fieldbus Barrier Modules (Baseefa09ATEX0184U) housed inside an appropriately certified stainless steel enclosure. Each 937X-FB-**-** Fieldbus Barrier Module is either a 6 way simplex unit, a 12 way simplex unit or a 5 way redundant unit.

The 93ZX-FB-**-** Fieldbus Barrier System is designed to be supplied from a power supply conforming to IEC 61158 and produce several Spur outputs that are each compliant with the FISCO Power Supply requirements. The Spur outputs are isolated from the input supply but are not isolated from each other. Electrical connections are made via screw terminals.

The 93ZX-FB-**-** Fieldbus Barrier System has a certification temperature range of -30°C to +65°C.

Terminal Parameters - SPUR+ve Output Terminal and Shield Terminal w.r.t Spur-ve (each channel)

9387 & 9388 Units - Simplex Models

U_o	= 17.5V	U_i	= 17.5V
$I_{o\ peak}$	= 249.5mA	C_i	= 0
$I_{o\ continuous}$	= 113mA	L_i	= 0
P_o	= 982mW		

The capacitance and either the inductance or inductance to resistance ratio (L/R) of the load connected to hazardous area terminals TB1 must not exceed the following values:

GROUP	CAPACITANCE	INDUCTANCE	OR	L/R RATIO
	(µF)	(mH)		(µH/ohm)
IIC	0.339	0.57		32.5
IIB	1.97	2.28		130
IIA	8.2	4.57		260

The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.

or 2. The inductance and capacitance are distributed as in a cable.

or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and lumped capacitance, up to 50% of each of the L and C values is allowed. The reduced capacitance, when applicable, shall not exceed 1µF for Groups IIA & IIB, or 600nF for IIC.

The values of L_o and C_o determined by this method shall not be exceeded by the sum of all of the L_i plus cable inductances in the circuit and the sum of all of C_i plus cable capacitances respectively.

9391 - Redundant Models

U_o	= 16.4V	U_i	= 17.5V
$I_{o\ peak}$	= 246mA	C_i	= 0
$I_{o\ continuous}$	= 215mA	L_i	= 0
P_o	= 912mW		

The capacitance and either the inductance or inductance to resistance ratio (L/R) of the load connected to hazardous area terminals TB1 must not exceed the following values:

GROUP	CAPACITANCE	INDUCTANCE	OR	L/R RATIO
	(µF)	(mH)		(µH/ohm)
IIC	0.424	0.59		35.2
IIB	2.51	2.35		140
IIA	10.0	4.70		281

The above load parameters apply where:

1. The external circuit contains no combined lumped inductance L_i and capacitance C_i greater than 1% of the above values.

or 2. The inductance and capacitance are distributed as in a cable.

or 3. The external circuit contains either only lumped inductance or lumped capacitance in combination with a cable.

In all other situations e.g. the external circuit contains combined lumped inductance and lumped capacitance, up to 50% of each of the L and C values is allowed.

16 Report Number

See certificate history.

17 Specific Conditions of Use

1. The equipment shall only be powered from supplies conforming to IEC 61158.
2. When a Trunk Surge Module is fitted, the power input circuit will not withstand a 500V a.c. isolation test to earth. This must be taken into account during installation.
3. When one or more Spur Surge Modules are fitted, the spur outputs will not withstand a 500V a.c. isolation test to earth. This must be taken into account during installation.
4. Potential electrostatic hazard. The equipment should only be cleaned with a damp cloth.

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
CI9391-1	1	3	7.23	939X Stainless Steel Final Assy
CI9391-3	1	4	7.23	93ZX Encl Cert Label

These drawings are held with IECEx BAS14.0133X

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
None.				

20 Certificate History

Certificate No.	Date	Comments
Baseefa14ATEX0288X	20 October 2014	The release of the prime certificate. The associated test and assessment was documented in GB/BAS/ExTR14.0258/00 for project 14/0479.
Baseefa14ATEX0288X Issue 1	16 April 2024	This issue:- - permits a change of company name, - confirms the current design has been reviewed against the requirements of EN IEC 60079-0:2018, EN 60079-1: 2014, EN IEC 60079-7: 2015+A1:2018, EN 60079-18:2015+A1:2017 and EN 60079-31: 2014 in respect of the differences from EN 60079-0: 2009, EN 60079-1: 2007, EN 60079-7: 2007, EN 60079-18:2009, and EN 60079-31: 2009. - permits the use of alternate enclosures, See GB/BAS/ExTR16.0282/00 for project 16/0371.
For drawings applicable to each issue, see original of that issue.		