

## EU - TYPE EXAMINATION CERTIFICATE

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

- 1 EU - Type Examination Certificate Number: **Baseefa17ATEX0139X – Issue 2**
- 2 Product: **93ZX-FB2-XX-XX-XXXX Fieldbus Barrier System**
- 3 Manufacturer: **Eaton Electric Limited**
- 4 Address: **Great Marlings, Butterfield, Luton, Bedfordshire, LU2 8DL United Kingdom**
- 5 This re-issued certificate extends EU Type Examination Certificate No. Baseefa17ATEX0139X 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.
- 6 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.
- 7.1 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
- 8 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.
- 9 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.
- 10 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.
- 11 The marking of the product shall include the following :
- ⊕ II 2(1)GD Ex db eb ib mb [ia Ga] IIC T4 Gb (-40°C ≤ T<sub>a</sub> ≤ +65°C) Ex tb IIIC T80°C Db

SGS Fimko Oy Customer Reference No. **0703**

Project File No. **16/0371**

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## Schedule

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Certificate Number Baseefa17ATEX0139X – Issue 2

### 15 Description of Product

The 93ZX-FB2-XX-XX-XXX Fieldbus Barrier System comprises one or two 937X-FB2-\*\*-\*\* Fieldbus Barrier Module(s) mounted inside a stainless steel enclosure.

The 93ZX-FB2-XX-XX-XXX Fieldbus Barrier System is designed to be supplied from a power supply conforming to IEC 61158 and produce 12 (where ZX=87) or 24 (where ZX=88) 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 or spring terminals.

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

$U_o$	= 16.4V
$I_{o \text{ peak}}$	= 249.5mA
$I_{o \text{ continuous}}$	= 109mA
$P_o$	= 898mW
$U_i$	= 16.4V
$C_i$	= 0
$L_i$	= 0

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 $C_o$	INDUCTANCE $L_o$	OR	L/R RATIO
	( $\mu$ F)	(mH)		( $\mu$ H/ohm)
IIC	0.424	0.57		34.7
IIB	2.51	2.28		138
IIA	10.0	4.56		277

The above load parameters apply where:

The above parameters apply when one of the two conditions below is given:

- the total  $L_i$  of the external circuit (excluding the cable) is < 1% of the  $L_o$  value or
- the total  $C_i$  of the external circuit (excluding the cable) is < 1% of the  $C_o$  value.

The above parameters are reduced to 50% when both of the two conditions below are given:

- the total  $L_i$  of the external circuit (excluding the cable)  $\geq$  1% of the  $L_o$  value and
- the total  $C_i$  of the external circuit (excluding the cable)  $\geq$  1% of the  $C_o$  value.

Note: the reduced capacitance of the external circuit (including cable) shall not be greater than 1 $\mu$ F for Groups IIA & IIB, and 600nF for Group 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.

### 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. Equipment fitted with a plastic certification label should only be cleaned with a damp cloth.
5. When the enclosure is fitted with a hinged lid fitted, it shall only be mounted in a vertical orientation on a flat surface, and care is required in the installation process and when opening the hinged lid to ensure the enclosure does not distort.
6. When the enclosure is fitted with a fully bolted lid the enclosure may be mounted in any orientation but it shall be on a flat surface and care is required in the installation process to ensure that the enclosure does not distort.

## **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:

<b>Clause</b>	<b>Subject</b>
1.4.1	External effects
1.4.2	Aggressive substances, etc.

## **19 Drawings and Documents**

New drawings submitted for this issue of certificate:

<b>Number</b>	<b>Sheet</b>	<b>Issue</b>	<b>Date</b>	<b>Description</b>
CI9388-FB2-3	1	3	7.23	93ZX-FB2 Encl Cert Label

This drawing is held with IECEx BAS 17.0112X.

Current drawings which remain unaffected by this issue:

<b>Number</b>	<b>Sheet</b>	<b>Issue</b>	<b>Date</b>	<b>Description</b>
CI9388-FB2-1	1 to 3	2	8.19	93ZX-FB2 Assembly

This drawing is held with IECEx BAS 17.0112X.

## **20 Certificate History**

<b>Certificate No.</b>	<b>Date</b>	<b>Comments</b>
Baseefa17ATEX0139X	15 November 2017	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0:2012+A11:2013 EN 60079-1:2014 EN 60079-7:2015 EN 60079-11:2012 EN 60079-18:2009 EN60079-31:2014 is documented in Test Report GB/BAS/ExTR17.0265/00 for project 17/0644.
Baseefa17ATEX0139X/1	9 December 2019	To permit:- - the use of alternative enclosures, - to update the markings as required by the standards listed on the prime certificate, - the certification temperature range as shown on the label to be extended to $-40^{\circ}\text{C} \leq T_a \leq +65^{\circ}\text{C}$ .  See GB/BAS/ExTR19.0310/00 for project 19/0470

Certificate No.	Date	Comments
Baseefa17ATEX0139X Issue 2	17 April 2024	<p>This issue:-</p> <ul style="list-style-type: none"><li>- incorporates previously issued primary &amp; supplementary certificates into one certificate,</li><li>- confirms the current design meets the requirements of EN IEC 60079-0:2018, EN IEC 60079-7:2015+A1:2018, &amp; EN 60079-18:2015+A1:2017.</li></ul> <p>See GB/BAS/ExTR24.0021/00 for 16/0371</p>
For drawings applicable to each issue, see original of that issue.		