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: **Baseefa19ATEX0023X – Issue 2**

4 Product: **93ZX-FB3 Compact Fieldbus Barrier**

5 Manufacturer: **Eaton Electric Limited**

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

7 This re-issued certificate extends EU Type Examination Certificate No. Baseefa19ATEX0023X 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 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 eb ib mb [ia Ga] IIC T4 Gb Ex tb IIIC T80°C Db (-20°C ≤ T_a ≤ +60°C) (no TP32 fitted)

Ⓔx II 2(1)GD Ex db eb ib mb [ia Ga] IIC T4 Gb Ex tb IIIC T80°C Db (-20°C ≤ T_a ≤ +60°C) (TP32 fitted)

SGS Fimko Oy Customer Reference No. **0703** Project File No. **21/0649**

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)

Tuomas Hänninen
SGS Fimko Oy

13 # Schedule

14 ## Certificate Number Baseefa19ATEX0023X – Issue 2

15 Description of Product

The 937X-FB3-**-** Compact Fieldbus Barrier Equipment comprises a 9377-FB3 Compact fieldbus barrier module mounted in a stainless steel enclosure, where X = 3 for a single 12-way compact fieldbus barrier (X = 1, 2 or 4 is reserved for future use).

Different sizes of stainless-steel enclosure are available.

Optional spare trunk terminals, an optional TP32 Trunk Surge Protector or an optional FX32-XE Trunk Surge Protection Device, and associated factory wiring may also be present. The spur outputs may optionally be fitted with FS32 Spur Surge Protectors.

Trunk Connections - Safe Area Terminals

U_m = 253Vrms

The equipment is designed to operate from a d.c. supply voltage of 16V to 32V. The maximum rated current is 410mA.

Each Spur Output – Connections Suitable for Zone 0 Areas

U_o = 16.4V
I_o(peak) = 247.9mA
I_o(continuous) = 107.1mA
P_o = 1.02W
C_i = 0
L_i = 0

The 12 spur channels share a common 0V output connection but are galvanically isolated from the connections to the safe area.

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

GROUP	CAPACITANCE C_i (µF)	INDUCTANCE L_i (mH)	OR L/R RATIO (µH/ohm)
IIC	0.424	0.57	34.9
IIB	2.51	2.31	139
IIA	10.0	4.62	279

The parameters in the table above 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 parameters in the table above are reduced to 50% when both of the two conditions below are given:
- the total L_i of the external circuit (excluding the cable) ≥1% of the L_o value and
- the total C_i of the external circuit (excluding the cable) ≥1% of the C_o value.

Note: the reduced capacitance of the external circuit (including cable) shall not be greater than 1µF for Groups I, IIA, IIB & IIIC, and 600nF for Group IIC.

The Compact Fieldbus Barrier equipment enclosure is component certified under Baseefa15ATEX0099U or CML17ATEX3291U.

The Compact Fieldbus Barrier equipment uses “eb” terminals that are certified under DEMKO14ATEX1338U, or under KEMA04ATEX2048U.

The Compact Fieldbus Barrier equipment uses the Compact Fieldbus Barrier component certified apparatus covered by Baseefa19ATEX0024U.

The Compact Fieldbus Barrier equipment may be fitted with TP32 Trunk Surge Protection Device covered by Baseefa04ATEX0053X.

The Compact Fieldbus Barrier equipment may be fitted with an FS32-XE Trunk Surge Protection Device covered by SGS20ATEX0120U.

The Compact Fieldbus Barrier equipment may be fitted with up to 12 FS32 Spur Surge Modules covered by Baseefa09ATEX0180X.

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 TP32 Trunk Surge Device or an FS32-XE Trunk Surge Protection Device 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 FS32 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. When the enclosure is fitted with a hinged lid, 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.
5. When the enclosure is fitted with a fully bolted lid, it 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.
6. All Conditions for Safe Use that are present on the certificates for the glands and blanking plugs must be observed.

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
1.2.7	LVD type requirements	Standards require manufacturer's declaration.
1.2.8	Overloading of equipment (protection relays, etc.)	Covered by installation rules and manufacturer's instructions
1.4.1	External effects	The Purchaser should make the manufacturer aware of such issues.
1.4.2	Aggressive substances, etc.	The Purchaser should make the manufacturer aware of such issues.

19 Drawings and Documents

New drawings submitted for this issue of certificate:

Number	Sheet	Issue	Date	Description
CI9373-FB3-1	1 to 5	3	26.1.21	General Assembly – Compact Field bus Barrier Enclosure – Stainless Steel

This drawing is held with IECEx BAS 19.0016X Issue 2.

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
CI9373-FB3-3 *2	1	1	06.19	937X-FB3 Encl Cert Label

20 Certificate History

Certificate No.	Date	Comments
Baseefa19ATEX0023X	3 July 2019	The release of the prime certificate. The associated test and assessment against the requirements of EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-7:2015, EN 60079-11:2012, EN 60079-18:2015 & EN60079-31:2014 is documented in Test Report No. GB/BAS/ExTR19.0007/00 for project 18/0473.
Baseefa19ATEX0023X Issue 1	26 April 2021	This issue of the certificate combines the previously issued primary certificate with this supplementary certificate, and permits the optional use of an FS-32XE Trunk Surge Protection Device, and confirm compliance with EN 60079-7:2015+A1:2018 and EN 60079-18:2014+A1:2017. See report GB/BAS/ExTR21.0046/00 for project 21/0048.
Baseefa19ATEX0023X Issue 2	26 January 2022	To allow additional terminals to be fitted for use with the I.S. spurs, and to permit the use of an alternate component certified enclosure. See report GB/BAS/ExTR21.0234/00 for project 21/0649.
For drawings applicable to each issue, see original of that issue.		