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: **Baseefa14ATEX0112X – Issue 4**

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: **937X-FB2-**-** 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. **Baseefa14ATEX0112X** 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.

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:

Refer to Schedule

SGS Fimko Oy Customer Reference No. **0703** Project File No. **24/0338**

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13 **Schedule**

14 **Certificate Number Baseefa14ATEX0112X – Issue 4**

15 Description of Product

The 937X-FB2-**-** Fieldbus Barrier System comprises a 937X-FB2-**-** Fieldbus Barrier Module mounted inside a GRP or in a stainless-steel enclosure.

The 937X-FB2-**-** Fieldbus Barrier System is designed to be supplied from a power supply conforming to IEC 61158 and produce 6, 12 or 18 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
$I_{o\ peak}$ = 249.5mA
$I_{o\ continuous}$ = 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 (µF)	INDUCTANCE L_o (mH)	OR	L/R RATIO (µH/ohm)
IIC	0.424	0.57		34.7
IIB	2.51	2.28		138
IIA	10.0	4.56		277

The above parameters apply when one of the two conditions below is given:
- the total L_i 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) ≥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 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.

Marking

The equipment may be marked with one of the following, depending on the enclosure type used:

93ZX-FB2-XX-PP – GRP Enclosure

⟨Ex⟩ II 2 (1) GD Ex db eb ib mb [ia Ga] IIC T4 Gb (-40 °C ≤ Tamb ≤ +65 °C)
Ex tb T80 °C Db

93ZX-FB2-XX-SS – Stainless-Steel Enclosure

⟨Ex⟩ II 2 (1) GD Ex db eb ib mb [ia Ga] IIC T4 Gb (-40 °C ≤ Tamb ≤ +70 °C)
Ex tb T80 °C Db

93ZX-FB2-XX-ST – Stainless-Steel Enclosure

⟨Ex⟩	II 2 (1) GD	Ex db eb ib mb [ia Ga] IIC T4 Gb Ex tb T80 °C Db	(-20 °C ≤ Tamb ≤ +70 °C)

Note: The equipment identifier 93ZX-FB2-XX-XX may be followed by a three-character alpha-numeric suffix after the enclosure identifier. This three-character alpha-numeric suffix does not incorporate any detail critical to the protection concepts used.

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 parts such as, but not limited to label(s), powder coating(s), glands and stoppers should only be cleaned with a damp cloth and installed in a manner that does not result in the charging of the surfaces due to environmental influences.
5. 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. This condition applies to the
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.
7. All cable glands and stopper plugs used for cable entries shall be suitably certified and shall have a minimum Degree of Ingress Protection of IP66.
8. When using the 93ZX-FB2-XX-ST enclosure, plastic parts not assessed to requirements of IEC/EN 60079-0 CL 7.3 Resistance to Light, the equipment shall be marked by the symbol “X” to indicate this specific condition of use according to IEC/EN 60079-0 CL 29.3 item e) i.e. not subject to direct exposure to any natural or artificial light source such as lamps or lighting.

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
1.2.7	LVD type requirements
1.2.8	Overloading of equipment (protection relays, etc.)
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
CI9373FB2-1	1 to 2	3	7.24	3GFB "FB2" Stainless Steel Encl Final Assy
CI9373FB2-3	1 to 2	4	9.24	937X-FB2 Encl Cert Label
CI9373FB2-5	1 to 2	4	9.24	3GFB “FB2” 3-Module SS Enclosure Final Assembly

Number	Sheet	Issue	Date	Description
CI9373FB2-6	1 of 1	2	09.24	937X-FB2 3 Module Cert Label

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
CI9373FB2-2	1 to 2	2	8.16	3GFB “FB2” GRP Encl Final Assy

These drawings are common to, and held with, IECEx BAS 14.0058X

20 Certificate History

Certificate No.	Date	Comments
Baseefa14ATEX0112X	27 August 2014	The release of the prime certificate. The associated test and assessment against the requirements of EN 60079-0:2012 EN 60079-1:2007 EN 60079-7:2007 EN 60079-11:2012 EN 60079-18:2009 and IEC 60079-31:2013is documented in GB/BAS/ExTR14.0063/00 for project 14/0063.
Baseefa14ATEX0112X Issue 1	1 September 2016	This issue of the certificate incorporates previously issued primary & supplementary certificates into one certificate, permits the introduction of a new carrier board, permits drawing changes associated with the delisting of component parts on this certificate, and permits the use of a stainless steel enclosure. The associated test and assessment is documented in GB/BAS/ExTR14.0063/00 for project 14/0063.
Baseefa14ATEX0112X Issue 2	2 July 2020	This issue of the certificate permits the introduction of a new 18-way model and confirms compliance with EN 60079-18:2015. The associated test and assessment is documented in GB/BAS/ExTR20.0091/00 for project 20/0278.
Baseefa14ATEX0112X Issue 3	16 April 2024	This issue of the certificate permits the addition of new enclosure options, a standards update to EN IEC 60079-0:2018, EN IEC 60079-7:2015+A1:2018 and EN 60079-18:2015+A1:2017 and the use of a different live-demateable component certificate. See GB/SGS/ExTR24.0020/00 for project 16/0371
Baseefa14ATEX0112X Issue 4	28 October 2024	This issue of the permits the use of an alternative stainless-steel enclosure to be used and corrects typographical errors in drawings that do not impact the safety critical aspects of the certification. The associated test and assessment is recorded in GB/SGS/ExTR24.0157/00. Project No. 24/0338.
For drawings applicable to each issue, see original of that issue.		