1 # EU - TYPE EXAMINATION CERTIFICATE

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

3 EU - Type Examination Certificate Number: **Baseefa15ATEX0147U – 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-FB2 Fieldbus Barrier Module**

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. Baseefa15ATEX0147U 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 the product, as modified by this supplementary certificate, 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

except in respect of those requirements listed at item 18 of the Schedule.

10 The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment or protective system.

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 2(1)G Ex db eb ib mb [ia Ga] IIC T4 Gb (-40°C ≤ T_a ≤ +75°C)

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

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13 # Schedule

14 ## Certificate Number Baseefa15ATEX0147U – Issue 1

15 Description of Product

The 93ZX-FB2 Fieldbus Barrier Module comprises a 12 way carrier assembly, four Barrier Modules, optionally a component certified Trunk Surge Module (part ref. 9376-SP), optionally a component certified F93-XE Fieldbus Terminator (part ref. F93-XE) and optionally up to twelve Spur Surge Modules (part ref. FS32).

The 93ZX-FB2 Fieldbus Barrier Module is designed to have two Barrier Modules in use at any one time, with two more Barrier Modules standing by in case of a failure of an energised module. Should a Barrier Module fail, due to the use of Ex d e live-dematable connectors, a Barrier Module may be replaced without having to power down the apparatus.

The 93ZX-FB2 Fieldbus Barrier Module is designed to be supplied from a power supply conforming to IEC 61158 and produces 12 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.

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

U_o	= 16.4V
$I_{o\ peak}$	= 246mA
$I_{o\ continuous}$	= 215mA
P_o	= 912mW
U_i	= 17.5V
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	INDUCTANCE	OR	L/R RATIO
	(µF)	(mH)		(µH/ohm)
IIC	0.339	0.57		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 Schedule of Limitations

1. The component 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. The component must be mounted in an appropriately certified enclosure when used in hazardous areas. When used in safe areas, the enclosure must provide ingress protection of at least IP54.

5. The Component is intended to meet the requirements for temperature class T4 when used within its certified temperature range.

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
CI9377-9	1	6	7.23	FB Barrier Case Marking
CI9384-1	2	2	1.24	TTA Wiring Diagram
CI9384-4	4 & 5	4	1.24	TTA Assembly
CI9385-FB2-5	1	3	7.23	9385-FB2 Carrier Cert Label

Current drawings which remain unaffected by this issue:

Number	Sheet	Issue	Date	Description
CI255-TFR	1 & 2	1	01.10	3GFB Comms 3 Coil Co-Ax Trnfmr
CI9377-1	1 to 6	2	5.11	3rd Generation Fieldbus Barrier Spur Control
CI9377-2	1 to 3	3	15/11/11	R-Barrier Spur Control Parts List
CI9377-3	1	2	9.11	Barrier Spur Control PCB Track Layout
CI9377-4	1 to 3	3	5.11	Barrier Spur Control PCB Assy
CI9377-5	1	4	2.14	3rd Generation Fieldbus Barrier PSU
CI9377-6	1 to 3	5	13.2.12	3GFB Barrier PSU PCB Parts List
CI9377-7	1	3	31.3.14	Barrier PSU PCB Track Layout
CI9377-8	1 & 2	2	4.10	Barrier PSU PCB Assy
CI9385-FB2-1	1 to 3	1	6.15	9385 Carrier Assembly
CI9385-FB2-2	1 & 2	1	09/15	9385 Carrier List
CI9385-FB2-3	1 to 4	1	6.15	9385 Carrier PCB Track View
CI9385-FB2-4	1 & 2	1	6.15	9385 Carrier PCB Layout
CI9385-FB2-6	1	1	9.15	9385-FB2 Carrier Component Assembly

20 Certificate History

Certificate No.	Date	Comments
Baseefa15ATEX0147U	25 September 2015	The release of the prime certificate. The associated test and assessment was documented in GB/BAS/ExTR15.0226/00 for project 15/0465.
Baseefa15ATEX0147U Issue 1	17 April 2024	This issue: - incorporates the primary & this supplementary certificates into one certificate, - permits a change of company name. - confirms the current design has been reviewed against the requirements of EN IEC 60079-0:2018, EN IEC 60079-7: 2015 +A1:2018, and EN 60079-18:2015+A1:2017 in respect of the differences from EN 60079-0: 2012, EN 60079-7: 2007, and EN 60079-18:2009. - permits the use of a different live-dematerable connector component certificate. See GB/BAS/ExTR16.0286/00 for project 16/0371.
For drawings applicable to each issue, see original of that issue.		