

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: **Baseefa19ATEX0024U**

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

5 Manufacturer: **Eaton Electric Ltd.**

6 Address: **Butterfield, Luton, LU2 8DL**

7 This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 SGS Baseefa, Notified Body number 1180, 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.

The examination and test results are recorded in confidential Report No. **GB/BAS/ExTR19.0007/00**

9 Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018 EN 60079-7:2015 EN 60079-11:2012 EN 60079-18:2015

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 :

⊕ II 2(1)G Ex eb ib mb [ia Ga] IIC Gb (-20°C ≤ T_a ≤ +65°C)

SGS Baseefa Customer Reference No. **0703**

Project File No. **18/0473**

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SGS Baseefa Limited

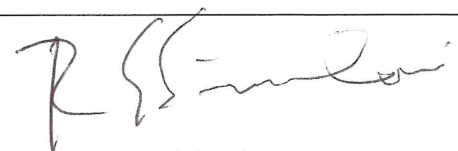
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R S SINCLAIR
TECHNICAL MANAGER
On behalf of SGS Baseefa Limited

13

Schedule

14

Certificate Number Baseefa19ATEX0024U

15 Description of Product

The 9377-FB3-** Compact Fieldbus Barrier with built-in selectable fieldbus terminator is designed to be supplied from a 16V to 32Vdc IEC61158 compliant fieldbus trunk supply and produce 12 intrinsically safe spur outputs that are each compliant with the FISCO power supply requirements.

The spur outputs are isolated from the trunk input but are not isolated from each other. The electrical connections are made by either spring clamp or screw clamp terminals. A Trunk Out connection is available where the fieldbus trunk is to be connected to more than one fieldbus barrier in either the same or separate enclosures.

The spur outputs may optionally be fitted with up to 12 FS32 Spur Surge Protectors.

Trunk Connections - Safe Area Terminals

$$U_m = 253V_{rms}$$

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
$I_o(\text{peak})$	= 247.9mA
$I_o(\text{continuous})$	= 107.1mA
P_o	= 1.02mW
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 OR (mH)	L/R RATIO ($\mu\text{H}/\text{ohm}$)
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) \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 μF for Groups I, IIA, IIB & IIIC, and 600nF for Group IIC.

The FS32 Spur Surge Modules if fitted are covered by Baseefa09ATEX0180X.

16 Report Number

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17 Schedule of Limitations

1. The component shall only be powered from supplies conforming to IEC 61158.
2. 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.
3. 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 IP20.
4. 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
1.2.7	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

Number	Sheet	Issue	Date	Description
CI9373-FB3-3 *2	1	1	06.19	937X-FB3 Encl Cert Label
CI9377-FB3-101 *2	1 & 2	1	18.6.19	9377-FB3 CFBB Final Assembly
CI9377-FB3-102 *2	1	1	6.19	9377-FB3 Certification Label
CI9377-FB3-201 *2	1 & 2	1	5.19	Circuit Diagram – PSU Board
CI9377-FB3-202 *2	1 to 3	1	5.19	Parts List – PSU Board
CI9377-FB3-203 *2	1	1	31.5.19	Track Layout – PSU Board
CI9377-FB3-204 *2	1 to 3	1	5.19	Component Layout – PSU Board
CI9377-FB3-301 *2	1 to 12	1	11.18	Circuit Diagram – Spur Board
CI9377-FB3-302 *2	1 to 6	1	11.18	Parts List Spur Board
CI9377-FB3-303 *2	1 & 2	1	31.5.19	Track Layout – Spur Board
CI9377-FB3-304 *2	1 & 2	1	11.18	Component Layout – Spur Board
CI9377-FB3-401 *2	1 & 2	1	5.19	CFBB Connector Interface Circuit Diagram
CI9377-FB3-402 *2	1	1	5.19	Parts list – connector board
CI9377-FB3-403 *2	1 & 2	1	31.5.19	Track Layout – Connector Board
CI9377-FB3-404 *2	1 & 2	1	3.19	Component layout – connector board
CI9377-FB3-101 *2	1	1	06.19	937X-FB3 Encl Cert Label

These drawings are held with IECEx BAS 19.0017U (prime).