IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com
Ex COMPONENT CERTIFICATE

Certificate No.: **IECEx BAS 09.0081U**

Page 1 of 4

Certificate history:
Issue 4 (2016-03-22)
Issue 3 (2013-06-21)
Issue 2 (2012-03-01)
Issue 1 (2010-07-09)
Issue 0 (2010-04-09)

Status: **Current**

Issue No: 5

Date of Issue: 2024-04-17

Applicant: **Eaton Electric Limited**
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

Ex Component: 937X-FB-**-** Fieldbus Barrier Module

This component is NOT intended to be used alone and requires additional consideration when incorporated into other equipment or systems for use in explosive atmospheres (refer to IEC 60079-0).

Type of Protection: **Flameproof, Increased Safety, Encapsulation, Intrinsic Safety**

Marking: **Ex db eb mb ib [ia Ga] IIC T4 Gb**

Approved for issue on behalf of the IECEx Certification Body: **D Brearley**

Position: **Certification Consultant**

Signature:
(for printed version)

Date:
(for printed version) 17/4/2024

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

SGS UK Limited
Rockhead Business Park
Staden Lane
Buxton, Derbyshire SK17 9RZ
United Kingdom

IECEx Certificate of Conformity

Manufacturer:
Eaton Electric Limited
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

Manufacturing locations:
Eaton Electric Limited
Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

MTL Instruments Pvt Limited
No 3 Old Mahabalipuram Road
Sholinganallur
Chennai 600119
India

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The component and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-1:2014 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

IEC 60079-18:2017 Explosive atmospheres - Part 18: Protection by encapsulation "m"
Edition:4.1

IEC 60079-7:2017 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the component listed has successfully met the examination and test requirements as recorded in:

Test Reports:

GB/BAS/ExTR09.0114/00
GB/BAS/ExTR09.0115/00
GB/BAS/ExTR10.0105/00
GB/BAS/ExTR10.0275/00
GB/BAS/ExTR13.0110/00
GB/BAS/ExTR16.0089/00
GB/BAS/ExTR16.0309/00

Quality Assessment Reports:

GB/BAS/QAR06.0022/11
GB/BAS/QAR07.0017/10

IECEx Certificate of Conformity

Ex Component(s) covered by this certificate is described below:

The 937X-FB-**-** Fieldbus Barrier Module comprises a Trunk Terminator Assembly, a 6 way or 12 way carrier assembly, one or two Barrier Modules, optionally a component certified Trunk Surge Module (part ref. 9376-SP), optionally a component certified Trunk Terminator (part ref. 9378-FT) and optionally up to twelve Spur Surge Modules (part ref. FS32).

The 9371 series 6 way simplex carrier assembly is normally associated with a single Barrier Module and the 9373 series 12 way simplex carrier is normally associated with two Barrier Modules.

The 937X-FB-**-** Fieldbus Barrier Module is designed to be supplied from 16V d.c. to 32V d.c. supply and produce 6 or 12 Spur outputs that are each compliant with the FISCO Power Supply requirements. The 9372 redundant Fieldbus Barrier Module provides either 5 or 6 Spur outputs. The Spur outputs are isolated from the input supply but are not isolated from each other. Electrical connections are made via screw terminals.

See annex for Terminal Parameters

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 IP20.

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

IECEx Certificate of Conformity

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Variation 5.1

To permit a change of company name, an update to the referenced standards and the addition of an updated live dematerable connector component certificate.

ExTR: **GB/BAS/ExTR16.0309/00**	File Reference: **16/0371**

Annex:

IECEx BAS 09.0081U Annex Issue 4_1.pdf

SGS Baseefa Limited
Rockhead Business Park
Staden lane, Buxton, Derbyshire
SK17 9RZ
United Kingdom

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

9371 & 9373 Units - Simplex Models

U_o	= 17.5V
$I_{o\ peak}$	= 249.5mA
$I_{o\ continuous}$	= 113mA
P_o	= 982mW
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		32.5
IIB	1.97	2.28		130
IIA	8.2	4.57		260

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.

9372 - Redundant Models

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	0.424	0.59		35.2
IIB	2.51	2.35		140
IIA	10.0	4.70		281

The above load parameters apply where:

2. 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.