

### INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:

**IECEx BAS 17.0045X** 

Issue No: 1

Certificate history:

Status:

Current

Issue No. 1 (2017-09-04) Issue No. 0 (2017-06-12)

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Date of Issue:

2017-09-04

Applicant:

**Eaton Electric Limited** 

**Great Marlings** Butterfield Luton Bedfordshire LU2 8DL United Kingdom

Equipment:

FCS-9504-xxx, FCS-9508-xxx & FCS-9512-xxx MTL Foundation Fieldbus Junction Box

Optional accessory:

Type of Protection:

Increased Safety & Type of Protection 'n'

Marking:

Ex ec nA IIC T4 Gc (-40°C ≤ Ta ≤ +65°C)

Approved for issue on behalf of the IECEx

R.S. Sinclair

Certification Body:

Position:

Technical Manager

Signature:

(for printed version)

Date:

- 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 the Official IECEx Website.

Certificate issued by:

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





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Manufacturer: Eaton Electric Limited

Great Marlings
Butterfield
Luton
Bedfordshire
LU2 8DL
United Kingdom

Additional Manufacturing location(s):

#### 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 electrical apparatus 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 : 2011 Explosive atmospheres - Part 0: General requirements

Edition:6.0

IEC 60079-15 : 2010 Explosive atmospheres - Part 15: Equipment protection by type of protection "n"

Edition:4

IEC 60079-7: 2006-07 Explosive atmospheres - Part 7: Equipment protection by increased safety "e"

Edition:4

IEC 60079-7: 2015 Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

Edition:5.0

This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the

Standards listed above.

#### TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in

Test Report:

GB/BAS/ExTR17.0119/00 GB/BAS/ExTR17.0242/00

Quality Assessment Report:

GB/BAS/QAR06.0022/06 GB/BAS/QAR07.0017/06



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Schedule

#### **EQUIPMENT:**

Equipment and systems covered by this certificate are as follows:

The FCS-9504-xxx, FCS-9508-xxx & FCS-9512-xxx MTL Foundation Fieldbus Junction Box enables up to sixteen individual field devices in a Zone 2 hazardous area to be connected to a high energy trunk cable. The equipment can be fitted with either F304 or F308 Relcom Megablock Fieldbus Connection Blocks, together with certified terminals and optional FS32 Surge Protection devices and F97 terminators housed in a sheet steel IP66 rated enclosure.

The sheet steel IP66 rated enclosure (min. size 480mm x 480mm x 205mm) in which the equipment is housed is currently afforded certificate No. IECEx BVS 13.0026U and marked Ex e IIC Gb. One face of the external wall permits the following entries, A IP66 Ex 'e' certified breather and up to 20 Ex 'e' certified cable glands and / or stopping plugs.

The internal construction of the equipment fitted with the following specific components:

Up to 4 off F304 or 2 off F308 Ex nA certified Relcom F300 Series Megablock(s) currently afforded Certificate No. IECEx FMG 11.0017X. These can be optionally fitted with F97 Terminators, also covered under the same certificate.

Ex e Terminals of Type WDU2.5 currently afforded Certificate No. IECEx ULD 14.0005U. The number and location of the terminals is dependent on the configuration.

Up to 20 off Ex ec certified Eaton Electric Limited FS32 Surge Protection Devices currently afforded Certificate No. IECEx BAS 17.0015X.

See addition sheet of the certificate for parameters and further details

#### SPECIFIC CONDITIONS OF USE: YES as shown below:

- 1) The equipment must be installed in an area of Pollution Degree 2 or better, as defined in IEC 60664-1.
- 2) The equipment shall be effectively earth bonded prior to use. It may not be capable of withstanding the 500V dielectric strength test in accordance with clause 7.1 of IEC 60079-7, and this must be taken into account during installation.
- 3) The enclosure shall not be fitted with flat gasket 2 or plastic washer 1 as detailed in IECEx BVS 13.0026U.
- 4) The enclosure lid must be opened and closed in a vertical position so that the hinges are protected against excessive mechanical forces.
- 5) All connections to the equipment must not be inserted or removed unless either the area in which the equipment is installed is known to be non-hazardous, or the circuit to which it is connected has been de-energised.
- 6) Unused terminals inside the equipment shall be tightened.



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#### EQUIPMENT (continued):

The FCS-9504-xxx, FCS-9508-xxx & FCS-9512-xxx MTL Foundation Fieldbus Junction Boxes only differ in the number of connections provided for field device in a zone 2 hazardous area. The 'xxx' at the end of the model number denotes the configuration of the equipment. The differences between the models and configurations do not affect the certification.

The following model and configurations are covered by this certificate:

FCS-9504-213, FCS-9504-241 to -260 MTL Foundation Fieldbus Junction Box FCS-9508-120 to -140 MTL Foundation Fieldbus Junction Box FCS-9512-242 to -261 MTL Foundation Fieldbus Junction Box

#### Input Parameters:

Rated Input Voltage = 32V d.c. Rated Current = 2A

The enclosure and its internal components are listed on the table below:

| Item  | Certificate        | Marking   | Standards   |
|---|--------------------|---|---|
| Enclosure Type<br>N-TB                                | IECEx BVS 13.0026U | Ex e IIC Gb   | IEC 60079-0: 2011 Edition 6<br>IEC 60079-7: 2007 Edition 4  |
| Relcom F300<br>Series Megablocks<br>& F97 Terminators | IECEx FMG 11.0017X | Ex nA IIC T4 Gc<br>(-50°C ≤ T <sub>a</sub> ≤ +70°C)           | IEC 60079-0: 2011 Edition 6<br>IEC 60079-15: 2010 Edition 4 |
| WDU2.5 Terminals                                      | IECEx ULD 14.0005U | Ex eb IIC   | IEC 60079-0: 2011 Edition 6<br>IEC 60079-7: 2007 Edition 4  |
| Eaton Electric<br>FS32 Surge<br>Protection Device     | IECEx BAS 17.0015X | Ex ec IIC T4 Gc<br>(-40°C $\leq$ T <sub>a</sub> $\leq$ +70°C) | IEC 60079-0: 2011 Edition 6<br>IEC 60079-7: 2015 Edition 5  |

Where the above certified components forming part of the equipment are certified to older editions of the standards than those listed for the FCS-9504-xxx, FCS-9508-xxx & FCS-9512-xxx, the differences between the editions of the standards listed have been reviewed and determined to have no applicable technical differences affecting the equipment.



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#### DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

#### Variation 1.1

To permit the removal of the limit in the number of Type WDU2.5 Ex e terminals that can be fitted in all variants of the equipment not affecting the original assessment. The location and number of the certified terminals that can be fitted to all variants of the equipment is dependent on the configuration and is subject to the required segregation requirements being satisfied. The Equipment Description on page 3 of the certificate was revised to reflect this change.

ExTR: GB/BAS/ExTR17.0242/00 File Reference: 17/0530