



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

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

EX COMPONENT CERTIFICATE

Certificate No.: IECEx ITS 16.0010U Issue No: 1 Certificate history:
Status: **Current** Page 1 of 7 Issue No. 1 (2019-02-25)
Date of Issue: **2019-02-25** Issue No. 0 (2016-12-20)
Applicant: **Eaton Electrical Systems Ltd Trading as Raxton, Redapt or Capri**
Unit 1, Kingsway South
Westgate, Aldridge
West Midlands
WS9 8FS
United Kingdom
United Kingdom
Ex Component: **Swivel Adaptors Inline Male-Female:FA, Female-Female:FC, Male-Male:FD, 90° Male-Female:FP, Female-Female:FQ, Male to Male FR, 90 ° Male Female:FG and Female-Female: FN, Male to Male FK, Twin/Single Inlet Fixed or Swivel Adaptor/Reducer YA, TA and FM**

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: **Ex db eb tb**

Marking:

IECEX ITS 16.0010U
Ex db I Mb Ex eb I Mb (not aluminium products)
Ex db IIC Gb Ex eb IIC Gb
Ex tb III C Db IP 6X
Ta = -20°C to +60°C

Approved for issue on behalf of the IECEx
Certification Body:

P Moss

Position:

Certification Officer

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](http://www.iecex.com).

Certificate issued by:



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Intertek Testing & Certification Limited
ITS House, Cleeve Road,
Leatherhead,
Surrey, KT22 7SA
United Kingdom





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Manufacturer: **Eaton Electrical Systems trading as Raxton, Redapt or Capri**
Kingsway South
Westgate, Aldridge
West Midlands
WS9 8FS
United Kingdom
United Kingdom

Additional Manufacturing location(s):

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 Component 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 Ex 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 : 2011 Edition:6.0	Explosive atmospheres - Part 0: General requirements
IEC 60079-1 : 2014-06 Edition:7.0	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-31 : 2013 Edition:2	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
IEC 60079-7 : 2015 Edition:5.0	Explosive atmospheres – Part 7: Equipment protection by increased safety "e"

*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 Ex Component listed has successfully met the examination and test requirements as recorded in

Test Report:

[GB/ITS/ExTR16.0012/00](#) [GB/ITS/ExTR16.0012/01](#)

Quality Assessment Report:

[GB/SIR/QAR06.0014/08](#)



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Schedule

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

The type FA, FC, FD, FP, FQ, FR: each device comprise of two/three threaded entry parts and a spinning internal component. The components are assembled such that flame paths are formed at both entry and around the spinning components (this flamepath is not required for Exe applications only)

The type FG, FN, FK, YA, TA, and FM: each device comprises of two/three threaded entry part. The components are designed to provide cable entry options where twin inlet is required or where space is limited,

The F-Line range of inline swivel adaptors – Inline FA- Male-Female, FC Female – Female, FD Male – Male are designed to convert cable gland entries into different thread forms and/ or sizes between M20 and M75. Each device comprises two, threaded parts and an internal, retaining key, when these are assembled, a flamepath is formed between the thread parts and the components are able to spin about each other, (this flamepath is not required for Exe applications only) such that connection at both ends may be achieved without twisting the cable. When installed in accordance with the manufacturer's instructions, these adaptors are capable of providing an ingress protection rating of IP66.

There is no limit to the size up or size down as the torque will not be transpired to the inlet thread. Thread forms are between M16 and M75 (to BS 3643) inclusive

Material Options

Brass to BS 2874

Brass BS 2872

Stainless Steel

Mild Steel

Aluminium

Bronze

Surface Coating: Nickel, Zinc, Electroless Nickel

Thread Options

Metric to BS 3643

ET Conduit to BS 31

PG to DIN 40430

BSPP to BS 2779

BSPT to BS 21

NPT to ANSI/ASME B1.20.1

In addition any other thread form that also complies with the requirements of EN 60079-1 tables 3 or 4 and clause C2.2 (as applicable) are also permitted

Conditions of manufacture

The Manufacturer shall comply with the following:



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1. These products shall be marked in accordance with the information as specified in this certificate and related reports.

SCHEDULE OF LIMITATIONS:

- The flame non transmission tests of the cylindrical flame path provided by the swivel adaptors have not been conducted. This shall be considered by the issuing body of the apparatus certificate.
- Only one adaptor or reducer shall be used with any single cable entry on the associated equipment.
- The interfaces between these devices and the associated enclosure cannot be defined; therefore, it is the user's responsibility to ensure that the appropriate ingress protection level is maintained at these interfaces
- At their point of mounting, these devices are suitable for use at -50°C to $+150^{\circ}\text{C}$ for devices which rely on a non-metallic sealing material such as the swivel adaptors or -60°C to 200°C for solid metallic adaptors in flameproof Ex d applications only.



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

Issue 1:

Change of certificate holders entity and address from Ex Innovations to Eaton Electrical Systems Ltd t/a Eaton, Raxton, Redapt or Capri. The QAR has also been updated to reflect this



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Additional information:

The following service temperature range limitations are listed below:

Type of protection	Service Temperature
Ex d I Mb	-20°C to +60°C*
Ex e I Mb	-60°C to +150°C*
Ex d IIC Gb	-20°C to +60°C*
Ex e IIC Gb	-60°C to +200°C*
Ex tb III C Gb	-60°C to +200°C*

*Unless fitted with an interface sealing O-ring with lower properties, temperatures shall be limited as per the manufacturer's instructions.