



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

Certificate No.: **IECEX SIR 12.0014X** issue No.:1

Certificate history:  
Issue No. 1 (2013-1-30)  
Issue No. 0 (2012-3-6)

Status: **Current**

Date of Issue: **2013-01-30** Page 1 of 5

Applicant: **EX Innovations Ltd., Trading as Raxton**  
Jepson Court  
Tancred Close  
Queensway  
Royal Leamington Spa  
Warwickshire CV31 3RZ  
**United Kingdom**

Electrical Apparatus: **Adaptors, Reducers and Stopping Plugs**  
Optional accessory:

Type of Protection: **Flameproof, Increased Safety and Protection by Enclosure**

Marking: **Types FB and FL Union Adaptors Types DG and DN Earthlead Adaptors and Reducers**  
Ex d I/IIC Mb/Gb  
Ex e I/IIC Mb/Gb  
Ex tb IIIC Db IP 6X  
**Inline Swivel Adapters**  
Ex d IIC Gb Ex e IIC Gb Ex d I Mb Ex e I Mb (not aluminium products)  
Ex tb IIIC Db IP 6X  
Ta = -20°C to +60°C  
**Type AB & AJ Adapters, Type BB & BJ Reducers and Types CK & CQ Stopping Plugs**  
Ex e IIC Gb, Ex t IIIC Db IP 6X

Approved for issue on behalf of the IECEx  
Certification Body:

A C Smith

Position:

Certification Manager

Signature:  
(for printed version)

Date:

2013-01-30

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:

**SIRA Certification Service**  
Rake Lane  
Eccleston  
Chester  
CH4 9JN  
**United Kingdom**

**sira**  
CERTIFICATION



# IECEx Certificate of Conformity

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Manufacturer: **EX Innovations Ltd., Trading as Raxton**  
Unit 1  
1 Kingsway South  
Westgate  
Aldridge WS9 8FS  
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 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:

<b>IEC 60079-0 : 2007-10</b> Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'
<b>IEC 60079-7 : 2006-07</b> Edition: 4	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 equipment listed has successfully met the examination and test requirements as recorded in*

##### Test Report:

[GB/SIR/ExTR12.0055/00](#)

##### Quality Assessment Report:

[GB/SIR/QAR07.0016/03](#)

[GB/SIR/QAR07.0016/04](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

Types FB and FL Union Adaptors  
Types DG and DN Earthlead Adaptors  
Type AB & AJ Adapters  
Type BB & BJ Reducers  
Types CK & CQ Stopping Plugs

Inline Swivel Adapters  
Male/Female: FA  
Female/Female: FC  
Male/Male: FD

Refer to the Annexe for the descriptions.

#### **Type AB & AJ Adapters, Type BB & BJ Reducers and Types CK & CQ Stopping Plugs**

##### **Conditions of manufacture**

The Manufacturer shall comply with the following:

1. The female threads of adaptors shall be restricted to one size larger than the male thread size.
2. When these entry devices are manufactured in Type BKV 140 material, they shall be to be marked with BKV 140.
3. These products shall be marked in accordance with the information as specified in this certificate and related reports.

### CONDITIONS OF CERTIFICATION: YES as shown below:

#### **Type AB & AJ Adapters, Type BB & BJ Reducers and Types CK & CQ Stopping Plugs**

- 1 All entry devices shall only be installed where there is a low risk from mechanical impact.
- 2 The stopping plugs shall not be used with any form of adaptors or reducers.
- 3 Only one adaptor or reducer is to be used with any single cable entry on the associated equipment.
- 4 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.
- 5 When manufactured in BKV 30 NI type material, the entry devices are suitable for a service temperature range of -20°C to +65°C.
- 6 When manufactured in BKV 140 type material, the entry devices are suitable for a service temperature range of -20°C to +45°C; items made from this material are marked with 'BKV 140'.
- 7 When the entry devices are manufactured in BKV 140 type material, they shall be protected from exposure to light; items made from this material are marked with 'BKV 140'.

**For Inline Swivel Adapters Conditions of Certification refer to EQUIPMENT (continued)**



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## EQUIPMENT(continued):

### Inline Swivel Adapters Conditions of Certification

- 1 As the swivel adapters do not dissipate any energy, they are not marked with a temperature classification.
- 2 Service temperature ranges have been applied as follows:

Type of protection	Service Temperature
Ex d I Mb	-20°C to +60°C*
Ex e I Mb	-50°C to +150°C*
Ex d IIC Gb	-20°C to +60°C*
Ex e IIC Gb	-50°C to +200°C*
Ex tb IIC Db	-50°C to +200°C*

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



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

### Issue 1 – this Issue introduced the following changes:

1.	The recognition that the company name and address has changed from Raxton Ltd, Westgate, Aldridge, West Midlands WS9 8FS to EX Innovations Ltd., Trading as Raxton at Jepson Court, Tancred Close, Queensway, Royal Leamington Spa, Warwickshire CV31 3RZ.
2.	The introduction of a Condition of Certification/Manufacture.

**Annexe to:** IECEx SIR 12.0014X Issue 1  
**Applicant:** EX Innovations Ltd., Trading as Raxton  
**Apparatus:** Types FB and FL Union Adaptors  
Types DG and DN Earthlead Adaptors  
Type AB & AJ Adapters  
Type BB & BJ Reducers  
Types CK & CQ Stopping Plugs



**Inline Swivel Adapters:**  
**Male/Female: FA**  
**Female/Female: FC**  
**Male/Male: FD**

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### **Types FB and FL Union Adaptors - Drawing No. 830 I**

The range of union adaptors is intended for in-line cable gland connection. Each union comprises two threaded entry components and a 'spinning' internal component. The components are assembled such that flamepaths are formed at both the entry threads and around the 'spinning' components and such that connection at both ends is achieved without twisting the cable.

The threads are between M16 and M75. Thread combinations are such that a maximum of one 'standard' size difference is maintained.

#### Material options:

- Brass to BS 2874:1985
- Brass to BS 2872:1989
- Stainless steel to BS 970: Part 4:1970
- Mild steel to BS 970: Part 1: 1983

#### Entry thread options:

- Metric to BS 3643:1981
- ET Conduit to BS 31:1940
- PG to DIN 40430:1971
- BSPP to BS 2779:1985
- BSPT to BS 21:1985
- NPT to ANSI/ASME B1.20.1-1983

### **Types DG and DN Earthlead Adaptors and Reducers - Drawing No. 833 I**

These are a range of adaptors and reducers, each comprising a hollow, brass, hexagonal body with a male thread at one end and a female thread at the other. The entry thread is between M16 and M75. Thread combinations are such that a maximum of one 'standard' size difference is maintained.

The components are designed to provide a connection from a cable gland or termination to earth via an earth lead cable riveted and soldered to the body, additionally, they may be used to convert an existing cable entry aperture to a different thread form and / or size.

#### Entry thread options:

- Metric to BS 3643:1981
- ET Conduit to BS 31:1940
- PG to DIN 40430:1971
- BSPP to BS 2779:1985
- BSPT to BS 21:1985
- NPT to ANSI/ASME B1.20.1-1983

**Annexe to:** IECEx SIR 12.0014X Issue 1

**Applicant:** EX Innovations Ltd., Trading as Raxton

**Apparatus:** Types FB and FL Union Adaptors  
Types DG and DN Earthlead Adaptors  
Type AB & AJ Adaptors  
Type BB & BJ Reducers  
Types CK & CQ Stopping Plugs

**Inline Swivel Adapters:**  
Male/Female: FA  
Female/Female: FC  
Male/Male: FD



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### **Inline Swivel Adapters – Drawing No. 840 I, 841**

The Range of Inline Swivel Adapters 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, 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 IP 66.

#### Inline type designations:

- Male/Female: FA
- Female/Female: FC
- Male/Male: FD

#### Material Options:

- Brass to BS 2874:1985 & CZ 121
- Stainless Steel to BS 970 Part 4:1970 & 316
- Mild Steel to BS 970 Part 1:1983 & 220 MO7
- Aluminium to BS 1474:1987 & 6082T6
- Aluminium Bronze to BS 1400:AB2

#### Entry Thread Options:

- Metric
- ET conduit
- PG
- BSPT
- BSPP
- NPT

**Date:** 17 January 2013

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**Form 9530 Issue 1**

### **Sira Certification Service**

Rake Lane, Eccleston, Chester, CH4 9JN, England

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Web: [www.siracertification.com](http://www.siracertification.com)

**Annexe to:** IECEx SIR 12.0014X Issue 1  
**Applicant:** EX Innovations Ltd., Trading as Raxton  
**Apparatus:** Types FB and FL Union Adaptors  
Types DG and DN Earthlead Adaptors  
Type AB & AJ Adaptors  
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Types CK & CQ Stopping Plugs



**Inline Swivel Adapters:**  
**Male/Female: FA**  
**Female/Female: FC**  
**Male/Male: FD**

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**Type AB & AJ Adaptors, Type BB & BJ Reducers and Types CK & CQ Stopping Plugs – Drawing No. IECEx 851, IECEx 852**

Types AB & AJ Adaptors and Types BB & BJ Reducers: these devices are designed to convert an existing cable entry aperture in the associated apparatus to a different threadform and/or size. Each device comprises a hollow body with a male thread at one end and a female thread at the other. The AB is a hexagon type adaptor and AJ is a round diameter Type adaptor. The BB is a hexagon type reducer and BJ is a round diameter type reducer. Thread adaptors can have thread sizes between M20 and M75 and thread reducers between M25 and M75.

Types CK & CQ Stopping Plugs: these are a range of threaded stopping plugs that are used to fill unused entries in the associated apparatus. The CK has a hexagon head key way and the CQ has a 'mushroom' head, the plugs can have thread sizes between M20 and M75.

**Material options:**

- Type Durethan BKV 30 N1 Glass Filled Nylon 6
- Type Durethan BKV 140 Glass Filled Nylon 6

**Entry thread options:**

- Metric to BS 3643:1981
- ET Conduit to BS 31:1940
- PG to DIN 40430:1971
- BSP to BS 21:1985
- NPT to ANSI/ASME B1.20.1-1983