

# EU TYPE-EXAMINATION CERTIFICATE

1. EU type-examination Certificate (Module B)
2. Component intended for use with Equipment or Protective System in potentially explosive atmospheres (Directive 2014/34/EU)
3. EU type examination certificate Nr **ITS 16 ATEX 101337U**



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|---|--|
| <ol style="list-style-type: none"> <li>4. <b>Component:</b> 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</li> <li>5. <b>Manufacturer:</b> EATON ELECTRICAL SYSTEMS Ltd Trading as Redapt or Raxton</li> <li>6. <b>Address:</b> Kingsway South<br/>Westgate, Aldridge<br/>West Midlands<br/>WS9 8FS<br/>UK</li> </ol> | <ol style="list-style-type: none"> <li><b>Applicant:</b> EATON ELECTRICAL SYSTEMS Ltd Trading as Redapt or Raxton</li> <li><b>Address:</b> Kingsway South<br/>Westgate, Aldridge<br/>West Midlands<br/>WS9 8FS<br/>UK</li> </ol> |
|---|--|
7. This component and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.
  8. INTERTEK ITALIA S.p.A., Notified Body n° 2575 in accordance with article 17 of the Directive 2014/34/EU of the European Parliament and Council of the 26 February 2014, certifies that the component has been found to comply with the essential Health and Safety Requirements relating to the design and construction of components intended for use in potentially explosive atmosphere, given in Annex II of the Directive.  
The examination and tests results are recorded in confidential technical evaluation Intertek Report Nr. G102174344C Issue 1 dated November 2016
  9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012, EN 60079-1:2014, EN 60079-7:2015 and EN 60079-31:2014 except in respect of those requirements referred to at item 16 of the Schedule.
  10. If the sign U placed after the certificate number indicates that this certificate must not be mistaken relative to an equipment or protective system.
  11. This EU-Type Examination Certificate relates only to the design and construction of the specified component. Further requirements of the Directive apply to the manufacturing process and supply of this component. These are not covered by this certificate.
  12. The marking of the component shall include the following:



I M2 Ex d I Mb  
I M2 Ex e I Mb  
II 2G Ex d IIC Gb  
II 2G Ex e IIC Gb  
II 2D Ex tb IIIC Db IP6X

04-10-2019

Certificate issue date

  
**Alessandro Savio**  
 Certification Officer  
 Intertek Italia S.p.A. (NB 2575)



PDR N° 277B

Membro degli Accordi di Mutuo Riconoscimento EA, IAF e ILAC

Signatory of EA, IAF and ILAC Mutual Recognition Agreements

This certificate has been issued by Intertek Italia S.p.A. NB 2575 on transfer from Intertek Testing & Certification Ltd. (NB 0359) using the same issued original certificate number



This Certificate is for the exclusive use of Intertek's client and is provided pursuant to the agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this Certificate. Only the Client is authorized to permit copying or distribution of this Certificate and then only in its entirety. Any use of the Intertek name or one of its marks for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek.

**Intertek Italia S.p.A.** Via Miglioli, 2/A - 20063 Cernusco sul Naviglio, Milano - Italy



## SCHEDULE

**EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS 16 ATEX 101337U**

### 13. DESCRIPTION OF COMPONENT

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.

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



## SCHEDULE

### EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS 16 ATEX 101337U

Conditions of manufacture

The Manufacturer shall comply with the following:

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

#### 14. DRAWINGS AND DOCUMENTS

| TITLE                               | DOCUMENT Nr                           | LEVEL | DATE     |
|-------------------------------------|---------------------------------------|-------|----------|
| FG-FN-FK SERIES 90 DEGREE ADAPTORS  | FG-FN-FK                              | 1     | 06-04-16 |
| TWIN INLET SWIVEL/INTEGRAL ADAPTORS | SWIVEL & TWIN INLET                   | 1     | 04-03-12 |
| MARKING DRAWING                     | IECEX ITS16.0010U<br>ITS16ATEX101337U | 1     | 15-11-16 |

Copies of the above listed documents are kept at Intertek Italia S.p.A. archive.

#### 15. LIMIT CONDITIONS FOR USE

- 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°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.

The Manufacturer shall comply with the following:

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

#### 16. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

The relevant essential Health and Safety Requirements have been identified and assessed in Intertek Report Nr. G102174344C Issue 1 dated November 2016.

#### 17. ROUTINE (FACTORY) TESTS

None

#### 18. DETAIL OF CERTIFICATE CHANGES

None.