

# EU TYPE-EXAMINATION CERTIFICATE

1. EU type-examination Certificate (Module B)
2. Equipment or Protective System intended for use in potentially explosive atmospheres (Directive 2014/34/EU)



3. EU type examination certificate Nr **ITS16ATEX101339X**

4. **Product:** AD-U, AM-D/AM-U, AF-U, AD-E4 Thread Adapters, RD-U, RD-E4 Reducers and AE-E Earthlead Adapters, Reducers, UN-D / UN-U, UF-D / UF-U, FB and FL Unions

5. **Manufacturer:** EATON ELECTRICAL SYSTEMS Ltd Trading as Eaton, Raxton, Redapt or Capri

6. **Address:** Kingsway South  
Westgate, Aldridge  
West Midlands  
WS9 8FS

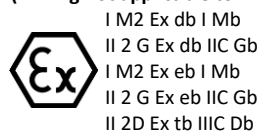
7. This product and any acceptable variation thereto are specified in the schedule to this certificate and therein referred to.

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 equipment or protective system has been found to comply with the essential Health and Safety Requirements relating to the design and construction of equipment and protective system 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. G102174344E Issue: 1 Dated: September 2016, G103326730 Issue 1 dated April 2018, 103717291LHD-001e dated April 2019 and 104039337LHD-001d dated August 2019.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards EN 60079-0:2012+A11:2013, EN 60079-1:2014, EN 60079-7:2015+A1:2018 and EN 60079-31:2014 except in respect of those requirements referred to at item 16 of the Schedule.
10. If the sign X is placed after the certificate number, it indicates that the product is subject to Special Conditions for Safe Use specified in the schedule to this certificate.
11. This EU-Type Examination Certificate relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.
12. The marking of the product shall include the following:

**Types AD-U, AM-D/AM-U, AF-U Thread Adapters, RD-U Reducers and UN-D / UN-U, UF-D / UF-U, FB and FL Unions (Mining not applicable to Aluminium version)**



**Type AE-E earth lead Adapters, Reducers (Mining not applicable to Aluminium version)**



**Type AD-E 4 Thread Adapters or RD-E4 Reducers**



4 November 2020

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: ITS16ATEX101339X

### 13. DESCRIPTION OF THE EQUIPMENT OR PROTECTIVE SYSTEM

#### Adaptors and Reducers

The ranges of thread adaptors and reducers each comprise a hollow body with an external male thread and an internal female thread. The devices are used to convert an existing cable entry aperture thread to a different thread form and / or size. The adaptors and reducers may optionally be machined with a groove to fit an 'o' ring seal. An increase of up to two step thread sizes is permitted on the AD-U series.

**AD-U and RD-U** Series – Metallic hexagonal or round bodied adaptors (AD-U) or reducers (RD-U)

Coded: Ex db I/IIC Mb/Gb, Ex eb I/IIC Mb/ Gb Ex tb IIIC Db

M12 TO M120 (or equivalent thread forms)

The **AM-D / AM-U** range of Male to Male thread adaptors each comprises a hexagon body with a male thread form at each end. The devices are used to convert an existing cable entry aperture thread to a different thread form and/or size. Coded: Ex db I/IIC Mb/Gb, Ex eb I/IIC Mb/ Gb Ex tb IIIC Db

M16 TO M90 (or equivalent thread forms)

The **AF-U** range of Female to Female thread adaptors each comprises a hexagon body with a female thread form at each end. The devices are used to convert an existing cable entry aperture thread to a different thread form and/or size. Coded: Ex db I/IIC Mb/Gb, Ex eb I/IIC Mb/ Gb Ex tb IIIC Db

M16 TO M120 (or equivalent thread forms)

Types **AD-E4** Adaptors and Types **RD-E4** Reducers are glass fibre nylon versions, 30% Glass filled Nylon is the standard material type and 40% Glass filled Nylon is a specific type. They are designed to convert an existing cable entry aperture in the associated apparatus to a different thread form and/or size. Each device comprises a hollow body with a male thread at one end and a female thread at the other. The AD-E4 is a hexagon type adaptor. The RD-E4 is a hexagon type reducer.

Coded: Ex eb IIC Gb, Ex tb IIIC Db

The **AE-E** Series range of earth lead adaptors and reducers each comprise a hexagon body with a male thread at one end and a female thread machined into the other. The devices are designed to provide a connection from a cable gland or termination to earth via a 300mm long earth lead cable riveted and soldered to the body and additionally may be used to convert an existing cable entry aperture thread to a different thread form and/or size. Coded Ex eb IIC Gb Ex tb IIIC Db IP6X

M16 TO M75 (or equivalent thread forms)

Type **UN-D / UN-U and FB** Male to Female Unions and **UF-D / UF-U and FL** Female to Female Unions each comprise a hexagon body, an internally threaded cone and an external nut. The devices are designed for connection when a conventional adaptor is impractical. Additionally, they may be used to convert an existing cable entry to a different thread form and/or size.

Coded: Ex db I/IIC Mb/Gb, Ex eb I/IIC Mb/ Gb Ex tb IIIC Db IP6X

M16 TO M75 (or equivalent thread forms)

Thread forms Options:

ISO Metric (to BS3463), PG to DIN40430, NPT (ANSI/ASME B1.20.1), NPS (ANSI/ASME B1.20.1), ISO Pipe Thread (BS21) BSPP/BSPT, Imperial conduit ET BS31BSP to BS21 or thread forms complying with standard EN 60079-1.



## SCHEDULE

### EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS16ATEX101339X

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

Aluminium (Not for Group I options)

30 % Glass filled Nylon -30°C to +90°C

40% Glass filled Nylon -20°C to +45°C

CE Marking shall be accompanied by the identification number of the Notified Body responsible for surveillance of production.

## 14. DRAWINGS AND DOCUMENTS

TITLE	DOCUMENT Nr	LEVEL	DATE
Ex d I&IIC AND Exe I&II ADAPTORS AD-U 1 08/03/16	AD-U	1	08-03-2016
Ex e II CERTIFIED G.F.N ADAPTORS & REDUCERS	AD / RD-E4	2	09-07-2019
Ex e II CERTIFIED EARTH LEAD ADAPTORS	AE-E Adaptor	1	09-03-2016
Ex e II CERTIFIED EARTH LEAD REDUCER	AE-E Reducer	1	09-03-2016
Ex d I&IIC & Ex e I&II F x F ADAPTOR/ REDUCER	AF-U	1	08-03-2016
MALE x MALE ADAPTOR / REDUCER	AM-U	1	08-03-2016
Ex d I&IIC & Exe I &II REDUCERS	RD-U	1	08-03-2016
Exd/ Exe IIC UNIONS	UN-U/ UF-U	1	08-03-2016
FB-FL SERIES UNIONS	FB-FL	1	05-04-2016
Marking Drawing	IECExITS16.0013X ITS16ATEX101339X	1	15-11-2016

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

## 15. SPECIAL CONDITIONS FOR SAFE USE

- When used in flameproof applications, only one adaptor or reducer is to be used with any single cable entry on the associated equipment. (Only applicable to flameproof applications).
- 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.
- Aluminum variants are not permitted for Group I applications
- At their point of mounting, these devices are suitable for use at the following temperatures dependent on the type of 'o'-ring:

O-ring Service temperature

Material	Service Temperature
None fitted	-60°C to 200°C*
EPDM	-50°C to +100°C



## SCHEDULE

### EU TYPE EXAMINATION CERTIFICATE NUMBER: ITS16ATEX101339X

Nitrile	-30°C to +80°C
Neoprene	-40°C to +80°C
Viton	-20°C to +180°C*
Silicone	-60°C to +180°C *
Fluorosilicone	-60°C to +130°C
30% Glass Filled Nylon	-30°C to +90°C
40% Glass Filled Nylon	-20°C to +45°C

**Note:** The limiting temperatures specified above are de-rated by 20K according to Clause 7.2.2 'Material Selection' of EN 60079-0:2012+A11:2013.

**Note:** The maximum temperature is limited to 150°C in Group I application (Coal dust, Mining) O-ring materials affect marked with '\*' above.

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

#### Conditions specific to type:

##### AD-U Adaptors and RD-U Reducers

1. When installed in Group I applications, the ADU M12 (M) to M20 (F) adaptors manufactured in brass shall be installed where the risk of impact is low

##### AE-E Earth Lead Adaptors and Reducer

2. At their point of mounting, these devices are suitable for use at -20°C to +40°C.

## 16. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

The relevant essential Health and Safety Requirements have been identified and assessed in Intertek Report Nr. G102174344E Issue: 1 Dated: September 2016, G103326730 Issue 1 dated April 2018, 103717291LHD-001e dated April 2019 and 104039337LHD-001d dated August 2019.

## 17. ROUTINE (FACTORY) TESTS

- The female threads of adaptors shall be restricted to two sizes larger than the male thread size.
- When these entry devices are manufactured in Type 40% Glass Filled Nylon material, they shall be to be marked with '40% Glass Filled Nylon' as applicable
- These products shall be marked in accordance with the information as specified in this certificate and related reports.
- Aluminum variants, where applicable, are not permitted for Group I applications. The manufacturer shall ensure that the equipment is marked appropriately
- In accordance with EN 60079-1, the coating on joint surfaces of metallic devices that are electroplated shall be not more than 0.008mm thick.

## 18. DETAIL OF CERTIFICATE CHANGES

None.