



EU-Type Examination Certificate



1. **EU-TYPE EXAMINATION CERTIFICATE**
2. **Component Intended for use on/in an Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**
3. **EU-Type Examination Certificate Number: ITS16ATEX101340U Issue 0**
4. **Product:** Right angle 90° AR-D Series of Adaptors / Reducers, Swivel Adaptor/Reducers. Male-Female TPU and TAU. Female-Female TQU and TCU, Male to Male TRU and TDU, Twin or Single Inlet Fixed or Swivel Adaptor/Reducer AYU, ATU ASU
5. **Manufacturer:** EATON ELECTRICAL SYSTEMS Ltd Trading as Redapt or Raxton
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 the documents therein referred to.
8. Intertek Testing and Certification Limited, Notified Body number 0359 in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that the product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of the product intended for use in potentially explosive atmospheres given in Annex II to the Directive.
The examination and test results are recorded in confidential Intertek Report Ref G102174344F Issue 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. The sign "U" is placed after the certificate number. It indicates that this certificate must not be mistaken for a certificate intended for an equipment or protective system. This partial certification may be used as a basis for certification of an equipment of protective system.
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:-
 II 2 GD / I M2
Ex db I Mb, Ex eb I Mb (Not aluminium or AR-D products)
Ex db IIC Gb, Ex eb IIC Gb
Ex tb IIIC Db IP 66

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V K Varma
Certification Officer
05th Dec 2016



SCHEDULE

13. EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS16ATEX101340U Description of Component

The **AR-D** series range of 90 ° thread adaptors and reducers each comprise a body with either male/ female or female/ female threads machined into the body at 90°C to the male thread. The components are designed to provide cable entry options where space is limited to avoid cable damage. Additionally, they may be used to convert an existing cable entry aperture thread to a different thread form and/ or size. Thread forms are between M16 and M75 inclusive. Coded Ex d IIC Gb, Ex E IIC Gb, Ex tb IIIC Db.

The **TAU, TCU, TDU, TPU, TQU, TRU, AYU, ATU, and ASU** range Twin or Single Inlet Fixed or Swivel adapters and reducers are designed to convert existing cable entries to different thread forms and/or sizes where space may be limited as to avoid cable damage. Threads available are between M16 to M75.

Each device comprises of two or three threaded entry parts and a 'spinning' internal component. The components are assembled such that flamepaths are formed at both entry threads and around the spinning components (this flamepath is not required for Exe applications only) and such that connection at both ends is achieved without twisting the cable.

The range of 90° swivel adapters can be fitted within an Ex d IIC Gb, Ex e IIC Gb, Ex tb IIIC Db enclosure or any combination provided the applicable Code of Practice is complied with.

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)

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

The following special points for noting apply:

Service temperature range limitations are listed below

Type of protection Service Temperature

Ex db I Mb -50°C to +150°C* #

Ex eb I Mb -50°C to +150°C*

Ex db IIC Gb -50°C to +150°C* #

Ex eb IIC Gb -50°C to +150°C*

Ex tb IIIC Db -50°C to +150°C*

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

#: Flameproof devices which are constructed entirely from metallic materials, such as the AYU, ATU and ASU, are considered suitable for temperature range of -60°C to +200°C. However, the flameproof properties at these extreme temperatures should be assessed with the associated enclosure.

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Conditions of manufacture

The Manufacturer shall comply with the following:

1. These products shall be marked in accordance with the information as specified in this certificate and related reports.
2. The adapters, when installed in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66.

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14. Report Number

Intertek Report Ref: G102174344F Issue: 1 Dated: November 2016

15. Conditions of Certification

(a). 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°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.

(b). Conditions of Manufacture - Routine Tests

The Manufacturer shall comply with the following:

1. These products shall be marked in accordance with the information as specified in this certificate and related reports.
2. The adapters, when installed in accordance with the manufacturer's instructions, are capable of providing, with an enclosure on which they are fixed, an ingress protection rating of IP 66.

16. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report Ref: G102174344F Issue: 1 Dated: November 2016

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This Certificate is the property of Intertek Testing and Certification Ltd and is subject to Intertek Testing and Certification's Conditions for Granting Certification

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.

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17. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
Exd/Exe IIC 90 DEGREE ADAPTOR/REDUCER	AR-U	1	08-03-16
TWIN INLET SWIVEL/INTEGRAL ADAPTOR	SWIVEL & TWIN INLET	1	04-03-16
SWIVEL & TWIN INLET	TYPE	1	04-03-12
MALE – MALE/ FEMALE – FEMALE ADAPTORS	AR-AU-AX SERIES	1	05-04-16
SWIVEL 90 DEG	TYPE TP-TQ-TR	1	29-03-16
MARKING DRWAING	ITS16ATEX101340U IECEX ITS16.0015U	1	15-11-16