# EU-Type Examination Certificate

1. **EU-TYPE EXAMINATION CERTIFICATE**

2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**

3. **EU-Type Examination Certificate Number: ITS09ATEX16846X Issue 1**

4. **Product:** Incremental and Absolute Encoder REXM

5. **Manufacturer:** Scancon Encoders A/S

6. **Address:** Huginsvej 8, DK-3400, Hilleroed, Denmark

7. This product and any acceptable variation thereto is 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 products 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 103276072CHE-001 dated March 2018.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2012+A11:2013, EN 60079-1:2014 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 Specific Conditions of 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:

    I M2 Ex db I Mb
    II 2 G Ex db IIC T5 Gb
    II 2 D Ex tb IIIC T100°C Db
    -40°C<Tamb<+70 °C

P Moss
Certification Officer
22nd March 2018

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## 13. Description of Equipment or Protective System

The Encoder Type REXM is a small cylindrical unit (68mm in diameter with length dependent on model) containing low voltage electronic components. The enclosure is manufactured from either stainless steel or acid-proof stainless steel. The enclosure comprises of cylindrical flamepaths between the End Cap & Cover Tube and Cover Tube & Housing. The rotating shaft forms a cylindrical flamepath through the housing controlled by k & m factors and is held in place with 2 precision roller element bearings. The enclosure has one threaded cable entry fitted with either a certified M20x1.5, M25x1.5, 1/2" NPT or 3/4" NPT cable gland or an M15 integral cable gland. Both internal and external earthing is provided.

## 14. Report Number

Intertek Report 103276072CHE-001 dated March 2018.

## 15. Special Conditions of Certification

(a). Specific Conditions of Safe Use

- Minimize the risk from electrostatic discharge - clean only with a damp cloth.
- Temperature at the cable gland or branching point could exceed 70°C or 80°C respectively - suitably rated cable must be utilized.
- It is a condition of certification that the flamepaths have to comply with the manufacturers drawings and can only be repaired by the manufacturer.
- The fasteners used to secure enclosure body to end shields shall have a minimum yield stress of 450 MPa.
- For models without integral cable gland use only suitably certified Ex db I Mb/Ex db IIC Gb and Ex tb IIIC Db cable glands, thread adaptors and blanking elements.
- When installed in mining areas the enclosure must be protected from high risk impacts.
- It is a condition of certification that precautions must be taken to avoid dust from forming layers on the encoder.

(b). Conditions of Manufacture - Routine Tests

- None.

## 16. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report 103276072CHE-001 dated March 2018.

## 17. Drawings and Documents

| Title: | Drawing No.: | Rev. Level: | Date: |
|---|---|---|---|
| *Certification drawing – H.Shaft/shaft for 2REX/REXM Ex dwg | 00131738C | 3 | 29-11-2017 |
| *Certification drawing – Housing for 2REXI-2REX-REXM Ex dwg | 00132210C | 8 | 29-11-2017 |
| *Certification drawing – End Cap for 2REX/REXM Ex-dwg | 00132416C | 3 | 29-11-2017 |
| *Certification drawing – Cover Tube 2REX/REXM Ex-dwg | 00132417C | 2 | 29-11-2017 |
| *Certification drawing – Cap 2REX/REXM Ex dwg | 00132573C | 2 | 29-11-2017 |
| *Certification drawing – Cap 2REX/REXM Ex dwg | 00132616C | 2 | 29-11-2017 |
| *Seal Ø4,5 ZruElast 70189 Ex dwg | 00141224 | 4 | 29-11-2017 |
| *Certification drawing – Cable Gland M15x1 | 00142425C | 2 | 29-11-2017 |
| *Warning Label Label for mining and surface Ex-dwg. | 00142898 | 7 | 17.05.2017 |
| *Seal Ø7 ZruElast 70189 Ex dwg | 00143108 | 7 | 29-11-2017 |
| *Internal / external earthing 2REX-REXM | 00230838C | 1 | 29-11-2017 |

**SCHEDULE**

**EU-TYPE EXAMINATION CERTIFICATE NUMBER ITS09ATEX16846X Issue 1**

| | | | |
|---|---|---|---|
| *Allen screw M4x16 ISO4762 A4-80 | 07130086 | 5 | 06-07-2017 |
| *Allen screw M4x10 ISO4762 A4-80 | 07130091 | 4 | 29-11-2017 |
| *Allen screw M4x12 ISO4762 A4-80 | 07130094 | 3 | 17-05-2017 |
| *Allen screw M4x35 ISO4762 A4-80 | 07130097 | 4 | 17-05-2017 |
| *Ring Cable Shoe Yellow – M4 | 06300054 | 1 | 09-07-2013 |
| *Allen screw M4x10 ISO4762 A2-70 | 07130056 | 3 | 18-10-2012 |
| *Allen screw M4x12 ISO4762 A2-70 | 07130059 | 3 | 18-10-2012 |
| *Allen Screw M4x35 ISO4762 A2-70 | 07130063 | 3 | 18-10-2012 |
| Encoder type 2REXI, 2REX, REXM. M&k calculation Ex-dwg | 00132087 | 2 | 11.10.04 |
| Washer Ø7/Ø13/x1 | 07150039 | 1 | 29-09-2009 |
| *Certification drawing – Rotary-Shaft Seal | 00230847C | 1 | 18-01-2018 |
| *Certification drawing – O-ring Ex dwg | 00230849C | 1 | 16-01-2018 |
| *REXM Ordering code Ex-dwg. | 00141198 | 15 | 29-11-2017 |
| *REXM marking label Ex-dwg. | 00141199 | 5 | 29.11.2017 |
| *Type REXM Installation Guide | 00240841 | 1 | 29 Nov. 2017 |

*Note: An * is included before the title of documents that are new or revised.*

**18. Details of Certificate changes**

| Issue/Variation No | Date | Details of change |
|---|---|---|
| Original Issue | 13th April 2010 | Original issue.<br>Report Number INT-CH3588 – 09 042179/1/2/3 dated April 2010. |
| Variation 1 | 6th December 2012 | 1. Increase of upper ambient from +54°C to +70°C.<br>2. Update to EN 60079-0:2012.<br>3. Update to EN 60079-31:2009.<br>Report Number 10045123 dated November 2012. |
| Variation 2 | 28th April 2015 | Change of address.<br>Report Number 101936470MAN-001 dated March 2015. |
| Issue 1 | This issue | 1. Inclusion of new type of rotary seal.<br>2. Inclusion of alternative type of O-ring.<br>3. Update to EN 60079-1:2014.<br>4. Update to EN 60079-31:2014.<br>5. Change of QAN issuer.<br>6. Minor drawing changes not compromising the IECEx certification.<br>Report Number 103276072CHE-001 dated March 2018. |