

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: ITS09ATEX16841X Issue 06**
4. **Product:** Incremental Encoder type SCA86EX, SCH86BEX & SCH86FEX
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 103054906CHE-001 dated September 2017.
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:



II 2 GD
Ex db IIC T5 Gb
Ex tb IIIC T100°C Db
-40°C<Tamb<+70 °C

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P Moss
Certification Officer
02 October 2017



SCHEDULE

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13. Description of Equipment or Protective System

The Incremental Encoder types SCA86EX, SCH86BEX, SCH86FEX are small enclosures manufactured from stainless steel or aluminium available in a "U"-shape with removable end or in a "drop-shape" with non-removable end cap version with approximate dimensions of 70mm x 86mm x 130mm. These enclosures are populated with electronics and have a shaft passing through the main body. The shaft may be solid or hollow and with one or two ends free. The encoder designations detail the type of shaft used as follows; SCA86EX – Solid Shaft, SCH86BEX – Hollow Shaft, SCH86FEX – Hollow Shaft. The enclosures comprise of cylindrical flamepaths between the Housing & End Cap, End Cap & Cover (when "U"-shaped enclosure used). The rotating shaft also 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 is provided with either one or two threaded cable entries which are fitted with either a certified M20 or M25 cable gland. Alternatively the equipment can have either one or two holes in NPT size $\leq 3/4"$. Both internal and external earthing is provided.

Note: Optionally the encoder can be fitted with an optical transmitter – the optical radiation output of the apparatus with respect to explosion protection is covered in this certificate based on Exception 3) to the scope of IEC 60079-28:2015.

14. Report Number

Intertek Report 103054906CHE-001 dated September 2017.

15. Special Conditions of Certification

(a). Specific Conditions of Safe Use

- Minimize the risk from electrostatic discharge - clean only with a damp cloth.
- Temperatures at the cable entry can reach 90 °C. Selection of cable must be appropriate for the ambient temperature range in which the product is used.
- No modifications must be made to the flamepaths of the enclosure without consultation to the manufacturer's drawings.
- Use only fasteners with minimum yield stress of 450MPa.
- Use only suitably certified Ex db IIC Gb and Ex tb IIIC Db cable glands.
- Use only suitably certified Ex db IIC Gb and Ex tb IIIC Db blanking elements.
- Use only suitably certified Ex db IIC Gb and Ex tb IIIC Db thread adapters.

(b). Conditions of Manufacture - Routine Tests

- None.



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16. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report 103054906CHE-001 dated September 2017.

17. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
*Certification drawing – Housing SC86EX Ex dwg	00132575C	5	06-07-2017
*Certification drawing – End Cap SC86EX Ex dwg	00132576C	4	06-07-2017
*Certification drawing – Cap SC86EX Ex dwg	00132820C	4	06-07-2017
*Certification drawing – Cover SC86EX Ex dwg	00132819C	5	06-07-2017
*Certification drawing – hollow shaft SC86EX EX dwg	00132577C	4	06-07-2017
*Certification drawing – Shaft SC86EX EX dwg	00132578C	4	06-07-2017
*Internal/external earthing SC86EX-XM	00132829C	3	06-07-2017
Encoder type SC86EX, SC86XM “k” calculation Ex-dwg	00132813A	2	05.05.2015
Encoder type SC86EX, SC86XM “m” calculation Ex-dwg	00132813B	2	05.05.2015
Encoder type SC86EX, SC86XM “k” calculation Ex-dwg	00132814A	2	05.05.2015
Encoder type SC86EX, SC86XM “m” calculation Ex-dwg	00132814B	2	05.05.2015
SC86EX-SC86XM Wall Thickness, vol, screws	00132827	2	06-01-2014
Allen screw M4x12 ISO4762 A2-70	07130059	3	18-10-2012
*Allen screw M4x12 ISO4762 A4-80	07130094	3	17-05-2017
*Allen screw M4x16 ISO4762 A4-80	07130086	5	06-07-2017
Ring Cable Shoe Yellow – M4	06300054	1	09-07-2013
*Warning Label Label for mining and surface Ex-dwg.	00142898	7	17.05.2017
*SC86EX ordering code surface Ex-dwg	00142828	3	06.07.2017
*SCA86EX, SCH86BEX SCH86FEX Marking drawing – surface Ex-dwg	00142581	8	06.07.2017
*Type SC86EX Installation Guide	00141508	11	06 July 2017
*Certification drawing – SC86EX-FO	90230763C	1	19-09-2017

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

