

Type Examination Certificate



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1. **TYPE EXAMINATION CERTIFICATE**
2. **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU**
3. **Type Examination Certificate Number: ITS08ATEX42972X Issue 3**
4. **Product:** Incremental and Absolute Encoder Type 2QEX
5. **Manufacturer:** Scancon Encoders A/S
6. **Address:** Huginsvej 8, 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, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of the products intended for use in potentially explosive atmospheres given in Annex II to the Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential Intertek Report 103448014CHE-001 dated 18 October 2018.
9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with EN 60079-0:2018, EN 60079-15:2010 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 equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.
11. This Type Examination Certificate relates only to the design of the specified product and not to specific items subsequently manufactured.
12. The marking of the product shall include the following:-



II 3 G Ex nA IIC T4 Gc
II 3 D Ex tc IIIC T_{max}100°C Dc

-40°C ≤ Ta ≤ 70°C*

*upper ambient of encoders fitted with Rota connector restricted to a maximum of +60°C

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P Moss
Certification Officer
19th October 2018



SCHEDULE

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13. Description of Equipment or Protective System

The Incremental and Absolute Encoder type 2QEX is a small aluminium enclosure containing electronics and a shaft. The shaft is designed with 2 precision ball bearings and is provided with a solid shaft. All external connections are provided through one connector (MIL style or ATEX approved as per BASEEFA09ATEX0038X) or a single threaded entry and approved cable gland. The enclosure measures approximately 62mm x 90mm x 70mm. Additionally the equipment has been found to meet IP64/65/66/67 in accordance with IEC 60529.

14. Report Number

Intertek Report 103448014CHE-001 dated 18 October 2018.

15. Conditions of Certification

(a). Specific Conditions of Safe Use

- Temperature at the cable gland or branching point could exceed 90°C - suitably rated cable must be utilized.
- When fitted connectors must have their dust covers immediately put fully back in position when the connectors are not in use.
- Potential electrostatic charging hazard – see instructions.

(b). Conditions of Manufacture - Routine Tests

- A dielectric strength test shall be carried out in accordance with clause 23.2.1 of EN 60079-15:2010 between the live/neutral supply pins and earth. Test voltage 500V r.m.s. (+5%,-0%). Test duration minimum of 60 seconds. Alternatively, the test shall be carried out at 1.2 times the above test voltage but shall be maintained for at least 100ms. The use of a d.c. test voltage is allowed as an alternative to the specified a.c. test voltage and shall be at 140% of the specified a.c. r.m.s test. Details of test must be recorded and records maintained.

16. Essential Health and Safety Requirements (EHSRs)

The relevant Essential Health and Safety Requirements (EHSRs) have been identified and assessed in Intertek Report 103448014CHE-001 dated 18 October 2018.

17. Drawings and Documents

Title:	Drawing No.:	Rev. Level:	Date:
*2QEX Internal/external earthing	00133121	4	08-10-2018
*Certification drawing – housing 2QEX Ex dwg	00133136C	3	20-04-2018
*2QEX Marking Label Ex-dwg.	00143119	3	20.04.2018
*Type 2QEX Installation Guide	00143123	3	20 April 2018
*Warning Label 2QEX	00143126	3	12-10-2018
*2QEX ordering code Ex-dwg.	00143139	3	20.04.2018
*Certification drawing – 2QEX Cap with MIL connector Ex dwg	00230124C	4	20-04-2018
*Certification drawing – 2QEX Cap with cable gland Ex dwg	00230141C	4	20-04-2018
*Certification drawing – 2QEX Cap with connector Ex dwg	00230142C	4	20-04-2018
*Certification drawing 2QEX – shaft Ex dwg	00230250C	2	20-04-2018
*Certification drawing – Rotary-Shaft Seal	00230847C	1	18-01-2018

EU-Type Examination Certificate



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*Certification drawing – O-ring Ex dwg	00230849C	1	16-01-2018
*2QEX with Rota connector Marking Label Ex-dwg.	00240088	3	20.04.2018
*PCB SC0241 component and layout details – Absolute SSI encoder 2QEX.	00240976	1	04-10-2018
*PCB SC0803 component and layout details – Incremental encoder 2QEX.	00240977	1	04-10-2018

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

18. Details of Certificate changes

Issue	Date	Change
Original issue	12 February 2009	<p>Original Issue; Assessment Standards: EN60079-0: 2006, EN60079-15: 2005, EN 61241-0:2006 and EN 61241-1:2006.</p> <p>Marking:</p> <p> II 3 G Ex nA IIC T5 Tamb -20°C to +85°C II 3 D Ex tD A22 IP64 T95°C</p> <p>Refer to report ETS2965 dated 23-09-2008 and ETS2965/A/V1 dated 22-01-2009.</p>
Variation 1	04 November 2009	<p>Addition of optional end caps providing PG7 and PG9 cable entries. Suitably certified cable glands may be used. Minor revisions in schedule drawings.</p> <p>Refer to report ETS3589 dated 09 October 2009.</p>
Variation 2	22 June 2015	<p>Update manufacturing address from “Tranevang 1, 3450 Allerød, Denmark” to “Huginsvej 8, 3400 Hillerød, Denmark”.</p> <p>Refer to report 101936470MAN-001 dated March 2015.</p>
Issue 2	10 November 2015	<p>Update the associated standards to EN 60079-0:2012 +A11:2013, EN 60079-15: 2010 & EN 60079-31:2014. Update the description and marking.</p> <p>Refer to report 101804741CHE-002 dated November 2015.</p>
Issue 3	This issue	<ol style="list-style-type: none">1. Inclusion of new type of rotary seal.2. Inclusion of alternative type of O-ring.3. Inclusion of Absolute Encoder version.4. Update from EN 60079-0:2012+A11:2013 to EN 60079-0:2018.5. Change of QAN/QAR issuer.6. Minor drawing changes not compromising the IECEx certification. <p>Refer to report 103448014CHE-001 dated 18 October 2018.</p>

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