

# TYPE-EXAMINATION CERTIFICATE

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



3. Type examination certificate Nr **ITS 08 ATEX 42972X R.1**

4. **Product:** Incremental and Absolute Encoder Type 2QEX

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

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

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., 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 Reports: ETS2965 dated 23-09-2008 and ETS2965/A/V1 dated 22-01-2009, ETS3589 dated 09 October 2009, 101936470MAN-001 dated March 2015, 101804741CHE-002 dated November 2015, 103448014CHE-001 dated 18 October 2018.

9. Compliance with the Essential Health and Safety Requirements has been assured by compliance with standards EN IEC 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 product 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 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 3G Ex nA IIC T4 Gc  
II 3D Ex tc IIIC T100°C Dc  
Tamb: -40°C to +70°C\*  
\*upper ambient of encoders fitted with Rota connector restricted to a maximum of +60°C.

13<sup>th</sup> January 2020  
Certificate issue date



**Fabrizio Massei**  
Certification Officer  
Intertek Italia S.p.A.

This certificate has been issued by Intertek Italia S.p.A. on transfer from Intertek Testing & Certification Ltd. 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

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

The Incremental and Absolute Encoder type 2QEX is a small aluminum 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. DRAWINGS AND DOCUMENTS

TITLE	DOCUMENT Nr	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
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

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



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### 15. SPECIAL CONDITIONS FOR SAFE USE

- Temperature at the cable gland or branching point could exceed 90°C - suitably rated cable must be utilized.
- 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.

### 16. ESSENTIAL HEALTH AND SAFETY REQUIREMENTS

The relevant essential Health and Safety Requirements have been identified and assessed in Intertek Reports: ETS2965 dated 23-09-2008 and ETS2965/A/V1 dated 22-01-2009, ETS3589 dated 09 October 2009, 101936470MAN-001 dated March 2015, 101804741CHE-002 dated November 2015, 103448014CHE-001 dated 18 October 2018.

### 17. ROUTINE (FACTORY) 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.

### 18. DETAIL OF CERTIFICATE CHANGES

R.1: corrections made to “Drawings and document” section 14. Drawings No. 06300085 , 90131476, 90131814, 90132243, 90131706, 90131876, 90132884, 90230066 removed as no longer forming part of schedule drawings.