



IECEX Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEX QPS 15.0015X** Page 1 of 6 Certificate history:
Status: **Current** Issue No: 3 Issue 2 (2017-01-11)
Date of Issue: 2018-03-09 Issue 1 (2016-11-21)
Applicant: **Scancon Encoders A/S** Issue 0 (2015-12-07)
Huginvej 8
3400 Hilleroed
Denmark
Equipment: **SCA108EX, SCH108BEX & SCH108FEX Type Encoders**
Optional accessory:
Type of Protection: **Flameproof 'd', By Enclosure 't'**
Marking: Ex db IIB+H2 T5 Gb
Ex tb III C T100 °C Db
Tamb=-40 °C to +70 °C
IECEX QPS 15.0015X
9 – 30 V dc; 3000 rpm max.

Approved for issue on behalf of the IECEx
Certification Body:

D, Adams, P.Eng.

Position:

Manager, Hazardous Locations Department [Ex Equipment]

Signature:
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

**QPS
Evaluation Services Inc.
81 Kelfield St
Unit 8
Toronto, Ontario M9W 5A3
Canada**





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Manufacturer: **Scancon Encoders A/S**
Huginsvej 8
3400 Hilleroed
Denmark

Additional
manufacturing
locations:

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2011 Explosive atmospheres - Part 0: General requirements
Edition:6.0

IEC 60079-1:2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
Edition:7.0

IEC 60079-31:2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"
Edition:2

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[CA/QPS/ExTR15.0009/02](#)

[CA/QPS/ExTR15.0009/03](#)

Quality Assessment Report:

[GB/EXV/QAR17.0015/00](#)



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EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

The Incremental Absolute Encoder types SCA108EX , SCH108BEX & SCH108FEX are small encoders manufactured from stainless steel or aluminium available in a "U"-shape with approximate dimensions of 110 mm x 108 mm x 162 mm. These encoders 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 contain a backup battery: primary lithium battery of type LS 14250 (lithium-thionyl chloride – Li-SOCl₂), size ½ R6 – ½ AA 3.6 V nominal. The battery is not supposed to be replaced in the lifetime of the encoder.

Rotation speed of the encoder shaft is limited to 3000 rpm.

Additionally the encoders meet IP65/66/67/68 (1 hour/ 1 meter) in accordance to IEC 60529.

The encoder designations detail:

SC*108Ex - ***** - ** - ** - ** - ** - ** - ** - * - **

A B C D E F G H I J

A..... the type of shaft used as follows:

SCA108Ex – Solid Shaft

SCH108BEx – Trough Hollow Shaft

SCH108FEx – Hollow Shaft

B..... output definition: singleturn / multiturn-D(Dual output) (e.g. "13/12-D")

C..... material: AISI316 (SR) / AISI316 (SA) or EN AW 6026 (AL)

D..... output protocol: ProfiBUS / Ethernet (e.g. "DP")

E..... shaft, diameter type (e.g. "03")

F..... shaft, length/depth (e.g. "12")

G..... IP rating (e.g. "65")

H..... type of cable outlet (e.g. "AA")

I.....flange type (e.g. "A")

J..... accessory (e.g. if none "00")

SPECIFIC CONDITIONS OF USE: YES as shown below:

- No modifications may be made to the flamepaths of the enclosure without consultation to the manufacturer's drawings.
- No user replaceable items inside - including internal backup battery.
- Use only fasteners with property class A*-70 with a yield stress \geq 450 MPa.
- Use only suitably certified Ex d/db and/or Ex tb cable glands.
- Use only suitably certified Ex d/db and/or Ex tb blanking elements.
- Use only suitably certified Ex d/db and/or Ex tb thread adapters.
- To minimize the risk from electrostatic discharge - clean only with a damp cloth.



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- It is a condition of certification that the precautions must be taken to avoid dust from forming layers on the encoder.

-Temperatures at the cable entry can reach 85 °C. Selection of cable must be appropriate for the ambient temperature range in which the product is used.



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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 0: original

Issue 1: Correction to include marking Ex db

Issue 2: update to include the following changes

- increase upper ambient to +70°C from 55°C
- addition of IP68 marking
- revised specifications and tolerances
- EXTR re-issued

Issue 3: update to manufacturer's documentation due to new QAR/QAN issuer



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Additional information:

ANNEX 1 contains list of controlled documents.

Annex:

[IECEX QPS 15.0015X Annex1.pdf](#)



QPS Evaluation Services Inc.

Testing, Certification and Field Evaluation Body
Accredited in Canada, the USA, and Internationally

ANNEX 1, Date: 2018-03-05

Certificate No.: IECEX QPS 15.0015X

Applicant:
Scancon Encoders A/S
Huginsvej 8
3400 Hilleroed
Denmark

Electrical Apparatus: **SCA108EX, SCH108FEX & SCH108BEX Type Encoders**

The following documents describe the equipment defined in this certificate:

Title:	Drawing No.:	Rev. Level:	Date:
Certification drawing SC108Ex - General arrangement [1 page]	90132914C1	2	07-12-2016
Certification drawing SCH108Ex – Enclosure [1 page]	90132914C2	1	21-02-2014
*Certification drawing SCH108Ex – PCB details, earthing connection [1 page]	90132914C3	2	07-12-2016
SCH108Ex – Flame paths, m&k calculating [2 pages]	90132914C5	4	05-01-2017
Certification Drawing - Housing SC108Ex [1 page]	00122838C	4	09-04-2015
Certification drawing - Cap SC108Ex [1 page]	00132840C	5	05-01-2017
Certification drawing - Cover SC108Ex [1 page]	00132994C1	5	05-01-2017
Certification drawing - Cover Variations SC108Ex [1 page]	00132841C	3	04-11-2015
Certification drawing – Shaft/H.shaft SC108Ex	00132842C	2	09-04-2015

YOUR FULL SERVICE PARTNER IN GLOBAL CONFORMITY ASSESSMENT

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[1 page]			
*SCH108BEX Ø31,75 Type 04 EC03 - AL [1 page]	90133001	5	07-11-2017
*SCH108BEX Ø31,75 Type 04 EC05 - AL [1 page]	90230406	3	07-11-2017
*SCH108BEX Ø31,75 Type 04 EC03 - SA [1 page]	90132914	5	07-11-2017
*SCH108FEX Ø31,75 Type 04 EC03 - AL [1 page]	90133002	5	07-11-2017
*SCA108EX Ø15x20 Type 01 EC03 - AL [1 page]	90133003	5	07-11-2017
*Marking Label SC108EX 100x35 [1 page]	00142933	11	07-11-2017
Warning Label [1 page]	00240274	2	04-11-2015
Ordering code EC108Ex [1 page]	00142947	3	07-11-2017
*Control Document to Installation Guide [4 pages]	00142948A	2	07-Nov-2017

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

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