

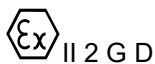


EU Type Examination Certificate CML 19ATEX1099X Issue 0

- 1 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU
- 2 Equipment **Shaft and Hollow-Shaft Encoders SCA88EX, SCH88BEX & SCH88FEX**
- 3 Manufacturer **Scancon Encoders A/S**
- 4 Address Huginsvej 8
3400 Hilleroed
Denmark
- 5 The equipment is specified in the description of this certificate and the documents to which it refers.
- 6 CML B.V. , Chamber of Commerce No 6738671, Hoogoorddreef 15, Amsterdam, 1101 BA, The Netherlands, Notified Body Number 2776, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in the confidential reports listed in Section 12.
- 7 If an 'X' suffix appears after the certificate number, it indicates that the equipment is subject to conditions of safe use (affecting correct installation or safe use). These are specified in Section 14.
- 8 This EU Type Examination certificate relates only to the design and construction of the specified equipment or component. Further requirements of Directive 2014/34/EU Article 13 apply to the manufacture of the equipment or component and are separately certified.
- 9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the confidential report, has been demonstrated through compliance with the following documents:

EN 60079-0:2018 EN 60079-1:2014 EN 60079-31
- 10 The equipment shall be marked with the following:



Ex db IIC T5 Gb

Ex tb IIIC T100°C Db

Ta= -40°C to +70°C



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11 Description

The Absolute Encoder types SCA88EX, SCH88BEX and SCH88FEX are small encoders manufactured from stainless steel or aluminium in a “U” shape with approximate dimensions of 134 mm x 75 mm x 90 mm. The Encoder types have Viton O-ring seals.

These encoders are populated with electronics and have a shaft passing through the main body and having fluorosilicone shaft seals. The shaft may be solid or hollow and with one or two ends free.

The encoder contains 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 a lifetime of the encoder.

The main type of protection utilized by the equipment to operate safely in a hazardous location is equipment protection by flameproof enclosure “db” and equipment dust ignition protection by enclosure “tb”.

The ratings of the equipment are as follows:

- Supply voltage = 9 - 30 Vdc,
- Current Consumption = 80 mA @ Vsup = 10 V (typical)
- Current Consumption = 40 mA @ Vsup = 24 V (typical)
- Power Consumption < 1.2 Watts
- Maximum rotation speed of the encoder shaft = 3000 RPM

SC*88*Ex - *** - **** - ** - ** - ** - ** - ** - **** - *
A J B C D E F G H I

A..... Main Type of Encoder

SCA88EX – Solid Shaft

SCH88BEX – Through Hollow Shaft

SCH88FEX – Hollow Shaft

J..... Type of encoder (Optional)

B..... Pulse/revolutions (e.g. 1213)

C..... Material of Housing and Body

AISI 303 (SR)

AISI 316 (SA)

EN AW-6026 (AL)

D..... Output Signal (e.g. DP)

E..... Diameter of Hollow Shaft (e.g. 03)

F..... Length of Shaft or Max Depth of Hollow Shaft (e.g. 00)

G..... IP Rating (e.g. 66)

H..... Type and Placement of Cable Outlet (e.g. EC02)

I..... Type of Flange Body (e.g. A)



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12 Certificate history and evaluation reports

Issue	Date	Associated report	Notes
0	07/05/2019	R12448A/00	Issue of prime certificate

Note: Drawings that describe the equipment or component are listed in the Annex.

13 Conditions of manufacture

The following conditions are required of the manufacturing process for compliance with the certification.

- 13.1 Where the product incorporates certified parts or safety critical components the manufacturer shall ensure that any changes to those parts or components do not affect the compliance of the certified product that is the subject of this certificate.

14 Specific Conditions of Use (Special Conditions)

The following conditions relate to safe installation and/or use of the equipment.

- 14.1 No modifications shall be made to the flamepaths of the enclosure
- 14.2 No user replaceable items inside – including internal backup battery
- 14.3 Only use replacement fasteners with a property class A4-80 with a yield stress ≥ 600 MPa
- 14.4 Use only suitably certified Ex d/db and/or Ex t/tb cable glands, blanking elements, and thread adapters
- 14.5 To minimize the risk from electrostatic discharge – clean only with a damp cloth
- 14.6 It is a condition of certification that the precautions must be taken to avoid dust from forming layers on the encoder
- 14.7 Temperatures at the cable entry can reach 90°C. Selection of cable and cable entrance devices must be appropriate for the ambient temperature range in which the product is used.



Certificate Annex

Certificate Number CML 19ATEX1099X
Equipment Shaft and Hollow-Shaft Absolute Encoders SCA88EX,
SCH88BEX & SCH88FEX
Manufacturer Scancon Encoders A/S

The following documents describe the equipment or component defined in this certificate:

Issue 0

Drawing No	Sheets	Rev	Approved date	Title
90230802C2	1 of 1	1	01/05/2019	Certification Drawing SC88Ex - Enclosure
90230802C3	1 of 1	1	01/05/2019	Certification Drawing SC88EX – Earthing
90230802C4	1 of 1	1	01/05/2019	Certification Drawing SC88EX - Flamepaths, m&k
00230268C	1 of 1	1	01/05/2019	Certification Drawing – Housing SC88Ex
00230276C	1 of 1	1	01/05/2019	Certification Drawing – Cap SC88EX
00230367C	1 of 1	1	01/05/2019	Certification Drawing – Cover SC88EX
00230272C	1 of 1	1	01/05/2019	Certification Drawing – h. shaft/shaft SC88EX
00240999	1 of 1	1	01/05/2019	Marking Label SC88EX 100x23
00241000	1 of 1	1	01/05/2019	Warning Label SC88EX 70x36
00241001	1 of 1	1	01/05/2019	Ordering Code SC88EX