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 SIR 10.0105X**

Certificate history:
Issue 0 (2010-11-09)

Status: **Current**

Issue No: 1

Date of Issue: 2020-06-18

Applicant: **Hohner Automation Ltd**
Whitegate Industrial Estate
Wrexham LL13 8UG
United Kingdom

Equipment: **Type 4-20mA ABS Absolute Shaft Encoder**

Optional accessory:

Type of Protection: **Intrinsically Safe ia and Dust iaD**

Marking: Ex ia IIC T4 Ga and
Ex ia I Ma
Ta = -20 °C to +60 °C
Ex iaD 20 T135° Da
Tamb -20 °C to +60 °C when Pi =0.7W or
Tamb -20 °C to +40 °C when Pi =0.76W
IEC 60079-0:2007 Edition 5 (used for guidance in respect of marking)

Approved for issue on behalf of the IECEx Certification Body: **Neil Jones**

Position: **Certification Manager**

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:

SIRA Certification Service
CSA Group
Unit 6, Hawarden Industrial Park
Hawarden, Deeside, CH5 3US
United Kingdom

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Manufacturer: **Hohner Automation Ltd**
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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 60079-0:2004 Electrical apparatus for explosive gas atmospheres - Part 0: General requirements
Edition:4.0

IEC 60079-11:2006 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:5

IEC 60079-26:2006 Explosive atmospheres - Part 26: Equipment with equipment protection level (EPL) Ga
Edition:2

IEC 61241-0:2004 Electrical apparatus for use in the presence of combustible dust - Part 0: General requirements
Edition:1

IEC 61241-11:2005 Electrical apparatus for use in the presence of combustible dusts - Part 11: Protection by intrinsic safety 'iD'
Edition:1

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:

GB/SIR/ExTR10.0259/00 GB/SIR/ExTR20.0115/00

Quality Assessment Report:

GB/SIR/QAR06.0038/12

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

The Type 4-20 mA ABS Absolute Shaft Encoder is designed to indicate the angular movement of a shaft. Movement is detected optically by shining light produced by LEDs through a graduated disc that rotates with the shaft. User connections are by means of an external plug-and-socket.

Refer to EQUIPMENT (continued) for full description

The Manufacturer shall comply with the following condition of manufacture:

1 The assembled apparatus shall be subjected to a routine test voltage of 500 V rms for 1 minute. There shall be no flashover or breakdown of insulation and the maximum current flowing shall not exceed 5 mA, in accordance with IEC 60079-11:2006 clauses 6.3.12 and 10.

SPECIFIC CONDITIONS OF USE: YES as shown below:

1 Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore the equipment shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. This is particularly important if the equipment is installed in a zone 0 location. In addition, the equipment shall only be cleaned with a damp cloth

Equipment (continued):

The circuit comprises two PCBs, the top board being mainly at the supply voltage and the lower board being exclusively powered from the nominally 5 V rail. The assembly is contained within a metallic enclosure with an ingress protection rating of at least IP54.

The equipment is a 2-wire device, utilising pins 1 and 2, with the following safety description applicable to gases in a 60°C ambient or dusts in a 40°C ambient.

Ui = 28 V
Ii = 150 mA
Pi = 0.76 W
Ci = 12 nF
Li = 0

Or the following lower parameters are applicable when the equipment is used in a hazardous dust atmosphere at ambient temperatures up to and including 60°C.

Ui = 28 V
Ii = 100 mA
Pi = 0.7 W
Ci = 12 nF
Li = 0

The screen may be connected to pin 4, which is galvanically isolated from the enclosure. Pin 3 is not used.

There are two builds, differing in the shaft type and the physical arrangement of the PCBs:

10-bit hollow shaft encoder10-bit solid shaft encoder

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)
Issue 1 – this Issue introduced the following change:

1. To permit the update of the notified body number shown on the marking label drawing.