1 **EU-TYPE EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

3 Certificate Number: **Sira 11ATEX2258X** Issue: **1**

4 Equipment: **4-20 mA Tachometer Shaft Encoder**

5 Applicant: **Hohner Automation Limited**

6 Address: Whitegate Road
Units 14, 15 and 16
Whitegate Industrial Estate
Wrexham
Clwyd LL13 8UG
UK

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., Notified Body Number 2813 in accordance with Articles 17 and 21 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 14.2.

9 Compliance with the Essential Health and Safety Requirements, with the exception of those listed in the schedule to this certificate, has been assured by compliance with the following documents:

IEC 60079-0:2011 IEC 60079-11:2011 EN 60079-26:2007

10 If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to Specific Conditions of Use identified in the schedule to this certificate.

11 This EU-Type Examination Certificate relates only to the design and construction of the specified equipment. If applicable, further requirements of this Directive apply to the manufacture and supply of this equipment.

11 The marking of the equipment shall include the following:

12

4-20 mA Tachometer Shaft Encoder

I M1
II 1 GD
Ex ia I Ma
Ex ia IIC T4 Ga
Ex ia IIIC T135°C Da
(T_a = -20°C to +60°C)

Project Number 2455

Signed:

Title: Director of Operations

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem,
Netherlands

SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE **Sira 11ATEX2258X**
Issue 1

13 **DESCRIPTION OF EQUIPMENT**

The 4-**20 mA Tachometer Shaft Encoder** is used 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. The circuitry is contained on an assembly comprising three printed circuit boards housed in a non-conducting holder, which is installed in an outer metallic enclosure. The equipment is supplied with either a flying lead or a connector for external connections.

The encoder is intended to be powered from a certified galvanic isolator:

4-20 mA Tachometer - safety description:

Ui = 28 V Ii = 100 mA Pi = 0.7 W Ci = 66 nF Li = 0

14 **DESCRIPTIVE DOCUMENTS**

14.1 **Drawings**

Refer to Certificate Annexe.

14.2 **Associated Sira Reports and Certificate History**

Issue	Date	Report no.	Comment
0	2 November 2011	R24736A/00	The release of the prime certificate.
1	15th October 2019	2455	• Transfer of certificate **Sira 11ATEX2258X** from Sira Certification Service to CSA Group Netherlands B.V.. • EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. *(In accordance with Article 41 of Directive 2014/34/EU, EC Type-Examination Certificates referring to 94/9/EC that were in existence prior to the date of application of 2014/34/EU (20 April 2016) may be referenced as if they were issued in accordance with Directive 2014/34/EU. Variations to such EC Type-Examination Certificates may continue to bear the original certificate number issued prior to 20 April 2016.)*

15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)

15.1 Some versions of the equipment are manufactured with an enclosure made from plastic materials. Under certain extreme circumstances, such parts may generate an ignition-capable level of electrostatic charge. Therefore, when the encoder is used for applications that specifically require group II, category 1 equipment, it shall not be installed in a location where the external conditions are conducive to the build-up of electrostatic charge on such surfaces. Additionally, the equipment shall only be cleaned with a damp cloth.

15.2 As the light metal alloy is used at the accessible surface of this equipment, in the event of rare idents, ignition sources due to impact and friction sparks could occur. This shall be considered when the Encoders are being installed in locations that specifically require group II and I, categories 1G/Ga, M1/Ma equipment.

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem Netherlands

15.3 When the equipment is used in a zone 0 the user should be aware of the potential for failure of the shaft and bearing resulting in frictional heating that could exceed the temperature class of the equipment. The user should periodically check the encoder bearing for signs of wear and heating.

16 **ESSENTIAL HEALTH AND SAFETY REQUIREMENTS OF ANNEX II** (EHSRs)

The relevant EHSRs that are not addressed by the standards listed in this certificate have been identified and individually assessed in the reports listed in Section 14.2.

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem Netherlands

Certificate Annexe

Certificate Number: **Sira 11ATEX2258X**

Equipment: **4-20 mA Tachometer Shaft Encoder**

Applicant: **Hohner Automation Limited**

Issue 0

Drawing	Sheets	Rev.	Date(Sira stamp)	Title
AS-HS-002-02	1 and 2	2	23 Nov 09	Hollow shaft encoder assembly
AS-SS-001-02	1 and 2	2	23 Nov 09	Solid shaft encoder assembly
Tach4_20-001-04	1 of 1	2	31 Aug 11	4-20mA 2 Wire Tacho Head I.S. schematic
Tach4_20-001-04	1 of 1	2	31 Aug 11	4-20mA 2 Wire Tacho Head I.S. BOM
Ex-LB-TAC-05	1 of 1	05	31 Aug 11	4-20mA Tachometer Label

CSA Group Netherlands B.V.
Utrechseweg 310,
6812 AR, Arnhem,
Netherlands