Certificate of Compliance

Certificate: 70128768 **Master Contract:** 252935

Project: 70128768 **Date Issued:** September 25, 2017

Issued to: **Hohner Automation Limited**
Units 14 - 16
Whitegate Industrial Estate
Wrexham
LL13 8UG
UK
Attention: Carl Collinge

The products listed below are eligible to bear the CSA Mark shown with adjacent indicators 'C' and 'US' for Canada and US (indicating that products have been manufactured to the requirements of both Canadian and US Standards) or with adjacent indicator 'US' for US only or without either indicator for Canada only

Issued by: B J Allen

PRODUCTS

CLASS 2258 04 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations
CLASS 2258 84 - PROCESS CONTROL EQUIPMENT - Intrinsically Safe Entity - For Hazardous Locations

Canada:
Ex ia IIB T4 Ga
Class I, Division 1, Groups C, D

U.S.:
Class I, Zone 0, AEx ia IIB T4
Class I, Division 1, Groups C, D

Incremental Shaft Encoder with two build options (having one or two separate IS circuits): Ambient temperature range: -40°C ≤ Tamb ≤+60°C, having the following intrinsically safe input parameters:-

Either	**OR**
Ui = 28 V	Ui = 25 V
Ii = 100mA	Ii = 390mA
P_i = 0.7W	P_i = 0.8W
C_i = 0.58 µF	C_i = 0.58 µF
L_i = 6 µH	L_i = 6 µH

CONDITIONS OF ACCEPTABILITY

The equipment shall be located in:

Hazardous Locations

1. Ex ia" equipment can be used in Class I, Division 1, and zone 0.
2. Enclosure may be made of light metal. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered during installation.
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.
4. The certificate number may have the year included as a prefix e.g. 17.70128768.

Ordinary locations

1. The equipment is to be powered from a certified power supply meeting the requirements of NEC Class 2 Circuits, Limited Power Source (LPS) or Limited Energy Circuit (LEC) as defined in CSA C22.2 61010-1-12 standard.
2. Equipment is not to be used with flammable liquids
3. Equipment has only been tested for all aspects of Hazard in the safety standard. No evaluation of functional safety and performance characteristics has been conducted.
4. If at any time there is a conflict between the system safety provisions and any relevant local (national or regional) requirements, the local requirements always take precedence
5. The equipment can only be used or operated with a shaft operating up to 2000RPM (NAMFPX Series) and 1 - 6000RPM for other build options.

Certificate: 70128768 **Master Contract:** 252935
Project: 70128768 **Date Issued:** 2017-09-25

APPLICABLE REQUIREMENTS

For Hazardous Locations

Canadian Standards

CAN/CSA-C22.2 No. 0-10	General Requirements - Canadian Electrical Code Part II
CAN/CSA-C22.2 No. 60079-0:15 (IEC 60079-0:2011 6th Ed., MOD)	Explosive atmospheres — Part 0: Equipment — General requirements
CAN/CSA-C22.2 No. 60079-11:14 (IEC 60079-11:2011 6th Ed., MOD)	Explosive atmospheres — Part 11: Equipment protection by intrinsic safety "i"

US Standards

ANSI/UL Standard 913; Ed 8	Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division 1, Hazardous (Classified) Locations
ANSI/UL 60079-0:13, 6th Edition	Explosive Atmospheres - Part 0: Equipment - General Requirements
ANSI/UL 60079-11:13, 6th Edition	Explosive Atmospheres – Part 11: Electrical Protection by Intrinsic Safety "i"

For Ordinary Locations

Canadian Standards:

CAN/CSA-C22.2 No. 61010-1-12 3rd Ed Update 1 & Update 2 (April 2016)	- Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, Part 1: General Requirements.

US Standards:

UL Std. No. 61010-1 (3rd Edition) Including Rev up to April 29, 2016	- Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 1: General Requirements

MARKINGS

The following is marked:

- Manufacturers name – **Hohner Automation Ltd.**.
- Model designation, as specified in the PRODUCTS section, above.
- Entity parameters and ratings, as specified in the PRODUCTS section, above.
- Ambient temperature range rating, as specified in the PRODUCTS section, above.
- Serial number that includes the year of manufacturer.
- Hazardous Location designation, as specified in the PRODUCTS section, above.
- The drawing number of the Control Drawing – CSA-CON-INCIIB-01 sheets 1 and 2
- The following warnings:

Warning: Explosion Hazard - Substitution of Components may impair intrinsic safety
Avertissement: Risque d'explosion - La Substitution des Composants peut compromettre la securite intrinseque.

- The following approval coding:

Canada:
Ex ia IIB T4 Ga
Class I, Division 1, Groups C, D

U.S.:
Class I, Zone 0, AEx ia IIB T4
Class I, Division 1, Groups C, D

Supplement to Certificate of Compliance

Certificate: 70128768 **Master Contract:** 252935

The products listed, including the latest revision described below, are eligible to be marked in accordance with the referenced Certificate.

Product Certification History

Project	Date	Description
70128768	2017-09-25	Original Certification.