

1 EU - Type Examination Certificate

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

3 Certificate Number:

ExVeritas 16 ATEX 0191X

Issue: 1

4 Equipment:

Incremental IIB Shaft Encoder

5 Manufacturer:

Hohner Automation Ltd

6 Address:

Units 14-16

Whitegate Industrial Estate

Wrexham, LL13 8UG, UK

- 7 This equipment and any acceptable variation thereto are specified in the schedule to this certificate and the documents therein referred to.
- ExVeritas, Notified Body number 2585 in accordance with Article 9 of the Council Directive 2014/34/EU of 26 February 2014, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to design and construction of equipment and protective systems for use in potentially explosive atmospheres given in Annex II to the Directive
- 9 Compliance with the applicable Essential Health and Safety Requirements has been assured by compliance with the following Standards and section 16 of this certificate:

EN 60079-0: 2013

EN60079-11: 2012

EN60079-26:2015

- If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.
- This EU-Type Examination Certificate relates only to the design, construction, examination and tests of the specified equipment or protective system in accordance to the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.
- 12 The marking of the equipment shall include the following:



IM1 II1G Ex ia I Ma Ex ia IIB T4 Ga

T<sub>amb</sub> -40°C to +60°C (equipment may be marked with any range within these limits)



No. 8613



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The certificate is only valid when it carries an original signature.

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### Schedule

# 13 <u>Description of Equipment or Protective System</u>

#### **Build Option 1 (One Circuit)**

The incremental Shaft encoder is an optical reading system that converts light interference patterns from a rotating disk into a digital voltage output. The encoder circuit is designed to be housed in a range of metallic or plastic enclosures with various dimensions. The encoder is fitted with one of two slightly different circuits and can be supplied with up to three enclosure entries with either flying lead(s), connector(s) or a junction box with terminals.

### **Build Option 2 (One or Two Circuits)**

The incremental Shaft encoder is an optical reading system that converts light interference patterns from a rotating disk into a digital voltage output. The encoder may contain one or two circuits that are designed to be housed specifically in the NAMFPX range of encoders. An encoder is fitted with one of two slightly different circuits and can be supplied with up to two enclosure entries with either flying lead(s) or connector(s). Each circuit of the dual circuit version has the same safety description as the single circuit version (Build Option One).

The Part Numbering system for build option 2 is as follows:

SPNF-XXX

Where

SP = Special Product

NF = NAMFPX Series

XXX = Unique Identifier

Input parameters for both build options

Ui = 28V

li = 100mA

Pi = 0.7W

 $Ci = 0.58 \mu F$ 

 $Li = 6\mu H$ 

Alternatively

Ui = 25V

li = 390mA

Pi = 0.8W

Ci = 0.58µF

Li = 6µH

14 <u>Descriptive Documents</u>

## 14.1 Associated Report and Certificate History:

Report Number	Cert Issue Date	Issue	Comment	
R1026/A/1	6/3/2017	1	Initial issue of the Prime Certificate	

## 14.2 Compliance Drawings:

### Issue 0

Title:	Drawing No.:	Sheets	Rev. Level:	Date:	
IECEX & ATEX Label drawing for NAMFPX	LB-INC-IIB-NOV-02	1 of 1	2.0	17 Feb 2017	
Incremental IIB Shaft encoder ATEX and IECEx markings	LB-IIB-005-01	1 of 1	1.0	17 Feb 2017	
Hollow Shaft Encoder General Assembly	AS-HS-005-01	2 of 2	1	15 Sep 2016	
Solid Shaft Encoder General Assembly	AS-SS-005-01	2 of 2	1	15 Sep 2016	
Hollow Shaft Assembly for NAMFPX (NOV dependency)	AS-HS-NOV-02	1 of 4	2.0	15 Sep 2016	
NAMFPX Shaft	NF-HS-NOV-01	1 of 1	1.0	16/12/2014	
Lid for Namfpx	NF-LD-NOV-01	1 of 1	1.0	15/09/2016	
NAMFPX redundancy Body - back	NF-BD-NOV-01	1 of 2	1.0	15/09/2016	
IIB Incremental Circuit Type A	SCH-IIB-TYPEA-02	1 of 1	2.0	17/02/2017	
IIB Incremental Circuit Type B	SCH-IIB-TYPEB-02	1 of 1	2.0	17/02/2017	

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### Schedule

### 15 Conditions of Certification

- 15.1 Special Conditions for Safe Use
  - As light metal may be used in the construction of this equipment, for Ga/1G installations only, consideration should be given that in rare events, ignition sources due to impact and/or frictional sparks could occur.
  - Some versions of the equipment are manufactured with an enclosure made from plastic materials. Under
    certain extreme conditions 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 buildup of electrostatic charge on such surfaces. Additionally the equipment shall only be cleaned with a damp
    cloth.
  - 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.
- 15.2 Conditions for Use
  - None
- 16 <u>Essential Health and Safety Requirements</u>
  Essential Health and Safety Requirements are addressed by the standards listed in section 9 and where required the report listed in section 14.1

The manufacturer shall inform the Notified Body of any modifications to the design of the product described by this schedule.