



1 **EC TYPE-EXAMINATION CERTIFICATE**

2 Equipment intended for use in Potentially Explosive Atmospheres Directive 94/9/EC

3 Certificate Number: **Sira 02ATEX2317X** Issue: **3**

4 Equipment: **Incremental Shaft Encoder, part no. aa-bb-cc-ee-ffff**

5 Applicant: **Hohner Automation**

6 Address: **Whitegate Industrial Estate
Wrexham 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 Sira Certification Service, notified body number 0518 in accordance with Article 9 of Directive 94/9/EC of 23 March 1994, 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:

EN 60079-0:2006 EN 60079-11:2007 EN 60079-26:2007
IEC 60079-0:2007 was used as guidance in respect of marking

10 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.

11 This EC 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.

12 The marking of the equipment shall include the following:

 I M1
II 1 G
Ex ia I Ma
Ex ia IIB T4 Ga
(T_a = -20°C to +60°C)

Project Number 70015372

C Ellaby
Deputy Certification Manager

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

Build option 1 – One Circuit

The Incremental Shaft Encoder is an optical reading system that converts light interference patterns from a rotating disc into a digital voltage output. The encoder circuit is designed to be housed in a range of metallic or plastic enclosures with various dimensions. An encoder is fitted with one of two slightly different circuits. The part numbering system is as follows:

aa bb cc ee ffff	where:	aa = series	The equipment has the	$U_i = 28 V$
		bb = shaft size	following safety description:	$I_i = 100 mA$
		cc = circuit type		$P_i = 0.7 W$
		ee = connection option		$C_i = 0.58 \mu F$
		ffff = resolution		$L_i = 0$

Variation 1 - This variation introduced the following changes:

- Following appropriate re-assessment to demonstrate compliance with the requirements of the EN 60079 series of standards, the documents originally listed in section 9, EN 50014:1997 (amendments 1 and 2), EN 50020:2002, EN 50284:1999 and EN 50303:2000, were replaced by those currently listed, the markings in section 12 were updated accordingly and the conditions were modified to recognise the requirements of the latest standards.
- The introduction of minor mechanical modifications.

Variation 2 - This variation introduced the following changes:

- The introduction of an NAMFPX Series version model number SPNF-XXX that has a duplication of the approved circuit to form a dual circuit version. For clarity, this version is referred to as Build Option 2 and the original version is Build Option 1.

Build option 2 – One or Two Circuits

The Incremental Shaft Encoder is an optical reading system that converts light interference patterns from a rotating disc into a digital voltage output. The encoder may contain one or two circuits that are designed to be housed specifically in the NAMFPX series range of enclosures. The encoder is fitted with one of two slightly different circuits. Each circuit of the dual circuit version has the same safety description as the single circuit version (Build Option One). The part numbering system is as follows:

SPNF-XXX	where:	SP = Special Product
		NF = NAMFPX Series
		XXX = Unique Identifier

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

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14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	20 December 2002	R52A7615A	The release of the prime certificate.
1	12 March 2008	N/A	This Issue covers the following changes: <ul style="list-style-type: none">All previously issued certification was rationalised into a single certificate, Issue 1, Issue 0 referenced above is only intended to reflect the history of the previous certification and has not been issued as a document in this format.The modification of the permitted marking to recognise of the ambient temperature range assessed in report no. R52A7615A.
2	07 May 2009	R52A19698A	The introduction of Variation 1.
3	23 February 2015	R70015372A	The introduction of Variation 2.

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.

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.

17 CONDITIONS OF CERTIFICATION

17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.

17.2 Holders of EC type-examination certificates are required to comply with the production control requirements defined in Article 8 of directive 94/9/EC.

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Certificate Annexe

Certificate Number: Sira 02ATEX2317X
Equipment: Incremental Shaft Encoder
part no. aa-bb-cc-ee-ffff
Applicant: Hohner Automation



Issues 0 and 1

Number	Sheet	Rev.	Date	Description
GA-INC-IIB-HYB-HOLLOW-01	1 of 1	1.0	14 Oct 02	General arrangement – hollow shaft
GA-INC-IIB-07-HOLLOW-01	1 of 1	1.0	14 Oct 02	General arrangement – 07-series
GA-INC-IIB-97FPX-HOLLOW-01	1 of 1	1.0	14 Oct 02	General arrangement – 97/FPX-series
GA-INC-IIB-SOLID -01	1 of 1	1.0	14 Oct 02	General arrangement – solid shaft
LB-INC-IIB-CEN-01	1 of 1	-	11 Nov 02	Label
SCH-IIB-TYPEA-01	1 of 1	1.0	24 Oct 02	Schematic – type A
SCH-IIB-TYPEB-01	1 of 1	1.0	24 Oct 02	Schematic – type B

Issue 2

Drawing	Sheets	Rev.	Date	Title
GA-INC-IIB-HYB-HOLLOW-02	1 of 1	2.0	05 Mar 09	General arrangement – hollow shaft
GA-INC-IIB-07-HOLLOW-02	1 of 1	2.0	05 Mar 09	General arrangement – 07-series
GA-INC-IIB-97FPX-HOLLOW-02	1 of 1	2.0	05 Mar 09	General arrangement – 97/FPX-series
GA-INC-IIB-SOLID-02	1 of 1	2.0	05 Mar 09	General arrangement – solid shaft
LB-INC-IIB-CEN-02	1 of 1	-	05 Mar 09	Incremental IIB Encoder Label Drawing

Issue 3

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
AS - HS - NOV - 01	1 to 4	1	16 Dec 14	Hollow Shaft Assembly for NAMFPX (NOV Dependency)
NF - BD - NOV - 01	1 to 2	1	16 Dec 14	NAMFPX Redundancy Body - Front
NF - HS - NOV - 01	1 of 1	1	16 Dec 14	NAMFPX Shaft
LB-INC-IIB-NOV-01	1 of 1	1	23 Feb 15	ATEX/IECEx label drawing for NAMFPX (NOV dependency)
NF - LD - NOV - 01	1 of 1	1	16 Dec 14	Lid for NAMFPX

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