

1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 09ATEX2162X** Issue: **0**

4 Equipment: **SRX - Valve Position Monitor**

5 Applicant: **Imtex Controls Limited**

6 Address: Unit 5a
Valley Industries
Hadlow Road
Tonbridge
Kent TN11 0AH
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
IEC 60079-0:2007 Ed 5 (was used for 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:



II 2G
Ex ia IIC T4/T5/T6 Gb

Note: the temperature class and ambient temperature range depends on the construction of the devices, see Equipment Description.

Project Number 52L19844
C. Index 12

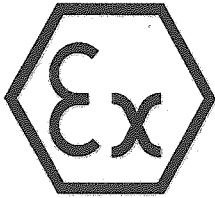
C Ellaby
Certification Officer

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13 DESCRIPTION OF EQUIPMENT

The SRX - Valve Position Monitor is intended to be fitted to a valve. The device uses a metallic enclosure, either stainless steel or aluminium, with either a short or tall cover. This enclosure is fitted with a mechanical shaft that has cams and an indicator, it also contains a terminal board and various combinations of voltage free switches, certified sensors or transmitters (see tables below) that are activated by the cams. The indicator is on top of the enclosure and provides visual indication of the shaft position, which correlates with the valve position.

Various available functions, as specified in the model number:

Function	Description	Notes
17	Up to 2 off SPDT Gold Contact Mechanical Switch	Up to 0.5 A @ 30 VDC
40	Up to 2 off SPST Reed Switches (passive)	Up to 0.15 A @ 30 VDC
42	Up to 2 off V3 Style Proximity Sensor	ATEX certified to Ex ia IIC T4/T5/T6
43	Up to 2 off non-V3 Style Proximity Sensor	ATEX certified to Ex ia IIC T4/T5/T6
52	Between 3 & 6 off V3 Style Proximity Sensor	ATEX certified to Ex ia IIC T4/T5/T6
53	Between 3 & 6 off non-V3 Style Proximity Sensor	ATEX certified to Ex ia IIC T4/T5/T6
56	Between 3 & 6 off SPDT Gold Contact Mechanical Switch	Up to 0.5 A @ 30 VDC
59	Between 3 & 6 off SPST Reed Switches (passive)	Up to 0.15 A @ 30 VDC
70	Position Transmitter - resistive	4-20 mA @10 – 30 VDC ATEX certified to Ex ia IIC T4/T5/T6 Monitor may include up to 2 additional switches/sensors from functions 17, 40, 42 or 43

Various available optional switches, sensors and transmitters, as specified in the model number:

Option	Description	Device type	Certificate no.
Z	Voltage Free Contact Switch	Crouzet EF83161.8 Gold Plated Switch	-
		Stonel Corp SPST Maxx Guard 'J' Switch	-
		Stonel Corp SPDT Maxx Guard 'G' Switch	-
Y	Proximity Sensor Type 1	Hans Turck GmbH, Bi2-G12-Y1	Kema 02ATEX1090X
		Hans Turck GmbH, Bi5-G18-Y1	Kema 02ATEX1090X
		Hans Turck GmbH, Ni10-G18-Y1	Kema 02ATEX1090X
		Hans Turck GmbH, Ni2-G12-Y1	Kema 02ATEX1090X
		Hans Turck GmbH, Bi2-Q10S-Y1X	Kema 02ATEX1090X
		Hans Turck GmbH, Bi2-G12-Y1X	Kema 02ATEX1090X
		Hans Turck GmbH, Bi5-G18-Y1X	Kema 02ATEX1090X
		Hans Turck GmbH, Ni10-G18-Y1X	Kema 02ATEX1090X
		Hans Turck GmbH, Ni2-G12-Y1X	Kema 02ATEX1090X
		Hans Turck GmbH, Bi2-G12-Y1/S100	Kema 02ATEX1090X
		Hans Turck GmbH, Bi5-G18-Y1/S100	Kema 02ATEX1090X
		Hans Turck GmbH, Ni10-G18-Y1/S100	Kema 02ATEX1090X
		Hans Turck GmbH, Ni2-G12-Y1/S100	Kema 02ATEX1090X

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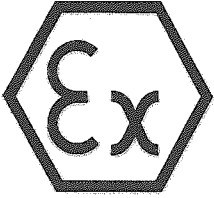
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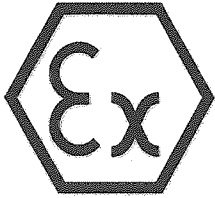
Option	Description	Device type	Certificate no.
W	Proximity Sensor Type 2	Pepperl & Fuchs, NCB2-12GM...-NO	PTB 00ATEX2048X
		Pepperl & Fuchs, NJ2-11-N-G	PTB 00ATEX2048X
		Pepperl & Fuchs, NJ2-V3-N...	PTB 00ATEX2032X
		Pepperl & Fuchs, NJ4-14GK-N...	PTB 00ATEX2048X
		Pepperl & Fuchs, NCB2-V3-NO	PTB 00ATEX2032X
		Pepperl & Fuchs, NJ2-12GK-N...	PTB 00ATEX2048X
		Pepperl & Fuchs, NJ3-18GK-S1N...	PTB 00ATEX2049X
		Pepperl & Fuchs, NJ5-11-N...	PTB 00ATEX2048X
		Pepperl & Fuchs, SJ3,5-...-N...	PTB 00ATEX2219X
		Pepperl & Fuchs, NCN4-12GM...-NO	PTB 00ATEX2048X
		Pepperl & Fuchs, NJ2-12GM-N...	PTB 00ATEX2048X
		Pepperl & Fuchs, NJ4-12GK-N...	PTB 00ATEX2048X
		Pepperl & Fuchs, NJ5-18GK-N...	PTB 00ATEX2048X
		Pepperl & Fuchs, NJ1.5-8GM-N...	PTB 00ATEX2048X
		Pepperl & Fuchs, NJ2-14GM-N...	PTB 00ATEX2048X
		Pepperl & Fuchs, NJ4-12GM-N	PTB 00ATEX2048X
Pepperl & Fuchs, NJ5-18GM-N...	PTB 00ATEX2048X		
V	Transmitter	PR Electronics, 5333B	Kema 03ATEX1535X
		PR Electronics, 5333C	Kema 03ATEX1535X
		PR Electronics, 5333D	Kema 03ATEX1535X
		PR Electronics 5335B	Kema 03ATEX1537X
		PR Electronics 5335C	Kema 03ATEX1537X
		PR Electronics 5335D	Kema 03ATEX1537X
		PR Electronics 5350B	Kema 02ATEX1318
		Optional Proximity Sensor Type 2	Pepperl & Fuchs, NCB2-12GM...-NO
	Pepperl & Fuchs, NJ2-11-N-G		PTB 00ATEX2048X
	Pepperl & Fuchs, NJ2-V3-N...		PTB 00ATEX2032X
	Pepperl & Fuchs, NJ4-14GK-N...		PTB 00ATEX2048X
	Pepperl & Fuchs, NCB2-V3-NO		PTB 00ATEX2032X
	Pepperl & Fuchs, NJ2-12GK-N...		PTB 00ATEX2048X
	Pepperl & Fuchs, NJ3-18GK-S1N...		PTB 00ATEX2049X
	Pepperl & Fuchs, NJ5-11-N...		PTB 00ATEX2048X
	Pepperl & Fuchs, SJ3,5-N...		PTB 00ATEX2219X
	Pepperl & Fuchs, NCN4-12GM...-NO		PTB 00ATEX2048X
	Pepperl & Fuchs, NJ2-12GM-N...		PTB 00ATEX2048X
	Pepperl & Fuchs, NJ4-12GK-N...		PTB 00ATEX2048X
	Pepperl & Fuchs, NJ5-18GK-N...		PTB 00ATEX2048X
	Pepperl & Fuchs, SJ3.5-S1N...		PTB 00ATEX2049X
	Pepperl & Fuchs, NJ1.5-8GM-N...		PTB 00ATEX2048X
	Pepperl & Fuchs, NJ2-14GM-N...		PTB 00ATEX2048X
	Pepperl & Fuchs, NJ4-12GM-N		PTB 00ATEX2048X
	Pepperl & Fuchs, NJ5-18GM-N...		PTB 00ATEX2048X

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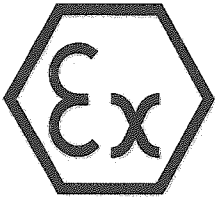
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Option	Description	Device type	Certificate no.
U	Proximity Sensor Low Temperature Type 2	Pepperl & Fuchs,NJ2-11-SN-G...	PTB 00ATEX2049X
		Pepperl & Fuchs,NJ2-12GK-SN...	PTB 00ATEX2049X
		Pepperl & Fuchs,NJ4-12GK-SN...	PTB 00ATEX2049X
		Pepperl & Fuchs,NJ5-18GK-SN...	PTB 00ATEX2049X
		Pepperl & Fuchs,SJ3.5-SN...	PTB 00ATEX2049X
T	Proximity Sensor Low Temperature Type 1	Hans Turck GmbH, Bi2-P12-Y1X/S97	Kema 02ATEX1090X
		Hans Turck GmbH, Bi5-P12-Y1X/S97	Kema 02ATEX1090X
		Hans Turck GmbH, Ni10-P12-Y1X/S97	Kema 02ATEX1090X
		Hans Turck GmbH, Ni5-P12-Y1X/S97	Kema 02ATEX1090X
J	Transmitter	PR Electronics, 5333B	Kema 03ATEX1535X
		PR Electronics, 5333C	Kema 03ATEX1535X
		PR Electronics, 5333D	Kema 03ATEX1535X
		PR Electronics 5335B	Kema 03ATEX1537X
		PR Electronics 5335C	Kema 03ATEX1537X
		PR Electronics 5335D	Kema 03ATEX1537X
		PR Electronics 5350B	Kema 02ATEX1318
	Optional Volt Free Switches	Crouzet EF83161.8 Gold Plated Switch Stonel Corp SPST Maxx Guard 'J' Switch Stonel Corp SPDT Maxx Guard 'G' Switch	- -

The following safety parameters, temperature classes and ambient temperature ranges are applicable:

Option	Safety parameters	T class	Temp. range (Ta)
Z	U _i = 28 V, I _i = 120 mA. P _i = 1.3 W, L _i = 0, C _i = 0	T6 T5	-40°C to +70°C -40°C to +80°C
Y	U _i = 15 V, I _i = 20 mA. P _i = 200 mW, L _i = 150 µH, C _i = 150 nF	T6 T4	-25°C to +70°C -25°C to +100°C
W	U _i = 16 V, I _i = 25 mA. P _i = 34 mW, L _i = 550 µH, C _i = 150 nF	T6 T5 T4	-25°C to +72°C -25°C to +87°C -25°C to +99°C
V	Individual Transmitter: U _i = 28 V, I _i = 120 mA. P _i = 840 mW, L _i = 10 µH, C _i = 2 nF Optional sensor(s), when fitted: U _i = 16 V, I _i = 25 mA. P _i = 34 mW, L _i = 550 µH, C _i = 150 nF	T6 T4	-40°C or -25°C to +60°C -40°C or -25°C to +85°C
U	U _i = 16 V, I _i = 25 mA. P _i = 34 mW, L _i = 550 µH, C _i = 150 nF	T6 T5 T4	-50°C or -40°C to +72°C -50°C or -40°C to +87°C -50°C or -40°C to +99°C
T	U _i = 15 V, I _i = 20 mA. P _i = 200 mW, L _i = 150 µH, C _i = 150 nF	T6	-40°C to +70°C
J	Individual Transmitter: U _i = 28 V, I _i = 120 mA. P _i = 840 mW, L _i = 10 µH, C _i = 2 nF Optional switch(s), when fitted: U _i = 28 V, I _i = 120 mA. P _i = 1.3 W, L _i = 0, C _i = 0	T6 T4	-40°C to +60°C -40°C to +80°C

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14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	7 July 2009	R52L19844A	The release of the prime certificate.

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

- 15.1 The user/installer shall ensure that versions of these Valve Monitors that use an enclosure that incorporates light metals are installed in a manner that minimises the risk of impact or friction with other metal surfaces.
- 15.2 Parts of these Valve Monitors are made of plastic. By virtue of its shape, design and position of use, it is assessed that this device is not considered to be an electrostatic risk; however, it shall not be installed in a position where it may be subjected to an excessive air/fluid flow or be subjected to rubbing that may cause an electrostatic build-up, it shall also be cleaned with a damp cloth.
- 15.3 The user/installer shall install these Valve Monitors taking into account any restrictions or special conditions for safe use that are applicable to the previously certified devices that are fitted in the devices.

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.
- 17.3 The products covered by this certificate incorporate previously certified devices, it is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these devices, and the manufacturer shall inform Sira of any modifications of the devices that may impinge upon the explosion safety design of their products.
- 17.4 The manufacturer shall take all reasonable steps to ensure that the user/installer complies with the special conditions for safe use associated with these Valve Monitors, in addition, the manufacturer shall provide the user/installer with an appropriate copy of the certificate for each certified device that is fitted in the device.

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Certificate Annexe

Certificate Number: Sira 09ATEX2162X
Equipment: SRX - Valve Position Monitor
Applicant: Imtex Controls Ltd



Issue 0

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
A190193	1 of 1	-	25 Jun 09	Type SRX-IS- ATEX Master Model description
A160156	1 of 1	C	25 Jun 09	Title Label – SRX Intrinsically Safe
A160155	1 of 1	A	25 Jun 09	SRX Monitor Safety Label
A190194	1 of 1	B	25 Jun 09	Wiring Diagrams – SRX IS Units
A110009	1 of 1	A	25 Jun 09	MK3-6 Terminal Block
J100315	1 of 1	A	25 Jun 09	SRX Housing – General Layout
J100316	1 of 1	A	25 Jun 09	SRX Cover
SRX17S5LR-Z00-BOM	1 of 1	-	25 Jun 09	SRX w/2 x GP Mech Switch
SRX17S5LR-Z00-ASS	1 of 1	-	25 Jun 09	SRX17 Assembly
SRX70S5LR-J00-BOM	1 of 1	-	25 Jun 09	SRX17 w/PR Trans
SRX70S5LR-J00-ASS	1 of 1	-	25 Jun 09	SRX17 Assembly
A160149	1 of 1	A	25 Jun 09	Z or S Label
A160150	1 of 1	A	25 Jun 09	Y or R Label
A160151	1 of 1	C	25 Jun 09	W Label
A160152	1 of 1	C	25 Jun 09	V Label
A160153	1 of 1	A	25 Jun 09	U Label
A160154	1 of 1	B	25 Jun 09	T or M Label
A160162	1 of 1	A	25 Jun 09	J Label

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