



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 02ATEX2386X** Issue: **6**

4 Equipment: **M6420-Series, P6420-Series, P9420-Series, S6420-Series, W9420-Series A-Series and B-Series Transducers**

5 Applicant: **RM&C Ltd**

6 Address: Downgate Drive
Sheffield
South Yorkshire S4 8BT
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 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:

EN 50014:1997 (amendments 1 and 2) EN 50284:1999
EN 50020:2002 EN 50303:2000

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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.

12 The marking of the equipment shall include the following:



I M1
EEx ia I (T_a = -20°C to +90°C)



II 1G
EEx ia IIC T4 T_a = -20°C to +90°C

Project Number 70102677


A Boyes
Certification Support Officer

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SCHEDULE

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13 **DESCRIPTION OF EQUIPMENT**

The M6420-Series, P6420-Series, P9420-Series, S6420-Series, A-Series and B-Series are a family of transducers designed to measure pressures that range from a few millibars to one thousand bar. The housing is manufactured in several shapes, sizes and materials for a variety of industrial applications. The interface to the pressure port is configured to the customer's requirement but is typically a threaded boss fitting. Electrical connections to the transducers are made via one of a range of connectors or cable entries. The transducers have the following safety description and alternative product references:

M6420-Series				
Model	i (Group I)	iF (Group I Fused)	ii (Group II Standard)	G (Group II Surge)
U _i	28 V	16.5 V	28 V	28 V
I _i	120 mA	-	120 mA	120 mA
P _i	0.84 W	-	0.84 W	0.84 W
C _i	60 nF	60 nF	60 nF	53 nF
L _i	0	0	0	0

P6420-Series					S6420-Series
Model	i (Group I)	iF (Group I Fused)	ii (Group II Standard)	G (Group II Surge)	ii (Group II Surge)
U _i	28 V	16.5 V	28 V	28 V	28 V
I _i	120 mA	-	120 mA	120 mA	120 mA
P _i	0.84 W	-	0.84 W	0.84 W	0.84 W
C _i	60 nF	60 nF	60 nF	53 nF	53 nF
L _i	0	0	0	0	0

P9420-Series			A-Series and B-Series	
Model	(Group II Standard)	(Group II Surge)	A-K (Group II Standard)	B-K (Group II Surge)
U _i	28 V	28 V	28 V	28 V
I _i	120 mA	120 mA	120 mA	120 mA
P _i	0.84 W	0.84 W	0.84 W	0.84 W
C _i	60 nF	53 nF	60 nF	53 nF
L _i	0	0	0	0

Model	Series 510*	Series 503FR*	PE-420*	VE-420*	A-R
U _i	28 V	28 V	28 V	28 V	28 V
I _i	120 mA	120 mA	120 mA	120 mA	120 mA
P _i	0.84 W	0.84 W	0.84 W	0.84 W	0.84 W
C _i	60 nF	60 nF	60 nF	60 nF	60 nF
L _i	0	0	0	0	0

* Alternative references for ii (Group II Standard)

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Sira Certification Service

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Hawarden, CH5 3US, United Kingdom

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Variation 1 - This variation introduced the following changes:

- i. The address of the distributor that is shown on the alternative labels was changed.

Variation 2 - This variation introduced the following changes:

- i. A shunt wire was added to 4-20mA PCB B1693.
- ii. The enclosure was modified to enable the user to access the zero and span trim potentiometers.
- iii. The component size of EMC PCB B2327 was changed to 0805 surface mount.
- iv. The tolerance on capacitors on EMC PCB was increased.
- v. Vishay Norway were introduced as a distributor, their associated model numbers are PE-420 and VE-420.
- vi. The Sensit A-R Series designation was recognised.

Variation 3 - This variation introduced the following changes:

- i. The recognition of drawing modifications to remove reference to Sensit and Nobel, improve the aesthetics of the marking label and introduce the RM&C name and logo.

Variation 4 - This variation introduced the following changes:

- i. The introduction of a new version of the equipment that uses a different connector arrangement. This version is called the **W9420-Series Transducer** and its certification label bears a new, brand name.

The W9420-Series has the following marking and associated, intrinsic safety parameters:

Marking



II 1G
EEx ia IIC T4 T_a = -20°C to +90°C

Safety parameters

U_i = 28 V I_i = 120 mA P_i = 0.84 W C_i = 60 nF L_i = 0

Variation 5 - This variation introduced the following changes:

- i. The introduction of NASC (North American Sensors Corp) as a distributor, the associated model numbers are PTR525 and PTR575. The new products PTR525 and PTR575 are identical to A-series product.

U_i = 28 V I_i = 120 mA P_i = 0.84 W C_i = 60 nF L_i = 0

Variation 6 - This variation introduced the following changes:

- i. Certificate holder's name and address was changed:

From:
Roxspur Measurement & Control Ltd
Campbell Court, Bramley
Tadley
Hampshire RG26 5EG
UK

To:
RM&C Ltd
Downgate Drive
Sheffield
South Yorkshire S4 8BT
UK

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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	03 March 2003	R52A9377A	The release of the prime certificate.
1	11 December 2003	R51V11044A	The introduction of Variation 1.
2	20 June 2008	R52A18354A	This Issue covers the following changes: <ul style="list-style-type: none"> All previously issued certification was rationalised into a single certificate, Issue 2, Issues 0 and 1 referenced above are only intended to reflect the history of the previous certification and have not been issued as documents in this format. The introduction of Variation 2.
3	21 June 2011	R24305A/00	The introduction of Variation 3.
4	04 January 2016	R70049978A	The introduction of Variation 4.
5	25 August 2016	R70086575A	This Issue covers the following changes: <ul style="list-style-type: none"> EC Type-Examination Certificate in accordance with 94/9/EC updated to EU Type-Examination Certificate in accordance with Directive 2014/34/EU. <i>(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.)</i> The introduction of Variation 5.
6	20 October 2016	R70102677A	The introduction of Variation 6.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

15.1 Some transducers have an enclosure manufactured from aluminium alloy. In rare cases, ignition sources due to impact and friction sparks could occur. This shall be considered when the equipment is installed in locations that specifically require group II, category 1G equipment.

15.2 In the case of the B-Series pressure transducer and the S6420-Series level transducer, the circuit is not isolated from its enclosure and does not meet the 500 V insulation test; this shall be taken into account when it is installed.

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.

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17 **CONDITIONS OF MANUFACTURE**

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 With the exception of the B-Series pressure transducer and the S6420-Series level transducers, each transducer shall be subjected to an electric strength test using a test voltage of 500 Vac applied between the circuit and the outer enclosure, in accordance with EN 50020:2002 clause 10.6. There shall be no evidence of flashover or breakdown and the maximum current flowing shall not exceed 5 mA. A test voltage of 700 Vdc may be used as an alternative.
- 17.4 The transducers that are marked as suitable for group I use shall have a stainless steel enclosure.

Certificate Annexe



Certificate Number: Sira 02ATEX2386X

Equipment: Series Transducers

Applicant: RM&C Ltd

Issue 0

Number	Sheet	Rev.	Date	Description
A1688	1 of 1	4	23 Oct 02	M6420 Standard Grp II ATEX Identification Label
A1705	1 of 1	4	23 Oct 02	P6420 Standard Grp II ATEX Identification Label
A2206	1 of 1	2	01 Mar 98	I.S. Fuse PCB Approvals Drawing
A2225	1 of 1	2	01 Mar 98	I.S. Fuse PCB Track Layout Approvals Drawing
A2325	1 of 1	2	23 Oct 02	M6420 Surge Grp II ATEX Identification Label
A2326	1 of 1	2	23 Oct 02	P6420 Surge Grp II ATEX Identification Label
A2380	1 of 1	3	23 Oct 02	M6420 Fused Grp I ATEX Identification Label
A2381	1 of 1	3	23 Oct 02	P6420 Fused Grp I ATEX Identification Label
A2590	1 of 1	2	23 Oct 02	S6420 Surge Grp II ATEX Identification Label
A2850	1 of 1	2	23 Oct 02	B Series Surge Grp II ATEX Identification Label
A2851	1 of 1	2	23 Oct 02	A Series Standard Grp II ATEX Identification Label
B1684	1 of 1	8	29 Oct 02	P9420-3XX and P6420 Transducer – General Assembly (CENELEC)
B1685	1 of 1	7	29 Oct 02	M6420, A & B Family of Transducers – General Assembly (CENELEC)
B1693	1 of 1	5	15 Dec 02	4-20mA Circuit Diagram - IS Version (M6420, A Series, P6420 & P9420 Families)
B1988	1 of 1	1	13 Nov 95	P9420 & P6420 Transducer General Assembly (CENELEC)
B1989	1 of 1	1	13 Nov 95	M6420 Transducer General Assembly (CENELEC)
B2209	1 of 1	2	01 Mar 98	M6420 Transducer - General Assembly (CENELEC – Group I, Fused)
B2210	1 of 1	2	01 Mar 98	P9420 & P6420 Transducer – General Assembly (CENELEC Group I, Fused)
B2213	1 of 1	2	01 Mar 98	4-20 mA Circuit Diagram - I.S. Version (Group I, Fused)
B2320	1 to 2	2	04 Jan 00	IS Transducer Electrical Connection Options (G.L.)
B2321	1 of 1	2	15 Dec 02	IS 4-20 mA PCB Circuit Diagram (G.L.) (B series & S6420 Families)
B2323	1 of 1	1	07 Oct 97	IS Ceramic Pressure Sensor Schematic (G.L.)
B2327	1 of 1	1	08 Oct 97	IS M and P Series EMC PCB Circuit Diagram (G.L.)
B2374	1 of 1	3	29 Oct 02	P9240-8XX Family of Weco Transducers – I.S. General Assembly
B2401	1 of 1	3	29 Oct 02	M6420 Limited Feature Transducer – I.S. General Assembly
B2402	1 of 1	2	26 Jul 01	M6420 Barrier Seal Transducer I.S. General Assembly
A1706	1 of 1	7	27 Feb 03	P9420 Grp II ATEX Identification Label
A2331	1 of 1	5	27 Feb 03	P9420 Surge Standard Grp II ATEX Identification Label
A2441	1 of 1	4	27 Feb 03	SOR Series 503FR Standard Grp II ATEX Identification Label
A2442	1 of 1	5	27 Feb 03	SOR Series 510LT Standard Grp II ATEX Identification Label

Issue 1

Number	Sheet	Rev.	Date	Description
A1706	1 of 1	8	10 Nov 03	P9420 Grp II ATEX Identification Label
A2331	1 of 1	6	10 Nov 03	P9420 Surge Standard Grp II ATEX Identification Label

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Certificate Annexe



Certificate Number: Sira 02ATEX2386X

Equipment: Series Transducers

Applicant: RM&C Ltd

Issue 2

Number	Sheet	Rev.	Date	Description
A3467	1 of 2	2	06 Jun 08	GP2 Identification Label for Vishay
A3467	2 of 2	2	06 Jun 08	GP2 Identification Label – A series
B1685	1 of 1	8	08 May 08	M6420, A & B Family of Transducers – General Assembly (CENELEC)
B1686	1 of 1	3	02 Jun 08	Transducer Electrical Connections (CENELEC)
B1693	1 of 1	6	12 May 08	4-20mA Circuit Diagram - IS Version (M6420, A Series, P6420 & P9420 Families)
B2327	1 of 2	1	08 Oct 97	IS M and P Series EMC PCB Circuit Diagram
B2327	2 of 2	1	08 Oct 97	IS M and P Series EMC PCB Circuit Diagram

Issue 3

Number	Sheets	Rev.	Date (Sira stamp)	Description
A1688	1 of 1	05	10 Jun 11	M6420 Standard Grp II ATEX Identification Label
A1705	1 of 1	05	10 Jun 11	P6420 Standard Grp II ATEX Identification Label
A2325	1 of 1	03	10 Jun 11	M6420 Surge Grp II ATEX Identification Label
A2326	1 of 1	03	10 Jun 11	P6420 Surge Grp II ATEX Identification Label
A2380	1 of 1	04	10 Jun 11	M6420 Fused Grp I ATEX Identification Label
A2381	1 of 1	04	10 Jun 11	P6420 Fused Grp I ATEX Identification Label
A2590	1 of 1	03	10 Jun 11	S6420 Surge Grp II ATEX Identification Label
A2850	1 of 1	03	10 Jun 11	B Series Surge Grp II ATEX Identification Label
A2851	1 of 1	03	10 Jun 11	A Series Standard Grp II ATEX Identification Label
A1706	1 of 1	09	10 Jun 11	P9420 Grp II ATEX Identification Label
A2331	1 of 1	07	10 Jun 11	P9420 Surge Standard Grp II ATEX Identification Label
A2441	1 of 1	05	10 Jun 11	SOR Series 503FR Standard Grp II ATEX Identification Label
A2442	1 of 1	06	10 Jun 11	SOR Series 510LT Standard Grp II ATEX Identification Label
A3467	1 of 2	03	10 Jun 11	GP2 Identification Label for Vishay
A3467	2 of 2	03	10 Jun 11	GP2 Identification Label for A series

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
B1686	1 and 2	4	03 Dec 15	Transducer Electrical Connections (CENELEC)
A3720	1 of 1	1	03 Dec 15	ATEX W9420 Standard Group II ATEX Identification Label
B2374	1 of 1	4	03 Dec 15	W9420-8XX & P9420-8XX Family of Weco Transducers I.S. General Assembly

Issue 5

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
A3791	1 of 1	1	01 Aug 16	PTR525 Marking Drawing
A3792	1 of 1	1	01 Aug 16	PTR575 Marking Drawing

Issue 6

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
A2380	1 of 1	05	17 Oct 16	M6420 Fused Group I ATEX Identification label
A2381	1 of 1	05	17 Oct 16	P9420 Fused Group I ATEX Identification label
A1688	1 of 1	06	13 Oct 16	M6420 standard Group II ATEX identification label
A1705	1 of 1	06	17 Oct 16	P6420 standard Group II ATEX identification label
A1706	1 of 1	10	17 Oct 16	P9420 standard Group II ATEX identification label
A2441	1 of 1	06	17 Oct 16	SOR series 503FR standard Group II ATEX identification

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Certificate Annexe



Certificate Number: Sira 02ATEX2386X

Equipment: Series Transducers

Applicant: RM&C Ltd

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
A2442	1 of 1	07	17 Oct 16	SOR series 510LT standard Group II ATEX identification
A2851	1 of 1	04	17 Oct 16	A series standard Group II ATEX identification label
A3467	1 of 2	04	17 Oct 16	Group II Atex identification label for Vishay Norway sheet 1 of 2
A3467	2 of 2	04	17 Oct 16	Group II Atex identification label sheet 2 of 2 (A-R)
A3720	1 of 1	02	17 Oct 16	W9420 standard Group II ATEX Identification label
A3791	1 of 1	02	17 Oct 16	Group II ATEX Identification label for NASC (Pt No 525)
A3792	1 of 1	02	17 Oct 16	Group II ATEX Identification label for NASC (Pt No 575)
A2325	1 of 1	04	17 Oct 16	M6420 Surge Group II ATEX identification label
A2326	1 of 1	04	17 Oct 16	P6420 Surge Group II ATEX identification label
A2331	1 of 1	08	17 Oct 16	P9420 Surge Group II ATEX identification label
A2590	1 of 1	04	17 Oct 16	S6420 Surge Group II ATEX identification label
A2850	1 of 1	04	17 Oct 16	B Series Surge Group II ATEX identification label

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