



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 06ATEX2014X** Issue: **2**

4 Equipment: **IMP 3 i.s., 6 i.s. and 10 i.s. Loop Powered Ultrasonic Level Measurement Devices**

5 Applicant: **Pulsar Process Measurement Limited**

6 Address: Cardinal Building  
Enigma Commercial Centre  
Sandy's Road  
Malvern  
Worcestershire WR14 1JJ  
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 50014:1997 plus Amendments 1 and 2      EN 50020:2002      EN 50284:1999

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 1G  
EEx ia IIC T4 (Tamb = -40°C to +80°C)

Project Number 52A19911  
C. Index 13

C Ellaby  
Certification Officer

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**SCHEDULE**

**EC TYPE-EXAMINATION CERTIFICATE**

**Sira 06ATEX2014X  
Issue 2**

**13 DESCRIPTION OF EQUIPMENT**

These ultrasonic level measuring devices are designed as 4-20 mA, loop powered, level measurement sensors that are used in level measurement systems. The sensors in the series differ only in the size of transducer crystal, the Ping board population and the housing. They comprise two printed circuit boards and a piezo electric crystal transducer; these are all housed inside a plastic enclosure and then totally encapsulated. The devices also have an unencapsulated display board and keypad. A terminal block provides the connection facilities to the external circuits. The models included in the range are described as follows:

IMP 3 i.s.	(the numbers 3, 6 and 10 relate
IMP 6 i.s.	to the maximum measurable
IMP 10 i.s.	distance in metres)

The ultrasonic level measuring devices have been assessed with the following input parameters:

Ui	=	28 V
Ii	=	162 mA
Pi	=	1.03 W
Ci	=	0
Li	=	0

**Variation 1** - This variation introduced the following changes:

- i. The addition of Resistor R13 and the option to fit a diode D9.
- ii. The change of the company Address:

From:	To:
Pulsar Process Measurement Limited	Pulsar Process Measurement Limited
Harmac House	Cardinal Building
Chequers Close	Enigma Commercial Centre
Enigma Business Park	Sandy's Road
Malvern	Malvern
Worcestershire WR14 1GP	Worcestershire WR14 1JJ
UK	UK

**Variation 2** - This variation introduced the following changes:

- i. The Bill of Material drawings were modified to recognise:
  - The re-specification of suppliers, identification numbers, package types, ratings, operating temperatures etc. applicable to specified component parts.
  - The removal of specified component parts.
  - Certain specified component parts were allowed to be optional.



**SCHEDULE**

**EC TYPE-EXAMINATION CERTIFICATE**

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Issue 2**

**14 DESCRIPTIVE DOCUMENTS**

**14.1 Drawings**

Refer to Certificate Annexe.

**14.2 Associated Sira Reports and Certificate History**

Issue	Date	Report number	Comment
0	23 March 2006	R52A14172A	The release of prime certificate.
1	26 April 2007		This Issue covers the following changes: <ul style="list-style-type: none"><li>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.</li></ul>
2	12 May 2009	R52A16191A R52A19911A	<ul style="list-style-type: none"><li>The introduction of Variation 1.</li></ul> The introduction of Variation 2.

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

15.1 Under certain extreme circumstances, the non-metallic parts incorporated in the enclosure of this equipment may generate an ignition-capable level of electrostatic charge. Therefore, when it is used for applications that specifically require group II, Category 1, zone 0, equipment, the equipment 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.

17.3 The manufacturer shall mark the products with the address that is detailed in section 6.

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# Certificate Annexe

**Certificate Number:** Sira 06ATEX2014X  
**Equipment:** IMP 3 i.s., 6 i.s. and 10 i.s. Loop Powered Ultrasonic Level Measurement Devices  
**Applicant:** Pulsar Process Measurement Limited



## Issue 0

Drawing	Sheet	Rev.	Date	Description
D-804-0688-A	1 of 1	A	20 Feb 06	Label
D-804-0687-A	1 of 1	A	20 Feb 06	Internal label
D-804-0647-B	1 of 1	B	06 Feb 06	General assembly
D-804-0649-A	1 of 1	A	20 Jun 05	Housing
D-804-0674-A	1 of 1	A	10 Nov 05	1.5 inch threaded transducer housing, for 3
D-804-0675-A	1 of 1	A	10 Nov 05	1.5 inch threaded transducer housing, for 6
D-804-0676-A	1 of 1	A	10 Nov 05	2 inch threaded transducer housing for 10
BOM-0012-A	1 and 2	2.0	10 Nov 05	Bill of materials 3, 6, 10 i.s.
A-705-0004-A	1 to 3	4.0	08 Dec 04	Encapsulant specification sheet for Conapoxy
D-804-0651-B	1 to 3	B	03 Mar 06	CPU PCB circuit diagram
BOM-0015-D	1 to 6	D	06 Feb 06	CPU bill of materials
D-804-0654-B	1 to 6	B	06 Feb 06	CPU PCB layout
D-804-0650-A	1 of 1	A	21 Jun 05	Ping PCB circuit diagram
BOM-0014-B	1 to 2	B	08 Feb 06	Ping bill of materials
D-804-0653-B	1 to 5	B	06 Feb 06	Ping PCB layout
D-804-0652-A	1 of 1	A	07 Oct 05	Display PCB circuit diagram
BOM-0013-B	1 to 2	B	06 Feb 06	Display bill of materials
D-804-0655-B	1 to 4	B	06 Feb 06	Display PCB layout

## Issue 1

Drawing	Sheet	Rev.	Date Sira stamp	Description
D-804-0650-B	1 of 1	B	27 Mar 07	IMP i.s. Ping Circuit Diagram
D-804-0653-C	1 to 5	C	27 Mar 07	IMP Ping PCB
BOM-0014-C	1 to 2	-	27 Mar 07	IMP Ping i.s. Parts List
Variation to Sira 06ATEX2014X 17 January 07	1 to 2	-	27 Mar 07	Two Photos and Description

## Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
BOM-0012-A	1 to 2	2.1	15 Apr 09	Controlled Bill of Materials IMP 3, 6 or 10 i.s.
BOM-0014-D	1 to 2	D	15 Apr 09	IMP Ping i.s. Parts List
BOM-0015-E	1 to 5	E	15 Apr 09	IMP BOM Main Board IS

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