



## 1 EU-TYPE EXAMINATION CERTIFICATE

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

3 Certificate Number: **Sira 08ATEX2193X** Issue: **3**

4 Equipment: **Multi-Sensor Flow**

5 Applicant: **Detectronic Limited**

6 Address: Regent Street  
Whitewalls Industrial Estate  
Colne  
Lancashire BB8 8LJ  
UK

7 This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 CSA Group Netherlands B.V., Notified Body Number 2813 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 60079-0:2006                      EN 60079-11:2006                      EN 60079-26:2006  
IEC 60079-0:2007 was used for reference to the marking

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:

 II 1G  
Ga Ex ia IIB T4 T<sub>a</sub> = -40°C to +60°C

Project Number    1964

Signed:   
Title: Director of Operations

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**CSA Group Netherlands B.V.**  
Utrechtseweg 310,  
6812 AR, Arnhem,  
Netherlands



## SCHEDULE

### EU-TYPE EXAMINATION CERTIFICATE

Sira 08ATEX2193X  
Issue 3

#### 13 DESCRIPTION OF EQUIPMENT

The Multi-Sensor Flow Monitor combines a data logger & GSM modem for use in flow monitoring applications in 'dirty water', such as sewage. The unit provides terminations for several, suitably-approved, intrinsically safe sensors and is powered by both internal & external battery packs.

The internal battery pack is either a Technolog '9E3000' (single Tadiran TL-6930 3.9V lithium 'D' cell) or a Technolog '9V3000' (IECEX SIR 08.0095U and Sira 08ATEX2238U) which is a higher capacity version containing two Tadiran TL-6930 cells in parallel. Both may be changed in a hazardous area.

The external battery pack is typically an intrinsically safe Technolog '9W3000' battery pack, certificate number IECEX SIR.08.0074X and Sira 08ATEX2189X. Apart from the battery pack, there is no other external source of power.

The equipment comprises two printed circuit boards: interface PCB and processor PCB; these are housed in a plastic enclosure.

External circuit connections are made at the ports shown in the table below. The Multi-Sensor Flow Monitor has the following safety description at the ports for connections by the user:

	VEL	PRESSURE/LEVEL	CSO	COMMS	EXT POWER
Ui	0	0	0	0	12.6 V
Ci	3.603 $\mu$ F	0	0	0	0
Li	2400 $\mu$ H	90 $\mu$ H	0	0	0
Uo	12.6 V	11.55 V	5.88 V	5.88 V	-
Io	0.238 A	0.229 A	0.141 A	0.027 A	-
Po	0.748 W	0.748 W	0.207 W	0.039 W	-
Co	3.797 $\mu$ F	10.8 $\mu$ F	1000 $\mu$ F	1000 $\mu$ F	-
Lo	100 $\mu$ H	100 $\mu$ H	100 $\mu$ H	100 $\mu$ H	-

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

- i. The addition of a MAX8881 Adapter board, fitted as a replacement for components U4, C9 & C10 on board CA11000.

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

- i. The introduction of an optional user-accessible connection for an external antenna, with a corresponding Special Condition for Safe Use was approved.
- ii. The recognition of alternative casting compounds was acknowledged.
- iii. The incorporation of an amended Interface Board was endorsed.
- iv. The recognition of an editorial change to the marking drawings, in addition, the battery options on the assembly drawing was clarified.

**Variation 3** - This variation introduced the following change:

- i. The Applicants address was changed from 1 Turner Road, Lomeshaye Industrial Estate, Nelson, Lancashire BB9 7DR to Regent Street, Whitewalls Industrial Estate, Colne, Lancashire BB8 8LJ.



## SCHEDULE

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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	20 October 2008	R52A18900A	The release of the prime certificate.
1	30 January 2012	R26807B/00	The introduction of Variation 1 and Variation 2.
2	10 February 2014	R33060A/00	The introduction of Variation 3.
3	15 October 2019	1964	<ul style="list-style-type: none"><li>Transfer of certificate Sira 08ATEX2193X from Sira Certification Service to CSA Group Netherlands B.V..</li><li>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></li></ul>

##### 14.3 Certificate number Sira 08ATEX2190X Issue 2

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

- 15.1 The circuit ground is deliberately connected to the connector shells of the VEL and PRESS/LEV ports, so the equipment does not meet the requirements of the 500 V dielectric strength test in IEC 60079-11:2006 clause 10.3. This shall be taken into consideration during installation.
- 15.2 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 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. This is particularly important if the equipment is installed in a zone 0 location. In addition, the equipment shall only be cleaned with a damp cloth.
- 15.3 The internal battery packs may be changed in a hazardous area but do not meet the electrostatic requirements of clause 7.3 in IEC 60079-0:2004 and may cause an ignition due to a build up of electrostatic charge. This must be taken into consideration when the battery packs are changed in a hazardous area.
- 15.4 The Multi-Sensor Flow Monitor has provision for the installer to connect an external antenna, which is not covered by the certificate. The Multi-Sensor Flow Monitor meets the requirements for isolation between the external pins of the antenna connector and the internal circuit. However, the installer shall ensure that the antenna meets all the requirements of IEC 60079-14, such as precautions against electrostatic discharge.



## **SCHEDULE**

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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.

# Certificate Annexe



**Certificate Number:** Sira 08ATEX2193X  
**Equipment:** Multi-Sensor Flow  
**Applicant:** Detectronic Limited

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## Issue 0

Drawing No.	Sheet	Rev.	Date	Description
CA15011	1 of 1	A	19 Sep 08	Multi-Sensor Flow Monitor (ATEX) I.S. Marking Requirements

## Issue 1

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
CA15011	1 of 1	B	30 Jan 12	Multi-Sensor Flow Monitor (ATEX) I.S. Marking Requirements

## Issue 2

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Description
CA15013	1 of 1	A	10 Feb 14	Label

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