1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 11ATEX1365** Issue: **1**

4 Equipment: **Liquid Vertical Continuous Sensor, Flameproof (LVCS FP) and Float Switch, Flameproof (F/S FP)**

5 Applicant: **Deeter Electronics Limited**

6 Address: Deeter House
Valley Road
Hughenden Valley
High Wycombe
Bucks HP14 4LW
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 60079-0:2009 EN 60079-1:2007 EN60079-26:2007 EN 60079-31:2009

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 (without the adaptor for mounting across a boundary of two hazardous area zones)
II 1/2G (with the adaptor for mounting across a boundary of two hazardous area zones)
II 2D (with/without the adaptor for mounting across a boundary of two hazardous area zones)
Ex d IIC T(*) Gb (without the adaptor for mounting across a boundary of two hazardous area zones)
Ex d IIC T(*) Ga/Gb (with the adaptor for mounting across a boundary of two hazardous area zones)
Ex t IIIC (*)°C Db IP68 (with/without the adaptor for mounting across a boundary of two hazardous area zones)
Sensor Head Ta = -20°C≤ Ta ≤ +85°C
Process Temperature Range: ≤85°C T5/T100°C
≤125°C T4/T135°C
≤180°C T3/T200°C (LVCS)
≤190°C T3/T200°C (F/S)

* Dependent upon process temperature

Project Number 70027233

A G Boyes
Certification Support Officer

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 11ATEX1365**
Issue 1

13 **DESCRIPTION OF EQUIPMENT**

The LVCS FP (Liquid Vertical Continuous Sensor) and F/S FP (Float Switch) are liquid level sensors with either a continuous analogue or switching output. The equipment is rated for up to 28 Volt use and the F/S FP reed switch having a 50vDc/230VAC 1amp option and comprises of a flameproof, component certified instrument housing with stainless steel level guide which is threaded into the housing. The level guide consists of either an 8mm or 12mm stainless steel tube which contains the sensing electronics. The instrument housing is used for termination and mounting of optional PCBs, depending on the communication and I/O's required. The level guides can be of various lengths and are mounted with up to seven stainless steel floats, each containing a magnetic ring. The equipment can be supplied with an optional threaded adaptor for mounting across a boundary of two hazardous area zones.

When connected to process temperatures above 85°C, the temperature of sensor head must be sufficiently cooled to keep it below 80°C, as detailed in the manufacturer's instructions.

Model	Level guide length (mm)	Sensing device	Input/output options	Maximum Process Temperatures (°C)	Cable entry sizes
LVCS	100 to 4000	Reed switch or Hall effect	Optional PCB's for various input/outputs	180 (T3) 125 (T4) 85 (T5)	M20x 1.5 or 1/2" NPT
F/S	60 to 4000	Reed switch or Hall effect	Between 1 to 7 I/O float switches, direct output	190 (T3) 125 (T4) 85 (T5)	M20x 1.5 or 1/2" NPT

Variation 1 - This variation introduced the following change:

i. The Applicant's name was changed from Deeter Engineering Services Limited to Deeter Electronics Limited.

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 April 2012	R25009A/00	The release of prime the certificate.
1	26 March 2015	R70027233A	The introduction of Variation 1

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

None

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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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE **Sira 11ATEX1365**
Issue 1

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 Routine tests on production in accordance with clause 16 of EN60079-1 to a pressure of at least 5720 kPa (57.2 Bar).

17.4 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.

17.5 The manufacturer shall inform the user/installer that, when connected to process temperatures above 85°C, the temperature of sensor head must be sufficiently cooled to keep it below 80°C; this information shall be included in the instructions for these products and shall remain constant in subsequent versions of this document.

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Certificate Annexe

Certificate Number: **Sira 11ATEX1365**

Equipment: **Liquid Vertical Continuous Sensor, Flameproof (LVCS FP) and Float Switch, Flameproof (F/S FP)**

Applicant: **Deeter Electronics Limited**

Issue 0

Drawing	Sheets	Rev.	Date (Sira Stamp)	Title
D600779	1 of 2	1	19 Apr 12	LVCS FP all versions
D600779 - 2	2 of 2	1	19 Apr 12	LVCS FP all versions
D600781	1 of 2	1	19 Apr 12	F/S FP all versions
D600781-2	2 of 2	1	19 Apr 12	F/S FP all versions
Dwg 950553	1 of 1	1	19 Apr 12	Adaptor ½" NPT long thread to 12mm
Dwg 950568	1 of 1	1	19 Apr 12	Adaptor 1/2" NPT long thread to 8mm

Issue 1

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
D600781_2	2 of 2	2	26 Mar 15	F/S FP all Versions
D600779_2	2 of 2	2	26 Mar 15	LVCS FP all Versions

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