



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 03ATEX1176X** Issue: **4**

4 Equipment: **F1 Gas Sensor**

5 Applicant: **GDS Technologies Limited**

6 Address: Fusion Point
Ash Lane
Garforth
Leeds
LS25 2GA
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 60079-1:2007

EN 61241-1:2004

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 2 G D

Ex d IIC T6 Gb -20°C ≤ Ta ≤ +35°C

Ex tb IIIC T85°C Db IP6X

Ex d IIC T5 Gb -20°C ≤ Ta ≤ +50°C

Ex tb IIIC T100°C Db IP6X

Ex d IIC T4 Gb -20°C ≤ Ta ≤ +85°C

Ex tb IIIC T135°C Db IP6X

Ex d IIC T3 Gb -20°C ≤ Ta ≤ +120°C

Ex tb IIIC T200°C Db IP6X

Project Number 20978

C. Index 14

D R Stubbings BA MIET
Certification Manager

This certificate and its schedules may only be reproduced in its entirety and without change.



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 03ATEX1176X
Issue 4

13 DESCRIPTION OF EQUIPMENT

The F1 Gas Sensor is designed to monitor flammable gases in air. It is cylindrical in shape and has a two-part construction comprising a main body and an end cap, both of which are manufactured from stainless steel. The end cap screws into the main body and has a 250 µm sinter fused into its walls. This sinter allows the surrounding atmosphere to enter the sensor so that the presence of the flammable gas can be detected by various sensing elements contained within the main body. The sensor has a maximum power dissipation of 2.48 W. The rear end of the main body is filled with a setting compound through which the equipment wiring passes, it also has a male M20 x 1.5 thread-form that allows the F1 Gas Sensor to be fitted to an associated enclosure.

Variation 1 - This variation introduced the following change:

- i. The introduction of minor dimensional changes relating to the gas sensor extended body.

Variation 2 - This variation introduced the following change:

- i. The change of the Applicant's address from Swillington Lane, Swillington, Leeds, LS26 6BZ to Fusion Point, Ash Lane, Garforth, Leeds, LS25 2GA.

Variation 3 - This variation introduced the following change:

- i. Following appropriate re-assessment to demonstrate compliance with the requirements of the EN 60079 series of standards, the documents originally listed in section 9, EN 50014:1997 (amendments 1 and 2), EN 50018:2000 and EN 50281-1-1:1998, were replaced by those currently listed, the markings in section 12 were updated accordingly.

Variation 4 - This variation introduced the following change:

- i. The recognition of previously assessed updated drawings.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report No.	Comment
0	24 October 2003	R51A8269A	The release of the prime certificate.
1	19 January 2006	R51A14236A	The introduction of Variation 1.
2	9 December 2008	R51L19300A	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 to 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	30 December 2008	R51L19028A	The introduction of Variation 3.
4	18 September 2009	R20978A	The introduction of Variation 4.

This certificate and its schedules may only be reproduced in its entirety and without change.

Sira Certification Service

Rake Lane, Ecclestone, Chester, CH4 9JN, England

Tel: +44 (0) 1244 670900
Fax: +44 (0) 1244 681330
Email: info@siracertification.com
Web: www.siracertification.com



SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 03ATEX1176X
Issue 4

- 15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)
- 15.1 The F1 Gas Sensor shall not be used as Safety Related Devices in accordance with Directive 94/9/EC.
- 15.2 When installed, the F1 Gas Sensor shall be electrically bonded to earth.
- 15.3 Mechanical and explosion protection shall be provided for the flying leads of the F1 Gas Sensor.
- 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 substitute, on the approved label affixed to the apparatus, the new name and address for the old name and address.

Certificate Annexe

Certificate Number: Sira 03ATEX1176X
Equipment: F1 Gas Sensor
Applicant: GDS Technologies Limited



Issue 0

Drawing No.	Sheet	Rev.	Date	Title
DDC-015-3	1 of 1	C	29 Apr 97	Gas Sensor Type:
DDC-015/5	1 of 1	C	29 Apr 97	Gas Sensor Type:
DDC 015/10	1 of 1	A	06 Oct 92	Gas Sensor Type:
DDC-015-11	1 of 1	A	29 Sep 92	Gas Sensor Type:- GDS-F1
DDC-015/17	1 of 1	A	08 Jun 95	Gas Sensor Extended Body Type:- GDS F1
DDC-015/18	1 of 1	A	-- Apr 95	Gas Sensor Body (Extended) Type:- GDS F1
DDC015-19	1 of 1	A	20 Apr 97	Gds F1 Gas Sensor Extended Body
DDC015-20	1 of 1	A	20 Apr 95	Gas Sensor Extended Body Type:- GDS F1
DDC-015/21	1 of 1	A	08 Jun 95	Gas Sensor Extended Body Type:- GDS F1
DDC-015-23	1 of 1	A	12 Mar 97	Gas Sensor Extended Body Type:- GDS F1
DDC015-24	1 of 1	A	07 Jun 97	Gas Sensor Extended Body Type:- GDS F1
DDC015-25	1 of 1	A	07 Jun 97	Gas Sensor Extended Body Type:- GDS F1
DDC015-26	1 of 1	A	01 Apr 03	GDS F1 Body Marking

Issue 1

Drawing No.	Sheet	Rev.	Date (Sira stamp)	Title
DDC-015/18	1 of 1	B	16 Jan 06	Gas Sensor Body (Extended) Type:- GDS F1

Issue 2 No new drawings were introduced.

Issue 3

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Title
DDC015-26	1	B	22 Dec 08	ATEX Body Marking

Issue 4

Drawing	Sheets	Rev.	Date (Sira stamp)	Title
DDC-015-3	1 of 1	D	30 May 06	Gas Sensor Type GDS-F1
DDC-015-10	1 of 1	B	22 Jun 06	Gas Sensor Type GDS-F1
DDC-015-17	1 of 1	B	30 May 06	Gas Sensor Extended Body Type:- GDS F1
DDC-015-18	1 of 1	C	30 May 06	Gas Sensor Body (Extended) Type:- GDS F1
DDC-015-21	1 of 1	B	30 May 06	Gas Sensor Extended Body Type:- GDS F1
DDC-015-23	1 of 1	B	30 May 06	Gas Sensor Extended Body Type:- GDS F1

This certificate and its schedules may only be reproduced in its entirety and without change.