



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 08ATEX1031X** Issue: **2**

4 Equipment: **FGD 10** Series of Gas Detectors**

5 Applicant: **Status Scientific Controls Limited**

6 Address: **Kings Mill Way
Mansfield
Nottinghamshire NG18 5ER
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

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

Ex d IIC

T4 (Ta = -20°C to + 60°C) or

T5 (Ta = -20°C to + 50°C) or

T6 (Ta = -20°C to + 35°C)

Project Number 25165

C Ellaby
Deputy Certification Manager

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SCHEDULE

EC TYPE-EXAMINATION CERTIFICATE

Sira 08ATEX1031X
Issue 2

13 DESCRIPTION OF EQUIPMENT

The FGD10 Series of Gas Detectors use one of the following enclosures:

- either: A Type XD-Iwin, certified to IECEx FMG 06.0003U, coded Ex d IIC (Ta -40°C to + 85°C) and afforded ingress protection level IP 68, this enclosure has a threaded cover with a window.
- or: A Type XD-I, certified to IECEx FMG 06.0003U, coded Ex d IIC (Ta -40°C to + 100°C) and afforded ingress protection level IP 68, this enclosure has a threaded, plain cover.
- or: A Type XD-I80, certified to IECEx FMG 06.0003U, coded Ex d IIC (Ta -40°C to + 100°C) and afforded ingress protection level IP 68, this is a smaller enclosure that has a threaded, plain cover.

The enclosures have three bosses, two are used for cable entries and the third accommodates either a gas sensing head or gas sensor insert, designated SI-IR and SI-M respectively. The type SI-IR gas sensing head is a Type MSH or MSH-P to IECEx SIR 05.0053U, coded Ex d IIC (Ta = -20°C to + 60°C), the type SI-M gas sensing insert contains electrochemical or pellistor type gas sensors with a mesh between the external gas and the sensing element. Size M20, 1/2" or 3/4" NPT cable entries can be provided and the enclosures may contain up to four PCBs mounted on pillars, in the case of the Type XD-I80 enclosure, the PCBs are replaced by a single PCB containing terminals.

The FGD10 Series of Gas Detectors are rated up to 24 V, 5 W and have a relay switching maximum capacity of 300 Va.c. 3 A.

Variation 1 - This variation introduced the following changes:

- i. The introduction of the XD-SI & XD-SIwin Models was approved.
- ii. The recognition of minor machining detail changes were endorsed.

Variation 2 - This variation introduced the following change:

- i. The introduction of an alternative, separately certified sensor housing, type GSH4, mounted either directly on to the detector housing or remotely via separately certified junction boxes was approved.
- ii. The introduction of additional Special Conditions for Safe use and Conditions of Manufacture.
- iii. The drawings have been amended to show dual certification marking.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	9 April 2008	R51L17292B	The release of the prime certificate.
1	10 March 2010	R20717A/00	The introduction of Variation 1.
2	13 September 2011	R25165A/00	The introduction of Variation 2.

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

- 15.1 The gap between the SI-IR sensor and its housing in the gas detector is 0.11 mm maximum and should not be enlarged during maintenance etc.
- 15.2 Only Loctite 243 or a compound equal strength shall be re-applied to the threads of the type SI-M sensor after replacing the sensing element.
- 15.3 The SI-IR sensors shall not be installed or removed when an explosive gas atmosphere is present.
- 15.4 When FGD10 gas detector is provided with a remote GSH4 gas sensor, the integral conductors shall be suitably mechanically protected and terminated in a suitably certified ATEX junction box facility have the following minimum marking requirements:

Junction box		Cable glands for Junction box		Cable glands for FGD10 Gas detector	
Marking	Ambient range	Marking	Operating range (Min)	Marking	Operating range (Min)
Ex d IIC or Ex e IIC	-20°C to 60°C	Ex d IIC or Ex e	-20°C to 80°C	Ex d IIC	-20°C to 80°C

- 15.5 When FGD10 gas detector is provided with a remote GSH4 gas sensor, the integral conductors shall be suitably clamped within 100 mm of the point at which they exit the body of the Gas Sensor Type GSH4.
- 15.6 When gas detector is supplied with a GSH4 sensor for remote connection, it is the user's responsibility to ensure that the earth continuity is maintained via the mounting arrangement.

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 When FGD10 gas detector is provided with a GSH4 gas sensor, the product shall only be marked with a T4 temperature class.
- 17.4 When FGD10 gas detector is provided with a GSH4 gas sensor, it is the manufacturer's responsibility to ensure that the earth continuity is maintained via the mounting arrangement.

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Certificate Annexe

Certificate Number: Sira 08ATEX1031X
 Equipment: FGD 10** Series of Gas Detectors
 Applicant: Status Scientific Controls Limited



Issue 0

Drawing No.	Sheet	Rev.	Date	Description
SSC18/001	1 of 1	1	29 Aug 07	General Assembly – FGD10 Windowed Version
SSC18/002	1 of 1	1	29 Aug 07	General Assembly – FGD10 Non-Windowed Version
SSC18/006	1 of 1	1	04 Oct 07	Internal Arrangement – FGD10-A
SSC18/007	1 of 1	1	04 Oct 07	Internal Arrangement – FGD10-B
SSC18/005	1 of 1	1	03 Mar 08	General Assembly Type SI-M Sensor
SSC18/304	1 of 1	1	04 Mar 08	Sensor Housing Type SI-M Sensor
SSC18/317	1 of 1	1	03 Mar 08	Sensor Cover Type SI-M Sensor
SSC18/302	1 of 1	1	03 Sep 07	Mesh Holding Ring Housing Type SI-M Sensor
SSC18/303	1 of 1	1	03 Sep 07	Mesh Holding Ring Type SI-M Sensor Insert
SSC18/004	1 of 1	1	28 Aug 07	General Assembly Type SI-IR Sensor
SSC18/300	1 of 1	1	21 Aug 07	Sensor Housing Type SI-IR Sensor
SSC18/200	1 of 3	1	07 Dec 07	Certification Marking Details – Window Version
SSC18/200	2 of 3	1	07 Dec 07	Certification Marking Details – Non Window Version
SSC18/200	3 of 3	1	07 Dec 07	Certification Marking Details – Alternative Version

Issue 1

Drawing No.	Sheets	Rev.	Date (Sira stamp)	Description
SSC18/006	1 of 1	2	06 Oct 09	Typical Circuit Board Arrangement For FGD10-A Enclosure
SSC18/007	1 of 1	2	06 Oct 09	Typical Circuit Board Arrangement For FGD10-B Enclosure
SSC18/038	1 of 1	1	06 Oct 09	FGD10 Stainless Steel - Window Version - General Assembly
SSC18/039	1 of 1	1	06 Oct 09	FGD10 Stainless Steel - Non Window Version - General Assembly
SSC18/040	1 of 1	1	22 Feb 10	Typical Circuit Board Arrangement For FGD10 Stainless Steel Enclosure
SSC18/225	1 of 3	1	06 Oct 09	Certification Details For FGD10 Stainless Steel Gas Detector Window Version
SSC18/225	2 of 3	1	06 Oct 09	Certification Details For FGD10 Stainless Steel Gas Detector Non Window Version
SSC18/225	3 of 3	1	06 Oct 09	Certification Details For FGD10 Stainless Steel Gas Detector - Alternative Version
SSC18/300	1 of 1	2	06 Oct 09	Sensor Insert Type Si-IR
SSC18/304	1 of 1	2	06 Oct 09	Sensor Insert Type Si-M Body

Issue 2

Drawing	Sheets	Rev.	Date (Sira stamp)	Description
SSC18/038	1 of 1	2	15 Aug 11	FGD10 Stainless Steel – Window Version – General Assembly
SSC18/039	1 of 1	2	15 Aug 11	FGD10 Stainless Steel – Non-Window Version – General Assembly
SSC18/044	1 of 1	1	15 Aug 11	System Diagram for the FGD10 Gas Detector with Remote GSH4 Sensor Connected via Junction Boxes
SSC18/045	1 of 1	1	15 Aug 11	FGD10 Stainless Steel – Window Version Fitted with GSH4 Sensor General Assembly
SSC18/046	1 of 1	1	15 Aug 11	FGD10 Stainless Steel – Non Window Version Fitted with GSH4 Sensor General Assembly
SSC18/047	1 of 1	1	15 Aug 11	FGD10 Window Version Fitted with GSH4 Sensor General Assembly

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Sira Certification Service

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Certificate Annexe

Certificate Number: Sira 08ATEX1031X
Equipment: FGD 10** Series of Gas Detectors
Applicant: Status Scientific Controls Limited



Drawing	Sheets	Rev.	Date (Sira stamp)	Description
SSC18/048	1 of 1	1	15 Aug 11	FGD10 Non Window Version Fitted with GSH4 Sensor General Assembly

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