



1 **EC TYPE-EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 09ATEX1198X** Issue: **2**

4 Equipment: **FL310* Flame Detectors**

5 Applicant: **General Monitors Ireland** **General Monitors Inc.**

6 Address: Ballbrit Business Park 26776 Simpatica Circle
Galway Lake Forest
Ireland California 92630
USA

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 60079-0:2012

IEC 60079-1:2014 Ed 7

IEC 60079-31:2013 Ed 2

The above list of documents may detail standards that do not appear on the UKAS Scope of Accreditation, but have been added through Sira's flexible scope of accreditation, which is available on request.

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 db IIC T5 Gb
Ex tb IIIC T100°C Db IP6X
Ta = -40°C to +85°C

Project Number 70012374

C Ellaby
Deputy Certification Manager

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SCHEDULE

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13 DESCRIPTION OF EQUIPMENT

The FL310* Flame Detectors are ultraviolet/infrared devices. They comprise a rectangular base and a cylindrical cover secured by four M6 grade A2-70 hexagon socket-head bolts. The base contains two M20 x 1.5 cable entry points for the fitting of suitable cable entry devices on one side-wall. The cover, dependent on the model type, contains a combination of circular, sapphire or quartz, window and light rod options.

Design options

The FL310* Flame Detectors may utilise the following cable entry threadforms:

M25 x 1.5
¾" 14 NPT
PG 13.5

The FL310* Flame Detectors have been independently tested according to the requirements of EN 60529 to meet the requirements for IP66/67

Variation 1 - This variation introduced the following changes:

- i. The introduction of General Monitors Inc. as an additional manufacturer.
- ii. Following appropriate re-assessment to demonstrate compliance with the requirements of the latest standards, IEC 60079-31:2008 Ed 1 was replaced by EN 60079-31:2009.

Variation 2 - This variation introduced the following changes:

- i. The inclusion of drawing numbers 71110 Sheet 1 of 5 and 71053 sheet 1 of 1 to clarify the parameters of the design.
- ii. The manufacturer has confirmed that Models FL3101 UV, FL3100 UV/IR, FL3102 IR/IR will no longer be manufactured, the associated drawings have therefore been rationalised leaving only those current drawings required for FL3100H UV/IR and FL3101H UV Flame Detectors.
- iii. The option to use JGS1 windows as an alternative to the Quartz window type was endorsed.
- iv. Following appropriate assessment to demonstrate compliance with the latest technical knowledge, EN 60079-0:2006; IEC 60079-0:2007 Ed 5; EN 60079-1:2007 and IEC 60079-31:2008, were replaced EN 60079-0:2012, IEC 60079-1:2014 Ed 7 and IEC 60079-31:2013 Ed 2, the markings in section 12 of the certificate were updated accordingly and Special Conditions for Safe Use were amended to recognise the new standards resulting in an 'X' suffix being added to the certificate.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report number	Comment
0	22 March 2010	R20263A/00	The release of prime certificate.
1	2 November 2010	R22772A/00	The introduction of Variation 1.
2	30 March 2015	R70012374A	The introduction of Variation 2.

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Issue 2

- 15 **SPECIAL CONDITIONS FOR SAFE USE** (denoted by X after the certificate number)
- 15.1 This equipment uses an external non-metallic coating, which may generate an ignition-capable level of electrostatic charge under certain extreme conditions. The user shall ensure that the equipment is not installed in a location where it may be subjected to external conditions (such as high-pressure steam) which might cause a build-up of electrostatic charge on non-conducting surfaces. Additionally, cleaning of the equipment shall be done only with a damp cloth.
- 15.2 In accordance with IEC 60079-1 Clause 11.3, the 4 x M6 housing retain bolts are Class A2-70 304 Stainless Steel.
- 15.3 In accordance with IEC 60079-1 Clause 5.1, the flameproof joints are not intended to be repaired.
- 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 Each FL310* Flame Detector enclosure shall be subjected to a routine overpressure at 20.5 bar in accordance with EN 60079-1 clause 16. There shall be no permanent deformation or damage or leakage through the enclosure walls.

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