



1 **EU-TYPE EXAMINATION CERTIFICATE**

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

3 Certificate Number: **Sira 18ATEX1073X** Issue: **0**

4 Equipment: **FL500 UV/IR Flame Detector**

5 Applicant: **General Monitors,
Incorporated**

6 Address: **26776 Simpatica Circle
Lake Forest, CA 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 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: 2012/A11:2013 EN 60079-1:2014 EN 60079-31:2014

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 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 2GD
Ex db IIC T5 Gb
Ex tb IIIC T100°C Db
Ta: -55°C to +85°C

IP66/IP67

Project Number 70173529

C Ellaby
Deputy Certification Manager

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

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SCHEDULE

EU-TYPE EXAMINATION CERTIFICATE

**Sira 18ATEX1073X
Issue 0**

13 DESCRIPTION OF EQUIPMENT

Model FL500 is an ultraviolet/infrared (UV/IR) flame detector. It detects the ultraviolet and infrared spectral regions of flame to produce a system which is highly immune to false alarms caused by lightning, arc-welding, hot objects, and other sources of radiation.

The FL500 uses a UV radiation-sensitive phototube and an IR detector to identify fires. The FL500 is available with the following outputs: 4 to 20 mA signal, Immediate Alarm Low (relay), Time-delayed Alarm High (relay), RS-485 Modbus RTU, and HART 7 communication.

The FL500 assembly consists of a cylindrical, single-compartment, painted cast stainless steel enclosure with one threaded windowed cover. Field wiring connections for supply, communications and output contacts are accommodated through two threaded conduit entries. Each conduit entry is provided with a suitably rated blanking element. The overall physical dimensions are 11.2 x 11.0 cm (Ø x W).

The optical radiation output (LED) of the apparatus with respect to explosion protection is covered in this certificate based on exception 5) to the scope of IEC 60079-28:2015.

The M100x2.0 (6H/6g, ISO 965-1) threaded cover is provided with a minimum of 8 fully engaged threads. The cover is provided with a 4.95 mm (0.195 in) minimum thick sapphire window, secured by means of a threaded retaining ring and environmentally sealed with an EPDM O-ring (73 mm ID x 2.4 mm cross section thickness) gasket. The cover includes an M10 x 1.5 x 12mm long set screw for tool-securement and environmentally sealed with an EPDM O-ring (95.3 mm ID x 3.2 mm cross section thickness) gasket. See manufacturer's assembly drawings for further information.

The ratings IPx6 and IPx7 are not part of the methods of protection and were tested independent of the IECEx requirements. The equipment has been independently tested against the requirements of IEC 60529 and it meets IP66/IP67.

14 DESCRIPTIVE DOCUMENTS

14.1 Drawings

Refer to Certificate Annexe.

14.2 Associated Sira Reports and Certificate History

Issue	Date	Report no.	Comment
0	14 August 2018	R70173529A	The release of the prime certificate.

15 SPECIFIC CONDITIONS OF USE (denoted by X after the certificate number)

- 15.1 Potential electrostatic charging hazard; use a damp cloth for cleaning.
- 15.2 Contact the manufacturer if dimensional information of flameproof joints is needed.
- 15.3 Field connections to the FL500 shall be appropriately certified for the location and installed in accordance with wiring method requirements of the local electrical code as applicable.

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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17 CONDITIONS OF MANUFACTURE

- 17.1 The use of this certificate is subject to the Regulations Applicable to Holders of Sira Certificates.
- 17.2 Holders of EU-Type Examination Certificates are required to comply with the conformity to type requirements defined in Article 13 of Directive 2014/34/EU.
- 17.3 The FL500 incorporates the following previously certified components. It is therefore the responsibility of the manufacturer to continually monitor the status of the certification associated with these components, and to inform CSA Group/Sira Certification Services of any modifications to the components which may impinge upon the explosion safety design of the FL500.
- 3/4 NPT stopping plug / blanking element, manufactured by HLS, model number: D5.3/4.N 3/4" NPT (D.1). Certificate number: Sira 07ATEX1175X.
 - 3/4" to M25 thread adapter, manufactured by Peppers Cable Glands, Ltd. Model series AR. Certificate numbers: Sira 09ATEX1322X.

Certificate Annexe



Certificate Number: Sira 18ATEX1073X
Equipment: FL500 UV/IR Flame Detector
Applicant: General Monitors, Incorporated

Issue 0

Drawing no.	Sheets	Rev.	Date (Sira stamp)	Title
712900	1 to 2	0	20 June 2018	FL500 Approval DWG
712902	1 of 1	1	20 June 2018	Final Assembly, FL500
712904	1 of 1	1	20 June 2018	NAMEPLATE, APPROVAL, FL500
712908	1 of 1	1	20 June 2018	HOUSING, MACHINED, FL500
712912	1 of 1	1	20 June 2018	Base, Machined, FL500
712920	1 of 1	1	20 June 2018	Schematic diagram, Sensor Board
712921	1 of 1	1	20 June 2018	Circuit Card Assembly, Detector Board
712923	1 to 2	1	20 June 2018	Circuit Card Detail, Detector Board
712930	1 to 3	1	20 June 2018	Schematic diagram, Control Board
712931	1 of 1	1	20 June 2018	Circuit Card Assembly, Control Board
712940	1 of 1	1	20 June 2018	Schematic diagram, Relay & Connector Board
712941	1 of 1	1	20 June 2018	Circuit Card Assembly, Relay & Connector Board
712943	1 to 2	1	20 June 2018	Circuit Card Detail, Relay & Connector Board
712983	1 of 1	1	20 June 2018	BOARD STACK ASSY, UV/IR, FL500
712985	1 of 1	1	20 June 2018	WINDOW, FL500
712989	1 of 1	1	20 June 2018	LABEL, WIRING, FL500

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