



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx SIR 18.0026X Issue No: 0 Certificate history:  
Issue No. 0 (2018-08-14)

Status: Current Page 1 of 3

Date of Issue: 2018-08-14

Applicant: **General Monitors, Incorporated**  
26776 Simpatuca Circle  
Lake Forest, CA 92630  
United States of America

Equipment: **FL500 UV/IR Flame Detector**  
Optional accessory:

Type of Protection: **Flameproof and Dust Protection by Enclosure**

Marking:  
Ex db IIC T5 Gb  
Ex tb IIIC T100°C Db  
Ta: -55°C to +85°C  
IP66/IP67

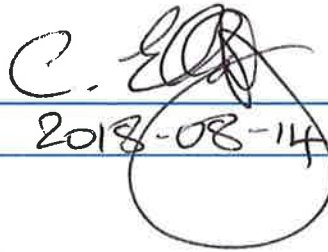
Approved for issue on behalf of the IECEx  
Certification Body:

C Ellaby

Position:

Deputy Certification Manager

Signature:  
(for printed version)

  
2018-08-14

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**SIRA Certification Service**  
CSA Group  
Unit 6, Hawarden Industrial Park  
Hawarden, Deeside, CH5 3US  
United Kingdom

**sira**  
CERTIFICATION





# IECEx Certificate of Conformity

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Date of Issue: 2018-08-14 Page 2 of 3  
Manufacturer: **General Monitors, Incorporated**  
26776 Simpatica Circle  
Lake Forest, CA 92630  
United States of America

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2017 Explosive atmospheres - Part 0: Equipment - General requirements  
Edition:7.0  
IEC 60079-1 : 2014-06 Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition:7.0  
IEC 60079-31 : 2013 Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure "t"  
Edition:2

*This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[GB/SIR/ExTR18.0136/00](#)

Quality Assessment Report:

[US/UL/QAR10.0004/06](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

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.

Refer to the Annexe for additional information.

**SPECIFIC CONDITIONS OF USE: YES as shown below:**

Refer to the Annexe.

### Annex:

[IECEX SIR 18.0026 Issue 0 Annexe.pdf](#)

Annexe to: IECEx SIR 18.0026X Issue 0  
Applicant: General Monitors, Incorporated  
Apparatus: FL500 UV/IR Flame Detector

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## 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.

## Specific Conditions of Use:

1. Potential electrostatic charging hazard; use a damp cloth for cleaning.
2. Contact the manufacturer if dimensional information of flameproof joints is needed.
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.

## Conditions of Manufacture:

1. 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: IECEx SIR 07.0048X.
  - 3/4" to M25 thread adapter, manufactured by Peppers Cable Glands, Ltd. Model series AR. Certificate number: IECEx SIR 09.0131X.

Date: 08 August 2018

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Sira Certification Service

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