



# 1. EU-TYPE EXAMINATION CERTIFICATE

2. Equipment or Protective systems intended for use in Potentially Explosive Atmospheres - Directive 2014/34/EU

3. EU-Type Examination Certificate No:

FM11ATEX0003X

4. Equipment or protective system:  
(Type Reference and Name)

Gassonic Observer-H Acoustic Gas Leak Detector  
Observer-i Acoustic Gas Leak Detector

5. Name of Applicant:

General Monitors Inc

6. Address of Applicant

16782 Von Karman Ave.,  
Unit 14,  
Irvine, California 92606, USA

7. This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and documents therein referred to.

8. FM Approvals Europe Ltd, notified body number 2809 in accordance with Article 17 of Directive 2014/34/EU of 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 confidential report number:

3040159EC dated 30<sup>th</sup> November 2011

9. Compliance with the Essential Health and Safety Requirements, with the exception of those identified in item 15 of the schedule to this certificate, has been assessed by compliance with the following documents:

EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-11:2012, EN 60079-31:2014,  
EN 60529:1991+A1:2000+A2:2013

10. If the sign 'X' is placed after the certificate number, it indicates that the equipment is subject to specific conditions of use specified in the schedule to this certificate.

11. This EU-Type Examination certificate relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

Certificate issued by: Martin Crowe

Certification Manager, FM Approvals Europe Ltd.

Date: 21 June 2023

**THIS CERTIFICATE MAY ONLY BE REPRODUCED IN ITS ENTIRETY AND WITHOUT CHANGE**

FM Approvals Europe Ltd. One Georges Quay Plaza, Dublin. Ireland. D02 E440  
T: +353 (0) 1761 4200 E-mail: [atex@fmapprovals.com](mailto:atex@fmapprovals.com) [www.fmapprovals.com](http://www.fmapprovals.com)

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## SCHEDULE

EU-Type Examination Certificate No. FM11ATEX0003X



12. The marking of the equipment or protective system shall include:



II 2 G Ex db ia IIB+H<sub>2</sub> T6 Gb Tamb = -40°C to +60°C

II 2 D Ex tb IIIC T85°C Db Tamb = -40°C to +60°C

### **13. Description of Equipment or Protective System:**

The Gassonic Observer-H Gas Leak Detector and the Observer-i Gas Leak Detector are stationary ultrasonic gas leak detectors that detect leaks from pressurized gas systems by sensing the airborne ultrasound generated by the escaping gas. This detection method is omni-directional. A microphone picks up the whistling sound of a leak and turns it into a signal. There is a transducer in the stainless-steel enclosure which acts as a test source for the detector. The apparatus is built into a semi-spherical stainless-steel enclosure with a circular indicator window. The microphone and the transducer are mounted outside the main enclosure. A guard protects the microphone from impact.

The optional configurations cover a HART® interface and alternative connections facilities.

Electrical ratings:

U = 15 – 36 Vdc

Um = 250 Vrms

The enclosure has an ingress protection rating of IP66.

See Annex

### **14. Specific Conditions of Use:**

1. The Class A4-70, M6 x 1 x 20 bolts connecting the bulkhead flanges must be tightened at 9 Nm.
2. Consult the manufacturer if dimensional information on the flameproof joints is necessary.

### **15. Essential Health and Safety Requirements:**

The relevant EHSRs that have not been addressed by the standards listed in this certificate have been identified and assessed in the confidential report identified in item 8.

### **16. Test and Assessment Procedure and Conditions:**

This EU-Type Examination Certificate is the result of testing of a sample of the product submitted, in accordance with the provisions of the relevant specific standard(s), and assessment of supporting documentation. It does not imply an assessment of the whole production.

Whilst this certificate may be used in support of a manufacturer's claim for CE Marking, FM Approvals Europe Ltd accepts no responsibility for the compliance of the equipment against all applicable Directives in all applications.

This Certificate has been issued in accordance with FM Approvals Europe Ltd's ATEX Certification Scheme.

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**SCHEDULE**  
EU-Type Examination Certificate No. FM11ATEX0003X



#### 17. Schedule Drawings

A list of the significant parts of the technical documentation is annexed to this certificate and a copy has been kept by the Notified Body.

#### 18. Certificate History

Details of the supplements to this certificate are described below:

Date	Description
8 December 2011	Original Issue.
25 September 2013	<u>Supplement 1</u> Report Reference: 3040159rev130827 dated 9 <sup>th</sup> September 2013. Description of the Change: Addition of model Gassonic Observer-i.
9 January 2014	<u>Supplement 2</u> : Report Reference: 3040159rev121106 dated 30 <sup>th</sup> December 2013. Description of the Change: Minor electrical and clerical updates not affecting compliance.
18 October 2016	<u>Supplement 3</u> : Report Reference: RR206550 dated 13 <sup>th</sup> October 2016. Description of the Change: Minor drawing changes, changed mounting bolts, removed "Gassonic" reference for the Observer-i. Updated standards and updated certificate to EU format.
27 April 2017	<u>Supplement 4</u> : Report Reference: RR208817 dated 17 <sup>th</sup> April 2017. Description of the Change: Minor drawing changes.
30 January 2019	<u>Supplement 5</u> : Report Reference: RR217075 dated 28 <sup>th</sup> January 2019. Description of the Change: Minor drawing changes.
8 April 2019	<u>Supplement 6</u> : Description of the Change: Certificate transferred from FM Approvals Ltd., notified body no. 1725, to FM Approvals Europe Ltd., notified body no. 2809.
24 December 2019	<u>Supplement 7</u> : Report Reference: RR221571 dated 23 <sup>rd</sup> December 2019. Description of the Change: Minor drawing change.
24 February 2021	<u>Supplement 8</u> : Report Reference: RR226786 dated 23 <sup>rd</sup> February 2021. Description of the Change: Minor drawing change, gap analysis and update from EN

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Date	Description
	60079-0:2012+A11:2013 to EN IEC 60079-0:2018.
25 August 2021	<u>Supplement 9:</u> Report Reference: – RR227059 dated 29 <sup>th</sup> July 2021. Description of the Change: Documentation Update to update label
20 January 2022	<u>Supplement 10:</u> Report Reference: – RR229755 dated 12 <sup>th</sup> January 2022. Description of the Change: Update to add UKEX to label.
21 June 2023	<u>Supplement 11:</u> Report Reference: RR236397 dated 21 June 2023. Description of the Change(s): Revision of fusing, and other component updates. Documentation updates.

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## ANNEX

### 805501-a Gassonic Observer-H Acoustic Gas Leak Detector

#### Description of Equipment:

**805501-a Gassonic Observer - H Acoustic Gas Leak Detector**

a = configuration 1, 2, 3, 4, 5, 6, 7, 8

### 805701-a Observer-i Acoustic Gas Leak Detector

#### Description of Equipment:

**805701-a Observer - i Acoustic Gas Leak Detector**

a = configuration 1, 2, 3 or 4

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# Blueprint Report

## General Monitors Inc (1000001865)

Class No 3615

Original Project I.D. 3040159

Certificate I.D. FMIIATEX0003X

<u>Drawing No.</u>	<u>Revision Level</u>	<u>Drawing Title</u>	<u>Last Report</u>
80461	C	Bulkhead	RR206550
805500	F	Final Assembly Observer-H	11/6/12
805501	F	Final Cfg Assembly	11/6/12
805504-1	G	MULTI-LEVEL MANUFACTURING BOM	RR226786
805504	H	Assy Bottom Housing Mechanical ObserverH	RR226786
805505	F	Bot Housing Assy w/ Bulkhead Observer H	11/6/12
805508-1	A	Display Cable Assy BOM	3040159
805508	A	Display Cable Assy	3040159
805510	B	Schematic Diagram, Display Board	11/6/12
805511-1	B	CCA Obsv H Display BOM	11/6/12
805511	B	Circuit Card Assembly, Display Board	11/6/12
805513	B	Circuit Card Detail, Display Board	11/6/12
805520	D	Schematic Diagram, Control Board	11/6/12
805521-2	D	CCA Obsv H Ctrl Hart BOM	11/6/12
805521	D	Circuit Card Assembly, Control Board	11/6/12
805523	D	Circuit Card Detail, Control Board	11/6/12
805530	F	Schematic Diagram, Analog Board	11/6/12
805531-1	G	CCA Obsv H Analog BOM	11/6/12
805531	D	Circuit Card Assembly, Analog Board	11/6/12
805533	D	Circuit Card Detail, Analog Board	11/6/12
805540	B	Schematic Diagram, Relay Board	RR206550
805541-1	B	CCA Obsv H Relay Push BOM	RR206550
805541-2	B	CCA Obsv H Relay Screw BOM	RR206550
805541	B	Circuit Card Assembly, Relay Board	RR206550
805543	B	Circuit Card Detail, Relay Board	RR206550
805544-1	B	MULTI-LEVEL MANUFACTURING BOM	RR206550
805544-2	B	MULTI-LEVEL MANUFACTURING BOM	RR206550
805554	F	Assy High Tower Observer-H	RR217075
805558	D	Bulkhead Subassy Observer-H	11/6/12
805561	F	Nameplate, Observer-H	RR206550
<b>805563-1</b>	<b>D</b>	<b>MULTI-LEVEL MANUFACTURING BOM</b>	<b>RR236397</b>
805563	C	Assy Linebushing Transducer	3040159
805565-1	C	Microphone PreAssy BOM	RR206550
805565	C	Microphone Assy	RR206550
805568	A	Approval Drawing Observer H	3040159
805569	B	Subassy Bottom Housing	11/6/12
805580	B	Connector Board	3040159
805581-1	B	CCA Obsv H Connector Bd BOM	11/6/12
805581	B	Circuit Card Assembly, Connector Board	3040159
805583	B	Circuit Card Detail, Connector Board	3040159
805701	C	Final CFG Assy.pdf	RR217075
805704	A	BOT Housing Assy W/Bulkhead Observer i.pdf	RR206550
<b>805706</b>	<b>M</b>	<b>Nameplate Observer i.pdf</b>	<b>RR236397</b>
<b>805730</b>	<b>C</b>	<b>Schematic Diagram, Control Board.pdf</b>	<b>RR236397</b>
805731-2	F	CCA, Observer i, Control Board, HART.pdf	RR217075
805731	B	Circuit Card Assembly, Control Board.pdf	RR217075
805733	A	Circuit Card Detail, Control Board.pdf	RR206550
<b>805740</b>	<b>C</b>	<b>Schematic Board, Analog Board.pdf</b>	<b>RR236397</b>
<b>805741-1</b>	<b>B</b>	<b>CCA, Observer i, Analog Board.pdf</b>	<b>RR236397</b>
<b>805741</b>	<b>B</b>	<b>Circuit Card Assembly, Analog Board.pdf</b>	<b>RR236397</b>
<b>805743</b>	<b>B</b>	<b>Circuit Card Detail, Analog Board.pdf</b>	<b>RR236397</b>
847-4006	B	Resistor, 680R, 4W, 1%, Wire Wound SMT, SMD	RR206550
847-4008	A	Resistor, 44.2R, 1W, 1%, Thick Film, 2512, SMT	3043383
848-0022	D	Diode, Zener, 12V, 100 mA SMBJ SMT DO-214	RR217075
851-1000	A	Fuse, Fast-Acting, 250V, 1/16A, SMT	RR217075
932-002	D	Conformal Coating	RR217075
937-023	A	Sound source piezo	3040159
945-070	C	Relay, 5V, 8A SPDT	3043383

958-505	A	TBG Heat Ultra-Flex Shrinkable, Black	3043383
960-373	A	Wire, Shielded, 3 Cond, 24AWG, 1mm Insulation	3043383
960-374	B	Wire, Shielded, 2 Cond, 24AWG, 1mm Insulation	RR217075
MANOBSERVER-F		Observer-H Instruction Manual	RR206550
MANOBSERVER-K		Observer i Instruction Manual	MANOBSERV
MANOObserver-i	K	Gassonic Observer-i Ultrasonic Gas Leak Detector (Manual)	RR227059

***Certificate I.D. FM21UKEX0025X***

<u><b>Drawing No.</b></u>	<u><b>Revision Level</b></u>	<u><b>Drawing Title</b></u>	<u><b>Last Report</b></u>
80461	C	Bulkhead	RR206550
805500	F	Final Assembly Observer-H	11/6/12
805501	F	Final Cfg Assembly	11/6/12
805504-1	G	MULTI-LEVEL MANUFACTURING BOM	RR226786
805504	H	Assy Bottom Housing Mechanical ObserverH	RR226786
805505	F	Bot Housing Assy w/ Bulkhead Observer H	11/6/12
805508-1	A	Display Cable Assy BOM	3040159
805508	A	Display Cable Assy	3040159
805510	B	Schematic Diagram, Display Board	11/6/12
805511-1	B	CCA Obsv H Display BOM	11/6/12
805511	B	Circuit Card Assembly, Display Board	11/6/12
805513	B	Circuit Card Detail, Display Board	11/6/12
805520	D	Schematic Diagram, Control Board	11/6/12
805521-2	D	CCA Obsv H Ctrl Hart BOM	11/6/12
805521	D	Circuit Card Assembly, Control Board	11/6/12
805523	D	Circuit Card Detail, Control Board	11/6/12
805530	F	Schematic Diagram, Analog Board	11/6/12
805531-1	G	CCA Obsv H Analog BOM	11/6/12
805531	D	Circuit Card Assembly, Analog Board	11/6/12
805533	D	Circuit Card Detail, Analog Board	11/6/12
805540	B	Schematic Diagram, Relay Board	RR206550
805541-1	B	CCA Obsv H Relay Push BOM	RR206550
805541-2	B	CCA Obsv H Relay Screw BOM	RR206550
805541	B	Circuit Card Assembly, Relay Board	RR206550
805543	B	Circuit Card Detail, Relay Board	RR206550
805554-1	B	MULTI-LEVEL MANUFACTURING BOM	RR206550
805554-2	B	MULTI-LEVEL MANUFACTURING BOM	RR206550
805554	F	Assy High Tower Observer-H	RR217075
805558	D	Bulkhead Subassy Observer-H	11/6/12
805561	F	Nameplate, Observer-H	RR206550
<b>805563-1</b>	<b>D</b>	<b>MULTI-LEVEL MANUFACTURING BOM</b>	<b>RR236397</b>
805563	C	Assy Linebushing Transducer	3040159
805565-1	C	Microphone PreAssy BOM	RR206550
805565	C	Microphone Assy	RR206550
805568	A	Approval Drawing Observer H	3040159
805569	B	Subassy Bottom Housing	11/6/12
805580	B	Connector Board	3040159
805581-1	B	CCA Obsv H Connector Bd BOM	11/6/12
805581	B	Circuit Card Assembly, Connector Board	3040159
805583	B	Circuit Card Detail, Connector Board	3040159
805701	C	Final CFG Assy.pdf	RR217075
805704	A	BOT Housing Assy W/Bulkhead Observer i.pdf	RR206550
<b>805706</b>	<b>M</b>	<b>Nameplate Observer i.pdf</b>	<b>RR236397</b>
<b>805730</b>	<b>C</b>	<b>Schematic Diagram, Control Board.pdf</b>	<b>RR236397</b>
805731-2	F	CCA, Observer i, Control Board, HART.pdf	RR217075
805731	B	Circuit Card Assembly, Control Board.pdf	RR217075
805733	A	Circuit Card Detail, Control Board.pdf	RR206550
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<b>805743</b>	<b>B</b>	<b>Circuit Card Detail, Analog Board.pdf</b>	<b>RR236397</b>
847-4006	B	Resistor, 680R, 4W, 1%, Wire Wound SMT, SMD	RR206550
847-4008	A	Resistor, 44.2R, 1W, 1%, Thick Film, 2512, SMT	3043383
848-0022	D	Diode, Zener, 12V, 100 mA SMBJ SMT DO-214	RR217075
851-1000	A	Fuse, Fast-Acting, 250V, 1/16A, SMT	RR217075
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MANOBSERVER-F		Observer-H Instruction Manual	RR206550
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***Certificate I.D. IECEEx FMG 11.0003X***

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805511-1	B	CCA Obsv H Display BOM	11/6/12
805511	B	Circuit Card Assembly, Display Board	11/6/12
805513	B	Circuit Card Detail, Display Board	11/6/12
805520	D	Schematic Diagram, Control Board	11/6/12
805521-2	D	CCA Obsv H Ctrl Hart BOM	11/6/12
805521	D	Circuit Card Assembly, Control Board	11/6/12
805523	D	Circuit Card Detail, Control Board	11/6/12
805530	F	Schematic Diagram, Analog Board	11/6/12
805531-1	G	CCA Obsv H Analog BOM	11/6/12
805531	D	Circuit Card Assembly, Analog Board	11/6/12
805533	D	Circuit Card Detail, Analog Board	11/6/12
805540	B	Schematic Diagram, Relay Board	RR206550
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