

# CERTIFICATE OF CONFORMITY



1. **HAZARDOUS (CLASSIFIED) LOCATION ELECTRICAL EQUIPMENT PER US REQUIREMENTS**

2. **Certificate No:** FM18US0156X  
3. **Equipment:** Model ELDS Open Path Gas Detector  
(Type Reference and Name)

4. **Name of Listing Company:** Senscient Ltd

5. **Address of Listing Company:** Unit F1 Arena Business Centre  
Holyrood Close  
Poole Dorset  
BH17 7FJ  
United Kingdom

6. The examination and test results are recorded in confidential report number:

3034911 dated 12<sup>th</sup> March 2010

7. FM Approvals LLC, certifies that the equipment described has been found to comply with the following Approval standards and other documents:

FM Class 3600:2018, FM Class 3615:2018, FM Class 3810:2018,  
FM Class 6325:2005, ANSI//FM 6325:2007, ANSI/ISA 12.13.04:2007,  
ANSI/NEMA 250:2003, ANSI/ISA 60529:2004, ANSI/ISA 60079-0:2005, ANSI/ISA 60079-1:2005

8. 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.

9. This certificate relates to the design, examination and testing of the products specified herein. The FM Approvals surveillance audit program has further determined that the manufacturing processes and quality control procedures in place are satisfactory to manufacture the product as examined, tested and Approved.

**Certificate issued by:**

J.E. Marquedant  
Manager, Electrical Systems

29 May 2018

Date

To verify the availability of the Approved product, please refer to [www.approvalguide.com](http://www.approvalguide.com)

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

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# SCHEDULE

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10. Equipment Ratings:

Explosionproof for Class I, Division 1, Groups B, C, and D, T5 Ta = 60°C; Flameproof for Class I, Zone 1, AEx IIB+H2, T5 Ta = 60°C; and Dust-ignitionproof for Class II/III, Division 1, Groups E, F and G, T5 Ta = 60°C, Hazardous (Classified) Locations, indoor/outdoor locations NEMA 4X/6 and IP66/67.

11. The marking of the equipment shall include:

Class I, Div. 1 Groups B, C, D, T5  
 Class II/III, Div. 1 Groups E, F, G, T5  
 Class I, Zone 1, AEx d (IIB+H2) T5  
 Tamb = -40°C to +60°C; Type 4X, IP66/67

12. Description of Equipment:

**ELDS**

The ELDS; part numbers, S-1012-1, M-1012-1, L-1012-1, S-1015-1, M-1015-1 and L-1015-1 are fixed open path gas detectors, comprising of a transmitter and receiver module operating over a distance of 5-40 (S), 40-120 meters (M) and 120-200 meters (L). The ELDS are Explosionproof for Class I, Division 1, Groups B, C, and D, T5 Ta = 60°C; Flameproof for Class I, Zone 1, AEx IIB+H2, T5 Ta = 60°C; and Dust-ignitionproof for Class II/III, Division 1, Groups E, F and G, T5 Ta = 60°C, Hazardous (Classified) Locations, indoor/outdoor locations NEMA 4X/6 and IP66/67. The operating temperature range is -40°C to +60°C and the power consumption is: for the transmitter (Tx) =12W and for the receiver (Rx) =10W. The enclosures are manufactured from 316L stainless steel with integral junction box and mounting brackets. Field accessories comprise Gassing Cell, Alignment Telescope, and Challenge Cell. Based on the model number selected, the system is either a single channel with one discreet 4-20mA outputs or dual channel with two discreet 4-20mA outputs for detection of Methane with measurement ranges of 0-1 LEL•m and 0-5 LEL•m, with minimum alarm set point of 10% FSD (0.1 LEL•m) and repeatability of ±2% FSD.

**Senscient ELDS a-b-1, Open Path Gas Detector**

- a = S (short range), M (medium range) or L (long range)
- b = 1012 (0-1 LEL•m Methane) or 1015 (0-5 LEL•m Methane)

Specifications - The manufacturer's specifications are as follows:

Operating Temperature:	-40°C to +60°C
Relative Humidity:	0 to 100% (Non- condensing)
Supply Parameters:	+24 V nominal, 18-32 VDC
Measurement Signal:	4-20mA
Calibration:	Units are supplied factory calibrated for the specified target gas or gases. Units should not require recalibration in service.
Firmware:	Transmitter = 002.011.010; Receiver = 002.011.010

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13. **Specific Conditions of Use:**

1. Use conductors rated >85°C.

14. **Test and Assessment Procedure and Conditions:**

This Certificate has been issued in accordance with FM Approvals US Certification Requirements.

15. **Schedule Drawings**

A copy of the technical documentation has been kept by FM Approvals.

16. **Certificate History**

Details of the supplements to this certificate are described below:

Date	Description
12 <sup>th</sup> March 2010	Original Issue.
29 <sup>th</sup> May 2018	<u>Supplement 2:</u> Report Reference: Project ID 3063268 dated 29 <sup>th</sup> May 2018 Description of the Change: Hardware and firmware updates and addition of model code designations.

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