



# SENSCIENT ELDS™

## METHANE SPECIFIC OPEN PATH DETECTOR

Open path methane (CH<sub>4</sub>) gas detectors are used to monitor for fugitive emissions and protect plants from the risk of explosion by detecting leaks faster and over a larger area than is feasible with point detection. These devices are typically located around the perimeter of a plant, process or storage area; or positioned in close proximity to specific items of a plant, that pose a real risk of gas escape: e.g. compressors, pump sets, pressure reducers, valves and pipe flanges.



FM 6325 Approved

## ADVANCED SENSING TECHNOLOGY

HARMONIC FINGERPRINT™



**Harmonic Fingerprint™** Much like forensic fingerprint ID, the Harmonic Fingerprint™ uses multiple identifiers in the absorption analysis of the target gas to eliminate false alarms.

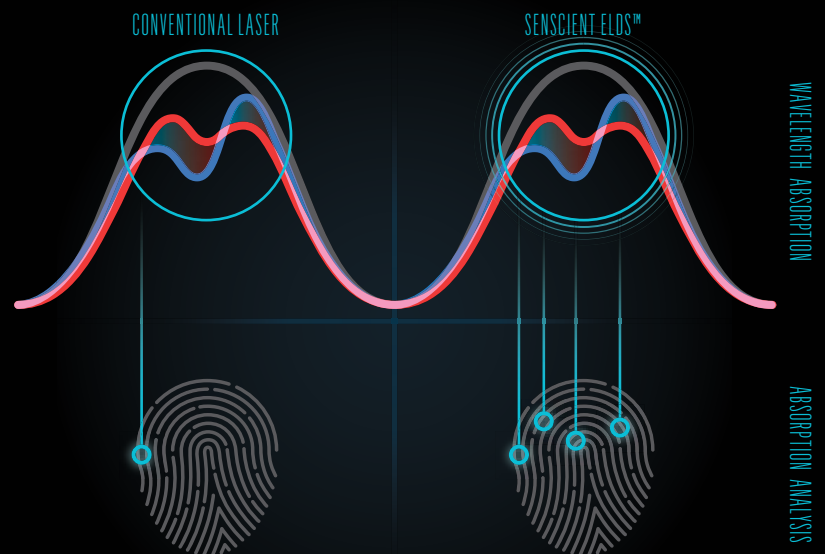
**SimuGas™** Only the Senscient ELDS™ can check and record functional tests automatically everyday.

**Zero Maintenance** The system does not require consumable sensing elements or calibrations, significantly reducing operation costs for time and materials spent on maintenance.

**Tuneable Lasers** Class 1 eye safe lasers penetrate thick fog, heavy rain, and snow further than differential infrared based detectors.

**Bluetooth®** Stay Connected. Work Smarter. Bluetooth wireless technology for faster commissioning and troubleshooting while keeping workers out of harms way.

**Lock Cell** A real target gas sample eliminates laser drift and maintains Harmonic Fingerprint™ lock continuously all day.



**Single point verification**  
Low false alarm rejection

**Four point verification**  
Highest false alarm rejection

— NO GAS    — TARGET GAS    — INTERFERENT GAS  
○ HARMONIC IDENTIFIER

# TECHNICAL SPECIFICATIONS



## Specifications

GAS	METHANE (CH <sub>4</sub> )
RANGES	0-1 LEL.m 0-5 LEL.m
PATH LENGTH	5-40 m OR 40-120 m OR 120-200 m (16-131 ft. OR 131-394 ft. OR 394-656 ft.)
FORMAT	INDIVIDUAL TRANSMITTER (Tx) & RECEIVER (Rx)

## Performance

RESPONSE TIME	T90 ≤ 3 SECONDS
REPEATABILITY	<± 5% FSD
LINEARITY	<± 5% FSD

## Environmental

INGRESS PROTECTION	IP66/67 NEMA TYPE 4/4X/6
ENCLOSURE MATERIAL	316L STAINLESS STEEL
LENS MATERIAL Tx	FACETED OPTICAL GLASS
LENS MATERIAL Rx	ASPHERIC OPTICAL GLASS
OPERATING TEMPERATURE	-40°C TO +60°C (AMBIENT)[-40°F TO 140°F]
HUMIDITY	0 - 100% RH (NON-CONDENSING)
VIBRATION	10 - 150 Hz, 2 g
EMC	EN50270

## Certification/Approvals

FM:	
CLASS I DIV 1 GROUPS B, C & D T5	
CLASS II DIV 1 GROUPS E, F & G T5	
CLASS III DIV 1	
Ex d IIB + H2 T5	
CLASS I, ZONE 1, AEx d IIB + H <sub>2</sub> T5	
Tamb = -40°C TO +60°C [-40°F TO 140°F]	
ENTRY: 3/4" NPT	

FM 6325 2005:	
PERFORMANCE OF COMBUSTIBLE OPEN PATH GAS MONITORS	
APPROVAL NO.:	FM3063268

## Safety Integrity

SUITABLE FOR USE IN SIL2 SAFETY SYSTEMS PER IEC 61508
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## Electrical

OPERATING VOLTAGE	Tx & Rx +24VDC (+18 TO +32 V DC)
POWER CONSUMPTION	Tx = 12 W (MAX), Rx = 10 W (MAX)
OUTPUTS (ANALOG x 2)	4-20 mA, CONFIGURABLE FOR 2 WIRE ISOLATED OR SINGLE WIRE, SINK OR SOURCE.
LOW SIGNAL	3 mA (CONFIGURABLE 1 TO 4 mA)
BEAM BLOCK	2.5 mA (CONFIGURABLE 0 TO 3.5 mA)
INHIBIT	2 mA (CONFIGURABLE 1 TO 3.5 mA)
FAULT	0.5 mA (CONFIGURABLE 0 TO 1 m)
OVER RANGE	21.5 mA (CONFIGURABLE 20 TO 21.9 mA)
OUTPUT (DIGITAL x 2)	HART 7.1 & MODBUS RTU SUPPORTED

## Mechanical

SIZE	Tx/Rx 140 mm DIA. X 300 mm [5.5" DIA X 11.8"]
WEIGHT	Tx 13.4 kg [29.5 lb.], Rx 12.4 kg [27.3 lb.] COMPLETE WITH MOUNTING BRACKET AND SUNSHADE
SUN / DELUGE PROTECTION	Tx & Rx SUPPLIED WITH SUN SHIELD/DELUGE PROTECTION
MOUNTING	Tx & Rx SUPPLIED WITH MOUNTING BRACKETS INCORPORATING FIXING HOLES / SLOTS FOR FLAT SURFACE OR METAL POLE MOUNTING. (NOTE: MOUNTING POLES SHOULD BE OF 4" TO 6" [100 mm TO 150 mm] DIAMETER. FIXING BOLTS / U BOLTS ARE NOT SUPPLIED)

## Optical

USES HARMONIC FINGERPRINT™ TO ENSURE NO FALSE ALARMS DURING ADVERSE ENVIRONMENTAL CONDITIONS, MISALIGNMENT OR PARTIAL OBSCURATION.	
ALIGNMENT	± 0.25°
OBSCURATION	OPERATES UP TO 95%
HEATED OPTICS	Tx & Rx LENSES ARE CONTINUOUSLY HEATED
LASER BEAM	CLASS 1 (EYE SAFE) IEC 60825-1
FDA ACCESSION NO.	1410373-000 (FOR IMPORTS INTO USA)

## Calibration

FACTORY CALIBRATED FOR LIFE, NO ROUTINE CALIBRATION REQUIRED.
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## Ordering Information

TO ORDER / SPECIFY:	SENSCIENT ELDS
GAS TYPE:	CH <sub>4</sub>
MEASURING RANGE:	E.G. 0-1 LEL.m
PATH LENGTH:	E.G. 5-40 m
CERTIFICATION:	E.G. FM

## Accessories

INTERFACE TERMINAL (TABLET)
OPTICAL ALIGNMENT SCOPE
GASSING CELL (OPTIONAL)
SNOW COWL (OPTIONAL)

Note: This bulletin contains only a general description of the products shown. While uses and performance capabilities are described, under no circumstances shall the products be used by untrained or unqualified individuals and not until the product instructions including any warnings or cautions provided have been thoroughly read and understood. Only they contain the complete and detailed information concerning proper use and care of these products. Specifications subject to change without notice.

ID 1411-018-MC / April 2018  
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Corporate Headquarters  
**MSA**  
1000 Cranberry Woods Dr  
Cranberry Township, PA 16066  
United States  
+1-724-776-8600

Design Center  
**MSA Poole**  
F1-2 Arena Business Centre  
Holyrood Close  
Poole  
BH17 7FP  
United Kingdom  
+44 (0) 1202 606460

Additional locations can be found on our web site:  
[www.MSAafety.com](http://www.MSAafety.com)