**SENSCIENT ELDS™**

**METHANE SPECIFIC OPEN PATH DETECTOR**

Open path methane (CH₄) 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.

**ADVANCED SENSING TECHNOLOGY**

**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.

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**Single point verification**
Low false alarm rejection

**Four point verification**
Highest false alarm rejection

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**NO GAS**
**TARGET GAS**
**INTERFERENT GAS**
**HARMONIC IDENTIFIER**
TECHNICAL SPECIFICATIONS

Specifications

Gas
- METHANE (CH₄)

Ranges
- 0-1 LEL
- 0-5 LEL

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 + H2 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

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 mA)

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 85%

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.

Ordering Information

To Order / Specify:
- SENSIENT ELDS
- GAS TYPE: CH₄
- 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.

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