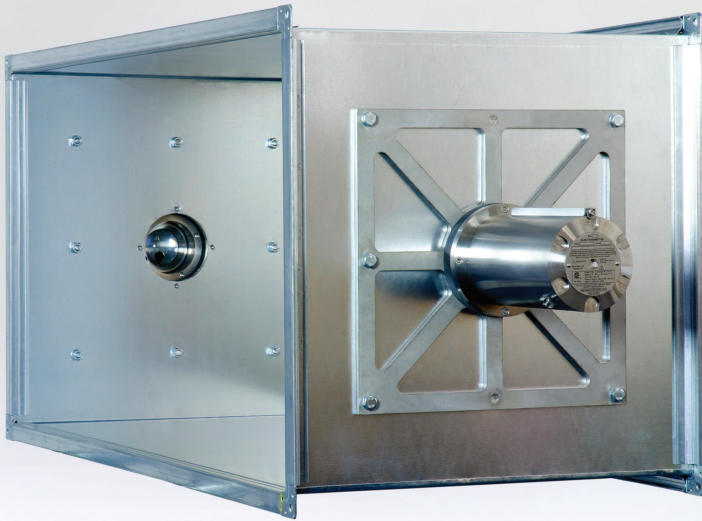




# SENSCIENT ELDS™

## METHANE SPECIFIC CROSS DUCT (XD) DETECTION

Open path methane ( $\text{CH}_4$ ) gas detectors are used to monitor for fugitive emissions and protect plants from the risk of explosion by detecting leaks faster. These devices are typically mounted onto opposing side walls of ventilation ducting to provide earlier detection and fast activation of HVAC executive actions.

## ADVANCED SENSING TECHNOLOGY

HARMONIC  
FINGERPRINT™

**SimuGas™**  
SAFETY INTEGRITY

**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.

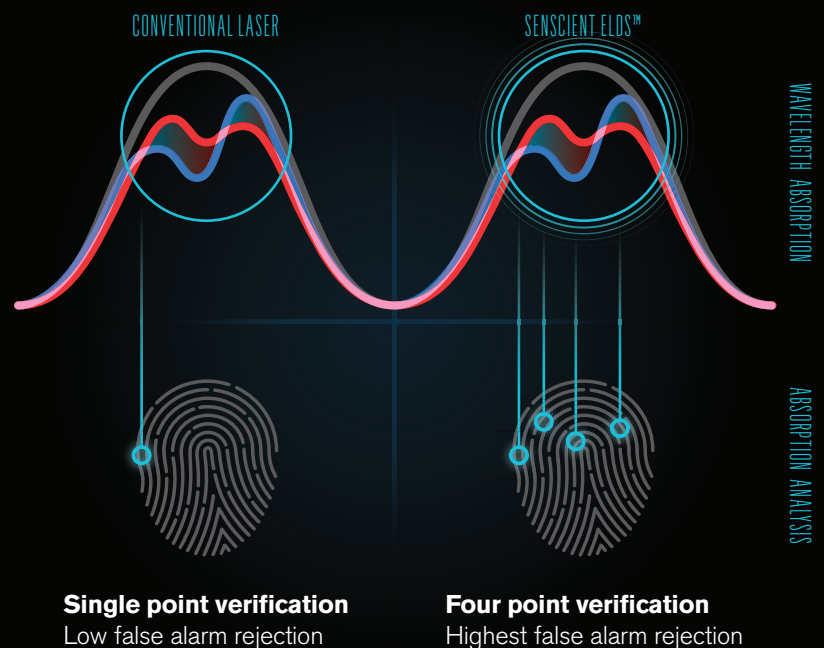
**Zero Maintenance** The system does not require consumable sensing elements or calibrations, significantly reducing operation costs for time and materials spent on maintenance.

**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.

**Fastest Response** Less than one second response time for increased safety.



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

# TECHNICAL SPECIFICATIONS



## Specifications

|             |                                             |
|-------------|---------------------------------------------|
| GAS         | METHANE (CH <sub>4</sub> )                  |
| RANGES      | 0-10% LEL<br>0-25% LEL<br>0-100% LEL        |
| PATH LENGTH | 0.5-5 m (1.6-16 FT)                         |
| FORMAT      | INDIVIDUAL TRANSMITTER (Tx) & RECEIVER (Rx) |

## Performance

|               |                |
|---------------|----------------|
| RESPONSE TIME | T90 ≤ 1 SECOND |
| 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 | -55°C TO +60°C (AMBIENT) [-67°F TO 140°F] |
| HUMIDITY              | 0 - 100% RH (NON-CONDENSING)              |
| VIBRATION             | 10 - 150 Hz, 2 g                          |
| EMC                   | EN50270                                   |

## Certification/Approvals

|                                         |                                                     |
|-----------------------------------------|-----------------------------------------------------|
| CSA AND UL:                             | CUSTOMS UNION OF RUSSIA,                            |
| CLASS I DIV 1 GROUPS B, C & D T5        | KAZAKHSTAN & BELARUS:                               |
| CLASS II DIV 1 GROUPS E, F & G T5       | EAC EX TR CU CoC                                    |
| CLASS III DIV 1                         | IEExd IIB T5/H2X                                    |
| Ex d IIB + H2 T5                        | ENTRY: M25                                          |
| CLASS I, ZONE 1, AEx d IIB + H2 T5      |                                                     |
| Tamb = -40°C TO +60°C [-40°F TO 140°F]  | INMETRO:                                            |
| ENTRY: 3/4" NPT                         | Ex d IIB + H2 T5 Gb<br>Ex tb IIIC T100°C Db IP66/67 |
| ATEX / IECEX:                           | Tamb: -40°C TO +60°C [-40°F TO 140°F]               |
| II 2 GD Exd IIB + H2 T5                 | ENTRY: M25                                          |
| Tamb -40°C TO +60°C Gb [-40°F TO 140°F] |                                                     |
| Ex tb IIIC T100°C [212°F]               |                                                     |
| Tamb = -40°C TO +60°C [-40°F TO 140°F]  |                                                     |
| Db IP66/67                              |                                                     |
| ENTRY: M25                              |                                                     |

## 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 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/Rx 12 KG [26.5 LB] EACH (C/W BRACKET)                                                                                                                                                                                                                                                                                                    |
| MOUNTING | BOTH Tx & Rx UNITS REQUIRE A MOUNTING PLATE (ORDERED SEPARATELY), FOR FLAT DUCT WALL FIXING. (FIXING BOLTS ARE NOT SUPPLIED). MOUNTING PLATES ARE AVAILABLE IN THREE SIZE OPTIONS:<br>180 MM X 180 MM [7.1" X 7.1"], 1.6 kg [3.5 LB]<br>250 MM X 250 MM [9.8" X 9.8"], 2.7 kg [2.7 LB]<br>400 MM X 400 MM [15.7" X 15.7"], 5.5 kg [12.1 LB] |

## Optical

USES HARMONIC FINGERPRINT™ TO ENSURE NO FALSE ALARMS DURING ADVERSE ENVIRONMENTAL CONDITIONS, MISALIGNMENT OR PARTIAL OBSCURATION.

|                   |                                        |
|-------------------|----------------------------------------|
| ALIGNMENT         | ± 2.5°                                 |
| 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.

## Ordering Information

|                     |                      |
|---------------------|----------------------|
| TO ORDER / SPECIFY: | SENSCIENT ELDS XD    |
| GAS TYPE:           | CH <sub>4</sub>      |
| MEASURING RANGE:    | E.G. 0-25% LEL       |
| PATH LENGTH:        | E.G. 0.5-5 m         |
| CERTIFICATION:      | E.G. ATEX            |
| MOUNTING PLATE:     | E.G. 250 mm x 250 mm |

## Accessories

APPROVED INTERFACE TERMINAL (PC)  
INTERFACE TERMINAL (TABLET)  
ALIGNMENT ADJUSTMENT BUSHINGS  
GASSING CELL (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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