detcon inc.

Model GD1-H2S

Laser Open Path Gas Detector

GAS DETECTION SENSORS ▪ INTEGRATED CONTROL SYSTEMS ▪ SMARTWIRELESS® ▪ PIPELINE ANALYZERS ▪ ALARMS

Description

The GD1 sets a new standard for toxic gas detection. Using a tuneable laser diode the GD1 delivers enhanced coverage and fail safe detection. The performance improvement marks a genuine step change for safety systems and life cycle cost savings.

The GD1 has been designed with features that provide an effective response to the detection of gas hazards in a wide range of industrial environments from offshore production facilities to wastewater treatment plants.

At the heart of the detector is a tuneable laser diode that eliminates environmental effects from sun, rain and fog. The laser scans single absorption lines where there is no interference from other gases.

Fail Safe
Fast Speed of Response
Calibration Free

Unlike traditional methods for detecting H2S (MOS or EC cell) the GD1 needs no recalibration and can replace multiple standard detectors to cover the same risk.

The complete optomechanical design and construction is so stable that an ultra fast speed of response can be achieved while providing unparalleled service life and detector stability, thus saving on maintenance and service costs.

The detector is supplied with worldwide hazardous area approvals, is suitable for SIL2 applications and comes with a 5 year warranty.

Features	Benefits
▶ Optical infrared toxic gas detection	No sensor recalibration or replacement
▶ Tuneable laser diode/laser scanning	Superior detector stability and specificity
▶ No undisclosed source of failure	Suitable for use in SIL 2 systems
▶ Large area of coverage	Fewer devices cover the same risk
▶ High sensitivity	Suitable for personnel safety purposes
▶ Fast acting	Fastest possible speed of response
▶ Vibration and misalignment tolerant optics	Ease of alignment and setup
▶ Heated optics, transmitter and receiver	High performance in arduous conditions
▶ HART®	Non-proprietary user interface and improved preventative maintenance

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R 853-816590-R06 052114

Technical Data

General
Detection Method: Near IR laser scanning
IR-Source: Tuneable laser diode, Laser Class 1, eye safe
Detected Gas: H2S
Range: 0-200 ppm
Path Length: 0-75 m
Self Test: Continuous
Calibration: Factory set, no field recalibration

Performance
Lifetime Stability: Zero: ±2% full scale deflection
Span: ±3% full scale deflection
Response Time: 5 sec.

Optics
Alignment: ±0.3°
Optics: Heated (Transmitter and Receiver)
Obscuration: 98%

Output Signal
Standard: 4-20 mA source or sink,
max. load impedance 500 ohm
HART®
Fault Signals: Fault 1mA
Beam Block 2mA
Warning 3mA

Electrical
Power Supply: 24V DC, range 18-32V DC
Power Consumption: <15 W
Cable Entry: M20

Temperature Range
Storage: -40°C to +75°C: -40°F to +167°F
Operating: -40°C to +65°C: -40°F to +149°F
ATEX Flameproof: -55°C to +75°C: -67°F to +167°F
Humidity (operation): 100% RH

Material
Tx and Rx Housing: Stainless steel (ASTM 316)
Junction Box: GRP

Weight
Approx: 5.5 Kg (12lbs) per Tx or Rx
Approx: 2.0 Kg (4.4 lbs) per Tx or Rx junction box

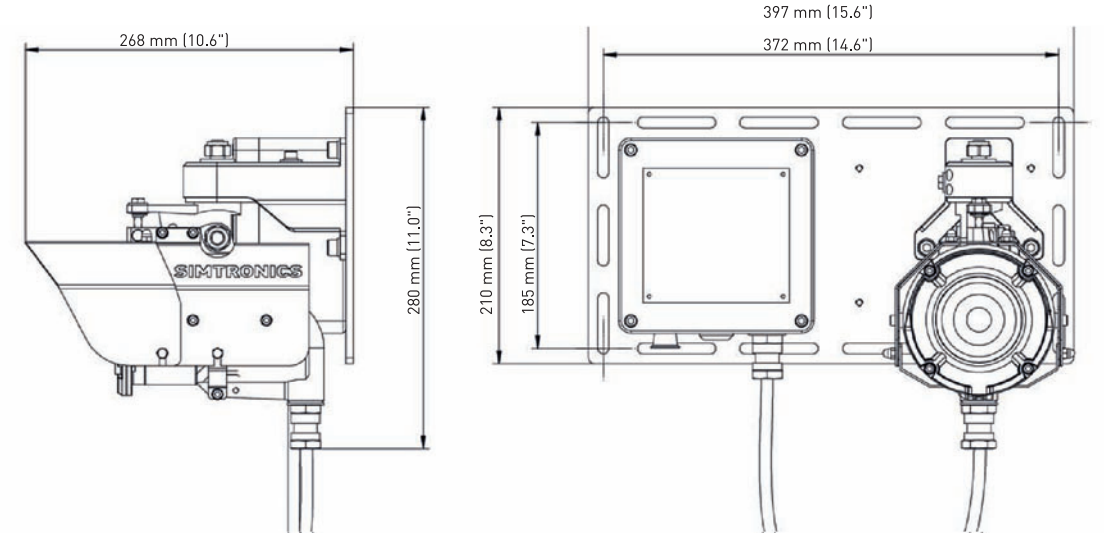
Dimensions
Tx and Rx Housing: Ref. outline drawing

Warranty
5 years full warranty on detector system

Approvals
ATEX Rating Tx/Rx: Ex II 2 G Ex d IIC T6/T5
ATEX Rating JB: Ex II 2 G Ex e IIC T4/T5/T6
ATEX Certificate: DNV 08 ATEX 18877X
IECEx: DNV 10.0002X
Ingress: IP66/IP67 IEC 60529
SIL: Suitable for use in SIL2 systems

Accessories
GD1-X00-TT01: Alignment kit
GD1-X00-TT02: Test cell

Specifications subject to change without notice



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ISO 9001: 2008 Certified