GD1- H2S

Fast speed of response Calibration free

improved preventative maintenance

Fail safe

Laser Open Path Gas Detector

The Simtronics 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.

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 whilst providing unparalleled service life and detector stability, thus saving on maintenance and service costs.

Supplied with worldwide hazardous area approvals. Suitable for use in systems with SIL 2 requirement.

FEATURES BENEFITS Laser open path 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& misalignment tolerant optics Ease of alignment and setup Heated optics, transmitter and receiver High performance in arduous conditions **HART®** Non-proprietary user interface and







GD1 - H2S

Technical Data

GENERAL

Near IR laser scanning Detection method Tuneable laser diode IR-Source Laser Class 1, eye safe

Detected gas

Range 0 - 200 ppm.m (Default range. Other

ranges available on request)

5 - 50 m Path length Self test Continuous

Calibration Factory set, no field recalibration

PERFORMANCE

Accuracy <±4% of full range <±4% of full range Repeatability

Response time <5 sec.

OPTICS

±0.30 Alignment

Heated (Transmitter and Receiver) Optics

Obscuration >98%

OUTPUT SIGNAL

Standard 4-20mA source or sink, max. load

impedance 500 Ohm

HART®

Fault signals Fault 1 mA

> Beam Block 2 mA Warning 3 mA

ELECTRICAL

24 V DC, range18-32 V DC Power supply

Power consumption <15 W Cable entry M25

TEMPERATURE RANGE

-40°C to + 65°C (-40°F to +149°F) Operating -55°C to + 75°C (-67°F to +167°F) ATEX Flameproof

Humidity (operation) 100% RH

MATERIAL

Tx and Rx Housing Stainless steel (ASTM 316)

Junction Box **GRP**

WEIGHT

5.5 Kg (12 lbs) per Tx or Rx Approx.

2.0 Kg (4.4 lbs) per Tx or Rx Junction Box Approx.

DIMENSIONS

Tx and Rx Housing Ref. outline drawing

WARRANTY

5 years full warranty on detector system

APPROVALS

⟨£x⟩ || 2 G Fx d IIC T6/T5 ATEX rating Tx/Rx ⟨Ex⟩ II 2 G ATEX rating JB Ex e IIC T4/T5/T6

DNV 08 ATEX 18877X ATEX certificate **IECEx** DNV 10.0002X IP66/IP67 IEC 60529 Ingress

SIL Suitable for use in SIL2 systems

ACCESSORIES

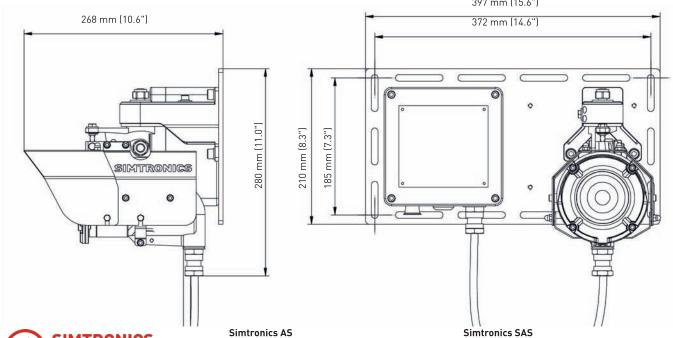
GD1-X00-TT01 Alignment kit

Test cell - short range (200-1000ppm test GD1-X00-TT02

GD1-X00-TT05 Test cell - long range (50-300ppm test

gas)

397 mm (15.6")





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