

GD10P

IR Point Gas Detector

Fast reliable response
No field recalibration
Solid state IR-source

SIL3
IEC 61508

The Simrad GD10P detector is the benchmark for combustible gas detection on offshore installations. It has set the standard for gas detectors in the areas of safety, stability and low maintenance. GD10P comes with 5 years warranty.

The GD10P has been designed with features that provide an effective response to the detection of gas hazards in a wide range of industrial environments from boiler plant rooms to offshore petrochemical installations.

These infrared gas detectors differ from all other models, because they utilise silicon based solid-state infrared sources. 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.

We offer the longest combined detector and IR source warranty on the market.

For retrofit applications, a bridge interface is available allowing the detector to be connected directly to catalytic systems, using the existing cabling and control modules.

Supplied with worldwide performance (CSA / CENELEC) and hazardous area approvals. Suitable for use in SIL 2 and SIL 3 systems.

Features

Solid state IR sources (SimSource™)

High IR source flash rate

True dual path, double compensation optical design

Selectable response rate

Dual layer weather protector

Early dirty optics warning

Integral termination compartment

Low power consumption

Independently heated mirror and lens

Benefits

Superior long term performance compared to filament lamps

Improved stability and speed of response

No recalibration, monitors and accounts for all changes in optical path

Fastest IR point detector on the market, ideal for speed critical applications

No mesh, gauze, hydrophobic filters or sinters = No delay, no failure on demand

Improved preventative maintenance

Reduced installation time, the unit is ready out of the box

Reduces load on UPS

High performance detection in rough environmental conditions



Technical Data

GENERAL

Detection method	IR-absorption, dual wavelength, dual path
IR-Source	Solid state IR source, 50Hz flash
Gases detected	Hydrocarbons, see separate data sheet for CO2 detection
Self-test	Continuous
Calibration	Factory set, no field recalibration

PERFORMANCE

Lifetime stability *)	±5% of full scale (FS) reading
Accuracy *)	±3% FS between 0-50 % reading ±5% FS between 50-100 % reading
Response time	T20 = 1 sec. (Option 0.3 sec) T50 = 2.5 sec. (Option 0.7 sec) T90 = 6 sec. (Option 1.6 sec)
Start-up time *)	Less than 60 sec.

*) Refers to -20°C to + 45°C

OUTPUT SIGNAL

Standard	Current source 4 – 20 mA, max. load impedance 500 Ohm HART® for configuration and maintenance
Option	Current sink 4 – 20 mA
Detector warnings:	Configurable (HART)
- Early clean optics	Pre warning (2 mA)
- Dirty optics	Dirt accumulation (1 mA)
- Detector failure	Internal fault (0 mA)

ELECTRICAL

Power supply	24 V DC, range 18-32 V DC
Power consumption	Approx. 3.5 W
Connection	3 wires (0.5mm ² - 1.5mm ²)
Cable entry	M20 EExe cable gland

TEMPERATURE RANGE

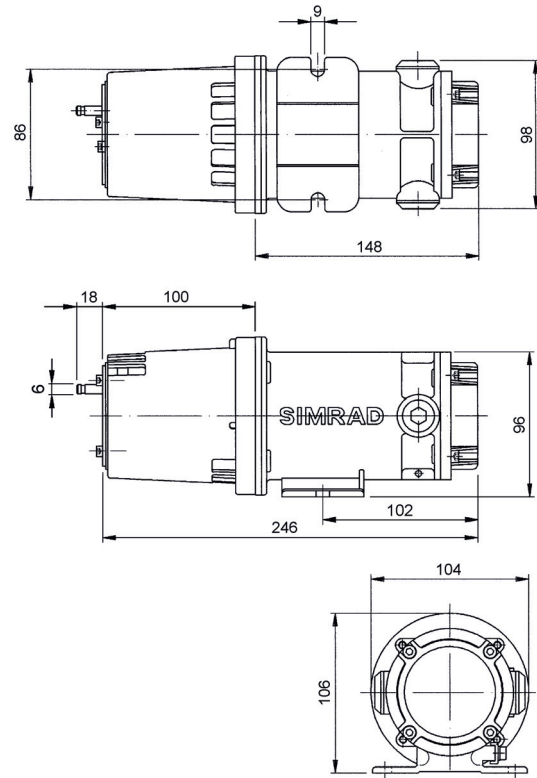
Storage	-40°C to + 70°C (-40°F to +158°F)
Operating	-40°C to + 65°C (-40°F to +149°F)
Humidity (operation)	100% RH

EXPLOSION PROOF HOUSING

Main compartment	EExd IIC T6
Terminal comp.	EExe
Protection category	IP66/IP67 DIN 40050
Housing material	Stainless steel SIS2343 (ASTM 316)
Weight	Approx. 2.9 kg (6.4 Lbs)
Dimensions	264L x 104W x 106H (mm) 10.4 x 4.1 x 4.2 (inches)

WARRANTY

5 years full warranty on complete instrument
15 years warranty on the IR-sources



APPROVALS

ATEX	Directive 94/9/EC, EMC directive 89/336/EEC Article 4
CSA	Standard C22.2 No.152-M1984
IECEX	NEM 07.006
GOST-R	
SAA (Simtars)	AS 2380.1 / 2380.2 / 2380.6
UL	See alternate datasheet
ABS	# 04-LD444057-PDA
SIL	Qualified for SIL2 and SIL3 systems

VERSIONS

Gas	Ranges
Methane	0-100%LEL, 0-100%Vol
Propane	0-100%LEL

Other versions are available, please contact your dealer.

FRONT COVER

Required, select one	
- Weather protection	For standard point detector
- Sample flow housing	For sampling systems and testing
- Duct mount kit	For through wall installation

ACCESSORIES

Mosquito net	Extra insect protection
Sun shade	Shielding for extreme radiation exposure