

Technical data, Tranceiver GD10L

GENERAL

Detection method	IR-absorption, dual wavelength, dual path
Detection range, standard	0 – 5 LELm methane
Gases detected	Hydrocarbons
-option	Other gases on request
Path length	2 – 30 m
-option	2 – 50 m, shielded areas
Long term stability	Less than ± 0.2 LELm
Response time	T20 = 1 sec. T50 = 2.5 sec. T90 = 6 sec.

Start-up time	Less than 60 sec.
Self-test	Continuous
Calibration	Factory set
Warranty	5 years full warranty

OUTPUT SIGNAL

Standard	Current source 4 – 20 mA, max. load impedance 500 Ω
Option	Current sink 4 – 20 mA

Detector warnings:

Clean optics	Dirt accumulation on optics (1 mA)
Beam block	Dirt accumulation on optics (0 mA)
Detector failure	Internal malfunction in the detector (0 mA)

ELECTRICAL

Power supply	24 V DC, range 18 – 32 V DC
Power consumption	Approx. 5 W
Electrical connection	3 wires (M20 EExe cable gland)

TEMPERATURE RANGE

Storage	-40°C to + 70°C
Operating, standard	-20°C to + 45°C
Operating (option)	-40°C to + 60°C
Humidity (operation)	99 % RH (non condensing)

EXPLOSION PROOF HOUSING

Main compartment	EExd IIC T6
Terminal compartment	EExe
Protection category	IP66/67

ENCLOSURE

Housing material	Stainless steel SIS 2343 (ASTM 316)
Weight	3.5 kg

ACCESSORIES

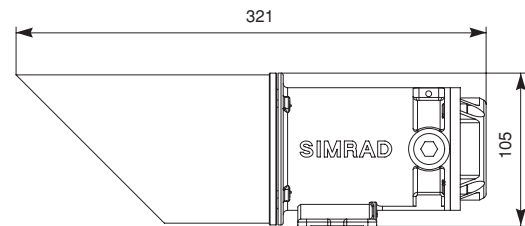
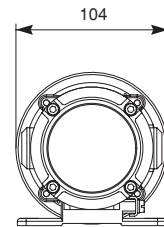
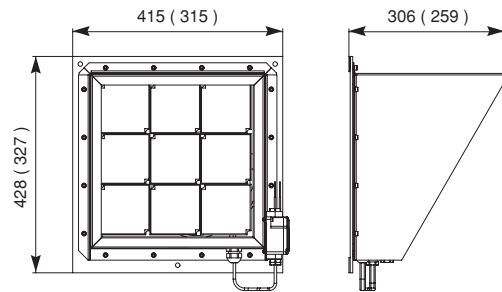
Alignment sight	
Handheld terminal	
Gas test filter	

Certified according to ATEX Directive 94/9/EC
Other approvals available

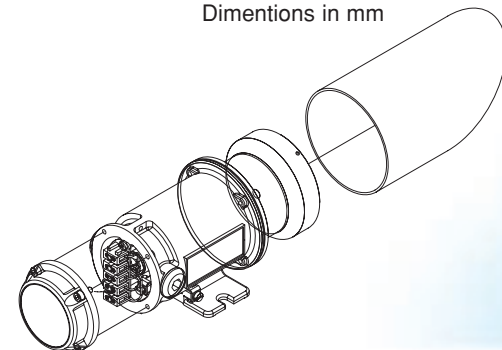
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ACCESSORIES



Dimensions in mm



Based on the unique
SimSource™ IR-source
Tolerates flexing and vibration
in the mounting structure
No false gas alarms
Unsurpassed stability and reliability
No regular maintenance
Easy single-person installation
Cost effective - lowest cost of ownership
Onshore and offshore installations

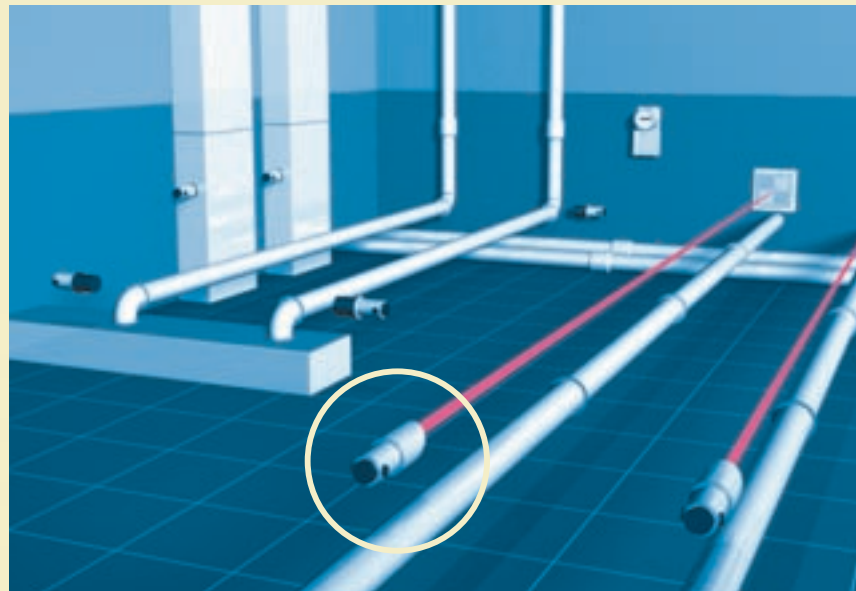


SIMRAD GD10L

Infrared open path gas detector

Reliable gas detection with no false gas alarms

The GD10L offers reliable and safe performance even under harsh working conditions. GD10L can withstand to a higher degree vibration and misalignment than competitive products. The GD10L is a cost-effective Open Path solution that uses the same well-proven, unique IR technology as in Simrad's well-known GD10P point detector.



GD10L is a part of Simrad Optronics' complete range of IR gas detection products.

Based on SimSource™ IR-source

The patented, silicon-based SimSource™ IR-source has a number of unique features and is insensitive to shock and vibration. Its long-term performance is stable. SimSource™ has an expected in-service life of 60 years exceeding all current competing

technologies. SimSource™ comes with an uncompromising 15 years warranty. SimSource™ does not need to be replaced during its service life.

Since the GD10L is not employing acoustically sensitive detector elements,

the GD10L is not sensitive to vibration and rapid temperature changes. The GD10L requires no recalibration during its service life.

Based on a winning concept

The Simrad GD10L is based on Simrad Optronics' highly acclaimed GD10P point detector. Over the past decade, the GD10P has proved to be the most reliable IR point detector on the market and more than 30.000 units have been sold.

No false gas alarms

GD10L applies the most trustworthy and advanced measuring principle available: The dual wavelength, dual path concept. Together with the SimSource™, this concept ensures reliable gas detection without any false gas alarms. If there is a detector failure, this will only result in a fault output.

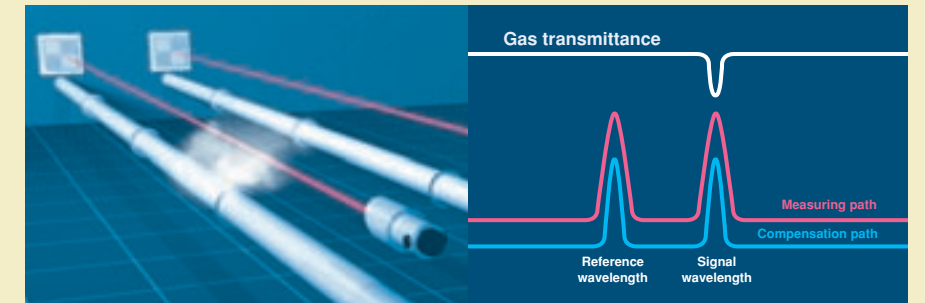
▶ The GD10L combines reliable gas detection with the lowest cost of ownership available.

▶ Dual wavelength, dual path concept ensures that there are no false gas alarms.

Unsurpassed reliability

The GD10L integrates the transmitter and receiver into one rugged ASI-316 steel unit. The introduction of a high-precision, advanced retroreflector makes this solution particularly attractive. Since the transmitter and receiver functions are synchronized by the same microprocessor, the GD10L is more robust to IR beam interference than any competitive products.

The GD10L conducts a continuous self test of its internal functions. All the vital functions of the GD10L are maintained even when IR beam transmission is severely reduced by dirt on the optics or other factors.



A warning is given if there is a high degree of contamination on the optics. The GD10L is easy to clean and is also resistant to humid and corrosive environments.

Easy single-person installation

Unlike other detectors on the market, the GD10L set-up only requires the alignment of one component. The alignment of the tranciever unit is a simple matter for a single person. An alignment sight and a palm terminal are available for fine adjustments.

Misalignment and vibration

Open Path detectors traditionally suffer from vibration caused by heavy equipment located nearby. This may easily cause faults such as broken lamps or even worse, cause the detector to trigger an unwanted alarm. On offshore installations, movements in structures or in the hull can also cause Open Path detectors to be misaligned.

The GD10L integrates an optimum combination of mechanical and electrical components, like the SimSource™, that is designed to withstand such challenging environments.

The sturdy and carefully designed mounting bracket provides a long-term, stable platform for the tranciever unit. The retro-reflector can easily be mounted in locations that are traditionally inadvisable for an Open Path detector. The misalignment tolerance of +/- 5 degrees is clear proof of the superior capability of the GD10L.

Cost effective – no need for regular field maintenance

Installation and maintenance make up an important part of the total cost of any kind of equipment, and gas detectors are no exception. The easy installation and operation of the GD10L contribute to its overall sound economy. The operating costs are kept to a minimum because the detector does not need regular field maintenance.

