

GD10PE

IR Extended Point Gas Detector

High sensitivity
Fast reliable response
No field recalibration

The GD10PE is designed for critical applications involving large volumes of air with high velocity. Places where you need fast reliable detection of low gas concentrations. GD10PE is in a class of its own.

Applications

Typical critical applications include the monitoring of air intakes for HVAC systems in living quarters or generators, and monitoring for potential gas leakages in areas with high temperatures in gas turbine packages.

The GD10PE is a stable instrument, and with a measuring range of 0 – 20%LEL the sensitivity for the GD10PE is 5 times higher than standard point detectors.

The GD10PE is designed for installation in air ducts and for mounting through walls and bulkheads in places such as pump rooms, but may also be used as a stand alone point detector in places where the properties of the GD10PE is required, such as low ppm level detection.

A weather protection accessory is used for exposed detector installations.

- Duct mounted close to the intake.
- Directly mounted on an air intake.
- General outdoor locations.

Technology

The detection concept is based on the measurement of infrared radiation passing through a volume of gas.

SOLID STATE IR-SOURCE

The silicon-based IR-source used in the GD10P is insensitive to shock and vibration, and does not need to be replaced during the detector service life.

NO FALSE GAS ALARMS

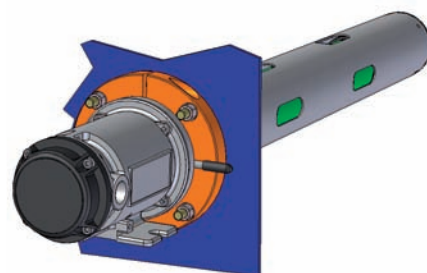
A false alarm, resulting in a production shut-down is extremely expensive. The dual wavelength, dual path concept, together with the electronic design, guarantees that there are no false gas alarms.

NO FIELD RECALIBRATION

Field recalibration of gas detectors is time consuming (cost) and introduces a risk of mistakes (safety). The GD10PE stays within the specifications for its service lifetime without recalibration.

Safety

The response time is among the fastest on the market, giving real world figures. We measure the response from the actual gas release, taking delays of the weather protection, initial detection, etc. into account. Trip levels down to 4%LEL combined with a response time in the area of 1 second should cover even the most demanding requirements.



Flange mounted for duct installation



Technical Data

GENERAL

Detection method	IR-absorption, dual wavelength, dual path
IR-Source	Solid state IR source, 50 Hz flash
Detection range	0-20% LEL (0-1% Vol.) methane
Gases detected	Hydrocarbons
Self-test	Continuous
Calibration	Factory set, no field recalibration

PERFORMANCE

Lifetime stability *)	±1.4%LEL		
Accuracy *)	±1%LEL (0-10 % LEL reading)		
	±1.4%LEL (10-20 %LEL reading)		
Response time	Detector	100%LEL	20%LEL
	reading:	test gas:	test gas:
	4% LEL	0.6 sec.	1 sec.
	10%LEL	0.9 sec.	2.5 sec.
	18%LEL	1.3 sec.	6 sec.
Start-up time *)	Less than 60 sec.		
	*) Refers to -20°C to + 60°C		

OUTPUT SIGNAL

Standard	Current source 4 – 20 mA, max. load impedance 500 Ohm
Option	Current sink 4 – 20 mA
Option	HART®
Detector warnings:	
Early clean optics	Pre warning (1 mA pulse)
Clean optics	Dirt accumulation (1 mA)
	Option: Dirt accumulation (2mA)
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
Operating	-40°C to + 65°C
Probe, inside duct	up to +85°C
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. 6.5 kg

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
SIL	Qualified for SIL2 systems

VERSIONS

Gas	Ranges
Methane	0-20%LEL

Other versions are available, please contact your dealer.

ACCESSORIES

Weather protection	For additional protection
Sample flow housing	For sampling systems and testing
Duct mount kit	Through wall installation

