

# 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. In places where you need fast reliable detection of low gas concentrations. GD10PE is in a class of its own.



The versatile GD10PE is suitable for monitoring, among others, the HVAC air intakes of living quarters, temporary refuges and local equipment rooms. In addition the ventilation air and combustion air intakes of gas turbines can be monitored along with the ventilation air extract duct, the only location where you can guarantee to detect a gas leak on a turbine package.

With a measuring range of 0-20% LEL the GD10PE is 5 times more sensitive than standard point detectors. This, and a response time in the region of 1 second should cover even the most demanding requirements.

The GD10 range of 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.

### Features

Solid state IR sources (SimSource™)

High IR source flash rate

True dual path, double compensation optical design

5x more sensitive than conventional point detectors

Dual layer weather protector

Early dirty optics warning

Independently heated mirror and lens

Continuously operation at 85°C

### 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

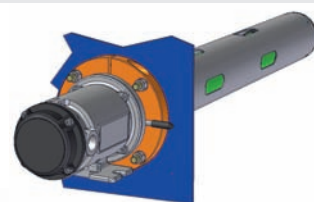
Suitable for critical applications requiring early detection

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

Improved preventative maintenance

High performance detection in rough environmental conditions

Suitable for gas turbine ventilation extract ducts



Flange mounted for duct installation



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## 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.		
	*) Ref: -20°C to + 60°C (-4°F to +140°F)		

### 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 <sup>2</sup> - 1.5mm <sup>2</sup> ) (12 AWG - 22 AWG)
Cable entry	M20 EExe cable gland

### TEMPERATURE RANGE

Storage	-40°C to 70°C (-40°F to 140°F)
Operating	-40°C to 65°C (-40°F to 158°F)
Probe, inside duct	up to +85°C (185°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)
Dimensions	104W x 105D (mm); 30.9 x 4.1 x 4.1 (inches) Overall
Weight	Approx. 6.5 kg (14.3 lbs)

### 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 and SIL3 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

