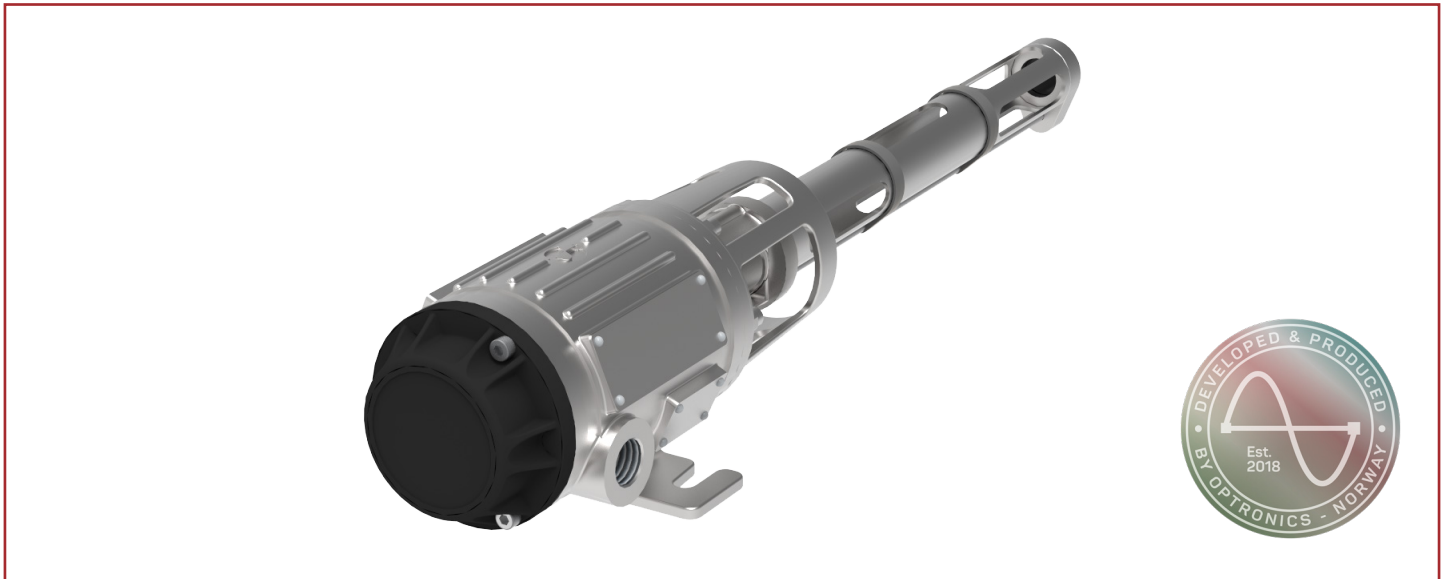
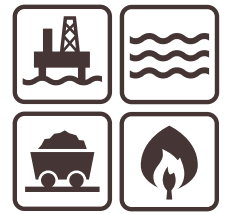


# PGE11 Optical Point Detector Extended

Hydrocarbons and CO<sub>2</sub>



The Optronics PGE11 is an explosion proof, rugged Optical Gas Detector for the detection of flammable gases and CO<sub>2</sub>. PGE11 comes with a life-time factory calibration, is easy to install and commission and has very limited need for maintenance. The Solid State Infrared SafeSource™ ensures unmatched stability and lifetime and the built-in condition monitoring keeps maintenance and process abruptions at a minimum. Any need for attention is automatically informed to the operator. The PGE11 is available in different lengths to fit different installation needs.

The accessories ensure that the PGE11 is ready to be used in applications ranging from duct and pipe mounts to stand alone detection with increased sensitivity. Communication interfaces and fieldbuses are available using the OptoCom™ module.

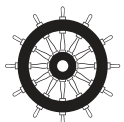
The PGE11 is designed for use in SIL2/SC3 systems and to withstand ambient conditions such as extreme temperatures and vibrations, all to ensure "Detection for real safety - for real life"

## Features

- Solid State Infrared SafeSource™
- Life-time factory calibration
- Fast response time (T90 < 1.5 s)
- OptoBAS™ for increased signal baseline accuracy
- Long optical path for increased sensitivity
- Designed for SIL2/SC3
- HART7 interface
- Heated sapphire optics
- Extended input voltage range

## Benefits

- 6 years warranty
- 15 years warranty on SafeSource™
- Long maintenance intervals
- No field calibration
- OptoCom™ for DCS integration
- IIoT ready
- One detector - several applications



**OPTRONICS**  
Detection for real safety - for real life

# Specifications

## Technology

Solid-state Infrared SafeSource™.  
Temperature compensated for rugged applications

## Gases and measuring ranges

Methane	0 - 100 %LEL, 0 - 100 %vol
Propane, Ethylene, Butane	0 - 100 %LEL
Biogas[CH <sub>4</sub> in CO <sub>2</sub> background]	0 - 100 %vol
CO <sub>2</sub>	0 - 100 %vol

## Calibration

Calibrated at factory, no need for field calibration.

## Self-test

Continuous health check of all important HW and SW functions

## Performance

Accuracy	± 3%FS
Repeatability	± 1%FS
Response time	T90 = 1.5 sec

## Signal output

Current source or sink 4 - 20 mA. Warnings/faults signalled below 4 mA.  
OptoCom™ for application specific digital protocols.  
HART® for maintenance and configuration.

## Ambient conditions

Temperature	Storage	-60 to +75°C / -76 to +167°F
	Operating	-40 to +65°C / -40 to +149°F
	Desert version (Arctic version)	-40 to +75°C / -40 to +167°F / -60 to +65°C / -76 to +149°F
Humidity		0 - 100 %RH
Vibration		Resistant to shock and vibration up to 4G

## Housing

Ingress Protection	IP66/IP67
Housing material	Stainless steel 316L
Weight & dimensions	Less than 4 kg & 775x120x120 mm3

## Electrical requirements and characteristics

Field wiring terminals	Stranded or solid wires rated up to 2.5 mm <sup>2</sup>
Cable gland entry options	Two M20 entries as standard. M25, ½"NPT and ¾"NPT on request
Power requirements	18 - 50 VDC
Power consumption	< 3.5W average (< 5 W average Arctic version) Soft boot with max 1 A current spikes

## Approvals

ATEX/IECEX	Ex db eb ib IIC T5 Gb
Marine	MED, BV, LR, DnV GL, ABS
Safety Integrity(IEC61508)	SIL2/SC3 (SIL3 in 1oo2 redundancy)

## Configurations

Short	15 cm
Medium	35 cm
Long	50 cm**

\*\* Reduced vibration range (Contact your supplier for more information)

# Accessories



## Duct Flange kit

Contact your local dealer for alternatives.  
Available for most standard JIS, DIN and ANSI flanges.



## Gas Test kit

Gas test kit for field testing. Available in different lengths to fit the different versions of the PGE11.



## Universal Mount kit

Fits most existing installation footprints to simplify retrofits. Pole Mount kit with u-bolts for 3" and 4" poles are also available.



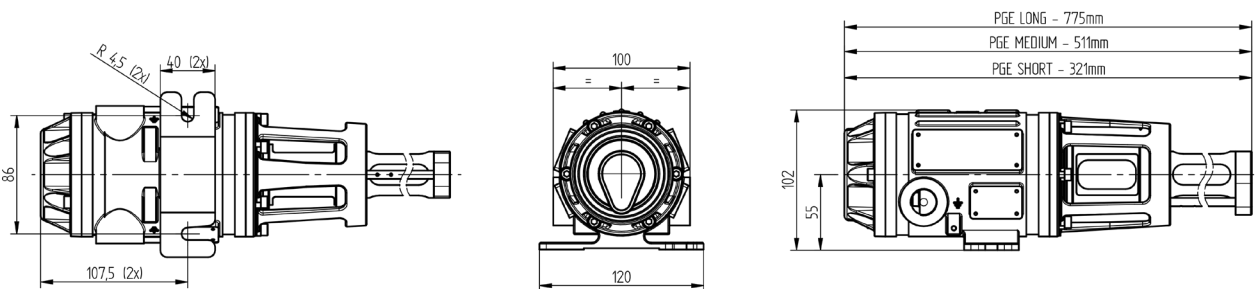
## Remote Gas Test kit

Gas test kit to simplify testing of detectors mounted in inaccessible or remote locations. Consist of a test point that can be routed to the detector using standard tubing or piping.

# Typical applications

- HVAC
- Gas Turbines
- Double wall/skin pipe (LNG/LPG)
- Increased sensitivity applications

For more information regarding applications, positioning etc. contact your local supplier.



## Optronics Technology AS

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