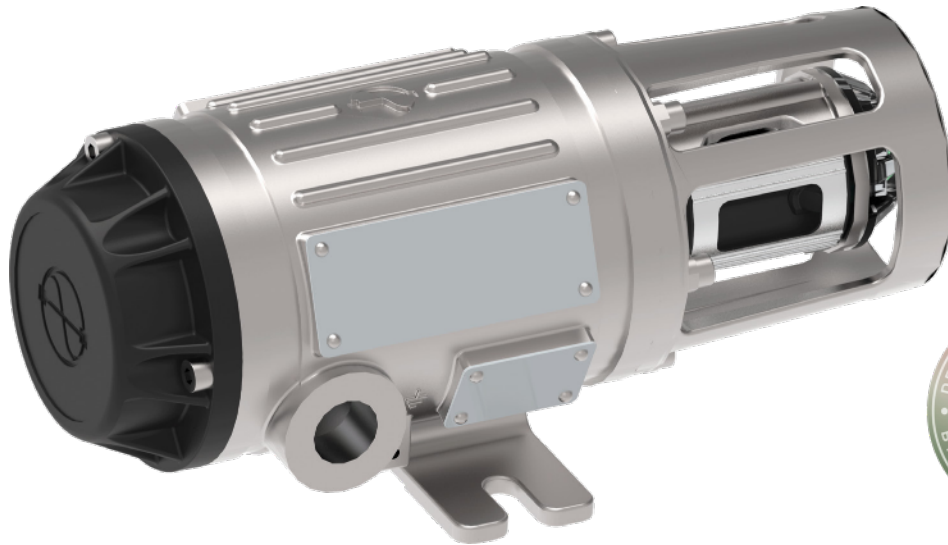# PG11 Optical Point Detector

Hydrocarbons and CO_2

The Optronics PG11 is an explosion proof, rugged Optical Gas Detector for the detection of flammable gases and CO_2. PG11 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.

A broad range of accessories ensure that the PG11 is ready to be used in most applications from duct mounts to extractive cabinet solutions. All accessories are easy to change should the need arise. Communication interfaces and fieldbuses are available using the OptoCom™ module.
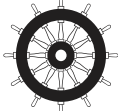
The PG11 is designed for use in SIL2/SC3 systems and to withstand ambient conditions such as extreme temperatures and vibrations, all to ensure "Detection for real safety - for real life"

Features	Benefits
• Solid State Infrared SafeSource™	• 6 years warranty
• Life-time factory calibration	• 15 years warranty on SafeSource™
• Fast response time (T90 < 1.5 s)	• Long maintenance intervals
• OptoBAS™ for increased signal baseline accuracy	• No field calibration
• Designed for SIL2/SC3	• OptoCom™ for DCS integration
• HART7 interface	• IIoT ready
• Heated sapphire optics	• Visual Indicator for local alarms
• Multicolor indicator	• One detector - several applications
• Extended input voltage range	

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$_4$ in CO$_2$ background]	0 - 100 %Vol
CO$_2$	0 - 10 %vol, 0-25%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	-40 to +75°C / -40 to +167°F
	(Arctic version)	-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 3.5 kg & 250x120x120 mm3

Electrical requirements and characteristics

Field wiring terminals	Stranded or solid wires rated up to 2.5 mm²
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)

Additional Accessories
Sunshade
Universal Mount kit
Remote Gas Test kit
Cleaning kit
Maintenance Blocking kit

For more information contact your local supplier.

Accessories

Mosquito Net
Insect guard with integrated gas nozzle. No need to remove the guard to perform routine testing.

Gas Test kit
Gas test kit for field testing. Separate inlet and outlet so test gas can be ventilated to safe area if needed.

Gas Sampling kit
Snap-in gas sampling kit for extractive solutions. Simple mounting and dismounting for easy access to optical parts. The small volume ensures unmatched fast response of the sampling loop.

OptoCom™
Contact your local dealer for alternatives. Will be available for both wired and wireless interfaces. May act as a wireless bridge in a mesh network system.
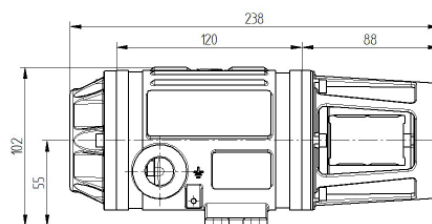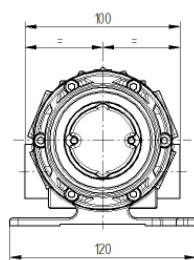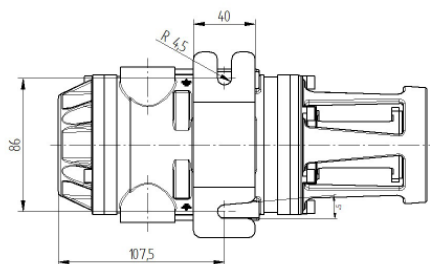

Duct Flange kit
Contact your local dealer for alternatives. Available for most standard JIS, ISO and ANSI flanges.

Gas Free Test kit
Gas free test kit for safe and easy function and bump testing of detector. Available in a kit of four testers with four different levels.

![Optronics logo]
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