Gas detector
PG11

Part no. 5101555-5101558

G022425

System: CGD50/500, CGS50/500

About the datasheet

This datasheet contains product information for the following PG11 gas detectors:

Product name	Part no.
PG11 Point CH4, WH, 0-100%LEL	5101555-00
PG11 Point C3H8, WH, 0-100%LEL	5101556-00
PG11 Point CH4, WH, 0-100%VOL	5101557-00
PG11 Point C3H8, WH, 0-100%VOL	5101558-00

General Description

Consilium PG11 is an explosion-proof rugged optical point gas detector developed for detection of flammable gases and carbon dioxide in harsh environments. Built-in condition monitoring reduces unplanned stops and unnecessary downtime.

Features and benefits:

- Fast gas detection - 2 seconds to response
- Built to handle tough vibrations and extreme temperatures
- Highly stable optical design
- Calibrated for life
- Maintenance prediction and early warning
- Easy to install and operate
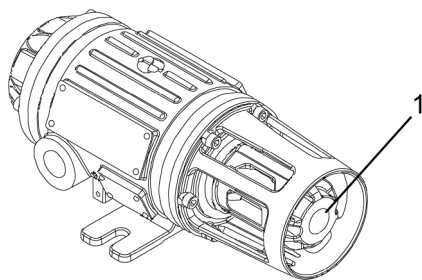- Gas-free function test

Data

Detection method	Solid-state IR, temperature compensated
Gases detected	Methane (CH_4) Propane (C_3H_8)
Accuracy	±3% of full scale in whole temperature range
Response time	T90 = 2 sec (with environment shield[1]) T90 = 1 sec (without environment shield)
Pressure coefficient	1% of reading per kPa [2]
Operating voltage	18 - 50 V DC
Startup current	Soft boot-up to keep rush current < 1 A
Power consumption	< 3 W average
Cable terminals	Max 2.5 mm^2
Cable entry	Standard cable gland, polyamide, M20 Ex e, inner diameter 5.5–13 mm (M25, 1/2'' NPT and ¾''NPT on request)
Electrical connection	3 wires (0.5–2.5 mm²), 4–20 mA signal
Operating temperature	-40 °C to +75 °C
Storage temperature	-60 °C to +75 °C
Pressure	70 to 130 kPa
Ambient humidity	0 to 100% RH
Ingress protection	IP66/IP67

1) Standard environment shield providing good protection against water splashes and dirt (incuded in delivery)
2) The detector is calibrated in atmospheric pressure. A change in pressure affects the measured value by 1% for each kPa that deviates from atmospheric pressure.

www.consiliumsafety.com

Material	Housing: Stainless steel 316L Back cover: Composite (standard); steel (optional)
Colour	Black/silver
Weight	3 kg ± 5%
Dimensions (L × W × H)	238 × 120 × 102 mm
Expected lifetime	15 years
Ex classification	ATEX / IECEx
ATEX approvals	II 2 G Ex db eb ib IIC T5 Gb Ex db ib IIC T5 Gb
ATEX Certificate No	Presafe 20 ATEX 67361 X

IECEx approvals	Ex db eb ib IIC T5 Gb, -55°C ≤ Tamb ≤ +75°C Ex db ib IIC T5 Gb
IECEx Certificate No	IECEx PRE 20.0061X

Accessories

Part name	Part no.
Bump test housing	5101518-00
Gas test kit Gas Free	5101594-00
Flow house	5101580-00
Cleaning kit	5101587-00
Mosquito net	5101585-00

Indications

G022661

The PG11 detector has a multicolour indicator light (1) with the following status indications:

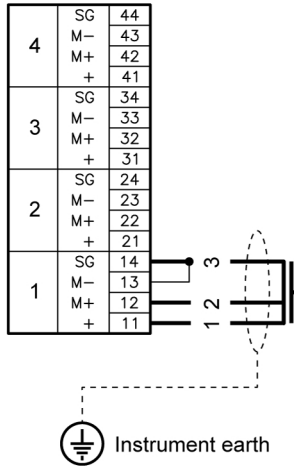| Colour, pattern	Status type	Description
Green, steady	Normal operation	No issues detected Measurement within specification
Green, blinking	Maintenance request	Optics getting dirty, cleaning recommended Measurement within specification
Green, blinking	Out of specification	Temperature outside rating Measurement accuracy possibly out of specification
Yellow, steady	Function check	Set to Service mode
Yellow, blinking	Failure	Faulty detector or detector booting up No measurement
Red, steady	Alarm 1	Gas concentration exceeding first set point (default 20% of full scale, non-latching)
Red, blinking	Alarm 2	Gas concentration exceeding highest set point (default 50% of full scale, non-latching)

Connections

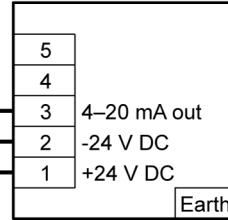**NOTE!**
For use in hazardous areas, see the PG11 / PGE11 Optical Gas Detection, Operating Manual (document number 022-80036-OM).

Analogue M 4-20   PG11/PGE11
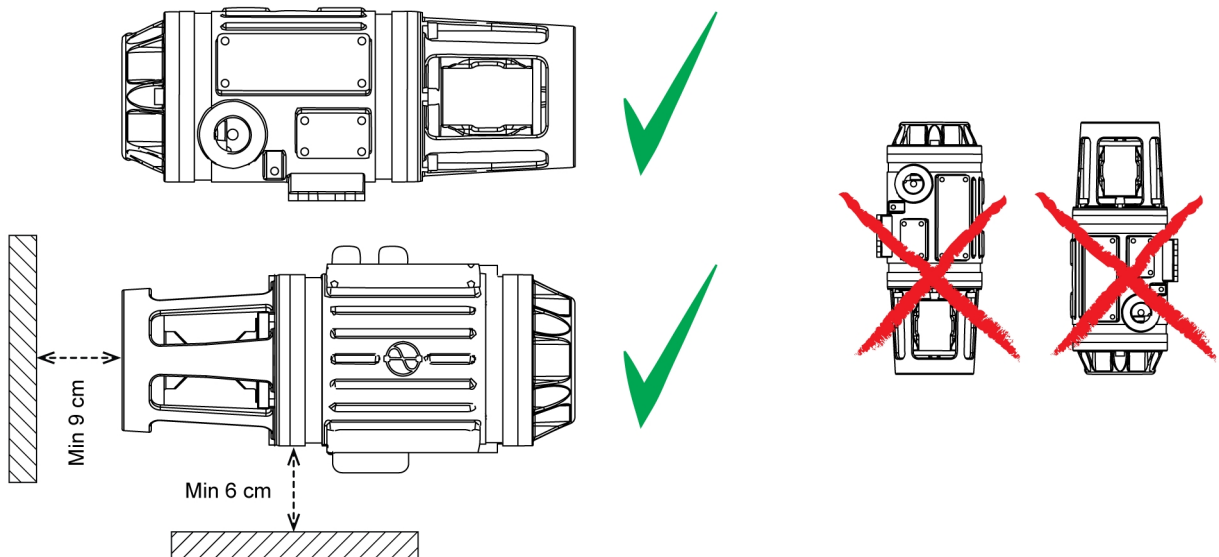

G022509

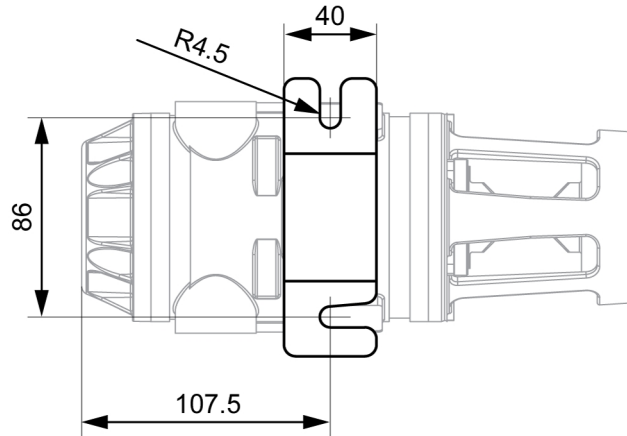| Terminal	Signal type	Specification
1 (white)	Power, positive supply voltage	24 V DC
2 (brown)	Power, supply voltage return	0 V DC
3 (green)	Analogue safety signal	Analogue 0–20 mA DC signal overlayed with a HART signal
4 (yellow)	RS-485 A	Two wires for connection to digital RS-485 serial communication, Modbus RTU
5 (grey)	RS-485 B	
Earth (yellow/green)	Internal earth point	(See installation manual)

Mounting

⚠️ **CAUTION!**
Mount the detector in a horizontal position.

G022507

ℹ️ **NOTE!**
Leave at least 6 cm free space around the sensor head, and at least 9 cm free space in front of the sensor head, to allow connection of Gas test kit Gas Free and equipment for gas bump tests.
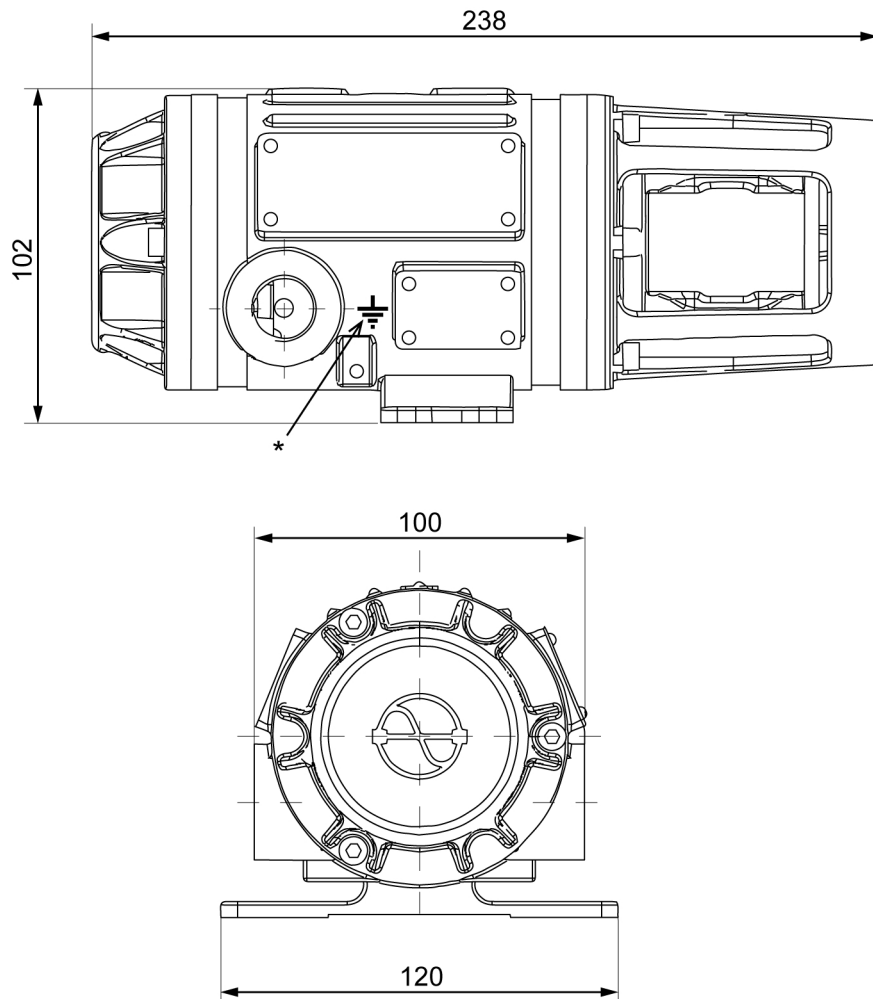
Data sheet no. 5101555-5101558_PG11_M_EN_2021_B

Consilium   www.consiliumsafety.com

Hole pattern:

R4.5

40

86

107.5

G022508

For detailed information, see the PG11 installation manual.

Dimensions (mm)

238

102

*

100

120

G022486

*) External earth connection point