



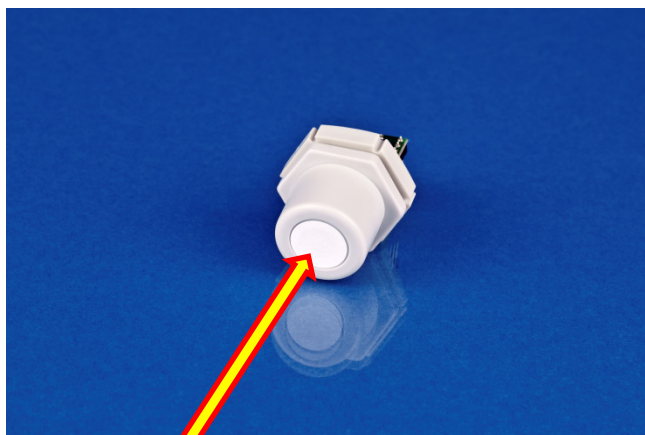
Methane (CH₄) gas detector GCH4 100 for wall mounting



Methane (CH₄) gas sensor with PCB.

Normal life time is 36 months for Methane (CH₄) gas sensor.

The Methane (CH₄) gas sensor with PCB can easily be exchanged after 36 months.



Special filter for IP65 protection of Methane (CH₄) gas sensor

Features

- Output 4-20 mA or 2-10 Vdc
- Power supply 24 Vdc
- Measuring range 0-100% LEL
- Pellistor (catalytic bead sensor)
- IP65 enclosure with quick locking screws
- Digital measurement value processing incl. temperature compensation
- Internal function control with integrated hardware watchdog
- Data / measured values in micro controller of sensor unit, therefore simple exchange uncalibrated <> calibrated
- High accuracy, selectivity and reliability
- Low zero point drift
- Hardware & software according to SIL2 compliant development process
- Easy maintenance and calibration by exchange of the sensor unit or by comfortable on-site calibration
- Duct mounting set available for sensing Methane (CH₄) gas in ventilation ducts.

Ordering

Type no.	Description
GCH4 100	Methane (CH ₄) gas detector for wall mounting 4-20 mA or 2-10 Vdc, 24 Vdc, 0-100% LEL

Design features

Exchangeable Methane (CH₄) gas sensor unit GCH4 100 including digital value processing, temperature compensation and self control for the continuous monitoring of the ambient air.

The Methane (CH₄) gas sensor unit GCH4 100 houses a module with a micro controller, analog output and power supply in addition to the electrochemical sensor element including amplifier.

The micro controller calculates a linear 4-20 mA or 2-10 Vdc signal out of the measurement signal and also stores all relevant measured values and data of the sensor element.

Calibration is done either by simply replacing the sensor unit or by using the comfortable, integrated calibration routine directly at the system.

Applications etc

Methane gas is a combustible gas with chemical formula CH₄.

Methane (CH₄) gas detector is also named as Natural gas detector.

Methane (CH₄) gas detector is used to detect Methane gas.

Methane (CH₄) gas detector are used in applications such as Boiler room, Heating room, Kitchen in Hotels or Apartments, Laboratories and Tunnels

Methane gas is an odourless gas, probably the most abundant organic compound on earth.

Methane (CH₄) gas is an extremely flammable gas.

When Methane (CH₄) gas is sold commercially it is usually mixed with small amounts of foul-smelling Sulphur compounds for easier detection of leaks.

Methane (CH₄) gas is also known as swamp gas, since Methane (CH₄) gas is formed during decomposition of organic matter in oxygen-deficient environments, such as the bottom of a swamp.

Methane (CH₄) gas is a greenhouse gas and emissions, primarily from agriculture is considered a contributing factor to the enhanced greenhouse effect.

The relative abundance of Methane (CH₄) gas makes it an attractive fuel.

However, since it is a gas at normal conditions, Methane (CH₄) gas is difficult to transport from its source.

Sensor coverage for Methane (CH₄) gas detector is 100 m² (recommended).

Methane (CH₄) gas is lighter than air, mounting height for Methane (CH₄) gas detector is 0.2 meter below ceiling.

VCP's Methane (CH₄) gas detector GCH4 100 converts the measurands 0-100% LEL into signal 2-10 Vdc or 4-20 mA output

Duct Mounting

Duct mounting set for sensing Methane (CH₄) gas in ventilation ducts.

The duct mounting set DMS 300G includes:

- 300 mm long duct probe with neoprane gasket on the duct flange for good sealing into the duct.
- 2 x 1 meter silicone hose
- Plug-connector to the Methane (CH₄) gas sensor head.



Duct Mounting Set DMS 300G



Duct Mounting Set DMS 300G assembled with Methane (CH₄) Gas Detector GCH4 100



Technical Data

Gas type	Methane (CH ₄)
Detector element	Pellistor (catalytic bead sensor)
Power supply	16 -29 Vdc, reverse-polarity protect
Power consumption	70 mA, max. (1.7VA for 24V)
Analog output signal	Proportional, overload and short-circuit proof, load ≤ 500 Ohm for current signal, ≥ 10kΩ for voltage signal 4-20 mA or 2-10V = measuring range 3.2 <4 mA or 1.6-2V = under range >20-21.6 mA or 10-10.8V = over range 2.5 mA or 1.25V = fault >21.8 mA or 10.9V = fault high
Detector coverage	100 m ² (recommended)
Measuring range	0-100 % LEL
Accuracy	± 1% LEL
Resolution	0.2%
Repeatability	< 1% sig.
t₉₀ Time (time allowed for sensor to detect 90% of existing gas conc.)	≤ 10 secs.
Zero point variation	0.5%
Long-term zero-point drift	< 0.3%LEL / month
Long-term sensitivity drift	< 1%LEL / month
Temperature range	-20°C to +50°C
Humidity range, non-condensing	5 to 95% r.H.
Sensor life time	>36 months
Mounting height	read sensor placement for monitoring oxygen page 4
Storage temperature	5°C to 30°C
Calibration interval*	6 months
Pressure range	Atmospheric ± 20 %
Storage time	6 months
Gas density (air=1)	0.55
Poisoning	The sensitivity of Pellistor sensors can be influenced by substances containing silicon compounds and even poisoned and destroyed by them.

Cont. Technical Data

Enclosure colour	White
Dimensions (W x H x D)	110 x 85 x 60 mm, excl. sensor unit and cable gland
Weight	Ca. 0.2 kg
Protection class	IP 65 incl. gas sensor unit
Pre-embossed entries for cable / sensor unit	PG 13.5
Conformity to	EN 50271 EN 601010-1 ANSI/UL 61010-1 CAN/CSA-C22.2 No.61010-1

* Manufacturer recommended calibration interval for normal environmental conditions.

Wiring

1	24 Vdc supply
2	0 Vdc
3	4-20 mA output

For output 2-10 Vdc connect the supplied 500 ohm resistors between terminal 2 and 3