

4-Gas-Detector **MICROTECTOR G333[®]**

Edition 4
2002



Small (only 60x133x33 mm)
Light (only 385 g)
Compact design
Most flexible for 1 to 4 gases
Ex ib d IIC T4

Worldwide Supplier of Gas Detection Solutions



The Microtector G333®

The world's smallest 1- to 4-gas detector



The gas detector G333 is the synthesis from decades of experience, more than 40 years of concentration and specialisation on the field of gas monitoring and its state-of-the-art technology. GfG's intensive cooperation with various universities and research institutes and with IVAM (syndicate for the dissemination of microstructure technology) results in developments which point the way ahead.

The fourth generation

Wherever the flexibility and capacity of the Polytektor II G750 is not requested, but special importance is given to the „smallness“, the G333 is the economic alternative, particularly if simplest handling yet maximum performance is considered to be essential. The G333 can simultaneously measure and monitor up to 4 gases in its TOX, OX and EX range. State-of-the-art material and components allowed a compact size. The highly integrated single-chip microprocessor and miniature sensors are protected by a heavy duty, antistatic casing

made from carbon fibre reinforced compound. This makes the G333 the world's measure referring to size, weight and performance.

Toxic gases

The toxic gases carbon monoxide (CO) and hydrogen sulphide (H₂S) may cause a high risk when entering manholes or inspecting sewers. The G333 gives an immediate warning from dangers caused by sudden dangerous gas concentrations building up.

Dosimeter

For toxic gases it is vital to not only consider the current concentration but to monitor also the time related exposure. This is why the G333 includes a dosimeter function, which calculates the Time Weighted Average (TWA) over 8 hours and the Short Term Exposure Level

(STEL) average over 15 minutes according to TRGS 402. Thus, the G333 provides maximum safety in contaminated atmospheres.

Advantages of TOX measurement with the G333:

- Hydrogen sulphide (H₂S) and carbon monoxide (CO) can be reliably monitored with only one sensor.
- Rapid and reliable response.
- Long sensor life and replacement of only one sensor for two toxic gases result in considerably reduced follow-up cost.

Monitoring the air you breathe

Even a minimum oxygen deficiency in the ambient air (normal: 20.9 Vol.-%) may mean maximum danger for human beings. The G333 measures the oxygen concentration with its



high-quality electrochemical sensor and gives alarm for both oxygen deficiency and oxygen surplus.

Advantages of GfG technology:

- Pressure and temperature compensation.
- Rapid response time.
- Warning for oxygen deficiency and oxygen surplus.
- Expected sensor life of 3 years.

Explosion hazards

Most combustible gases are odorless and cannot be perceived by human senses. Explosion hazards arise, whenever dangerous concentrations of combustible gases or vapours build up. Just a little spark, a flame, a cigarette or turning on the light may make the catastrophe happen. GfG's catalytic combustion sensor for flammable gases has proven in decades. With this sensor, the G333 monitors all combustible gases and vapours, even hydrogen, solvents and alcohols, which cannot be measured with infra-red sensors.



Advantages of GfG's EX sensor:

- Poison resistant pellistor.
- Proven sensor quality since decades.
- Long sensor life for minimum follow-up cost.

A little bit more than others

The G333 provides 3 programmable alarm thresholds for every gas. Thus, sudden gas

hazards are reliably recognized.

For toxic gases there are two additional setpoints for 15 minute (STEL) and 8 hours (TWA) averages, as the time-related exposure to a gas is vital. The G333 alarms with a big bright LED and a loud audible signal. Three other LEDs indicate the gas which caused the warning. In addition to this, the display is illuminated.

Clear display

The big LCD shows 3 measurement values simultaneously. Just hit a key and you get additional information for these values, e.g. in ZOOM mode a readout of the gas concentration and its unit. In bad lighting conditions you can turn on the backlight and individually set the display contrast.

Data logger

Just press a key, and the G333 reads the minimum (O₂) resp. the peak (EX) concentration and, for toxic gases, additional longterm and short-term averages. You can over-write or delete the data logger for peak values at any time.

Actually easy handling

One key for „ON“ and increased safety by two keys for „OFF“ – that's all you need to operate the G333. This is another proof for GfG's decades of knowledge, which also considers the users' day by day experiences.

Service Mode

The service mode allows quick adjustment of the G333. Alarm thresholds, calibration, zeropoint adjustment and many other special functions are easily configured by means of the menu driven service program. A safety code protects the G333 from incidental changing or manipulation of important parameters.

Nothing smaller and lighter

With its dimensions of only 60 x 133 x 33 mm and a weight of 385 g, the G333 is the world's smallest 4-gas detector and extraordinarily handy for day by day use.

Long time of operation

The metal hydrid battery pack powers the G 333 for up to 16 hours continuous measurement. These rechargeable batteries do not contain any cadmium and contribute to environmental protection.

Microtector G333®

Technical Data

Gases

TOX - Hydrogen sulphide (H₂S)
- Carbon monoxide (CO)
OX - Oxygen (O₂)
EX - Combustible gases
(e.g. methane)

Ranges

TOX 0 .. 100 ppm H₂S
0 .. 300 ppm CO
OX 0 .. 25 Vol.-% O₂
EX 0 .. 100 % LEL CH₄

Detection principles (sensor)

TOX electrochemical (EC)
OX electrochemical (EC)
EX catalytic combustion (CC)

Gas supply

Diffusion

Response time

10 to 60 s, depending on gas

Expected sensor life

TOX 3 years
OX 2 years
EX 3 years

Temperature range

+50 °C (Function test)

Humidity

5 .. 95 % r.h.

Ambient pressure

700 .. 1300 hPa

Power supply

Metal hydrid battery pack

Operational time

up to 16 hours (depending on sensors and alarm time)

Casing

Carbon fibre re-inforced polyamid, IP54

Weight

385 g

Dimensions

60 x 133 x 33 mm (WxHxD)

Display

LCD for gas concentration, 8-digit, zoom function, backlight illumination, adjustable contrast

Operation

Keypad for On/Off, zoom, battery check, service

Alarm

Visual: big (20 mm) LED, red, plus 3 additional reference LEDs.
Audible: buzzer (80 dB)

Ex-Approval

EEEx ib d IIC T4

Ex-Certificate

BVS 97.Y.4006

Function Test

DMT Report IBS/PFG-Nr. 41300498

Models

G333/1, 1 gas
G333/2, 2 gases
G333/3, 3 gases
G333/4, 4 gases

Accessories

Plug-in charger
Leather case
Shoulder strap
Transport case

We reserve the right of modification



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