smart GasDetection Technologies

Micro 5 G222E

Sturdy and compact dual gas detector for toxic gases, H_2 and O_2

MADE IN GERMANY

GfGsafety.com

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Sturdy and compact dual gas detector for monitoring toxic gases, H_2 and O_2

The Micro 5 G222E is among the smallest and lightest gas detectors in its class and is designed for monitoring one or two gases. It features two slots for electrochemical gas sensors (EC). Its user-oriented design, robust construction, and long operating time make it a reliable companion for everyday professional use.

Size comparison between the Micro 5 and the Polytector G999 multi-gas detector.

Safety through quality and functionality

Equipped with high-quality, precise and durable sensors, the system is individually tailored to your requirements. Currently, sensors are available for 20 different gases and a wide array of measuring ranges. Combine them according to your requirements or increase the safety of your employees even further by redundant use of the same sensors to minimize the danger from a specific gas.

A simple, two-button menu and a large, easy-to-read display provide easy menu navigation and reliable information even under difficult conditions.

« Certified for use in underground operations. »

Approved for underground use

Certified for use in underground operations according to equipment group I, equipment category M1 as well as well protected according to protection class IP 54, the Micro 5 G222E is suitable for challenging applications. The rubberized polycarbonate and plastic case provides excellent protection against shock and vibration, while the light weight of maximum 125 g ensures maximum wearing comfort.

Suitable for long periods of use

Depending on sensor equipment and configuration, the Micro 5 G222E has an average operating time of up to 9 months at 10 hours per working day or 90 days in 24/7 operation. The battery of the Micro 5 can be changed in seconds if necessary and the gas detector is ready for use again.

Data logger

The internal data logger stores the last 2600 events. These include measured values, alarms, TWA and STEL values, and time as well as temperature information.

Calibration Cap & Smart Cap

Calibration and adjustment of the Micro 5 are quite simple. All you need is the Calibration Cap for manual zero and test gas application.

If you want to read out the content of the data logger, you will need the Smart Cap, a USB connection cable and the Config Software for the G222 series instead.

Micro 5 with Calibration Cap. Alternatively available the Smart Cap with infrared interface and mini-USB plug.

Overview of the gases and measuring ranges

The smart sensors for the Micro 5 are durable, easy to change and minimize operating costs. Sensors for the following gases are available for the G222E:

Gas	Formula	Measuring Range
Ammonia	NH_3	0 to 200 ppm * 0 to 300 ppm * 0 to 1000 ppm *
Chlorine	Cl_2	0 to 10 ppm *
Chlorine dioxide	ClO_2	0 to 2 ppm
Hydrogen chloride	HCl	0 to 30 ppm *
Hydrogen cyanide	HCN	0 to 50 ppm *
Ethylene oxide	C_2H_4O	0 to 20 ppm *
Hydrogen fluoride	HF	0 to 10 ppm *
Carbon monoxide	CO	0 to 500 ppm *
Ozone	O_3	0 to 1 ppm
Phosgene	$COCl_2$	0 to 2 ppm
Phosphine	PH_3	0 to 10 ppm *
Oxygen	O_2	0 to 25 vol% (2 years) 0 to 25 vol% (3 years) 0 to 25 vol% (5 years)
Nitrogen dioxide	NO_2	0 to 30 ppm *
Sulfur dioxide	SO_2	0 to 10 ppm *
Hydrogen sulfide	H_2S	0 to 100 ppm *
Silane	SiH_4	0 to 20 ppm *
Nitric Oxide	NO	0 to 100 ppm *
tert-Butyl mercaptan (TBM)	$C_4H_{10}S$ TBM	0 to 20 ppm *
Tetrahydrothiophene (THT)	C_4H_8S THT	0 to 20 ppm *
Hydrogen	H_2	0 to 2000 ppm 0 to 1 vol% 0 to 4 vol%

* Sensor can also be set to other measuring ranges (refer to sensor specification)

Technical data: Micro 5 G222E

Measuring principle:	Electrochemical (EC) for toxic gases, hydrogen and oxygen
Sample gas feed:	via diffusion opening
Display:	2 x 4 digit LC display Indicates battery capacity and gas concentrations with unit
Controls:	2 operating buttons
Alerting:	2 very bright alarm LEDs, audible alarm and vibration alarm Depending on the gas type, 3 or 2 instantaneous alarms, battery alarm with visual and audible signaling and indication in the display Horn: 95 dB(A) (can be reduced to 90 dB(A))
Zero point and sensitivity adjustment:	manual or automatic with adjustment program if necessary test gas supply via the „SMART CAP“ with 0.5 to 0.6 slpm
Power supply:	replaceable alkaline battery (1x AA) Replace only with battery listed in the operation manual!
Battery life:	sensor dependent, per battery average: 9 months at 10 h per working day or 90 days 24/7
Climatic conditions:	
for operation:	-20 to +50 °C | 5 to 95 % r. h. | 70 to 130 kPa
for storage:	-25 to +55 °C | 5 to 95 % r. h. | 70 to 130 kPa (recommended 0 to +30 °C)
Housing:	
Material:	rubberized polycarbonate / plastic
Dimensions:	49 x 84 x 32 mm (W x H x D)
Weight:	115 g to 135 g (with sensors, battery and clip)
Protection class:	IP54
Approvals / Certifications:	
Markings and type of protection:	G222E Ⓔx I M1 Ex ia I Ma -20 °C ≤ Ta ≤ +55 °C Ⓔx II 1G Ex ia IIC T3 Ga -20 °C ≤ Ta ≤ +55 °C Ⓔx II 1G Ex ia IIC T4 Ga -20 °C ≤ Ta ≤ +45 °C
EU type examination certificate:	BVS 18 ATEX E 027 X
IECEx Certificate of Conformity:	IECEx BVS 18.0020 X
Electromagnetic compatibility:	DIN EN 50270:2015 Interference emission: Type class I Interference immunity: Type class II

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