

**Gasmonitor  
CO-500**

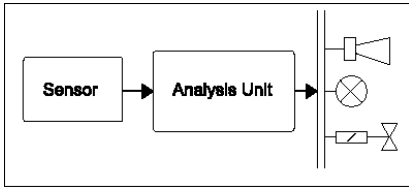
**Carbon Monoxide  
Detection Sensor**



**Data Sheet**

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#### Application/Structure



The sensor probe Gas Monitor CO-500 in connection with an analysis system has the following functions:

- measuring and displaying the concentration of carbon monoxide.
- control outputs to counteract the increase of carbon monoxide.

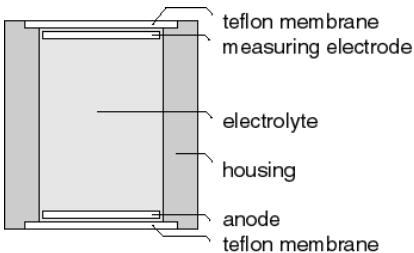
A CO alarm unit comprises the following components:

- sensors
- analysis system
- selectable units such as ventilator and warning signs

#### Product features

- Test gas: CO (carbon monoxide)
- Measuring range: 0 - 300 ppm CO
- Measuring principle: electro-chemical measuring cell
- Linear measuring signal: 4 - 20 mA
- 2-conductor design: 18 - 30 VDC / 4 - 20 mA
- One-man calibration: all operating elements mounted on sensor.
- Easy sensor replacement
- Range of use: CO monitoring and surveillance in parking units and systems
- Tested and approved according to VDI2053

#### Mode of function

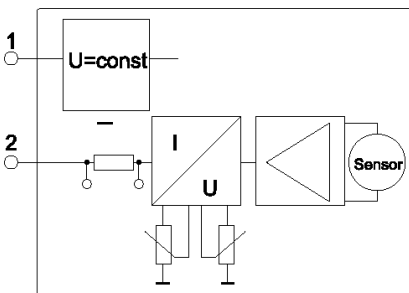


##### • Sensor

2-electrode sensor. Electrodes surrounded by an electrolyte. The upstream Teflon membrane protects the cell from dust and humidity. A capillary diffusion barrier is built in to make sure that only a limited quantity of test gas enters the inside of the cell. This configuration also ensures that the pressure impact is kept to a minimum. The electro-chemical reaction takes place at the measuring electrode. As a consequence, the potential proportions of the sensor change. The oxygen from the ambient air passes to the inside of the cell and reaches the counter-electrode. The cell delivers a measuring current as a consequence of this reaction.

##### • Electronic components

The electronic components comprise an amplifier, a 4-20 mA transmitter, and operating elements. The sensor signal is amplified and converted into a 4-20 mA signal. This signal is transmitted to the analysis unit, shown on the display as current value, and finally analysed.



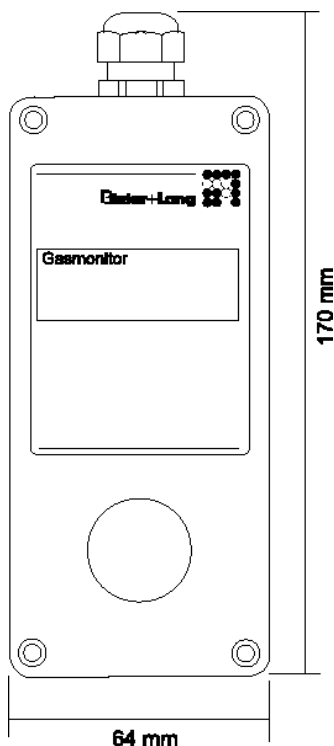
##### • Calibration

Direct calibration of the sensor using test gas. A voltmeter is connected to the test sockets of the sensor electronics. Test gas is applied to the sensor and the zero setting and the amplification is determined using the operating elements.

#### Technical specifications

Designation	Gasmonitor CO-500
Test gas	CO, carbon monoxide
Measuring range	0-300 ppm CO
Measuring principle	electro-chemical measuring cell
Measuring signal	4 - 20 mA
Supply voltage	18 - 30 V
Resolution	1 ppm
Linearity	+/- 2 ppm
Response time (T90)	<=35 seconds
Temperature range	-10°C to +45°C
Perm. humidity	15 - 90% rel. humidity
Pressure range	900 - 1,100 mbar
Max. cable length	1,000 m
Connecting cable	2-core, screened, conductor cross-section depending on cable length.
Suitable analysis units	CO-Control, Gas-Control Gasmesscomputer 8021/8022, 8021-CO/8022-CO GMC 8021E/8022E, 8021E-CO/8022E-CO
Drift per month	
• zero	2 ppm
• sensitivity	< 2% from signal
Repeatability	
• zero	Type -1 to 3 ppm
• CO	Type 1% from signal
Unit run-up time	30 minutes at first start-up
Expected life of the measuring cell	min. 2 years
Cross sensitivity	on request

#### Mechanical specifications



Designation	Gasmonitor CO-500
Protection class	IP 52
Enclosure material	aluminum
Weight	370 g
Dimensions:	
H x W x D (mm)	150 x 64 x 34 mm
Cable inlet	Pg 13.5 - cable diameter up to 12 mm
Terminals	2-pin, 0.5 - 1.5 mm <sup>2</sup>

**Approvals**

VDI 2053 in combination with in CO Control  
Test Symbol: 09-92-0113 TÜV Rheinland

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**Safety**

The following standards guarantee ultimate appliance safety:

- EN 50081-1 01/1992 EMC - emitted interference
  - EN 50082-2 02/1995 EMC - interference immunity
  - DIN 57106: Protection class III
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**Equipment**

- Splash-water-proof enclosure
  - Test gas set
  - Calibration gases
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**Service**

Everything from one source - from project development to the installation of your new gas alarm unit. Guaranteed by our comprehensive sales and service network. Call us for the address of your local contact partner. Our after-sales technicians are pleased to assist you with hands-on help and advice.