

**Gasmonitor  
CO-300**

**Gasmonitor  
NO2-300**

**Gas Detectors  
for**

**Carbon Monoxide  
and  
Nitrogen Dioxide**

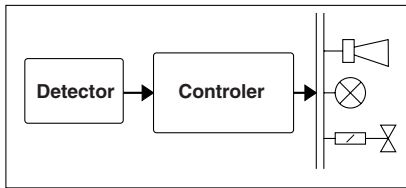


**Data Sheet**

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### Installation/Set-up



When used in conjunction with a controller (evaluation system), Gasmonitor CO-300 and Gasmonitor NO2-300 have the following functions:

- Measurement and display of the concentration of carbon monoxide or nitrogen dioxide
- Control of outputs to counter an increase in the gas concentration.

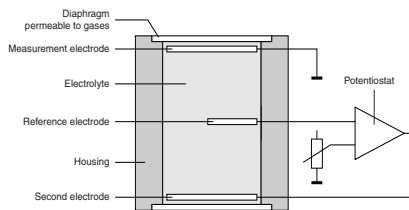
A warning system consists of the following components:

- Detector
- Controller
- Controllable devices such as fans and warning signs.

### Product Features

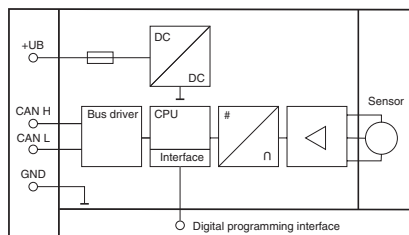
- Measuring principle: electrochemical measuring cell
- CAN-bus interface
- One-man calibration using Calibrationbox-I (accessory)
- Easy sensor exchange by adjustment of replacement sensor
- Field of application: CO-monitoring in car-park buildings
- Testing in accordance with VDI 2053

### How It Works



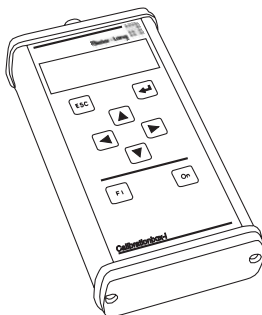
#### • Three-electrode sensor for toxic gases

The electrodes are surrounded by an electrolyte. The upstream Teflon diaphragm protects the cell from dust and moisture. A capillary-diffusion barrier ensures that only a limited quantity of sample gas reaches the interior of the cell. Simultaneously, this minimises the influence of pressure. An electro-chemical reaction (charge transfer) occurs at the measuring electrode. As a result, the potential relationships in the sensor change. The changes in potential are measured in comparison with a reference electrode. The other electrode is supplied by a potentiostat (controlled diffusion), so that potential changes in the cell are countered. The oxygen required for this reaches the cell interior from the ambient air.



#### • Electronics

The electronics operate the sensor potentiostat. The analogue measurement signal is amplified and digitalised. The micro-processor reads this information continuously and carries out temperature compensation. Then the measurement readings are made available. These can be displayed by the optional Calibrationbox-i operating unit. The connected controller calls up the measured concentration from the probe routinely on the CAN bus and evaluates the data received.



#### • Calibration

##### Direct calibration of the sensor with test gas.

The optional Calibrationbox-i is required for calibration. In the menu-guided calibration procedure, the zero and signal gain can be set using the keys. All calibration parameters are stored in memory and can be transferred to a computer system for further processing.

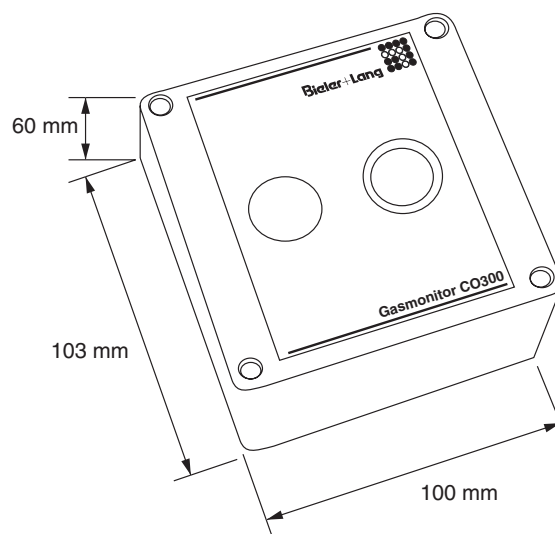


### Technical Data

Description	Gasmonitor CO-300	Gasmonitor NO2-300
Detection gas	CO, carbon monoxide	NO <sub>2</sub> , nitrogen dioxide
Measurement range:	0 - 150 ppm or 0 - 300 ppm CO	0 - 20 ppm
Measurement principle:	Electrochemical measuring cell	
Measurement signal	Digital (CAN BUS)	
Supply voltage	9 - 30 V	
Resolution	1 ppm	0.1 ppm
Linearity	+/- 4 FS	TBD
Response time (T90)	<= 30 seconds	<= 40 seconds
Temperature range	-10°C to +40°C	
Permissible humidity	15-90% RH	
Pressure range	900 - 1100 mbar	
Max. cable length	500 m	
Connection cable	4-conductor, screened (e.g.: J-Y (St)Y2x2x0.8)	
Suitable controller	GMC 8364 CAN	
Drift / month - Zero - Detection gas	TBD	TBD
Warming-up time	30 minutes when first commissioning	
Expected working life of sensor	Min. 2 years	
Cross sensitivity	On request	

### Mechanical Data

Description	Gasmonitor CO-300 / NO2-300
Degree of protection	IP 54
Housing material	PC
Weight	250 g
Dimensions: H x B x D	60 x 100 x 103
Cable gland	Stepped nipple, sealing range 5 - 16 mm
Connection terminals	4 terminals, 0.5 – 1.5 mm



**Approvals**

Gasmonitor CO-300:  
VDI 2053 (Ventilation of garages and tunnels)  
Approval certificate: 09-97-0139,  
TÜV Rheinland/Berlin-Brandenburg

**Safety Standards**

**Compliance with the following standards ensures the highest levels of safety and reliability**

- EN 50081-1 EMC - Interference emissions
- EN 50270 Immunity to interference

**Accessories**

- Test-gas set
- Calibration gases
- Calibrator Calibrationbox-i

**Service**

Everything from a single supplier – from system design to installation of your new gas warning system. The comprehensive coverage of our sales and service network ensures this. Ask us about regional representatives in your area. And after purchase, our service technicians are available to help and advise.

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Technical status: 07/2003

We reserve the right to make technical changes.

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