



## Features

- Digital measurement value processing incl. temperature compensation
- Internal functional control with integrated Hardware Watchdog
- Data / measured values in  $\mu\text{C}$  Sensor, therefore simple exchange of sensor uncalibrated <> calibrated
- Software according to SIL2 compliant development process
- Modular technology (plug-in and replaceable)
- Easy maintenance and calibration by exchange of the sensor cartridge or by comfortable on-site calibration
- Serial RS 485 interface with protocol for CGD06 Modbus and BacNet.
- IP 65 version

## Application

The Fieldbus Detector is used for integration in bus network.

## Technical Data

### Electrical

<b>Power supply</b>	16 – 29 Vdc, reverse-polarity protected
<b>Power consumption</b>	10 mA (0.24 VA), 24Vdc
<b>Output for GCD bus</b>	5 Vdc, 250 mA max. Overload, short-circuit and reverse-polarity protected
<b>Temperature range</b>	-20 °C to +50 °C (-31 °F to 122 °F)
<b>Humidity range</b>	15 - 90 % r.H non-condensing
<b>Storage temperature</b>	5 °C to 30 °C (41 °F to 86 °F)
<b>Storage time</b>	6 months
<b>Serial interface</b>	
<b>GCD bus</b>	1-wire / 19200 Baud
<b>Field bus</b>	RS 485 / 19200 Baud
<b>Tool bus</b>	2-wire / 19200 Baud
<b>Mounting Height</b>	<b>0.2 m above floor</b>

### Physical

#### Wire connection:

<b>Field bus</b>	Screw-type terminal min. 0.25 mm <sup>2</sup> , max. 2.5 mm <sup>2</sup>
<b>Local bus for sensor</b>	3-pin connector
<b>Directives</b>	EMC directives 2004/108/EC CE Conformity to: EN 50271 EN 61010-1:2010 ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1
<b>Housing</b>	90 x 130 x 57 mm

## Design Features

The detector provides the power supply of the sensors and makes the measured data available for digital communication.

Communication with the CGD06 controller takes place via the RS 485 fieldbus interface with CGD06 protocol.

Other communication protocols as Modbus and BacNet for direct connection to superordinate BMS are available.

The sensor is connected to the local bus via a plug connection enabling simple exchange instead of an on-site calibration.

The internal X-Change routine recognizes the exchanging process and the exchanged sensor and starts the measurement mode automatically.

An LED indicates the correct procedure of the exchange operation.

As an alternative, the on-site calibration via the CGD06 Service Tool can be performed with the integrated, comfortable calibration routine.

## Ordering Codes

<b>BMEK 100M</b>	ModBus	0-100% LEL 16-29Vdc
<b>BMEK 100B</b>	BacNet	0-100% LEL 16-29Vdc
<b>BMEK 100C</b>	CGD-bus	0-100% LEL 16-29Vdc
<b>XMEK 100</b>	Sensor Head	0-100% LEL for exchange (3 years)
<b>BBUZ</b>	Built-in buzzer	
<b>BBUZ LED</b>	Buzzer with built-in LED indication	
<b>BDUCT</b>	Duct Kit	

Technical Data	Sensor	Ordering Codes, cont'd
<b>Electrical</b>		
<b>Power supply</b>	5 Vdc from sensor board, reverse polarity protected	<b>DR 24/30</b> Power supply 24Vdc
<b>Power consumption:</b>	200 mA, max. (1.0 VA)	<b>BSTAIN</b> Option, stainless housing
<b>Serial interface local bus</b>	1-wire / 19200 Baud	<b>REG</b> Pressure regulator, flow adjustment to 0.5 l/min
		<b>GAS</b> Calibration Gas 17 liter
		<b>GKIT</b> Calibration Kit
<b>Alarm Units</b>		
<b>Sensor element</b>	Pellistor (catalytic bead sensor)	<b>AAW 24</b> Warning Horn 24Vdc 98dB
<b>Measuring range</b>	0 – 100 % LEL	<b>AAW 230</b> Warning Horn 230Vac 98dB
<b>Accuracy</b>	± 1 % LEL	<b>OA 24</b> Flashlight 24Vdc, red
<b>Resolution</b>	0.2%	<b>OAW 24</b> Combined Warning Horn/Flashlight, 24Vdc 98dB
<b>Repeatability</b>	< 1 % sig.	<b>OAW 230</b> Combined Warning Horn/Flashlight, 230Vac 98dB
<b>Response time <math>t_{90}</math></b>	10 sec.	<b>OAW 24T</b> Combined Warning Horn/Flashlight with reset button, 24Vdc 98dB
<b>Zero point variation</b>	0.5 %	
<b>Long-term zero-point drift</b>	< 0.3 % LEL / month	
<b>Long-term sensitivity drift</b>	< 1 % LEL / month	
<b>Temperature range</b>	-20 to +50 °C (-4 to 122 °F)	<b>Warning Plate</b>
<b>Humidity range</b>	5 - 95 % r.H non-condensing	<b>Gas Alarm</b> Flashing gas alarm plate "GASALARM" 24Vac/dc
<b>Pressure range</b>	Atmospheric ± 20 %	
<b>Sensor life time</b>	> 36 months / normal ambient conditions	
<b>Calibration interval<sup>1</sup></b>	6 months	
<b>Storage temperature range</b>	+ 5 to + 30 °C (41 to 86 °F)	
<b>Storage time</b>	6 months	
<b>Poisoning</b>	The sensitivity of Pellistor sensors can be influenced by substances containing silicon compounds and even poisoned and destroyed by them.	
<b>Warranty</b>	1 year on material (without sensor element)	

<sup>1</sup> Manufacturer-recommended calibration interval for normal environmental conditions.

### Set-up and Standard Alarm Levels

- 0 - 100% LEL
- Early alarm level set at **10% LEL**
- Emergency alarm level set at **20% LEL**

Special protection for people and buildings. The units are manufactured in accordance with the rules and directives such as EN50545.

Products delivered by the AP meets and exceeds the requirements of the new European standard EN50545.

Safety functions control devices for connection warnings regarding functionality and open circuit - day and night. Level SIL2 according to EN 50271.

### Electrical connection

