



Features

- Digital measurement value processing incl. temperature compensation
- Internal functional control with integrated Hardware Watchdog
- Data / measured values in μC Sensor, therefore simple exchange of sensor uncalibrated \leftrightarrow 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

Technical Data

Electrical

Power supply	16 – 29 Vdc, reverse-polarity protected
Power consumption	10 mA (0.24 VA), 24Vdc
Output for GCD bus	5 Vdc, 250 mA max. Overload, short-circuit and reverse-polarity protected

General

Temperature range	-20 °C to +50 °C (-31 °F to 122 °F)
Humidity range	15 - 90 % r.H non-condensing
Storage temperature	5 °C to 30 °C (41 °F to 86 °F)
Storage time	6 months
Serial interface	
GCD bus	1-wire / 19200 Baud
Field bus	RS 485 / 19200 Baud
Tool bus	2-wire / 19200 Baud
Mounting Height	0.2 m above floor

Physical

Wire connection:	
Field bus	Screw-type terminal min. 0.25 mm ² , max. 2.5 mm ²
Local bus for sensor	3-pin connector
Directives	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
Housing	90 x 130 x 57 mm

Application

The Fieldbus Detector is used for integration in bus network.

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

BPEN 100M	ModBus	Pentane 0-100% LEL 16-29Vdc
BPEN 100B	BacNet	Pentane 0-100% LEL 16-29Vdc
BPEN 100C	CGD-bus	Pentane 0-100% LEL 16-29Vdc
XPEN 100	Sensor Head	0-100% LEL for exchange (3 years)
BBUZ	Built-in buzzer	
BBUZ LED	Buzzer with built-in LED indication	
BDUCT	Duct Kit	

Technical Data	Sensor	Ordering Codes, cont'd
Electrical		DR 24/30 Power supply 24Vdc
Power supply	5 Vdc from sensor board, reverse polarity protected	BSTAIN Option, stainless housing
Power consumption:	200 mA, max. (1.0 VA)	REG Pressure regulator, flow adjustment to 0.5 l/min
Serial interface local bus	1-wire / 19200 Baud	GAS Calibration Gas 17 liter
		GKIT Calibration Kit
Sensor element	Pellistor (catalytic bead sensor)	Alarm Units
Measuring range	0 – 100 % LEL	AAW 24 Warning Horn 24Vdc 98dB
Accuracy	± 1 % LEL	AAW 230 Warning Horn 230Vac 98dB
Resolution	0.2%	OA 24 Flashlight 24Vdc, red
Repeatability	< 1 % sig.	OAW 24 Combined Warning Horn/Flashlight, 24Vdc 98dB
Response time t₉₀	10 sec.	OAW 230 Combined Warning Horn/Flashlight, 230Vac 98dB
Zero point variation	0.5 %	OAW 24T Combined Warning Horn/Flashlight with reset button, 24Vdc 98dB
Long-term zero-point drift	< 0.3 % LEL / month	Warning Plate
Long-term sensitivity drift	< 1 % LEL / month	Gas Alarm Flashing gas alarm plate "GASALARM" 24Vac/dc
Temperature range	-20 to +50 °C (-4 to 122 °F)	
Humidity range	5 - 95 % r.H non-condensing	
Pressure range	Atmospheric ± 20 %	
Sensor life time	> 36 months / normal ambient conditions	
Calibration interval¹	6 months	
Storage temperature range	+ 5 to + 30 °C (41 to 86 °F)	
Storage time	6 months	
Poisoning	The sensitivity of Pellistor sensors can be influenced by substances containing silicon compounds and even poisoned and destroyed by them.	
Warranty	1 year on material (without sensor element)	

¹ 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

