



Features

- Digital measurement value processing incl. temperature compensation
- Internal functional control with integrated Hardware Watchdog
- Data / measured values in μ 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

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

BTOL 100M	ModBus	0-100% LEL 16-29Vdc
BTOL 100B	BacNet	0-100% LEL 16-29Vdc
BTOL 100C	CGD-bus	0-100% LEL 16-29Vdc
XTOL 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					
Power supply		5 Vdc from sensor board, reverse polarity protected		DR 24/30	Power supply 24Vdc
Power consumption:		200 mA, max. (1.0 VA)		BSTAIN	Option, stainless housing
Serial interface local bus		1-wire / 19200 Baud		REG	Pressure regulator, flow adjustment to 0.5 l/min
				GAS	Calibration Gas 17 liter
				GKIT	Calibration Kit
				Alarm Units	
Sensor element		Pellistor (catalytic bead sensor)		AAW 24	Warning Horn 24Vdc 98dB
Measuring range		0 – 100 % LEL		AAW 230	Warning Horn 230Vac 98dB
Accuracy		± 1 % LEL		OA 24	Flashlight 24Vdc, red
Resolution		0.2%		OAW 24	Combined Warning Horn/Flashlight, 24Vdc 98dB
Repeatability		< 1 % sig.		OAW 230	Combined Warning Horn/Flashlight, 230Vac 98dB
Response time t_{90}		10 sec.		OAW 24T	Combined Warning Horn/Flashlight with reset button, 24Vdc 98dB
Zero point variation		0.5 %		Warning Plate	
Long-term zero-point drift		< 0.3 % LEL / month		Gas Alarm	
Long-term sensitivity drift		< 1 % LEL / month			
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

