Wall

Duct

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 <> 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 mm², max. 2.5 mm²
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

BALC 100M	ModBus	0-100% LEL 16-29Vdc
BALC 100B	BacNet	0-100% LEL 16-29Vdc
BALC 100C	CGD-bus	0-100% LEL 16-29Vdc
XALC 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	

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Technical Data   Sensor

Electrical	
Power supply	5 Vdc from sensor board, reverse polarity protected
Power consumption:	200 mA, max. (1.0 VA)
Serial interface local bus	1-wire / 19200 Baud
Sensor element	Pellistor (catalytic bead sensor)
Measuring range	0 – 100 % LEL
Accuracy	± 1 % LEL
Resolution	0.2%
Repeatability	< 1 % sig.
Response time t$_{90}$	10 sec.
Zero point variation	0.5 %
Long-term zero-point drift	< 0.3 % LEL / month
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 interval[1]	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.

Ordering Codes, cont'd

DR 24/30	Power supply 24Vdc
BSTAIN	Option, stainless housing
REG	Pressure regulator, flow adjustment to 0.5 l/min
GAS	Calibration Gas 17 liter
GKIT	Calibration Kit
Alarm Units	
AAW 24	Warning Horn 24Vdc 98dB
AAW 230	Warning Horn 230Vac 98dB
OA 24	Flashlight 24Vdc, red
OAW 24	Combined Warning Horn/Flashlight, 24Vdc 98dB
OAW 230	Combined Warning Horn/Flashlight, 230Vac 98dB
OAW 24T	Combined Warning Horn/Flashlight with reset button, 24Vdc 98dB
Warning Plate	
Gas Alarm	Flashing gas alarm plate "GASALARM" 24Vac/dc

Set-up and Standard Alarm Levels

0 - 100% LEL
- Early alarm level set at **5% LEL**
- Emergency alarm level ser at **20% LEL**

Special protection for people and buildings. The units are manufactured in accordance with the rules and directives such as EN50545.
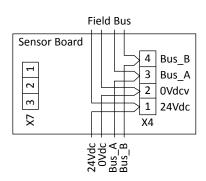
Products delivered by the AP meets and exceeds the requirements of the new European standard EN50545.

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

Electrical connection