



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
- Integrated heating down to -35°C

Technical Data	Basic unit
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
Temperature range	-2°C to $+40^\circ\text{C}$ (-35°C tto $+40^\circ\text{C}$ on request)
Humidity range	15 - 90 % r.H non-condensing
Storage temperature	5°C to 30°C (41°F to 86°F)
GCD bus interface	1-wire / 19200 Baud
Field bus interface	RS 485 / 19200 Baud
Tool bus interface	2-wire / 19200 Baud
Mounting Height	0.3 - 1.0 m above floor
Field bus	Screw-type terminal min. 0.25 mm ² , max. 2.5 mm ²
Local bus for sensor	3-pin connector
Cable Length	110 cm
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, Polycarbonate
Combustion	UE 94 V2

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

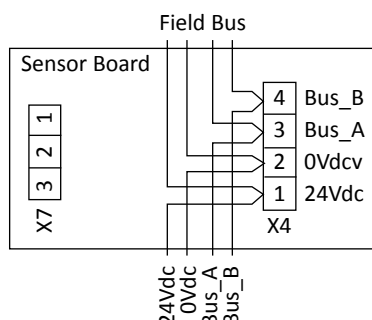
BFR 2000 M	ModBus	0-2000 ppm
BFR 5000 M	ModBus	0-5000 ppm
BFR 2000 C	CGD-bus	0-2000 ppm
BFR 5000 C	CGD-bus	0-5000 ppm
XFR 2000	Sensor Head (Repl.)	0-2000 ppm for exch. (15 år)
XFR 5000	Sensor Head (Repl.)	0-5000 ppm for exch. (15 år)

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Technical Data		Sensor		Ordering Codes, cont'd	
Electrical				BFR 002M	ModBus 0 - 2 vol%
Power supply		5 Vdc from sensor board, reverse polarity protected		BFR 002C	CGD-bus 0 - 2 vol%
Power consumption:		50 mA, max. (1.0 VA)		XFR 002	Sensor For exchange (15 years)
Serial interface local bus		1-wire / 19200 Baud		(M, B, C) ¹	Head (Repl.)
				BCO2 005M	ModBus 0 - 5 vol%
Sensor element		Infrared, NDIR		BCO2 005C	CGD-bus 0 - 5 vol%
Measuring range		0 – 2000 ppm, 0 - 2 vol %, 0 - 5 vol %		XCO2 005	Sensor 0 - 5 vol% for exchange (15 years)
Accuracy		< 10 % of range		(M, B, C) ¹	Head (Repl.)
Measuring interval		2 secs			
Calibration interval		5 years		BBUZ	Built-in buzzer
Response time t_{90}		≤ 120 sec.		BBUZ LED	Buzzer with built-in LED indication
Pressure range		Atmospheric ± 30 % (influence + 1.6 % on measured value per kPa)		BDUCT	Duct Kit
Sensor life time		15 years / normal ambient conditions		DR 24/30	Power supply 24Vdc
Storage temperature range		+ 5 to + 30 °C (41 to 86 °F)		BSTAIN	Option, stainless housing
Warranty		1 year on material (without sensor element)		BATEX	Explosion proof enclosure
				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
				SP 600	Impact Protection

¹ Manufacturer-recommended calibration interval for normal environmental conditions.

Electrical connection



EU directives

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.