

Methane, Combustible gas Fieldbus Detector - ModBus, BacNet





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 pro-

tected

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 below ceiling

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

BMTN 100M	ModBus	Pentane 0-100% LEL 16-29Vdc
BMTN 100B	BacNet	Pentane 0-100% LEL 16-29Vdc
BMTN 100C	CGD-bus	Pentane 0-100% LEL 16-29Vdc
XMTN 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: Serial interface local bus	200 mA, max. (1.0 VA) 1-wire / 19200 Baud	REG GAS	Pressure regulator, flow adjustment to 0.5 I/min Calibration Gas 17 liter	
		GKIT	Calibration Kit	
Sensor element Measuring range	Pellistor (catalytic bead sensor) 0 – 100 % LEL	Alarm Units		
Accuracy	± 1 % LEL	AAW 24	Warning Horn 24Vdc 98dB	
Resolution	0.2%	AAW 230	Warning Horn 230Vac 98dB	
Repeatability	< 1 % sig.	OA 24	Flashlight 24Vdc, red	
Response time t _{oo}	10 sec.	OAW 24	Combined Warning Horn/Flashlight, 24Vdc 98dB	
Zero point variation	0.5 %	OAW 230	Combined Warning Horn/Flashlight, 230Vac 98dB	
Long-term zero-point drift	< 0.3 % LEL / month	OAW 24T	Combined Warning Horn/Flashlight with reset	
Long-term sensitivity drift	< 1 % LEL / month	button, 24Vdc 98dB		
Temperature range	-20 to +50 °C (-4 to 122 °F)	Warning Plate		
Humidity range	5 - 95 % r.H non-condensing	Gas Alarm	Flashing gas alarm plate "GASALARM" 24Vac/dc	
Pressure range	Atmospheric ± 20 %			
Sensor life time	> 36 months / normal ambient conditions			
Calibration interval ¹	6 months			
Storage temperature	+ 5 to + 30 °C (41 to 86 °F)	Set-up and Standard Alarm Levels 0 - 100% LEL - Early alarm level set at 10% LEL		
range Storage time	6 months			
Poisoning	The sensitivity of Pellistor sensors can	- Emergency alarm level ser at 20% LEL		
	be influenced by substances containing silicon compounds and even poisoned and destroyed by them.	Special protection for people and buildings. The units are manufactured in accordance with the rules and directives such as EN50545.		
Warranty	1 year on material (without sensor element)	Products delivered by the AP meets and exceeds the requirements of the new European standard EN50545.		

¹ Manufacturer-recommended calibration interval for normal environmental conditions.

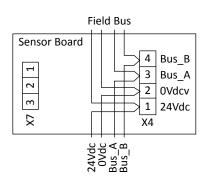
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-)% LEL

and exceeds the requirements tne 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



We cannot be held responsible for errors in the manual/datasheet and reserve the right to correct any errors and to make product improvements, which may affect the accuracy of the manual/datasheet, without prior notice.