



PolyGard®2

Gas Transmitter with BacNet Interface

PolyGard®2 gas transmitter including digital value processing and temperature compensation for the continuous monitoring of the ambient air to detect toxic or combustible gases as well as oxygen with BacNet interface and standard analog output, (0) 4 - 20 mA or (0) 2 - 10 V DC.

Calibration is done either by simply replacing the sensor cartridge or by using the comfortable, integrated calibration routine directly at the system using the MC2 Tool STL06_MC2_A1.

APPLICATION

The PolyGard®2 transmitter series with BacNet interface are used for the detection of toxic or combustible gases and oxygen.

FEATURES

- Digital measurement value processing incl. temperature compensation
- Continuous monitoring
- Low zero point drift
- Good stability to poisoning
- Sensor with long life expectancy
- Modular technology (plug-in)
- Easy maintenance
- Comfortable calibration with selective access release
- Reverse polarity protected, overload and short-circuit proof
- (0) 4 – 20 mA / (0) 2 – 10 V analog signal output, selectable
- Serial data communication: Protocol BacNet MS/TP
- Physical interface: RS 485
- IP 65 version
- Manual addressing for RS 485 mode
- Approved according to EN 61010-1; ANSI/UL 61010 1; CAN/CSA-C22.2 No. 61010-1
- Heating (option)
- Duct mounting (option)





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SPECIFICATIONS

General sensor data

Gas type	See Ordering Information
Sensor element	Electrochemical (toxic gases, oxygen) Pellistor (combustible gases)
Measuring range	See Ordering Information
Pressure range	Atmospheric $\pm 10\%$
Humidity range	15 – 90 % RH not condensing
Storage temperature range	+5 °C to +30 °C (+41 °F to +86 °F)
Storage time	6 months
Mounting height	Depends on gas type

Specific sensor data

Toxic gases	See data sheet: DB MC2_Tox
Oxygen	See data sheet: DB MC2_Tox
Combustible gases	See data sheet: DB MC2_Ex

Electrical

Power supply	18 - 28 V DC/AC, reverse polarity protected
Power consumption (without options)	40 mA, max. (1.0 VA)

Output signal

Analog output signal	(0) 4 – 20 mA, load $\leq 500\ \Omega$
Selectable: Current / voltage	(0) 2 - 10 V, load $\geq 50\ \text{k}\ \Omega$
Starting point 0 / 20 %	proportional, overload and short circuit protected

Serial interface

Baud rate options	BacNet MS/TP / 9600 / 19200 / 38400 Baud
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Physical

Housing plastic type A	Polycarbonate
Combustion	UL 94 V2
Housing colour	RAL 7032 (light grey)
Dimensions	(B x H x T) 94 x 130 x 57 mm (3.7 x 5.1 x 2.2 in.)
Weight	ca. 0,5 kg (1.1 lbs.)
Protection class	IP 65
Mounting	Wall mounting
Cable entry	Standard 1 x M 20
Connection type	Screw-type terminals min. 0.25 max. 2.5 mm ²
Cable lengths	Current signal ca. 500 m Voltage signal ca. 200 m

Directives

	EMC Directives 2014/30/EU EN 61010-1:2010 ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 CE
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Warranty

	1 year on material (without sensor element)
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Options

Heating

Temperature controlled	3 °C \pm 2 °C (37.4 °F \pm 3.6 °F)
Ambient temperature	-40 °C (-40 °F)
Consumption	0.3 A; 7.5 VA





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ORDERING INFORMATION

PG2BAC- XXXX-X- X- XXXX

Versions

- 1XXX** Heating
- XXF3** BacNet MS/TP, Low-Addr. (1-60), 9600 Baud, ID1⁴
- XXG3** BacNet MS/TP, Low-Addr. (1-60), 9600 Baud, ID6⁴
- XXH3** BacNet MS/TP, Low-Addr. (1-60), 19200 Baud, ID6⁴
- XXI3** BacNet MS/TP, Low-Addr. (1-60), 38400 Baud, ID6⁴
- XXJ3** BacNet MS/TP, High-Addr. (61-120), 9600 Baud, ID1⁴
- XXK3** BacNet MS/TP, High -Addr. (61-120), 9600 Baud, ID6⁴
- XXL3** BacNet MS/TP, High -Addr. (61-120), 19200 Baud, ID6⁴
- XXM3** BacNet MS/TP, High -Addr. (61-120), 38400 Baud, ID6⁴
- XXX3** Manual addressing

Housing¹

- A** Plastic
- B** Duct mounting

Sensor: Gas type

Measuring range

E1110-F	Carbon monoxide, CO	0 – 300 ppm
E1110-E	Carbon monoxide, CO	0 – 250 ppm
E1195-A	Oxygen, O ₂	0 – 25 Vol. %
P3400-A	Methane, CH ₄	0 – 100 % LEL
P3480-A	Propane, C ₃ H ₈	0 – 100 % LEL

¹ See data sheet "PolyGard ADT Enclosure"

⁴ Only in connection with manual addressing

EXAMPLE

CO Transmitter, 0 - 300 ppm, Low Addr. 19200 Baud; housing A

Order number: PG2BAC-E1110F-A-XXH3

ELECTRICAL CONNECTION

