



PolyGard®2

Sensor Board SB2

Sensor board with RS 485 interface for integration of the Sensor Cartridges SC2.

Up to three different Sensor Cartridges of the SC2 series can be connected to the Sensor Board via local bus. The SB2 provides the power supply of the SC2(s) and makes the measured data available for digital communication. Communication with the DGC06 controller takes place via the RS 485 fieldbus interface with DGC06 protocol. Other communication protocols for direct connection to superordinate BMS are available as well.

The SC is connected to the local bus via a plug connection enabling simple SC exchange instead of an on-site calibration. The internal X-Change routine recognizes the exchanging process and the exchanged SC 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 DGC06 Service Tool can be performed with the integrated, comfortable calibration routine.

APPLICATION

The PolyGard®2 Sensor Board SB2 is used for integration of the SC2 Sensor Cartridge(s).

FEATURES

- Digital measurement value processing incl. temperature compensation
- Internal functional control with integrated Hardware Watchdog
- Data / measured values in μ C Sensor Cartridge, therefore simple exchange of SC uncalibrated <> calibrated
- Up to three different Sensor Cartridges
- Sensor Cartridge can be mounted remotely with Remote Board (RB2), therefore adaptation to necessary mounting heights possible
- 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 DGC06. Modbus as option.
- 4 – 20 mA analog output (option)
- LCD display (option)
- Reverse polarity protected, overload and short-circuit proof
- IP 65 version (housing type A)
- Conformity to
 - EN 50271,
 - EN 61010-1;
 - ANSI/UL 61010 1;
 - CAN/CSA-C22.2 No. 61010-1



Sensor board with 1x SC2 in housing





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SPECIFICATIONS

Electrical

Power supply	16 – 29 V DC, reverse-polarity protected
Power consumption (24 V DC)	10 mA (0.24 VA)
Output for local bus	5 V DC, 250 mA max. Overload, short-circuit and reverse-polarity protected

General

Temperature range	-35 °C to +50 °C (-31 °F to 122 °F)
Humidity range	15 - 90 % RH not-condensing
Storage temperature	5 °C to 30 °C (41 °F to 86 °F)
Storage time	6 months

Serial interface

Local bus	1-wire / 19200 Baud
Field bus	RS 485 / 19200 Baud
Tool bus	2-wire / 19200 Baud

Physical

Wire connection: Field bus	Screw-type terminal min. 0.25 mm ² , max. 2.5 mm ²
Local bus for SC	3-pin connector
Cable lengths local bus for Remote Sensor Board	Max. 5 m (16.4 ft.)

Directives

EMC directives 2014/30/EU
CE
Conformity to:
EN 50271
EN 61010-1:2010
ANSI/UL 61010-1
CAN/CSA-C22.2 No. 61010-1

Warranty

1 year on material (without sensor element)

Options

LCD display

LCD	Two lines, 16 characters each, background highlighted in two colours
Operation	Menu driven via six push-buttons
Power consumption	5 V, 60 mA, 0.3 VA

Analog output signal

Proportional, overload and short-circuit proof, load ≤ 500 Ohm
4 - 20 mA = measuring range
3.0 < 4 mA = underrange
> 20 - 21.2 mA = overrange
2.0 mA = fault





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ORDERING INFORMATION

SENSOR BOARD SB2

SB2	-X	X	0	X	X	0	0	X	0	
										WARNING DEVICES¹
										0 Without built-on warning device
										DISPLAY¹
										0 Without display
										2 With display/keypad
										ANALOG INPUT¹
										0 No analog input
										DIGITAL INPUT¹
										0 No digital input
										OUTPUT SIGNAL – ANALOG / BUS
										2 RS 485 with DGC 06 protocol
										3 Analog output & RS 485 with DGC 06 protocol
										4 RS 485 with Modbus protocol
										VISUAL/ AUDIBLE WARNING DEVICES¹
										0 Without visual / acoustic indicator
										1* Buzzer
										3 Buzzer & status-LED red
										ALARM RELAYS¹
										0 No alarm relay
										POWER SUPPLY
										1* 12 V DC ¹
										2 24 V DC
										7* 90 – 240 V AC / 24 V DC, 15 VA ¹
										8* UPS 90 – 240 V AC /12 V DC, 15 VA, 0.8 Ah ¹
										9* UPS 90 – 240 V AC /24 V DC, 15 VA, 0.8 Ah ¹
										HOUSING
										0* Without housing
										A Housing type A 90 x 130 x 57
										K* Housing type K ATEX Ø 95 x 82 (on request)
										5 Housing type 5 stainless steel (113 x 135 x 45) ²

¹ Not in stainless steel housing

² Only for integration of one sensor cartridge

* only on request

Standard version: SB-A-2-0-0-2-0-0-0-0





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REMOTE BOARD RB2

RB2- X 1XXXXXXX

VERSION REMOTE BOARD

1XXXXXXX Remote Board for remote connection of one SC2 at the SB2

HOUSING

0* Without housing

A Housing type A 90 x 130 x 57

* only on request

ELECTRICAL CONNECTION

