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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).

Sensor board with 1x SC2 in housing A

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
- Reverse polarity protected, overload and short-circuit proof
- IP 65 version (housing type A in delivery state)
- Serial RS 485 interface with protocol for DGC06. Modbus as option.
- Warning module consisting of buzzer and status LED red (option)
- LCD display (option)
- Conformity to
 - EN 50271
- ANSI/UL 61010 1 & CAN/CSA-C22.2 No. 61010-1 (optional)











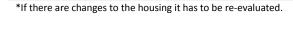
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Sensor Board SB2

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.
output for focul sus	Overload, short-circuit and reverse-polarity protected
Overvoltage category	I
General	
Temperature range	-35 °C to +50 °C (-31 °F to 122 °F)
Humidity range	15 - 90 % RH not-condensing
Pollution degree	2 (installation only indoors), not suitable for wet environment
Permissible height above sea level	1500 m (env. 5000 ft.)
Storage temperature	5 °C to 40 °C (41 °F to 104 °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	/
Housing	Type A
Material	Polycarbonate
Burning behaviour	UL 94 V2
Housing colour	RAL 7032 (light grey)
Dimensions W x B x D	94 x 130 x 57 mm (3.7 x 5.1 x 2.2 in.)
Weight	0.3 kg (0.7 lb)
Protection class (delivery status)*	NEMA 4X (IP 65)
Installation	Wall mounting
Wire connection: Field bus	Screw-type terminal min. 0.25 mm ² , max. 2.5 mm ² (24 to 10 AWG)
Local bus for SC	3-pin connector
Cable lengths local bus for Remote Sensor Board	Max. 5 m (16.4 ft.)
Knockout for integration of Sensor Cartridges	3 x M25 for M25 housing
Directives	EMC directives 2014/30/EU
	CE
	EN 61010-1:2010
	Conformity to:
	EN 50271
	Option:
	Option: ANSI/UL 61010-1
	•
Warranty	ANSI/UL 61010-1
Warranty	ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1
Warranty	ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 1 year on sensor (not if poisoned or overloaded)
Warranty LCD display	ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 1 year on sensor (not if poisoned or overloaded) 2 years on device Options
,	ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 1 year on sensor (not if poisoned or overloaded) 2 years on device
LCD display LCD Operation	ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 1 year on sensor (not if poisoned or overloaded) 2 years on device Options
LCD display LCD Operation Power consumption	ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 1 year on sensor (not if poisoned or overloaded) 2 years on device Options Two lines, 16 characters each, background highlighted in two colours
LCD display LCD Operation Power consumption Visual/acoustic indicator	ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 1 year on sensor (not if poisoned or overloaded) 2 years on device Options Two lines, 16 characters each, background highlighted in two colours Menu driven via six push-buttons 5 V, 60 mA, 0.3 VA
LCD display LCD Operation Power consumption	ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 1 year on sensor (not if poisoned or overloaded) 2 years on device Options Two lines, 16 characters each, background highlighted in two colours Menu driven via six push-buttons 5 V, 60 mA, 0.3 VA Red / Fault
LCD display LCD Operation Power consumption Visual/acoustic indicator	ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 1 year on sensor (not if poisoned or overloaded) 2 years on device Options Two lines, 16 characters each, background highlighted in two colours Menu driven via six push-buttons 5 V, 60 mA, 0.3 VA

IP 65





Protection class







MSR

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Sensor Board SB2

ORDERING INFORMATION

SENSOR BOARD SB2

SB2 - X X O X X O O X O X

FURTHER OPTIONS

- 0 No further options
- A Version UL/CSA 61010-1 (only housing A & C)

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 - BUS

- 2 RS 485 with DGC 06 protocol
- 4 RS 485 with Modbus protocol
- 8 MSR D Bus

VISUAL / ACOUSTIC WARNING INDICATOR¹

- Without visual / acoustic indicator
- 2 Plug connector for warning module
- Warning module, buzzer & status LED red, mounted on the housing
- 4 Warning module, buzzer & status LED red, as replacem. (only for SB Board with connector for warning module)

ALARM RELAYS¹

0 No alarm relay

POWER SUPPLY

- 1* 12 V DC1
- 2 24 V DC
- 7* 100 240 V AC / 24 V DC, 15 VA¹
- 8* UPS 100 240 V AC /12 V DC, 15 VA, 0.8 Ah1
- 9* UPS 100 240 V AC /24 V DC, 15 VA, 0.8 Ah1

HOUSING

- 0 Without housing
- A Housing type A 90 x 130 x 57
- C Housing type C 130 x 130 x 75
- K* Housing type K ATEX Ø 95 x 82
- 5 Housing type 5 stainless steel (113 x 135 x 45 mm)²

* only on request

- ¹ Not in stainless steel housing
- $^{\rm 2}$ Only for integration of one sensor cartridge

Standard version: SB2-A-2-0-0-2-0-0-0-0







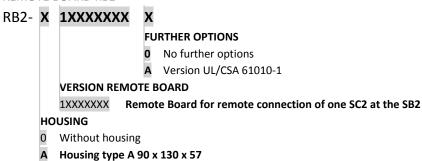




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REMOTE BOARD RB2



ELECTRICAL CONNECTION

