Warning and
Gas Detector WO3

Warning and
Gas Detector WO3D

Features

- **Digital measurement value processing incl. temperature compensation**
- **Interna! functional control with integrated Hardware Watchdog**
- **Warning and Gas Detector**
- **Data/measured values stored in µC Sensor Cartridge, therefore simple exchange of sensor uncalibrated <> calibrated**
- **Up to three different Sensor Cartridges**
- **Analog input, 4 - 20mA for one analog sensor (then only 2 x sensor connectable)**
- **Software according to SIL2 compliant development process**
- **Modular technology (plug-in and replaceable}**
- **IP 65 version**
- **Easy maintenance and calibration by exchange of the sensor cartridge or by comfortable on-site calibration**
- **Serial RS 485 interface with protocol for CGD. Modbus as option.**
- **One sensor cartridge can be placed via Remote Board (RB2) at 5 m for adaptation to required mounting height (option)**
- **4 - 20 mA analog output (option)**
- **One alarm relay with change-over contact, potential-free max. 40 Vac/dc, 0.5A (option)**
- **One fault relay, configurable as an alarm relay in addition, change-over contact, potential-free max. 40 Vac/dc, 0,5A (option)**
- **Display (option)**
- **Conformity to EN 50271**
- **ANSI/UL 61010 1& CAN/CSA-C22.2 No. 61010-1 (optional)**

Technical data

Electrical	
Power supply	24Vdc ± 20 % ; reverse polarity protected 24Vac - 10 % / + 15 %
Power consumption (24V)	Max. 60mA (1.5VA)
Overvoltage category	1
Analog input	
Input signal	4 -20mA,overload and short-circuit proof, input resistance 200 Ω
Power supply for MC2 analog sensor	24 Vdc, max. 100mA
Digital input	
Slignal input	Potential-free contact
Function	Acknowledgment function for horn or latching mode of main alarm
Outgoing line local bus	
Power supply	5Vdc, 250mA max., overload, short-circuit and reverse-polarity protected
Serial interface	
Local bus	1-wire / 19200 Baud
Field bus	RS 485 / 19200 Baud
Tool bus	2-wire / 19200 Baud
General	
Temperature range	-30 °C to +50 °C (-22 °F to 122 °F)
Humidity range	15 - 90 % rH non-condensing
Pollution degree	2 (installation only indoors), not suitable for wet environment

Warning & detector board with RS 485 interface, 4 to 20 mA output and alarm relay, for ozone and two other gases for connection to the CGD system or in stand-alone operation.

Up to three different Sensor elements can be connected to WO3 detector. One analog sensor of the A series can be mounted.

The WO3 provides the power supply of the sensor element and prepares the measured data for digital communication.

Communication with the CGD gas leak unit takes place via the RS 485 fieldbus interface with CGD protocol. The optional alarm relays can be controlled both by the CGD gas leak unit and locally via the measured values.

The digital input for acknowledgment function and further options such as display or various communication protocols for the direct connection to the superior BMS ensure adaptation ensure adaptation to the various applications in gas detection technology.

Permissible height above sea level	1500 m (5000 ft.)	
Storage temperature	+5 °C to +40 °C (41 °F to 104 °F)	
Storage time	6 months	
Physical		
Housing	**Type A / C / E**	**Type N**
Material	Polycarbonate	ABS
Burning behaviour	UL 94 V2	
Housing colour	RAL 7032 (light grey)	RAL 7032 (light grey)
Dimensions B x H x T (mm)	94 x 130 x 57 130 x 130 x 75 130 x 130 x 99	80 x 82 x 56
Weight (kg)		
Protection class (delivery status) *	NEMA 4x (IP 65)	IP 65
Installation	Wall mounting	
Knockouts for cable entry	Type A: 2 x Ml2/ 3 x M20 I Type C & E: 6 x M20/25	1 x M20
Knockouts for installation of SC2/MC2/ WAO	Type A: 2 x I Type C & E: 3 x	1x SC2, Option 1x WAO
Wire connection:		
Power supply, field bus	Screw-type terminals 0.25 to 2.5 mm^2	
Analog in/output; digital input	Screw-type terminals 0.25 to 1.3 mm^2	
Relays	Screw-type terminals 0.25 to 1.3 mm^2	
Local bus for SC2	3-pin plug connector	
Cable lengths local bus for Remote Sensor Board	Max. 5 m (16.4 ft.)	
Directives	EMC directives 2014/30/EU Low voltage directive 2014/35/EU CE EN 61010-1:2010 Conformity to: EN 50271 Option: ANSl/UL 61010- 1 CAN/CSA-C22.2 No. 61010-1	
Warranty	2 years on device 1 year on sensor (not if poisoned or overloaded)	

*** If there are changes to the housing it has to be re-evaluated**

The sensor element is connected to the local bus via a plug connection enabling simple sensor exchange instead of an on-site calibration.

The internal routine recognizes the exchanged sensor during the exchange process and starts the measurement mode automatically. A LED indicates the correct procedure of the exchange operation.

As an alternative, the on-site calibration via the CGD Service Tool can be performed with the integrated, comfortable calibration routine.

Application

The WO3 is used for measuring, monitoring and warning of hazardous gas concentrations in stand-alone operation or in conjunction with the CGD system.

	Options
Alarm relay / fault relay	30 V AC/DC, 0.5 A, potential-free, change-over contact (SPDT)
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
LCD display	
LCD	Two lines, 16 characters each, background highlighted in two colours
Operation	Menu driven via six push-buttons
Power consumption	5V, 60 mA, 0.3 VA
Status LED I buzzer	
Colour / mode	Red / yellow / green (alarm - fault - operation - service)
Acoustic pressure	> 85 dB (A) (0.1 m distance)
Frequency	2300 Hz
Protection class	IP 65
Power supply 230V	
Wide range input	100 - 240Vac - 50/60 Hz
Consumption	Max. 25VA
Overvoltage category	II

REMOTE BOARD RB2

RB2-	X	1XXXXXXX	X
			Further Options
			0 No further options
			A Version UL/CSA 61010-1
		Version Remote Board	
		1XXXXXXX	Remote Board for one SC2 for remote connection at the WSB2
	Housing		
	0	No Housing	
	A	Housing type A 90 x 130 x 57	

Electrical Connection