Sulphur Dioxide Detector

SO2

Jan.12

Display-version

SO2 Wall

SO2 Duct

Technical Data

Gas	Sulphur dioxide SO2
Sensor Element	Electrochemical diffusion
Accuracy	0,2 ppm
Repeatability	<2% of reading
Mounting height	**0,2m above floor**
Long term output drift	<2% signal loss/month
Response time	t90 <20 sec.
Pressure range	Atmospheric +/-15%
Storage time	Max 3 months
Output signal	(0)4-20mA, load 500ohm
Selectable	(0)2-10Vdc, load 50kohm
Starting point	0/20%
Relay 1	30Vac/dc, 0,5A, pot.free SPDT
Relay 2	Dito SPNO/SPNC
Consumption	30mA, max 0,8VA
Serial Interface	
Transciever	RS485/19200 Baud/9600 at Mod
Power supply	18-28Vac/dc,reverse polarity prot.
Power consumption	
Analogue	22mA, max (0,6VA**)**
Expected lifetime	> 2 years, normal operating env.
Humidity range	15-90% rH non-condensing
Operating range	-10 up to +45C
Rating	IP65 Protection Class

Features

- **Digital measurement values**
- **Comfort calibration with selective access release**
- **Continuous monotoring**
- **Low zero point drift**
- **Poisoning stable**
- **Long life sensor**
- **Modular plug-in technology**
- **Easy maintenance/calibration**
- **2 relays output adjustable switching thresholds**
- **Manual adressing for RS485 mode. eg. Modbus**

Description

SO2 detector including digital measurement value processing and temperature compensation for the continous monitoring of **sulphur dioxide gas** in the ambient air.

A comfortable calibration routine with selective access release is integrated in the detector.

Ordering Codes

Manual calibration via potentiometer

SO2 010	0--10ppm
SO2 020	0--20ppm

Calibration and adressing by service Tool

SO2 010T	0--10ppm
SO2 020T	0--20ppm

MOD	Protocol for Modbus
CUST	Protocol for customers specifications
GCD	Protocol for GCD-series
REL SO2	Relay pack see rear side
DUCT	Duct Mounting

LCD	Two lines, 16 characters each
CAL 2	Calibration Kit for Tox-transmitters
HEAT	Temp.controlled heating element 3C +/-2C0,3VA
BUZZ	Internal warning summer 85dB
STAIN	Enclosure of stainless steel

AIN	4-20mA analogue input
GAS 17	Calibration gas 17 liter
REG	Pressure regulator flow adjusted to 0,5 lit/min.

Warning devices	See special datasheet
Warning signs	See special datasheet

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Physical Characteristics

Enclosure	Polycarbonate
Flammability	UL94: V2 Halogenfree
Enclosure colour	RAL 7032 (light grey)
Dimensions	94x130x57nn
Weight	Approx. 0,5kg
Installation	Wall mounting
Cable entry	Standard 1xM20
Wire connection	Screw type terminal min. 0,25mm2 and max 2,5mm2
Wire distance	Current signal cirka 500m Voltage signal cirka 200m
Guidelines	EMV-Directive 89/336/EWG, CE EM-Directive 2004/108/EWG, CE

Relay Package

The two relays are activated in depence of the gas concentraion.

If the gas concentration exceeds the adjusted alarm threshold, the corresponding relay switches on.

If the gas concentration falls below the threshold minus hysteresis, the relay switches off again.

The contact function for relay 2, NC (normally closed) or NO (normally open), can be selected via jumper NO/NC.

See fig.1 and 3.

Relay one is equipped with a change-over contact.

Via the Modbus interface the two alarm thresholds and the hysteresis are freely adjustable at the PC within the measuring range.

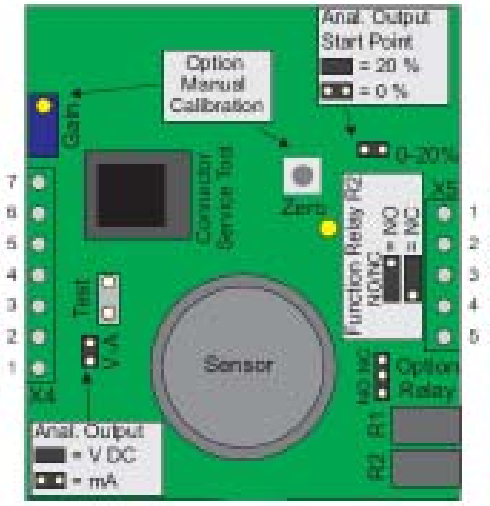
The procedure can be read from the user manual Modbus Software.

The following parameters are factory set.

Alarm threshold 1 = Relay 1: 3ppm

Alarm threshold 1 = Relay 2: 6ppm

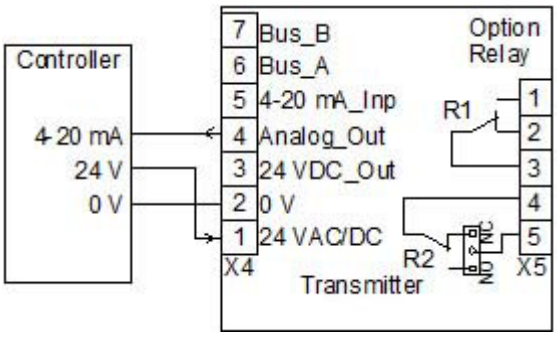
Switching hysteresis: 1ppm



Application

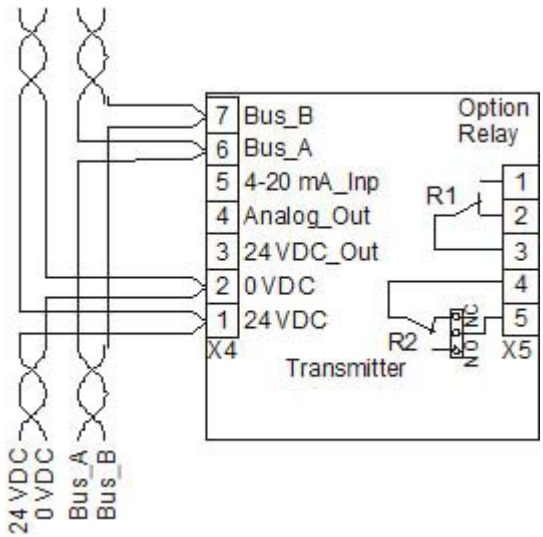
For detection of sulphur dioxide within a wide range of commercial and industrial applications.

Due to the standard analogue signal and th RS-485 serial interface the SO2 detector is compatible to the AP gas controller as well as to any other controllers or automation systems



Three-wire connection, Vdc or 0-mA output signal
Relay output, LCD display, Heating

GCD-05 Bus mode



Connection field bus and tension