

## PolyGard® Chlorine Dioxide ClO<sub>2</sub> Transmitter ADT63 1181

### DESCRIPTION

ClO<sub>2</sub> transmitter including digital measurement value processing and temperature compensation for the continuous monitoring of the ambient air to detect hydrogen fluoride concentrations. Integrated in the transmitter there is a comfortable calibration routine with selective access release. The ADT-63 possesses a standard analog output (0) 4- 20 mA or (0) 2– 10 V DC, and an RS-485 interface. 2 relays with adjustable switching thresholds are available as an option.

### APPLICATION

For detecting chlorine dioxide within a wide range of industrial and commercial applications. Due to the standard output signal and the RS-485 interface the ClO<sub>2</sub> transmitter is compatible to the PolyGard Gas Controller series MGC and DGC by MSR-E as well as to any other electronic control or automation system.

### FEATURES

- Digital processing of the measurement values incl. temperature compensation
- Continuous monitoring
- Low zero point drift
- Good stability to poisoning
- Long-life sensor
- Modular plug-in technology
- Easy maintenance
- Comfortable calibration with selective access release
- Reverse polarity protected, overload and short-circuit proof
- (0) 4 - 20 mA / (0) 2 – 10V analog signal output, selectable
- Serial interface RS-485
- IP65 protected
- Manual calibration via potentiometer (option)
- Manual addressing for RS-485 mode (option)
- 4 – 20 mA analog input for an external transmitter (optional)
- Approved according to EN 61010-1; ANSI/UL 61010 1; CAN/CSA-C22.2 No. 61010-1
- Relay output (optional)
- Integrated buzzer (optional)
- LED flashlight (optional)
- LCD display (optional)
- LED status display (optional)
- Heating (optional)
- Duct mounting (optional)



Standard enclosure



## SPECIFICATIONS

<b>General sensor performance (at 20°C)</b>	(at 68°F)	
Detected gas	Chlorine dioxide (ClO <sub>2</sub> )	
Sensor element	Electrochemical, diffusion	
Measuring range	0 - 1 ppm (ex works)	
Resolution	< 0.03 ppm	
Linearity	< 10 % of measuring range	
Long-term sensibility drift	< 5% /6 months	
Response time	t <sub>20</sub> < 20 s t <sub>90</sub> < 120 s	
Sensor life expectancy	> 24 months/ normal operating environment	
Temperature range	-20 °C to + 40 °C (-4 °F to 104 °F) w/o heating	
Pressure range	Atmospheric ± 15 %	
Humidity range	15 – 95 % RH non-condensing	
Storage temperature	5 °C to 30 °C (41 °F to 86 °F)	
Storage time	6 months	
Mounting height	300 mm (1 ft) above floor	
Cross sensitivity <sup>1</sup>	Concentration (ppm)	Reaction (ppm ClO <sub>2</sub> )
Arsine, AsH <sub>3</sub>	0.2	-0.01
Alcohols	1000	0
Carbon dioxide, CO <sub>2</sub>	5000	0
Carbon monoxide, CO	100	0
Chlorine, Cl <sub>2</sub>	1	0.3 ± 0.1
Chlorine trifluoride, ClF <sub>3</sub>	1	1
Hydrocarbons, HC	% range	0
Hydrogen, H <sub>2</sub>	3000	0
Hydrogen cyanide, HCN	20	-0.9
Hydrogen sulphide, H <sub>2</sub> S	20	0
Nitrogen dioxide, NO <sub>2</sub>	10	3.7
Nitrogen monoxide, NO	100 %	0
<b>Electrical</b>		
Power supply	18 - 28 VDC/AC, reverse polarity protected	
Power consumption (without options)		
- Analog mode	22 mA, max. (0.6 VA)	
- Bus mode	12 mA, max. (0.3 VA)	
<b>Output signal</b>		
Analog output signal	(0) 4 – 20 mA, load ≤ 500 Ω,	
Selectable: Current / tension	(0) 2 - 10 V; load ≥ 50 k Ω	
Starting point 0 / 20 %	proportional, overload and short-circuit proof	
<b>Serial interface</b>		
Transceiver	RS 485 / 19200 Baud (9600 at Mod_Bus)	
<b>Physical characteristics</b>		
Enclosure Plastic Type A <sup>2</sup>	Polycarbonate	
Flammability	UL 94 V2	
Enclosure colour	RAL 7032 (light grey)	
Dimensions (W x H x D)	94 x 130 x 57 mm (3.7 x 5.12 x 2.24 inch.)	
Weight	Approx. 0.5 kg (1.1 lbs.)	
Protection class	IP 65	
Installation	Wall mounting	
Cable entry	Standard 1 x M 20	
Wire connection	Screw type terminal, min. 0.25 mm <sup>2</sup> (24 AWG) max. 2.5 mm <sup>2</sup> (14 AWG)	
Wire distance	Current signal ca. 500 m (1500 ft.) Voltage signal ca. 200 m (600 ft.)	

<sup>1</sup> The table doesn't claim to be complete. Other gases, too, can have an influence on the sensitivity. The mentioned cross sensitivity data are only reference values valid for new sensors.

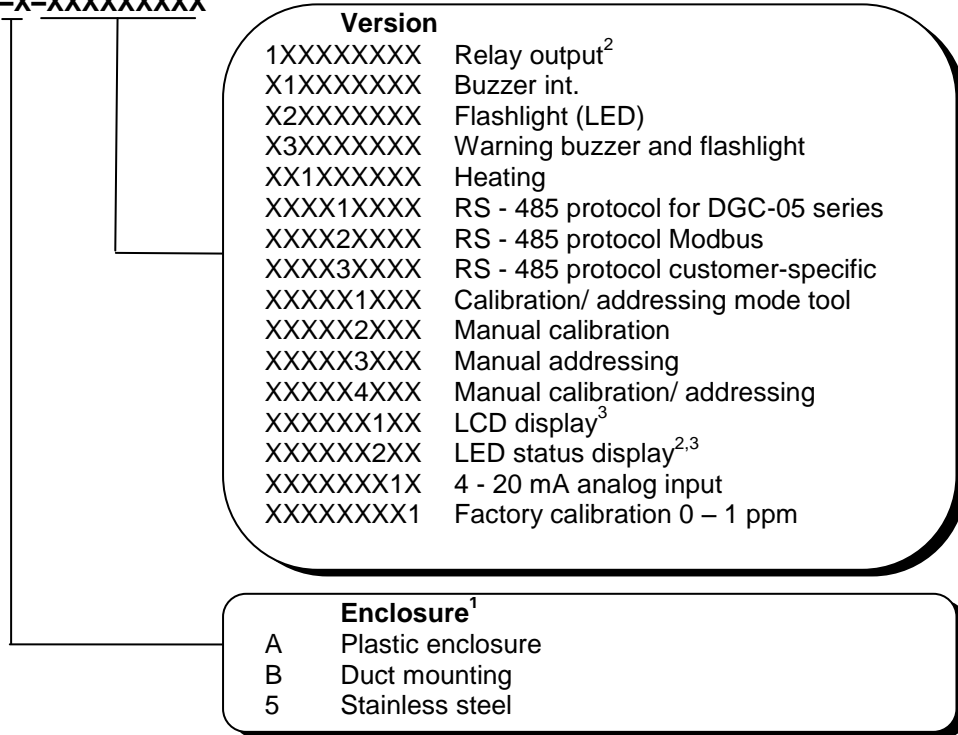
<sup>2</sup> For further enclosure types see datasheet ADT Enclosure.

# GAS ALARM SYSTEMS

<b>Guidelines</b>	EMC Directives 2004/108/EC EN 61010-1:2010 ANSI/UL 61010-1 CAN/CSA-C22.2 No. 61010-1 CE
<b>Warranty</b>	1 year on material (without sensor)
<b>Options</b>	
<b>Relay output</b>	
Alarm relay 1	30 VAC/DC 0.5 A, potential-free, SPDT
Alarm relay 2	30 VAC/DC 0.5 A, potential-free, SPNO/SPNC
Power consumption	30 mA, (max. 0.8 VA)
<b>Warning buzzer</b>	
Acoustic pressure	85 dB (distance 300 mm) (1 ft.)
Frequency	3.5 kHz
Power consumption	30 mA, (max. 0.8 VA)
<b>LCD display</b>	
LCD	Two lines, 16 characters each
Power consumption	10 mA, (max. 0.3 VA)
<b>LED indicator</b>	
Green-yellow-red	Supply, low alarm, high alarm
Power consumption	10 mA, (max. 0.3 VA)
<b>Heating</b>	
Temperature controlled	3 °C ±2°C (37.4 °F ± 3.6 °F)
Ambient temperature	- 40 °C (-40 °F)
Power consumption	0.3 A; 7.5 VA
<b>Analog input</b>	
Only for RS-485 mode	4 – 20 mA overload and short-circuit proof, input resistance 200 Ω
Power supply for external transmitter	24 VDC max. load 50 mA

## ORDERING INFORMATION

**ADT-63-1181-X-XXXXXXXXXX**



<sup>1</sup> See Data sheet "PolyGard ADT Enclosure"

<sup>2</sup> Please indicate thresholds for low and high alarm when ordering.

<sup>3</sup> Not in connection with stainless steel housing, not in connection with option Relay or RS-485 interface

**Example:** Chlorine dioxide transmitter, stainless steel housing, tool mode, measuring range 0- 1 ppm

**Ordering No.:** ADT-63-1181-5-XXXXX1XX1

## CONNECTING DIAGRAM

