

PolyGard® Oxygen O₂ Transmitter ADT93 1195

DESCRIPTION

O₂ transmitter including digital measurement value processing and temperature compensation for the continuous monitoring of the oxygen concentration in the ambient air. Comfortable calibration routine with selective access release is integrated in the transmitter. The ADT-93 possesses a standard analog (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 the detection of oxygen in rooms where changes of the oxygen concentration are possible, such as laboratories and food production etc. Due to the standard analog signal and the RS-485 Interface the O₂ transmitter is compatible to the PolyGard series MGC and DGC by MSR-E as well as to any other electronic control or automation system.



Standard enclosure

FEATURES

- Digital measurement value processing incl. temperature compensation.
- Continuous monitoring
- Low output drift
- Poisoning stable
- 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 – 20mA analog input for external AT transmitter (optional)
- Relay output (optional)
- Integrated buzzer (optional)
- Serial interface (optional)
- LCD display (optional)
- Heating (optional)
- Duct mounting (optional)

SPECIFICATIONS

General sensor performance

Detected gas	Oxygen (O ₂)
Sensor element	Electrochemical, diffusion
Measuring range	0 – 25 vol. %
Accuracy	± 0,1 vol. %
Long term output drift	< 4% signal loss/year
Response time	t ₉₀ ≤ 15 s
Sensor life expectancy	2 year, normal operating environment
Temperature range	- 10 °C to + 50 °C (14 °F to 122°F)
Pressure range	Atmospheric ± 10 %
Humidity range: Continuous	5 – 95 % RH non-condensing
Short-time	0 – 99 % RH non-condensing
Storage temperature	5 °C to 30 °C (41 °F to 86 °F)
Storage time	6 months
Mounting height	1,5 to 1,8 m (5 – 6 ft.)

Electrical

Power supply	18 - 28 VDC/AC, (reverse polarity protected)
Power consumption (without options)	22 mA, max. (0,6 VA)

Output signal

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

Serial Interface

Transceiver	RS 485 / 19200 Baud (9600 at Mod_Bus)
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Physical characteristics

Enclosure Plastic Type A*	Polycarbonate
Flammability	UL 94 V2
Enclosure color*	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 ² (24 AWG) max. 2.5 mm ² (14 AWG)
Wire distance	Current signal: ca. 500 m (1500 ft) Voltage signal: ca. 200 m (600 ft.)

Guidelines

EMC Directive 89/336/EEC

CE

Warranty

One year on material (without sensor)

Options

Relay output

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)

GAS ALARM SYSTEMS

Warning buzzer

Acoustic pressure	85 dB (distance 300 mm) (1 ft)
Frequency	3,5 kHz
Power consumption	30 mA, (max 0,8 VA)

LCD Display

LCD	Two lines, each 16 characters
Power consumption	10 mA, (max 0,3 VA)

Heating

Temperature controlled	3 °C ±2°C (37.4 °F ± 3,6 °F)
Ambient temperature	- 40 °C (- 40 °F)
Power supply	18 - 28 VDC/AC
Power consumption	0,3 A; 7,5 VA

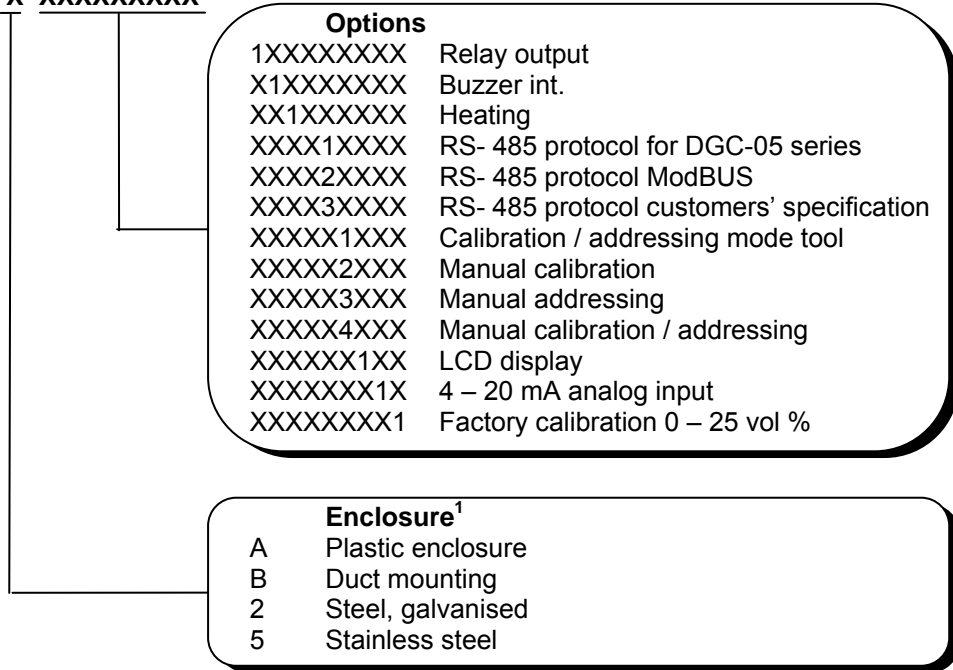
Analog Input

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. 50 mA

*For further enclosure types see datasheet AT-DT Enclosure.

ORDERING INFORMATION

ADT-93-1195-X-XXXXXXXXXX

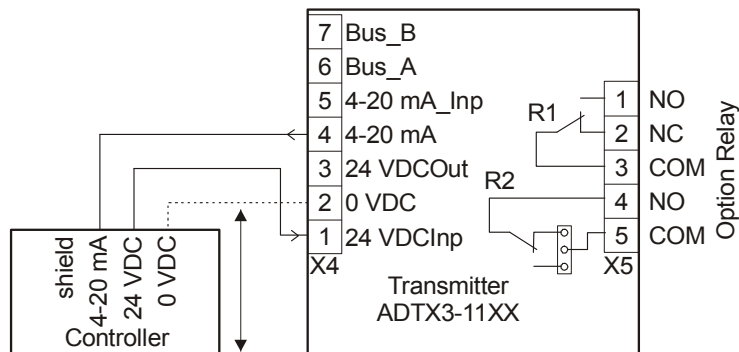


¹ See Data sheet „PolyGard AT/DT Enclosure”

Example: O₂ transmitter with factory calibration 0 – 25 vol %, tool calibration, stainless steel housing

Ordering No.: ADT-93-1195-5-00001001

CONNECTING DIAGRAM



0 VDC: Two wire mode only with 4 to 20 mA Output signal