

PolyGard® Ozone O₃ Transmitter ADT53 1190

DESCRIPTION

O₃ transmitter including digital measurement value processing and temperature compensation for the continuous monitoring of the ozone concentration in the ambient air. A comfortable calibration routine with selective access release is integrated in the transmitter. The ADT-53 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 the detection of ozone within a wide range of industrial and commercial applications. Due to the standard analog signal and the RS-485 interface the O₃ 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 zero-point 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)
- LCD display (optional)
- Heating (optional)
- Duct mounting (optional)

SPECIFICATIONS

General sensor performance

Detected gas	Ozone (O ₃)	
Sensor element	Electrochemical, diffusion	
Measuring range	0 – 5 ppm (factory-set) 0 – 10 ppm / 0 – 200 ppm (optional)	
Temperature range	-10 °C to + 45 °C (14 °F to 113°F)	
Pressure range	Atmospheric ± 15 %	
Humidity range	15 – 90 % RH non-condensing	
Storage temperature	5 °C to 30 °C (41 °F to 86 °F)	
Storage time	Max. 3 months	
Mounting height	0,3 m (1 ft.)	
Accuracy	0,1 ppm	
Repeatability	< 5 % of reading	
Long term output drift	< 2% signal loss/month	
Response time	t ₉₀ ≤ 60 s	
Sensor life expectancy	> 2 years, normal operating environment	
Cross sensitivity ¹	Concentration (ppm)	Reaction (ppm)
Chlorine, Cl ₂	5	~ 4
Carbon monoxide, CO	200	0
Ethylene, C ₂ H ₄	100	0
Hydrogen, H ₂	200	0
Nitrogen dioxide, NO ₂	5	~ 5
Nitric oxide, NO	35	0
Sulphur dioxide, SO ₂	5	0

Electrical

Power supply 18 - 28 VDC/AC, reverse polarity protected (2-wire mode only VDC)

Power consumption (without options)

- Analog mode 22 mA, max. (0,6 VA)

- Bus mode 12 mA, max. (0,3 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)

Protocol Depending on version

Physical characteristics

Enclosure Plastic Type A² 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 mm² (24 AWG) max. 2.5 mm² (14 AWG)
 Mounting² Wall mounted, pillar mounted
 Wire distance Current signal: ca. 500 m (1500 ft)
 Voltage signal: ca. 200 m (600 ft.)

Guidelines

EMC Directive 2004/108/EEC

Warranty

One year on material (without sensor)