

## PolyGard® Formaldehyde CH<sub>2</sub>O Transmitter ADT53 1185

### DESCRIPTION

CH<sub>2</sub>O transmitter including digital measurement value processing and temperature compensation for the continuous monitoring of the ambient air to detect formaldehyde concentrations. Integrated in the transmitter there is a comfortable calibration routine with selective access release. 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 formaldehyde within a wide range of industrial and commercial applications. Due to the standard output signal and the RS-485 interface the CH<sub>2</sub>O 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.



Standard enclosure

### 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 AT transmitter (optional)
- Relay output (optional)
- Integrated buzzer (optional)
- LCD display (optional)
- Heating (optional)
- Duct mounting (optional)

## SPECIFICATIONS

### General sensor performance

Detected gas	Formaldehyde (CH <sub>2</sub> O)
Sensor element	Electrochemical, diffusion
Measuring range	0 - 10 ppm (factory set) adjustable from 0 - 5 to 0 - 10 ppm
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 to 0,8 m (1 to 2.5 ft.)
Accuracy	0,01 ppm
Repeatability	< 2 % of reading
Long-term output drift	< 2% signal loss/month
Response time	t <sub>90</sub> < 50 sec.
Sensor life expectancy	> 3 years/normal operating environment
Cross sensitivity <sup>1</sup>	Reaction (%)
Carbon monoxide; CO	10 -18 %
Hydrogen, H <sub>2</sub>	1 - 3 %

### Electrical

Power supply	18 - 28 VDC/AC, reverse polarity protected (for 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 A <sup>2</sup>	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 <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.)