

PolyGard® Carbon Monoxide CO Transmitter ADTX3 1110

DESCRIPTION

CO transmitter including digital measurement value processing and temperature compensation for the continuous monitoring of the ambient air to detect carbon monoxide concentrations (CO). Comfortable calibration routine with selective access release is integrated in the transmitter. The ADT-03 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 carbon monoxide (CO) within a wide range of commercial applications such as underground garages, tunnels, engine repair shops, loading bays, engine test benches, shelters, go-kart race courses etc. Due to the standard analog signal the CO transmitter is compatible to the PolyGard series MGC 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
- 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 external AT transmitter (optional)
- Relay output (optional)
- Integrated buzzer (optional)
- LCD display (optional)
- Heating (optional)
- Duct mounting (optional)

SPECIFICATIONS

General sensor performance

Detected gas	Carbon monoxide (CO)
Sensor element	Electrochemical, diffusion
Measuring range: - Standard	0 – 300 ppm
- Optional	50 – 2000 ppm (see Ordering Information)
Pressure range	Atmospheric \pm 10 %
Humidity range	15 – 90 % 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.)

Type ADT03-1110

Accuracy	\pm 3 ppm
Repeatability	\pm 3 % of reading
Long term zero-point drift	< 5% signal loss/year
Response time	$t_{90} \leq 50$ s
Sensor life expectancy	5 years, normal operating environment
Humidity range: Short-time	0 – 95 % RH non-condensing
Working temp.: Continuous	-10 °C to + 50 °C (14 °F to 122 °F)
Working temp.: Short-time	-20 °C to + 50 °C (-4 °F to 122 °F)
Cross sensitivity*	Concentration (ppm) Reaction (ppm)
Acetone, C ₃ H ₆ O	1000 0
Acetylene, C ₂ H ₂	40 80
Ammonia, NH ₃	100 0
Carbon dioxide, CO ₂	5000 0
Chlorine, Cl ₂	2 0
Ethanol, C ₂ H ₅ OH	2000 5
Hydrogen, H ₂	100 20
Hydrogen Sulphide, H ₂ S	25 0
Iso Propanol, C ₃ H ₈ O	200 0
Nitric oxide, NO	50 8
Nitrogen dioxide, NO ₂	50 -1,0
Sulphur dioxide, SO ₂	50 < 0,5

Type ADT53-1110

Accuracy	\pm 1 ppm
Repeatability	\pm 2 % of reading
Long term sensitivity output drift	< 2% signal loss/month
Response time	$t_{90} \leq 40$ s
Sensor life expectancy	3 years, normal operating environment
Working temp.: Continuous	-20 °C to + 45 °C (14 °F to 113 °F)
Working temp.: Short-time	-20 °C to + 50 °C (-4 °F to 122 °F)
Cross sensitivity*	Concentration (ppm) Reaction (ppm)
Sulphur dioxide, SO ₂	50 0
Hydrogen Sulphide, H ₂ S	25 0
Nitrogen dioxide, NO ₂	50 0
Nitric oxide, NO	50 0
Hydrogen, H ₂	100 < 60

* 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.