

Technical Datasheet

CARBON MONOXIDE GAS DETECTOR & TRANSMITTER Atmos SERIES - CM50



CARBON MONOXIDE GAS DETECTOR & TRANSMITTER

The Polwax CO Transmitter is a high-precision, industrial-grade gas detector designed to measure carbon monoxide (CO) levels in enclosed and semi-enclosed environments. Equipped with advanced electrochemical sensing technology, it ensures accurate and real-time CO concentration readings. This device is essential for areas prone to CO accumulation, such as underground parking facilities, tunnels, garages, mechanical rooms, industrial plants, and commercial buildings. It enhances safety by providing continuous monitoring and alerting control systems to hazardous CO levels. Designed for long-term stability, it integrates with building automation systems, ventilation control units, and industrial gas safety monitoring networks through multiple signal output options, including 4-20mA, 0-5V, 0-10V, and RS485 (Modbus RTU).

Features

- **Easy to Install and suitable for Wall Mounting**
- **High Accuracy and Stability**
- **Easy to configured via keys**
- **Output Signal : 4 - 20 mA / 0 - 10 V**
- **Inbuilt Buzzer**
- **Protection Rating: IP65 for outdoor and harsh environment use**
- **Compact and Durable Design**
- **User-Friendly Configuration**
- **Energy Efficient**
- **Integrated Temperature Compensation**
- **Easy Integration**
- **Ruggedized Enclosure**
- **Advanced Communication RS-485**



Why Choose Polwax CO Transmitter?

- **High Accuracy & Stability:** Electrochemical sensor with minimal drift
- **Multiple Output Options:** Compatible with industrial control systems
- **Fast Response Time:** Quick detection of hazardous CO levels
- **Rugged & Durable:** Designed for demanding environments
- **Easy Installation & Maintenance:** Simple wiring and calibration process



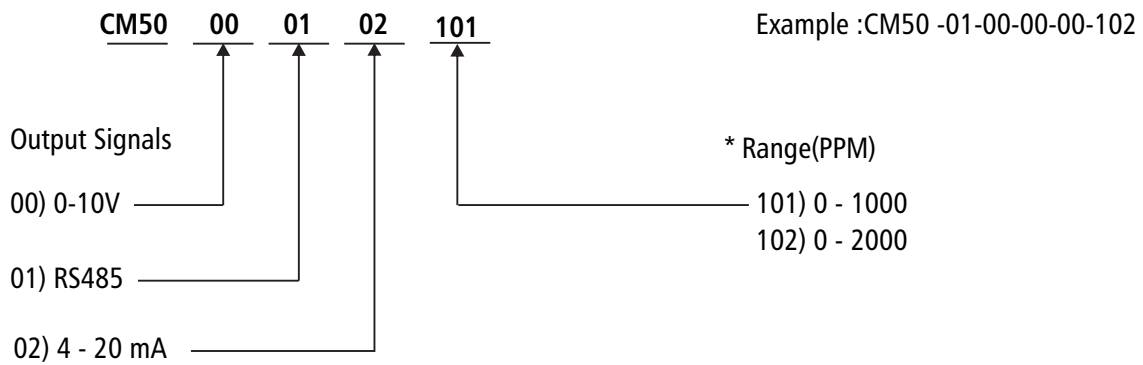


Technical Details

Measurement Range	0-1000 ppm / 0-2000 ppm (configurable)
Accuracy	±5 ppm
Resolution	1 ppm
Response Time	≤30 seconds
Repeatability	≤2% of signal value
Zero Drift	±3 ppm
Long-Term Drift	≤2%
Operating Temperature	-20°C to 50°C
Operating Humidity	15–90% RH (non-condensing)
Pressure Range	90–110 kPa
Sensor Lifespan	Up to 5 years
Power Supply	10–30V DC
Output Signals	Rs485 (Modbus RTU), 4-20mA, 0-5V, 0-10V
Display	Optional OLED display
Installation Method	Wall-mounted/Conduit-mount
Enclosure Material	Screw terminals
Process Connection	High-strength, dustproof, waterproof

Model Selection Chart

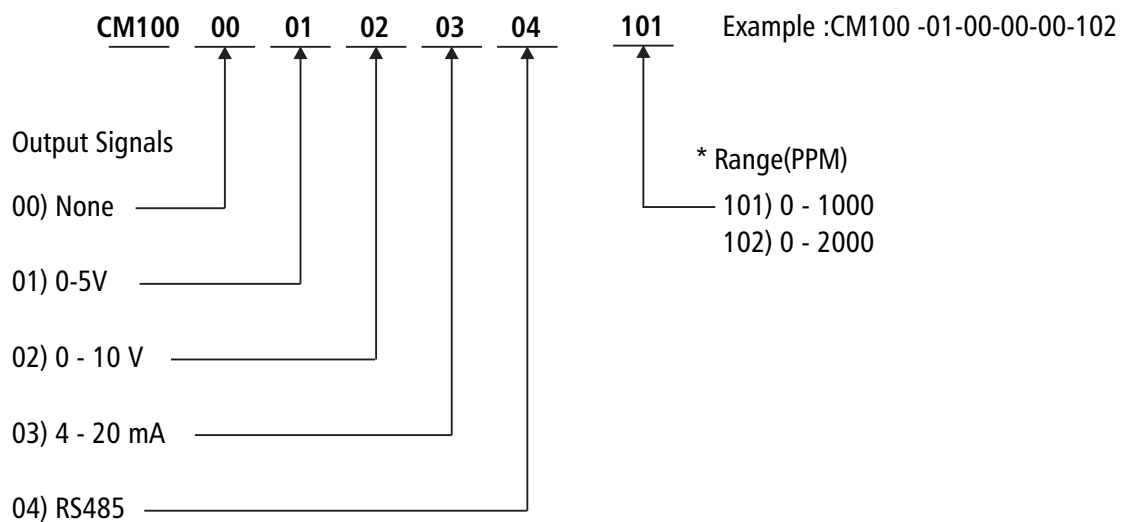
Polwax C050



* Customized Range available on request

Note: All ranges are bi-directional
(Specifications subject to change)

Polwax C0100



* Customized Range available on request

Note: All ranges are bi-directional
(Specifications subject to change)

Applications & Case Studies

Case Study 1: Smart CO Monitoring in Underground Parking Garages

Challenge: A multi-level underground parking garage experienced poor air circulation, leading to high carbon monoxide (CO) levels from vehicle exhaust. The existing ventilation system was operating continuously, resulting in high energy costs and inefficient air quality control.

Solution: Installed 50 Polwax CO Transmitters across the facility, integrating them with the HVAC control system via Modbus RTU (RS485). The transmitters provided real-time CO readings, enabling on-demand ventilation activation when CO levels exceeded 50 ppm.

Results :

- ✓ Energy savings: 35% reduction in ventilation power consumption
- ✓ Improved air quality: CO levels maintained below safety thresholds
- ✓ Automation : Ventilation fans triggered only when needed
- ✓ Regulatory compliance: Met local air quality standards for indoor parking



Industrial Boiler Room CO Safety System

Challenge: A manufacturing plant operating multiple boilers faced safety concerns due to CO emissions from fuel combustion. Workers were exposed to intermittent CO leaks, and the plant needed a reliable gas detection system to prevent poisoning incidents.

Solution: 30 Polwax CO Transmitters were installed near boiler units and air ducts. The 4-20mA output was linked to the central SCADA system, triggering alarm signals and emergency exhaust fans if CO exceeded 100 ppm.

Results:

- ✓ Zero CO-related safety incidents after installation
- ✓ Automated alerts: Alarm triggered at 80 ppm, ventilation at 100 ppm
- ✓ Improved workplace safety and compliance with EU safety regulations
- ✓ 24/7 monitoring with real-time CO level tracking





POLWAX Group has got an experienced, highly-qualified project team conducting extensive R&D operations. Owing to that, goods holding the POLWAX brand feature customer-tailored flexibility and meet requirements of various industries.

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