

# GAS-CO-300-X

## Sensor Transmitter Cartridge for Carbon Monoxide, with Analog Output

0-300ppm 4-20mA, with enhanced gas radical sensing for Very Early Fire Detection

### Product Summary

The exchangeable sensor transmitter cartridge is used for continuous monitoring of the ambient air to detect the presence of Carbon Monoxide (CO) concentrations in the range of 0-300ppm along with CO gas radicals for Very Early Fire Detection, in accordance with the defined specifications.

The product's standard linear 4-20mA analogue output may be connected to the Gas Alarm range of standalone and multi-channel gas controllers, or to any PLC, SCADA or DCS system for live monitoring, alarm generation, HVAC control or process parameter control.



### Key Product Features

- Fully sealed sensor cell with gas-specific gel electrolyte and hydrophobic filter.
- High accuracy, selectivity and reliability with low calibration drift over time.
- Long operational lifespan compared to solid state semiconductor sensors.
- Simplified maintenance via exchange of pre-calibrated sensor cartridges or easy on-site calibration.
- Power supply input is diode-protected against reverse voltage
- Fast tool-free wire termination via the supplied terminal block.
- Supplied with shipping cap to protect sensor during transport

### Typical Industries and Applications

Carbon Monoxide is a colourless, odourless and highly toxic gas which is known as “the silent killer”. As such, the GAS-CO-300-X offers major benefits for personnel safety and asset protection in such applications as:

- Mining, materials handling and processing plants (e.g. spontaneous combustion and Very Early Fire Detection monitoring in coal mines and related facilities).
- Parking garages, tunnels, emergency shelters, loading docks and engine maintenance/test stations (e.g. CO monitoring for safety, ventilation fan control for energy and greenhouse emission savings).
- Heavy industry e.g. power generation, petrochemical processing, production facilities,

**Technical Specifications** (Subject to change under continuous improvement program)

<b>Electrical</b>	
Power supply	+16 - 29 VDC with reverse polarity diode protection
Power consumption	22mA max. (0.5VA @ +24VDC)
Analog signal output	Linear proportional 4-20mA current loop
Output load	≤ 500 ohm for current signal
<b>Sensor Performance</b>	
Sensor element type	Electrochemical
Detected gas	Carbon Monoxide (CO)
Measurement range	0-300 ppm
Accuracy	±3 ppm
Resolution	0.5 ppm
Repeatability	< ±5% full scale signal
t90 Time	≤ 50 seconds
Zero-point variation	±4 ppm
Zero/Gain calibration drift	< ±0.4% full scale signal per month
Recommended calibration interval	12 months

**Environmental & Physical Specifications**

Operating temperature range	-15 to +50 °C
Humidity	10-95% relative humidity (non-condensing)
Pressure range	Atmospheric ±20%
Storage lifetime	6 months @ 5 – 30 °C
Dimensions (sensor cartridge only)	38mm (L) x M25 mounting diameter
Material – Sensor Cartridge	ABS with epoxy encapsulated sensor cell
Material – Optional Housings	ABS (IP44), Polycarbonate (IP65)

**Standards & Approvals Compliance**

EMC Directives 2014/30/EU

IP 65/66 (EN 60529/ DIN VED – 0470-1)

Impact Resistant IK08(DIN EEN5012/VDE 0470 seg. 100

UL508/CSA Certified C22.2 No. 94.1-07-Enclosure for Electrical Equipment

UL50/ CSA 22.2 Certified Enclosure for Electrical Equipment

**GAS-CO-300-D (IP65)**

**GAS-CO-300-F (IP44)**

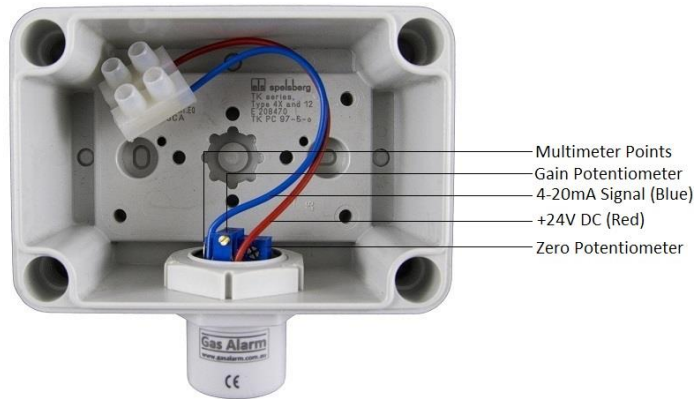
**GAS-CO-300-K (Duct**



**PRODUCT DATA SHEET**

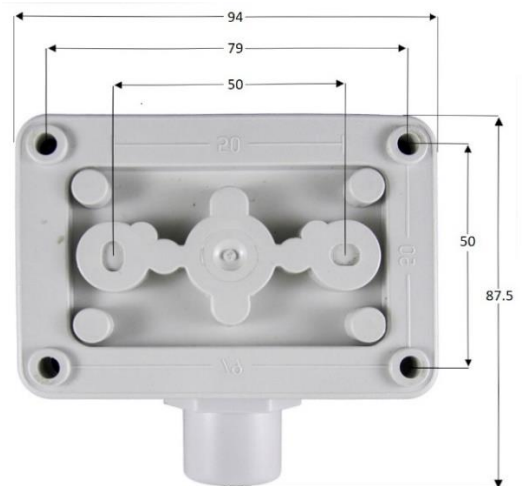
Version 1.0 – Release Date: 13/07/2018

**Wiring Schematics**



**Product Dimensions (in mm)**

**Note: GAS-CO-300-D (IP65 Housing):** Tough, rugged, glass-fibre reinforced, heavy duty polycarbonate industrial housing with Polyurethane Sealing; Operating Temp: -25 to +70 Degree Celsius; Expected Life: 10 years in normal operating environment when serviced regularly; **Coverage Area**-465 m<sup>2</sup> to 930 m<sup>2</sup> “Ideal Conditions” assumed



**GAS-CO-300-F (IP44 Housing)**

