

# AX-GS-CM-Ixx

Carbon Monoxide 4-20mA Transmitter IP65

# AXIO



## Product overview

The AX-GS-CM-I Carbon Monoxide Current Transmitter provides a 4-20mA linear output signal for CO levels from 0-300ppm (or 0-100ppm option). The AX-GS-CM-ILP is a 24Vdc 2-wire loop powered unit. The AX-GS-CM-I3 is a 3-wire 24Vac/dc unit, which also has optional relay(s) with set trip points. The sensor module uses a plug-in connector, making for easy in-the-field replacement.

The unit can be mounted with the cable gland entry pointing up or down, and is available in either a white or black enclosure.

(Refer to the AX-GS-CM-V data sheet for 0-10V versions)

## Features

- Monitors CO levels over a range of 0 to 100/300ppm
- Electrochemical sensing element
- Relay options with jumper set alarm levels (-I3xx versions only)
- 3 year warranty
- 4-20mA 2-wire Loop powered (-ILP only)
- Open-collector fault output (-I3xx version only)
- Easy maintenance and 3 year exchange sensor option
- Sensor is UL recognised component UL2034, UL2075, E240671

## Product specifications

Sensor Type:	Electrochemical 3-electrode
Power Supply:	AX-GS-CM-ILP 24Vdc $\pm 10\%$ 2 wire loop powered
	AX-GS-CM-I3 24Vdc $\pm 10\%$ at 30mA max or, 24Vac $\pm 10\%$ at 35mA max
	AX-GS-CM-I3R,R2 24Vdc $\pm 10\%$ at 50mA max or, 24Vac $\pm 10\%$ at 65mA max
Output:	4-20mA into 500 $\Omega$ maximum load
Output Range:	0-300ppm (0-100ppm as an option)
Output Accuracy:	$\pm 5$ ppm or $\pm 5\%$ of reading (whichever is greater) between 0-50°C
Output Stability:	<5% signal drift per year
Fault output (AX-GS-CM-I3xx only)	Open collector. 30Vdc at 100mA maximum
Typical Coverage Area:	700m <sup>2</sup> or 15m radius
Settling Time:	3 minutes after power up
Life Expectancy:	>3 years dependant on environment
Ambient Temp. & Humidity Range:	0-50°C, 15-90% RH non-condensing
Housing:	Flame retardant ABS, IP65, White (optional Black - see order codes)
Dimensions & Weight:	92mm diameter x 52mm, 170gms
Terminals:	Rising clamp for 0.5-1.5mm <sup>2</sup>
Country of Origin:	United Kingdom
Options on AX-GS-CM-I3xx only:	
1 Relay	AX-GS-CM-I3R SPCO relay, 230Vac 5A (resistive) can be set to trip at 25, 60 or 150ppm
2 Relays	AX-GS-CM-I3R2 Two SP relays, 50V 1A (resistive) can be set to trip at 25/50, 60/100 or 150/200ppm

## Order codes Carbon Monoxide Current Transmitter IP65

0-300ppm range	0-100ppm range	Description	
AX-GS-CM-ILP	AX-GS-CM-ILP-100	24Vdc Loop Powered 4-20mA ouptut	Add -B to all
AX-GS-CM-I3	AX-GS-CM-I3-100	24Vac/dc 3-wire 4-20mA ouptut	part numbers
AX-GS-CM-I3R	AX-GS-CM-I3R-100	24Vac/dc 3-wire 4-20mA ouptut with relay	for optional
AX-GS-CM-I3R2	AX-GS-CM-I3R2-100	24Vac/dc 3-wire 4-20mA ouptut with 2 relays	black enclosure

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# AX-GS-CM-Ixx

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## Installation

The AX-GS-CM-Ixx should be installed by a suitably qualified technician in conjunction with any guidelines for the equipment it is to be connected to and any local regulations. Field wiring should be installed to satisfy the requirements set out by the manufacturer of the equipment that the module is being connected to.

## Location

The enclosure should be mounted at a height of 1 to 1.5 metres from the floor of the area to be monitored in an area of good airflow. For best operation do not mount the sensor near doors, opening windows, supply air diffusers or other known air disturbances. Avoid areas where the transmitter would be exposed to vibrations or rapid temperature changes.

## Connections

The transmitter should be connected to the controller using 0.5 to 1.5mm<sup>2</sup> cable. The AX-GS-CM-ILP requires a two wire 24Vdc supply. The output signal is taken through the load to 0V. The AX-GS-CM-I3 requires a minimum of three wires and a 24Vac or 24Vdc supply. The use of shielded cable is recommended for the highest noise immunity. Do not route signal wires in the same conduit with power cables as signal degradation may occur.

## Fault output (AX-GS-CM-I3xx only)

This is an open collector output. The output will be switched on when no faults are detected, and off when a fault is detected or no power is applied.

## Relay trip point (option) (AX-GS-CM-I3Rx only)

TP jumper	AX-GS-CM-I3R	AX-GS-CM-I3R2	
		Relay 1	Relay 2
25	25	25	50
60	60	60	100
150	150	150	200

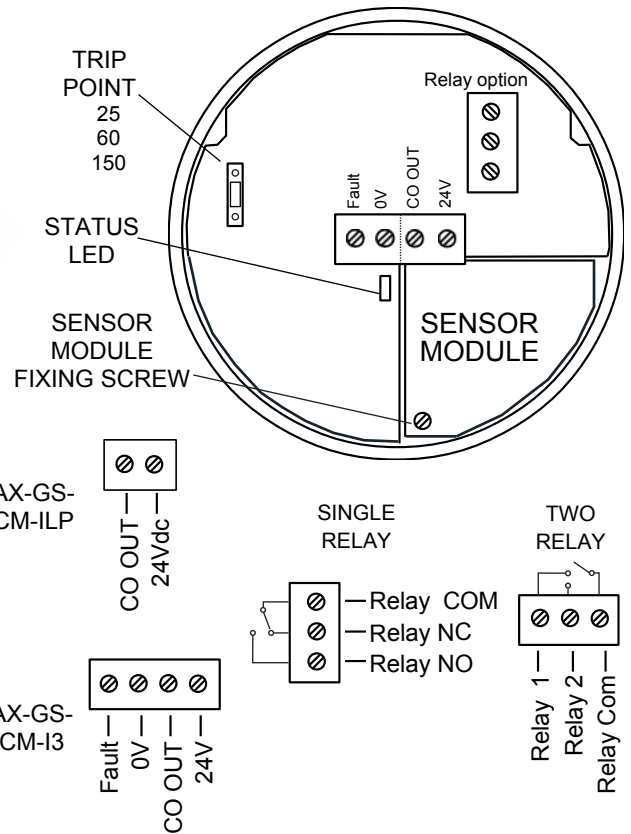
## Status LED

If the unit has a fault, this flashes 6 times every 8 seconds. A brighter flash in the sequence indicates a fault, ordered as:

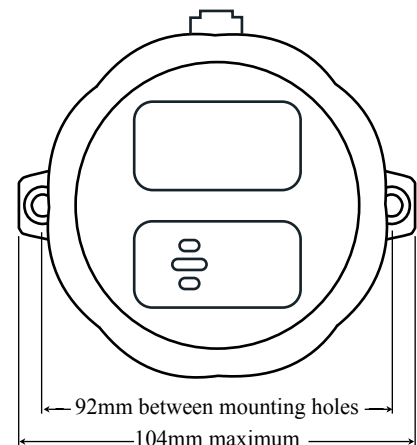
- |                        |                         |
|------------------------|-------------------------|
| 1 - Memory             | 2 - Internal            |
| 3 - Calibration        | 4 - CO sensor selection |
| 5 - Temperature sensor | 6 - CO sensor           |

## Sensor module replacement

To replace the sensor module remove the fixing screw and slide module to the right. After replacing the module, check the status LED indications give 6 equal flashes (no bright flash).



## Fixing



## Usage

Suitable for monitoring and ventilation applications. Do NOT use in safety critical or hazardous applications. Axio recommend using the Fault output on the AX-GS-CM-I3xx to maintain confirmation of correct operation of the unit.

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