

AX-GS-CM-NO2-V

Nitrogen Dioxide and Carbon Monoxide Transmitter, Voltage Output



Product overview

The AX-GS-CM-NO2-V is an ideal solution for detecting harmful emissions in parking garages, loading docks, warehouses etc. It offers detection of carbon monoxide and nitrogen dioxide gases in the same enclosure. The output voltages are configurable for either 0-5Vdc, 2-10Vdc or 0-10Vdc. This makes it compatible with most BMS and HVAC controllers with analog inputs. By monitoring the levels of CO and NO2 in the air, the ventilation system can be adjusted to ensure that the air quality is within safe limits.



Products Features

- Detection range - CO: 0 to 300 ppm ,NO2: 0 to 10ppm
- Electrochemical sensing elements
- Easy installation with plug-in connections
- 0-5, 2-10 or 0-10Vdc selectable voltage outputs
- Zero and span adjustments.
- UL listed sensors: File no. E240671

Product Specifications

Power Supply:		24Vac $\pm 10\%$, 100mA maximum or 24Vdc $\pm 10\%$, 60mA maximum
Sensor Type (CO and NO2):		Electrochemical 3-electrode
Outputs:		0-5Vdc, 2-10Vdc or 0-10Vdc at 5mA maximum load
Display (Option):		4 digit 9mm with back light
Output Range:	CO	0-300ppm
	NO2	0-10ppm
Output Accuracy:	CO	$\pm 5\text{ppm}$ or $\pm 5\%$ of reading (whichever is greater)
	NO2	$\pm 0.2\text{ppm}$ or $\pm 5\%$ of reading (whichever is greater)
Response time(t_{90}):		< 35 seconds
Long term sensitivity drift:	CO	<5% signal drift per year
	NO2	<12% signal drift per year
Typical Coverage Area:		700m ² or 15m radius
Settling Time:		3 minutes after power up
Life Expectancy:	NO2	2 years dependant on environment
	CO	5 Years
Ambient Temperature & Humidity:		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, 180gms
Terminals:		Rising clamp for 0.5-1.5mm ² , 2 Part Pluggable
Warranty:		5 years for the product. (NO2 sensor: 2 years , CO:3 years)
Country of origin:		UK

Product Order codes

Order code	Description
AX-GS-CM-NO2-V	CO 0-300ppm , NO2 0-10ppm transmitter, voltage output
AX-GS-CM-NO2-VL	CO 0-300ppm , NO2 0-10ppm transmitter, voltage output, LCD display

Add -R to the part number for rear cable entry , Add -B for Black Enclosure

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Installation

The AX-GS-CM-NO2-V 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 1.5mm² cable. The unit requires five wires - 24V supply, 0V, NO2 level, 0V and CO level output. 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. Before applying power, ensure that the transmitter outputs are configured correctly for the unit being supplied.

Voltage range selection

Place the VRANGE jumper in position 0-5 for 0-5Vdc output, 2-10 for 2-10Vdc output or 0-10 for 0-10Vdc output. When the 2-10V range is selected, and the unit detects a fault, the output will be set to 1V. Also if wiring becomes open-circuit, the measured voltage will drop to 0V.

Status LED

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

- | | |
|-----------------|------------------------|
| 1 - Calibration | 2 - Temperature sensor |
| 3 - CO Sensor | 4 - CO gain setting |
| 5 - NO2 sensor | 6 - NO2 gain setting |

PCB replacement

The expected life time for NO2 sensor is 2 years and CO sensor is 5 years in standard working conditions. There is an option to exchange the PCB for one with calibrated sensors at an attractive price. Please contact our sales team for further details.

Display

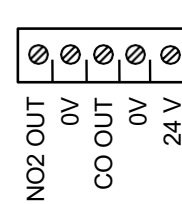
Press 'DISP/ZERO' switch to change between modes.

Mode 1: Display CO value only.

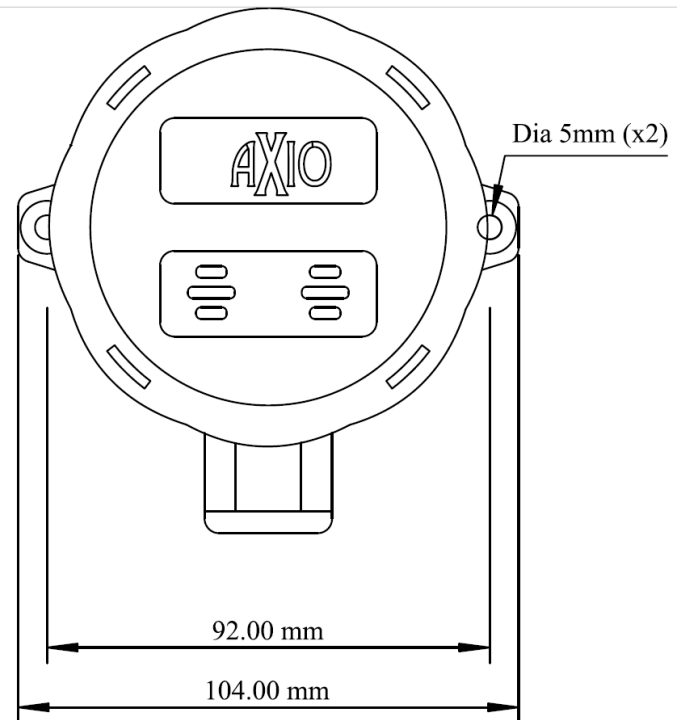
Mode 2: Display NO2 Value only.

Mode 3: Toggle between CO and NO2 values every 4 seconds.

Connections



Fixing and dimensions



Alternate Cable Entry

The AX-GS-CM-NO2-V provides a side-entry M20 cable gland as standard, whilst the -R version offers the option of rear cable entry allowing the unit to be mounted to a wall with its cable hidden from view. The -R version is supplied with a M20 gland plug and gasket that can be repositioned to the side or the rear.

Usage

Suitable for monitoring and ventilation applications. Do NOT use in safety critical or hazardous applications. Axio recommend using the 2-10V range and to maintain confirmation of correct operation of the unit.

Datasheet Contents

Every effort has been taken in the production of this data sheet to ensure accuracy. Annicom do not accept responsibility for any damage, expense, injury, loss or consequential loss resulting from any errors or omissions. Annicom has a policy of continuous improvement and reserves the right to change this specification without notice.