

### Product overview

The AX-AQM-3 is an ideal solution for detecting harmful emissions in parking garages, loading docks, warehouses etc. It offers the detection of carbon monoxide, nitrogen dioxide gases and Particulate matter in the same enclosure. Voltage output and current output versions are available. The NO2 and CO sensor modules use plug-in connectors, making easy in-the-field replacement easy. PM sensor uses the laser light scattering principle to measure particles of sizes less than 10µm. The unique data acquisition and calibration techniques used in the product ensure high accuracy and long term reliability.



### Products Features

- Detection range - CO: 0 to 300 ppm ,NO2: 0 to 10ppm, PM10,PM2.5:0-1000ug/m3
- Electrochemical sensing elements for CO,NO2 and optical sensor for PM
- Easy installation with plug-in connections
- Voltage and current outputs selectable using jumper
- Easy maintenance and 2 year exchange sensor option for CO and NO2
- 2 year warranty

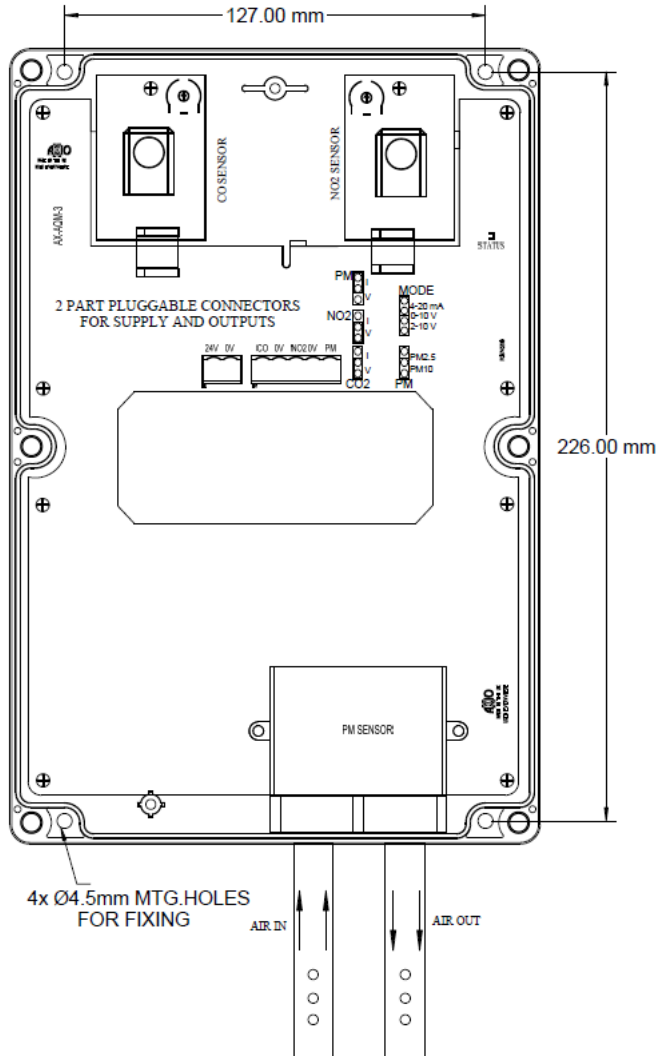
### Product Specifications

Power Supply:		24Vac ±10%, 150mA maximum or 24Vdc ± 10%, 100mA maximum
Sensor Type	CO/NO2	Electrochemical 3-electrode
	PM	Laser scattering
Outputs:		0-10Vdc at 5mA maximum load 4-20mA at 600 Ohms max
Output Range:		CO : 0-300ppm , NO2: 0-10ppm , PM10,PM2.5: 0-1000ug/m3
Output Accuracy:	CO	±5ppm or ±5% of reading (whichever is greater)
	NO2	±0.2ppm or ±5% of reading (whichever is greater)
	PM	± 10%
Response time(t <sub>90</sub> ):		CO , NO2: <35 Seconds , PM10,PM2.5: <10 Seconds
Typical Coverage Area:		700m <sup>2</sup> or 15m radius
Settling Time:		3 minutes after power up
Life Expectancy:	NO2	>2 years dependant on environment
	CO	>5 years
	PM	>3years
Ambient Temperature & Humidity:		0-50°C, 15-90% RH non-condensing
Housing:		ABS, IP65
Dimensions & Weight:		280 x 160x 60 mm, 700gms
Terminals:		Rising clamp for 0.5-1.5mm <sup>2</sup> , 2 Part Pluggable
Country of origin:		UK

### Product Order codes

Order code	Description
AX-AQM-3VI	CO 0-300ppm , NO2 0-10ppm PM2.5/PM10 0-1000ug/m3 transmitter V/I outputs
AX-AQM-V3-10	CO 0-300ppm , NO2 0-10ppm PM10-1000ug/m3 transmitter 0-10V outputs
AX-AQM-I3-10	CO 0-300ppm , NO2 0-10ppm PM10-1000ug/m3 transmitter 4-20mA outputs

### Fixing

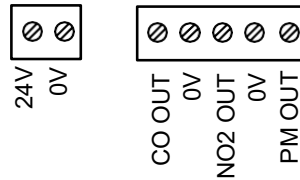


impede airflow to the inlet port.

- Do not install the sensor near areas where temperature and relative humidity conditions change rapidly.
- The unit should be mounted with the Particulate matter sensor's probes at the bottom.

### Connections

The transmitter should be connected to the controller using 0.5 to 1.5mm<sup>2</sup> cable. The unit requires a minimum of five wires 24V supply, 0V, NO2 level, CO level and PM 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 to which they are connected.



### Output selection(-VI version only)

Outputs can be configured as either voltage (0-10V/2-10V) or current(4-20mA) using MODE jumper.

If 4-20mA is selected, ensure that the (V/I) jumpers of all outputs are in 'I' position. Otherwise, they must in 'V' position.

### Status LED

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

- |                     |                |
|---------------------|----------------|
| 1 - Calibration     | 2 - CO Sensor  |
| 3 - CO Temp Sensor  | 4 - NO2 Sensor |
| 5 - NO2 Temp Sensor | 6 - PM Sensor  |

### Sensor module replacement

Contact Annicom for sensor module replacements. After replacing the sensors, ensure that the Status LED gives 6 dim flashes every 8 seconds.

### Usage

Suitable for monitoring and ventilation applications. Do NOT use in safety critical or hazardous applications. If voltage outputs are used, Axio recommends using the 2-10V/4-20mA (if available) range 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.

### Installation

#### General

The unit 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 unit is being connected to. Anti-static precautions must be observed when handling. As a general rule screened cable should be used to connect signal to a BMS or other controller. The shield should be connected to the earth at one end only.

#### Locating the transmitter

- Install at about 3-6 ft above ground if the application intends to measure a person's exposure to the pollutants.
- Avoid direct sunlight entering the sensor
- Do not position the sensor on a vibrating surface
- Do not position the sensor where other objects will block or