AX-PM

PM2.5/PM10 Particulate Matter Transmitter

Product overview

The AX-PM particulate matter transmitter is suitable for use in ventilation applications. It uses laser light scattering principle to measure particles of sizes PM2.5 and PM10 . The unique data acquisition and calibration techniques used in the product ensure high accuracy and long term reliability. This data can be used as a reference in ventilation control systems to improve the overall air quality.

Products Features

- Detection range - PM10/PM2.5 0-1000ug/m3
- Laser scattering principle used for detection.
- Easy installation with plug-in connections
- Voltage and current outputs selectable using jumper
- Suitable for outdoor applications
- Optional temperature sensor

Product Specifications

Power Supply:	24Vac ±10%, 100mA maximum or 24Vdc ± 10%, 60mA maximum
Detection Principle:	Laser scattering
Particle Size:	PM2.5,PM10 (selectable using jumper)
Outputs:	0-10Vdc at 5mA maximum load
	4-20mA at 600 Ohms max
Output Range:	PM10,PM2.5: 0-1000µg/m^3
Output Resolution:	1µg/m^3
Output Accuracy:	± 10% of FS
Response Time(t_{90}):	< 10 Seconds
Settling Time:	3 minutes after power up
Life Expectancy:	>3 years dependant on environment
Ambient Temperature & Humidity:	-10 to +60˚C, 0-80% RH non-condensing
Storage Temperature:	-40 to +80°C
Enclosure Material:	ABS
Ingress Protection:	IP65
Dimensions & Weight:	162 x 132 x 55 mm
Terminals:	Rising clamp for 0.5-1.5mm^2 , 2 Part Pluggable
Warranty:	2 Years
Country of Origin:	UK

Product Order codes

Order code	Description
AX-PM-VI	PM2.5/PM10 0-1000ug/m3 transmitter with selectable voltage or current output

Add suffix (-x) for Additional passive thermistor output. Choose one of the below thermistor types. Eg -T for Trend.

T	10K3A1 Trend	D	30K3A1 Drayton	1K	PT1000a Cylon
3K	3K3A1 Alerton	50K	50K6 Priva	2.2K	2.2K Johnsons
A	10K4A1 York, Andover	N1K	Ni1000a Siemens	SAT	Satchwell
H	10K6A1 Honeywell	100	PT100a Serek	TAC	1K87A1 TAC

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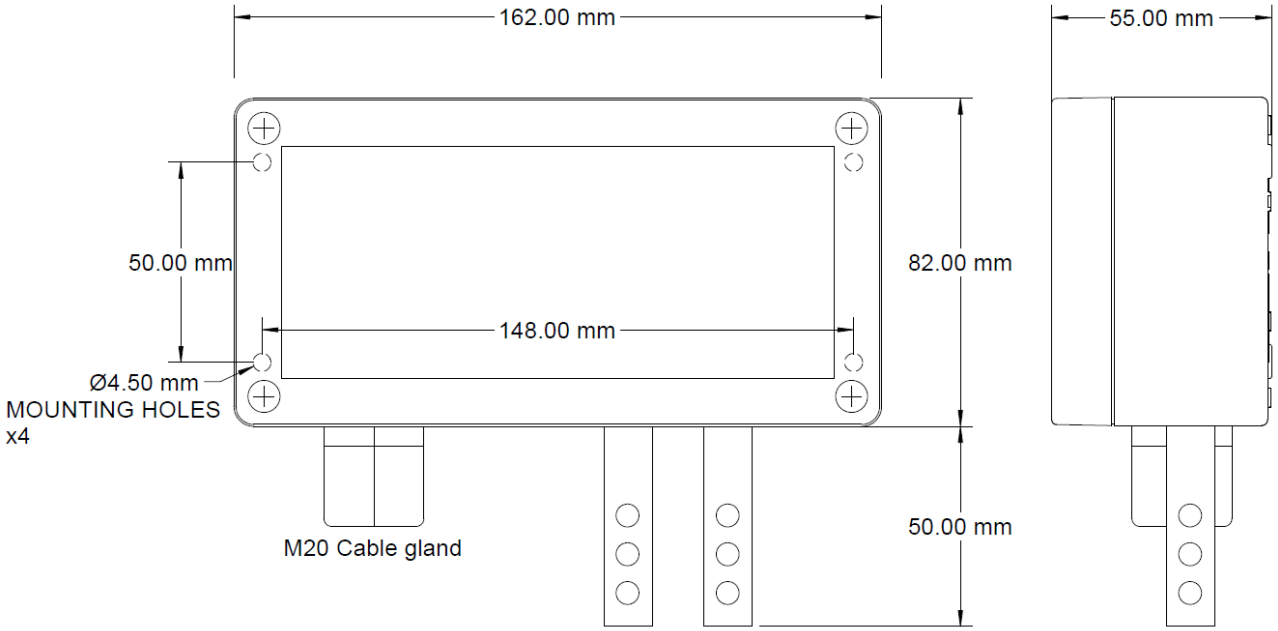
Dimensions



Installation

General

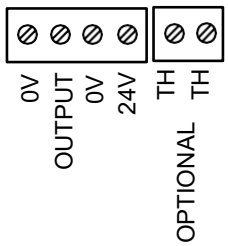
The unit should be installed by a suitably qualified technician in conjunction with any guidelines for the equipment it is to be connected to and any local regulations. Field wiring should be installed to satisfy the requirements set out by the manufacturer of the equipment that the unit is being connected 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 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 1.5mm² cable. The unit requires a minimum of three wires 24V supply, 0V, 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.

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) jumper is in 'I' position. Otherwise, it must in 'V' position.

Particle s size PM2.5/PM10 selection should be made using on board jumper.

Status LED

This flashes 2 times every 4 seconds. A brighter flash in the sequence indicates a fault, ordered as:

1 - Sensor error 2 - Calibration

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 or 4-20mA 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.