

## Continuous Dust Monitor Filter Leak Alarm

### High performance

- Detects solid particles with diameters from 0.3 $\mu$ m to 100 $\mu$ m.
- Trend monitoring with 4-20mA output.
- Can be calibrated to concentration unit mg/m<sup>3</sup>.
- Two independent alarm relays for limit or logic configurations.
- Automatic drift compensation.
- High temperature sensor up to 815 $^{\circ}$ C
- High-pressure application up to 20 Mpa.
- Buildup on sensor almost has no affect to reading.
- Measurement not affected by particle color

### Simple to use

- Requires no special training or skills.
- One touch calibration, quick and simple.
- No manual sensitivity adjustment required.
- LED display for measuring value and manual guide.
- Integral and remote system.
- Changeable probe length from 100 mm to 2000 mm.

### Easy-Installation and Maintenance-Free

- Easily installed through NPT thread or flange
- No alignment required
- No moving parts to deteriorate or break down.
- No routine cleaning or recalibration necessary.
- Rugged construction resists corrosion, vibration and abrasion.
- Usually do not need purging air



AIM-3000 continuous dust monitor is an accurate dust concentration measuring system with advanced leak detection capabilities. It enables continuous real-time and averaged analysis and recording of dust concentrations as well as early warning leak detection for filters and process control. It can be used on all types of dust collectors/bag filters and has special sensor design for ESP (Electrostatic Precipitator).

### The customer can benefit from...

- Continuously monitor and maintain filter or ESP efficiency
- Comply with US and International EPA regulations
- Simple absolute output or correlate to mg/m<sup>3</sup> or g/cf<sup>3</sup>
- Prevent the escape of valuable or hazardous powders
- Low-cost switch with relay output only for leak alarm

### Application for Dust-collecting Equipment and Others

#### Cement Factories

- For coal ash and other raw materials.
- For cement and concrete products.
- For kilns, AQC (Air-quality Control) systems, and other equipment.
- For slug- and fly ash.

#### Steel Plants

- For steel sintering.
- For casting.
- For coke ovens.
- For recycling-related facilities such as those for waste disposal of plastics.

#### Chemical Factories

- For catalyzation.
- For smoke removal.

#### Coal-fired Power Plants

- For coal prepare
- For ESP control.
- For fly ash

#### Waste incineration Plants

- For monitoring the environment.
- For incinerators.
- For fusion furnaces.
- For high-temperature incinerators used to cut emissions such as dioxins.

#### Rubber and Carbon Factories

- For monitoring of dust accumulation in ducts.
- For handling raw materials.

#### Fertilizer Plants

- For preventing mixture of fertilizers.

#### Spice and Paint Factories

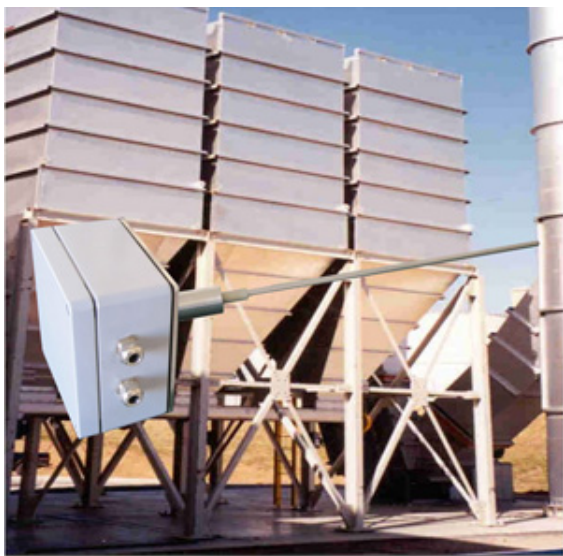
- For traceability-related equipment.

#### Gas Extraction

#### Equipment for Boilers

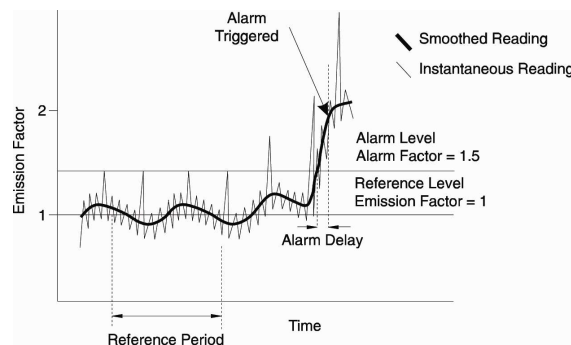
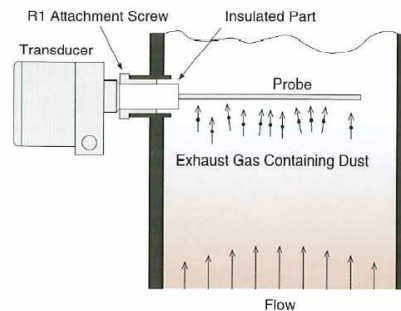
- For generators

#### Other Dust-collecting Equipment

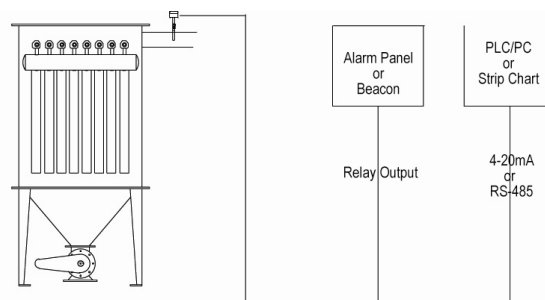


## Principle of Operation

AIM-3000 series monitors utilise special AC triboelectric measurement principle, the signal come from not only solid particles contact the sensor rod but also passing through nearby. This technique is very sensitive for small concentration, enables the use of both bare and insulated probe. The fully insulated probe is suitable for high humidity gas steam as well as applications with high conductivity dust loadings. It's good for corrosive gases or condensate and almost not affected by particle buildup on the probe.



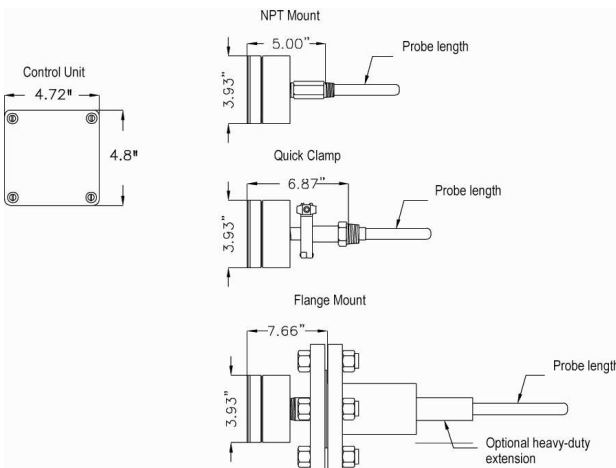
## System



## Specifications

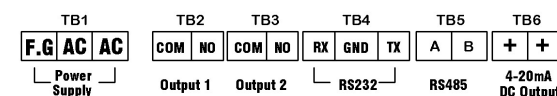
Control Unit	AIM 3000	AIM 300S
Measuring range:	0.1mg/m3 to 1kg/m3	Same
Particle size:	0.3um min	Same
Relay Output:	2 std (SPST, 5A@240VAC)	Same
4-20mA Output:	1 std (Isolated, 12 bit)	Not available
Serial Port:	1 opt (RS485)	Same
Display:	4 digital 7seg LED	LED indicator
Enclosure:	NEMA 4X std, other opt	Same
Ranging:	Log or linear (Auto or manual)	Same
Data averaging:	Standard (user adjustable)	Not available
Output scaling:	To mg/m3 or gr/cf	Not available
Temperature:	-13F to +160F (-25 to 70C)	Same
Power supply:	115/230VAC 50/60Hz or 24VDC	Same

## Mounting



Sensor	T31	T32	T33
Lengths:	10, 18" std,	Same	Same (Other probe lengths opt)
Material:	316SS & Peek	304SS with TFE Layer	316SS & Ceramic
Mounting:	3/4"NPT	3/4"NPT	1-1/4"NPT (Tri-Clamp or Flange opt)
P @ Temp	13.8 bar @ 232°C (200 PSI @ 450°F)		138 bar @ 815°C (2000 PSI @ 1500°F)
Housing:	NEMA 4X	Same	Same (Remote system only)
Sensor Cable:	300' Max length, 450F Max temp		Special Teflon coaxial (Remote system only)

## Wiring



## Air Instruments & Measurements

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