



Single Device Emissions Monitoring

The Dust Detect 1000 is a single device dust detector that has been specifically designed to continuously monitor the flow of particulate emissions from small stacks or other emission points being passed through a filter within an air filtration system. It easily installs in the exhaust ductwork and can be used in conjunction with various types of bag, ceramic, cartridge or cyclone filters. The probe on the Dust Detect 1000 is designed to recognize abnormal particulate levels outside user-defined preset parameters and initiates an alarm when changes in emission exceed these levels.

Alerts to Dust Levels Outside of Preset Standards

The Dust Detect 1000 measures particulate emission levels using a logarithmic scale against the set reference point, which is established by averaging the level of emissions for a given environment. It activates an alarm which is "switch selectable" and can be set for either an instantaneous reading or one-minute averaged level reading. By averaging the emission readings, the Dust Detect 1000 eliminates false readings commonly found with other dust monitoring systems that smooth readings. This device also provides a pre-warning alarm which alerts to potentially hazardous situations.



Makes the Workplace Safer and More Efficient

The Dust Detect 1000 helps to prevent the loss of valuable product and dramatically improves the safety of the workplace by alerting personnel to changes in emission levels before they become serious, which can virtually eliminate emission-related shutdowns. The device is simple to use, yet feature rich, making the Dust Detect 1000 a highly accurate and dependable dust monitoring system.

Dust Detect 1000

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Single Piece Triboelectric Dust Detector



Dust Detect 1000 utilizes triboelectric technology, whereby the collision and interaction of particles with the probe rod causes a small electrical charge transfer to occur. This small electrical charge provides a signal that is monitored by the electronics in the device. It is designed to prevent false readings, even if an accumulation of dust forms on the sensor rod. Emissions readings are averaged, not smoothed, to eliminate false alarms. It can be set to make pre-warning indicator alerts to potentially hazardous situations or be set to provide an instantaneous alarm or one-minute averaged readings. BinMaster offers a 4-20 mA output for applications where Dust Detect 1000 will be used with a PLC.

Dust Detect 1000 Specifications

Enclosure	Die cast aluminum, FDA recognized powder coat finish
Power Requirement	115 VAC, 230 VAC optional, 60/50 Hz
Operating Temperature	-25° to +160°F (-32° to +71°C)
Stack Temperature	250°F (107°C)
Conduit Connection	3/4" NPT
Process Connection	1-1/4" NPT
Output	Two SPDT 5A relays (warning & alarm)
Alarm	Dual alarm (alarm is 2x pre-alarm), switch selectable for instantaneous or one-minute average
Sensitivity	1 mg/m (.0005 gr/SCF)
Sensor Rod	316 stainless steel – 3", 6" & 12" standard, 1.5"-36" custom lengths available

Specifications subject to change without notice



Monitors Emissions in Dusty Conditions

The Dust Detect 1000 installs easily in the exhaust duct of an air filtration system, with either a 3/4" or a 1-1/4" NPT mount. Some common applications include monitoring conditions during the processing or manufacturing of:

Ferrous Metals	Feed/Grain Milling	Chemicals
Non-Ferrous Metals	Food Processing	Pharmaceuticals
Cement/Aggregates	Wood Processing	Plastics
Mining/Minerals	Pulp/Paper	Rubber Compounding
Foundries	Tobacco Processing	Battery Manufacturing
Fertilizer	Textiles	Galvanizing

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