



### **DUST MONITORING SYSTEM**

# A DUST GUARD PARTICULATE MONITOR PROVIDES RELIABLE AND ECONOMICAL DETECTION OF LEAKS AND FILTER FAILURES IN MANY POWDER AND BULK SOLIDS INDUSTRIES



## **DUST GUARD**

#### **DUST PARTICULATE MONITOR**

The Dust Guard series operates on the principle of Tribo - Electric charge transfer. The electrical charge carried by dust particles captures by a highly sensitive Tribo - Electric probe, amplifies and then transmittes to the control unit.

As the current generated by the charge is proportional to the concentration of particles present, an indicative signal of dust presence results.

Dust Guard is most suitable for use in Low Humidity gas streams with reasonably constant flows.

**The Control unit**: Incorporates graphic display with adjustable alarm levels to display the dust levels at which the Red LED light alarm is triggered and the emissions level at which the audible and visual alarm is triggered.

Alarm Monitoring: It is most commonly employed as a real time indicator of filter bag failure. Large LCD display gives an instantaneous read-out of the emission in the form of digital read-out. Green LED indicates normal operations, Yellow for warning and Red for alarm. 'Traffic Light' displays in the control unit / logger provides an easily visible alert for the operator, even if he is not closely monitoring the unit. The yellow warning light is set to operate when emission reach 75% of the level at which the Red alarm is triggered, to allow early reaction (which can of course help avoid non-compliance with emission limits or catastrophic failure).

#### **SPECIAL FEATURES**

- Quick & easy single point installation with no moving parts
- Low capital & maintenance costs
- High Sensitivity
- Can be calibrated to show emission levels in mg / m³
- Adjustable range from 1 1,000 mg/m³
- Minimum detection limit less than 1 mg/m³

#### **APPLICATIONS**

The Dust Guard is used in most situations where the actual or potential presence of particulate creates an indicative monitoring requirement & also where higher cost of a quantative monitor is not justified.

- Filter Failure Alarms, Process Control Monitor
- Co generation Power plants
- Ferrous & Non Ferrous metal Processing Unit
- Cement Plants & Silos, Petrochemical, Pharma
- Boilers & Incinerators Paper Plants etc.

#### **SPECIFICATIONS**

Type : Field Mounted

Detectable gases / parameters : SPM (suspended) dust

Electronics / processor : Micro-controller

Power supply : 24 V DC for sensors TX, 230 V AC / 50 Hz for RC

Display : Graphic LCD on receiver controller unit

Alarm : Settable LOW & HIGH

Output (Transmitter) : 4 - 20 mA analog

(Receiver Controller) : 4-20mA / RS 232 / RS 485 / Relay / Datalogging

Sensor technology : Charge transfer
Range : 0-1000 mg/m3
Resolution : 0.1 mg/m3

Accuracy : ± 2%

Response time : Instantaneous

Operating temperature : Upto 300°C for sensor probe and 0 -55 °C for TX and RC unit

Sampling : Insitu

Housing : LM6 (EXP TX housing), SS sensor, ABS plastic for RC

Optional accessories : Industrial hooter, flasher, cable, sensor probe, purging facility,

High temperature probes

Duct diameter : 25 mm to 2.2 meter ( preferable )

Positioning : 90° to duct wall

Output connectors : Single flat flanged fitting

Probe MOC : SS 316

Probe length : 25, 100, 250, 500, 750, 1000 mm

Probe diameter : 16 mm

Insulation : PTFE ( T Model - Glass ceramic )

Note: Images shown are indicative only. Specifications and Features will vary with application. There may be changes overtime due to continuous development process.

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#### **ENDEE ENGINEERS PVT. LTD.**

Office & Works: D/122, Ansa Industrial Estate, Saki-Vihar Road, Saki-Naka, Andheri (E),

Mumbai - 400 072, Maharashtra, India. | Tel.: +91-22-4295 2180 / 81

Email: sales@endee-engineers.com Website: www.endee-engineers.com