



## Multi-Channel Particulate Monitor

### Model PM 100



### Features & Benefits

- Flexible, Modular, Expandable Design
- Wide Range of I/O and Fieldbuses
- Ideal for Multi-Compartment Filters
- Detect Leaks and Monitor Efficiency
- Plan Maintenance, Maintain Compliance
- Superior to Traditional Triboelectric

### Applications

- Multi-Compartment Baghouses
- Clusters of Small Dust Collectors
- Multi-Clone Cyclones

Made in USA

### Overview

Featuring FilterSense's renowned, virtually maintenance-free particulate flow sensing technology and FilterSense's MICS™ platform (Modular Instrumentation and Control System), the PM 100 combines unmatched performance with state-of-the-art instrument modularity and functionality.

With multi compartment baghouse easily assess and compare compartments using the on-screen logarithmic bar graphs or optional remote FilterWare software. For monitoring mass emission trends in the common outlet a DynaCharge™ processor module can be added to provide the industries most advanced particulate monitoring technology with automatic self checks. For pulse jet filters with fixed cleaning patterns leak locating can be added. (For leak locating with varying cleaning times or patterns refer to FilterSense B-PAC™ Controls).

The PM 100 offers a full range of fieldbus communications and a wide range of modular relay and analog I/O.

### Principle of Operation

The PM 100 offers several levels of particulate monitoring performance based on charge induction and protected-probe technologies invented by FilterSense. As particles flow near and around the probe, a minute current is induced. A DSP processes the signal into an absolute output relative to particulate flow. A protective layer over the probe works in combination with induction-sensing to ensure reliable operation with conductive particulate, moist powders, corrosive gases and particulate buildup. Maintenance is minimal and there is no need for an air purge. For durability, the sensors are passive and free of electronics. For safe, easy access and to facilitate EPA QA checks, the control unit and electronics are remote.

## Meets US EPA MACT

40 CFR Part 63

Requires proper configuration

## Specifications

<b>Control Unit</b>	MICSTM Platform (Modular Instrumentation and Control System)
Enclosure:	NEMA 4X Aluminum Std Other Opt
Temperature:	-13F (-25C) to 160F (70C)
User Interface:	3.5" Industrial TFT display, Industrial membrane keypad
Area Classification:	Ordinary locations and hazardous areas pending
<b>Modules</b>	Snap in DIN rail type, 32bit DSP with internal CAN bus
Power supply:	115/230VAC 50/60Hz Std (10 or 20 Watts) 24VDC Opt
Particulate Modules (up to 32):	5.0pA Std 0.5pA Opt or DynaCharge™ 0.1pA Processor Opt
Fieldbus Modules:	Modbus RTU, Ethernet TCP, Ethernet IP, DeviceNet, Profibus, CanOPEN
SD Memory Card:	Field support memory card Std, Data logging card Opt
Relay/Analog I/O Modules:	Mixed relay/analog, relay only and analog only (Refer to price sheet)
<b>Sensors</b>	Remote passive sensors, not affected by alignment or normal vibration
Housing:	NEMA 4X Aluminum Std
Probe Lengths:	3, 5, 10, 15, 20, 30, 36" (Approximately 1/2 duct/pipe I.D.) Extended nipples & rope sensors for large multicompartment baghouses
Mounting:	NPT, Tri-Clamp or Flange
Wetted Materials:	316SS and Teflon or Ceramic Std Hastelloy Opt
Process Temperature:	-40F (-40C) to 250F (120C) Std 450F (232C) Opt 800-1600F Opt
Process Pressure:	10PSI (0.69bar) Std, 50PSI (3.4bar), 100PSI (6.9bar), 1000PSI (69bar) Opt
Sensor Cable:	300' (100m) Max
Area Classification:	Ordinary locations and hazardous areas pending
<b>Application Range</b>	
Particulate:	Any type >0.3 micron - Conductive, non-conductive, moist, corrosive
Minimum Detection Level:	With 5.0pA resolution - Approx. 5-10mg/m3 (standard leak detection) With 0.5pA resolution - Approx. 0.5mg/m3 (monitoring & analysis) With 0.1pA DynaCharge Processor - Approx. 0.1mg/m3 (mass correlations)



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