



Particulate Monitor

Model EM 70DGX



Features & Benefits

- Automatic Zero and Span Checks
- High Accuracy Low Level Monitoring
- Analyze Filter Performance in Real-Time
- Advanced Sensing Technology
- Superior to Opacity & Traditional Tribo

Applications

- US-EPA MACT Leak Detection
- ASTM Particulate Monitoring
- Process Optimization and Control



Made in USA

Overview

The EM 70DGX is a high accuracy continuous particulate monitor with advanced filter leak detection capabilities and optional internal self checks to automate EPA, ASTM and ISO instrument calibration requirements. It enables continuous real-time and averaged analysis and recording of particulate emissions as well as early warning leak alarming for process control and EPA compliance. It is designed for fabric filters, cyclones and process particulate flow monitoring.

The EM 70DGX has all the ease-of-use and renowned reliability of the popular EM 30LGX plus several important requirements for EPA regulations such as MACT. These additional features are equally beneficial for critical process control applications.

- High resolution 4-20mA for low level analysis and recording
- Short and long term data averaging
- Wide range of adjustments & I/O
- Optional internal automatic zero and span checking system
- Optional fieldbus communications and PC analysis/reporting software

Principle of Operation

The EM 70DGX employs a field-proven combination of 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 that is linear to mass 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.

Specifications

Exceeds US EPA MACT

40 CFR Part 63

Available automated QA

Meets ASTM D22

For PMDs and BLDs

Control Unit

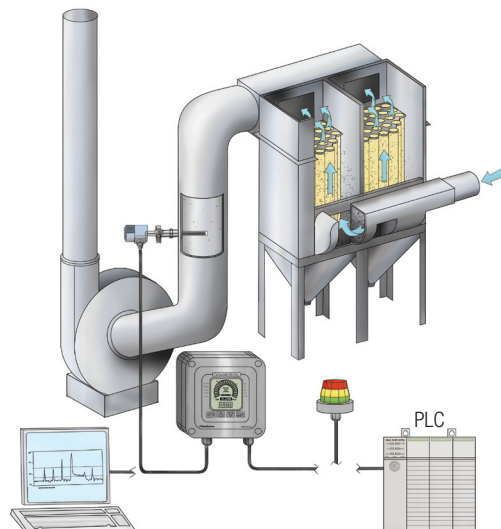
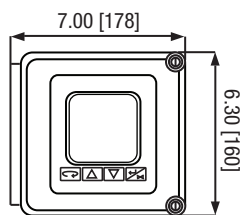
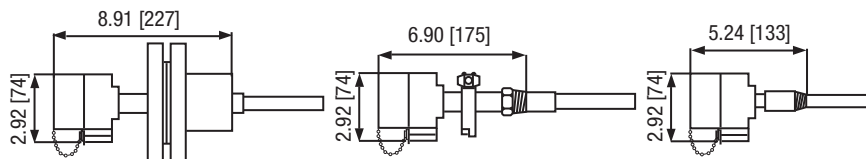
Power supply:	115/230VAC 50/60Hz Std (6 Watts max) 24VDC Opt
Resolution (Range):	0.5pA (0 to 5000pA) Std 0.1pA (0 to 5000pA) Opt
Outputs:	(2) Relay (SPST, 5A@240VAC) Std, (1) 4-20mA Isolated Std
Inputs:	(1) Relay Opt
Communications:	(1) Modbus RTU Opt or Ethernet IP Opt
Enclosure:	NEMA 4X Aluminum Std Other Opt
Temperature:	-13F (-25C) to 160F (70C)
User Interface:	LCD with digital, analog & text display, 4 button membrane keypad
Area Classification:	Ordinary locations (CE Approved) Std Ordinary locations (CSA Approved for use with Class I, II, III sensor) Opt
General:	Circuit boards conformal coated for long life in harsh environments

Sensor

Housing:	NEMA 4X Aluminum Std
Probe Lengths:	3, 5, 10, 15, 20, 30, 36, 48, 60, 72" (Approximately 1/2 duct/pipe I.D.) Extended nipples & rope sensors for large multicompart baghouses
Mounting:	NPT, Tri-Clamp or Flange
Wetted Materials:	316SS and Teflon or Ceramic Hastelloy Opt
Process Temperature:	-40F (-40C) to 250F (120C) Std 450F (232C) Opt 800-1600F Opt
Process Pressure:	10PSI (0.69bar) Std, 100PSI (6.9bar) Opt, 1000PSI (69bar) Opt
Sensor Cable:	300' (100m) Max
Area Classification:	Ordinary locations (CE Approved) Std Class I, II, III, Div I, II, All Groups (Intrinsically Safe, CSA Approved) Opt
General:	No special alignment, not affected by normal process vibration

Application Range

Particulate:	Any type >0.3 micron - Conductive, non-conductive, moist, corrosive
Minimum Detection Level:	With 0.5pA resolution - Approx. 0.5mg/m3 (Analysis & Compliance) With 0.1pA resolution - Approx. 0.1mg/m3 or less (Analysis & Compliance)



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