

Continuous DustGauge Filter LeakGauge

Featuring FilterSense's renowned, virtually maintenance-free, ProFLOW series of particulate flow sensors, the Continuous DustGauge and Filter LeakGauge offer a range of continuous dust monitoring and fabric filter leak detection capabilities.

The Filter LeakGauge™ is a basic baghouse and cartridge filter leak detector designed for general maintenance planning and process protection. It is easy-to-use and reliable. Leakage is gauged in real-time, on-the-spot, without prior baseline data and without signal tuning. Simply apply power and the general condition of the filter is quickly determined.

When the gauge reads "Low" there are no leaks. At mid-range, developing leaks are present and at "High" the filter is leaking. An alarm point is set by simply moving an indicator up and down the gauge with the convenient, lockable key pad.

For more precise alarm setup the large display provides both a logarithmic analog bar graph and an absolute digital readout. The log scale enables the user to observe both the baseline bleed through and the high peaks that are caused by filter cleaning cycles and developing leaks. Observation of both baseline and peaks is essential to setting proper alarms. The digital readout in absolute units ensures correct interpretation of the readings and provides accurate historical comparisons.

LeakGauge Benefits

- More reliable sensor than traditional triboelectric
- More effective control than "broken bag detectors"
- Protect downstream blowers, oxidizers, HEPAs, etc.
- Repeatable in all applications (conductive and moist dusts)
- Keep a clean work place and be a good neighbor



Made in USA

The Continuous DustGauge™ is an accurate dust concentration monitoring 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 process control and EPA applications. It can be used on all types of dust collectors and is well suited as a process dust flow monitor.

The DustGauge has all the ease-of-use features of the LeakGauge plus several important requirements for EPA regulations such as MACT. These additional features are equally beneficial to maximize product recovery or plan maintenance.

- High resolution 4-20mA for low level analysis and recording
- NIST traceable electronics calibration (Certificates for EPA)
- Peak hold function and dual alarms (Pre-Visible and Baseline)
- Data averaging and gravimetric correlation (mg/m^3) capabilities
- Wider adjustments, auxiliary inputs such as process on/off signal

In addition to proven reliability, simple operation and ease of installation, the DustGauge and LeakGauge are high quality products built to last.

DustGauge Advantages

- Continuously monitor and maintain filter efficiency
- Comply with US and International EPA regulations
- Simple absolute output or correlate to mg/m^3 or gr/cf
- Performs in tough applications (kilns, smelters, carbon black)
- Prevent the escape of valuable or hazardous powders
- PC Software for data analysis, stack testing and EPA reports

World Leader in Process Filter Monitoring & Automation

Since 1993 FilterSense has developed innovative sensing and automation solutions for process filtration and air pollution control systems. Products include particulate CEMs, baghouse PLCs & diagnostic controllers, non-clogging pressure sensors, non-fouling airflow monitors, HMI/SCADA and EPA Compliance software. FilterSense is the choice of experienced end-users and leading OEMs due to a commitment to quality and innovation.

Continuous DustGauge Filter LeakGauge

EM 70 Series
EM 30 Series

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Principle of Operation

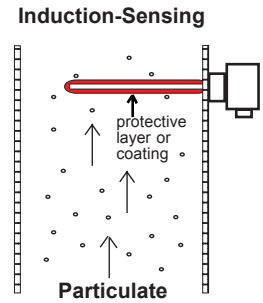
The DustGauge and LeakGauge employ a field-proven, proprietary combination of *passive-induction* and *protected-probe* technologies invented by FilterSense. As particles flow near and around the probe, minute currents are dynamically induced into the probe by flowing particulate. A DSP processes the signal into an *absolute output* that is reasonably linear to mass. Proprietary protective-layers over the probe work in combination with induction-sensing to ensure reliable operation with all types of particulate including moist powders and highly conductive dusts. Maintenance is minimal and there is no need for an air purge. For durability, the sensors are passive and free of electronics.

- Prevent false readings from:**
- Moist and conductive dusts
 - Corrosive gases or condensate
 - Dust buildup

**For baghouses, cartridge filters
bin vents and cyclones**

Models for precipis and scrubbers

**Far more reliable than traditional
triboelectric & opacity**



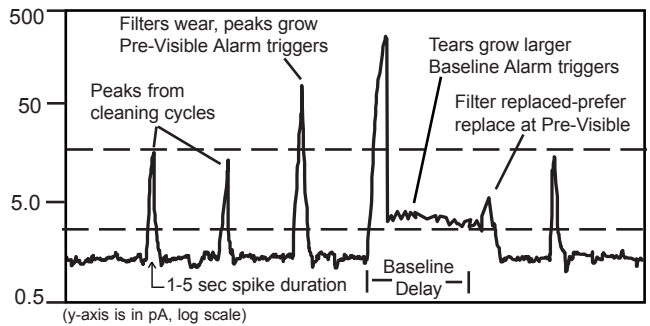
Minimum Detection Levels and Application Guide

Min.	*Approximate Correlations	Application
5.0pA	5.0 to 10mg/m ³ (.002 to .004gr/cf) barely visible to visible, >5% opacity	Basic leak detection
0.5pA	at least 0.5mg/m ³ (0.0002gr/cf) invisible to barely visible, <5% opacity	Lower levels or small leaks
0.1pA	at least 0.1mg/m ³ (0.00004gr/cf) invisible, < 1% opacity	Analysis and mass correlations

Particulate: Any type at least 0.3 micron, <10 micron requires 0.5pA or 0.1pA

*Guide for selecting detection level. For correlated output in mg/m³ or gr/cf, gravimetric tests must be performed and the EM 70 must be used. For higher accuracy refer to FilterSense CEM models.

Example of High Resolution Trending with EM 70



Specifications and Options

Specifications subject to change

Control Unit	EM 70 Series	EM 30 Series
Min Detection:	0.5pA std, 0.1pA opt	5.0pA std, 0.5pA opt
Relay Output:	2 std (SPST, 5A@240VAC)	1 std, 2 opt
Relay Input:	1 std (Process on/off signal)	Not available
4-20mA Output:	1 std (Isolated, 12 bit)	1 opt (Isolated)
4-20mA Input:	1 opt (pressure, temp, etc)	Not available
Serial Port:	1 opt (Modbus RTU)	Not available
Back Light:	Std (Fiber optic panel)	Opt (Fiber optic panel)
Enclosure:	NEMA 4X std, other opt	NEMA 4X std, other opt
Ranging:	Log or linear (Auto or manual)	Same
Peak hold function:	Standard (Ref: PeakTrac)	Opt (Ref: PeakTrac)
Data averaging:	Standard (user adjustable)	Not available
Output scaling:	To mg/m ³ or gr/cf	Not available
Temperature:	-13F to +160F (-25 to 70C)	Same
Power supply:	115/230VAC 50/60Hz or 24VDC	Same
General:	Circuit boards conformally coated and burned-in for 100 hours	
Approvals:	CE approved for ordinary locations - Standard Intrinsically safe - Optional (Refer to quote sheet for approvals)	

Sensor	Options (EM 70 & EM 30)	Specification and Comments
Housing:	NEMA 4X standard	NEMA 4/7/9 optional
Probe Lengths:	3, 5, 10" std, 15, 20, 30, 36 opt 48-72" opt EM 70 only	304SS with protective coating and/or protective layer
Mounting:	NPT, Tri-Clamp or Flange	304SS std, 316SS opt
Max Temperature:	250F/120C standard 450F/232C optional	800F/400C opt EM 70 only 1600F/870C consult factory
Max Pressure:	10PSI std, 100PSI opt	1000PSI opt EM 70 only
Sensor Cable:	400' Max length, 450F Max temp	Special Teflon coaxial
General:	Not significantly affected by vibration, temperature or alignment	

FilterSense products are supported by experienced local sales reps, on-site applications engineering & product training and 1-3 year warranties.

FilterSense

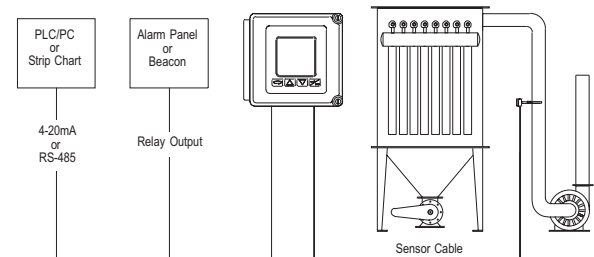
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Installation



Mounting

