



## Particulate Transmitter

Model EM 30T



### Features & Benefits

- Simple, Low Cost 2-Wire Installation
- Prevent Emissions
- Plan Filter Maintenance
- Protect Downstream Equipment
- Keep a Clean Work Place
- Superior to Traditional Triboelectric



Made in USA

### Overview

The model EM 30T is a reliable particulate emissions monitor and filter leak detector in a 2-wire loop powered transmitter configuration. The loop powered design is ideal for direct connection to PLCs and data loggers.

The model EM 30T is available in a compact 1-piece version and a 2-piece configuration with remote electronics for high temperature or high pressure applications. The 2-piece configuration is also beneficial for baghouse applications where outlet ducts are difficult to access. The base model is designed for general maintenance planning and process protection applications. Optional detection level upgrades enable low level monitoring and early warning filter leak detection.

Adjustable linear or logarithmic output ranges in absolute units enable simple setup without confusing sensitivity and gain settings. A log scale output enables trending both the baseline emissions and the high dynamic peaks that are caused by filter cleaning cycles and developing leaks. Observation of both baseline and peaks is essential to setting proper alarms.

### Principle of Operation

The EM 30T 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 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.

## Specifications

### Transmitter

Power Supply:	From 4-20mA Loop
Supply Voltage:	18-24VDC
Output:	5000hms Max at 24VDC
Output Isolation:	500VDC Process to Loop
Resolution (Range):	10.0pA (0-5000pA) Std, 5.0pA or 0.5pA Opt
Temperature:	-13F (-25C) to 160F (70C)
General:	Circuit boards conformal coated for long life in harsh environments

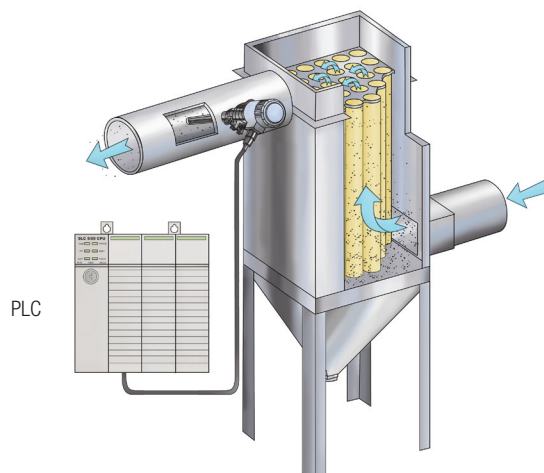
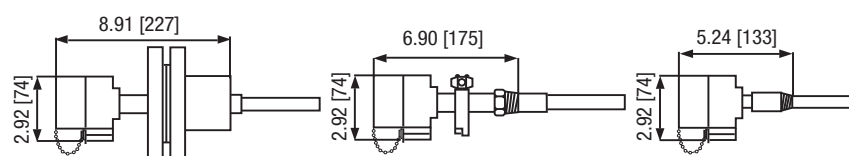
### Sensor

Housing:	NEMA 4X Aluminum Std
Probe Lengths:	3, 5, 10, 15, 20, 30, 36" (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 Std Hastelloy Opt
Process Temperature:	250F/120C Std 450F/232C Opt
Process Pressure:	10PSI (.69bar) Std, 50PSI (3.45bar) Opt, 100PSI(6.9bar) Opt 2-piece only
Sensor Cable:	300' (100m) Max (2-piece configuration only)
Area Classification:	Ordinary locations (CE Approved) Std Class I, II & III, Div II Only (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 10.pA resolution - Greater than 10mg/m3 (basic leak detection) With 5.0pA resolution - Approx. 5-10mg/m3 (standard leak detection) With 0.5pA resolution - Approx. 0.5mg/m3 (monitoring & analysis)



## FilterSense

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