



## A Leading Food Manufacturer Implements Particulate Monitors Across All Facilities

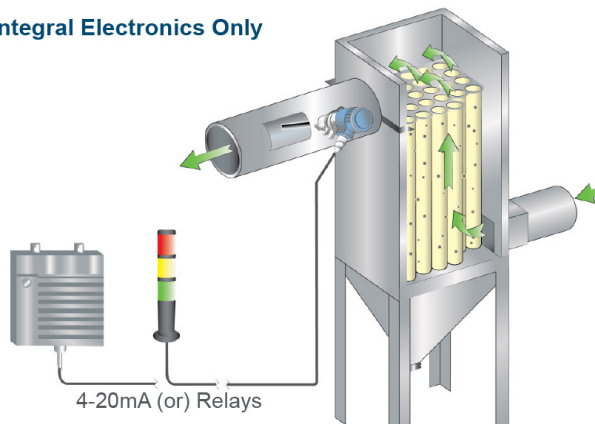
*Low installation and maintenance costs for the model PM 1 justifies monitoring even small dust collectors*

### Challenge

***“A need for hundreds of monitors that are functionally effective, suitable for hazardous areas and low cost to install and maintain”***

A dry food manufacturer sought a reliable, cost-effective solution to monitor smaller bin vents and filter receivers across multiple facilities. Committed to environmental responsibility, the company aimed to monitor all filter exhausts for leaks, emphasizing the need for a product with minimal maintenance. Overall, the objective was to find a reliable solution to manage the monitoring of hundreds of filters in various plants, including many with hazardous requirements.

#### Integral Electronics Only



*As particles flow over a sensing probe, charge is induced into the probe creating small currents in the picoamp (pA) range. The signal is processed into an output proportional to mass.*

### Solution

***“The functionality and quality greatly exceed comparably priced devices.”***



In response to the challenges faced by this top food manufacturer, the DynaCHARGE™ PM 1 series emerged as a versatile and effective solution. The one-piece configuration, simple integral design of this particulate monitoring/ filter leak detector addressed the need for a straightforward, yet effective solution. With a Class II Div. II hazardous rating, the product met the requirements for many hazardous locations.

The PM 1 provided the choice of a simple relay/alarm output (model PM 1-A) or continuous 4-20 mA output (model PM 1-T). The relay alarm is easy to set and offers fail-safe logic for automated equipment control while the loop powered 4-20mA enables trending and setting the alarm in a PLC or DCS. Streamlined commissioning and convenient self-diagnostics added further value over alternate products, making the PM 1 a reliable and cost effective choice for the diverse monitoring needs of the manufacturer's hundreds of filters throughout multiple facilities.

# Application Note

## PM 1 Series

The DynaCHARGE™ PM 1 is the ideal choice for this manufacturer, seamlessly aligning with operational needs and corporate goals. With a user-friendly interface, multi-language options, and clear data presentation, the PM 1 ensures simplicity and ease of use. Its straightforward installation and setup offers low long term cost of ownership and versatile options for both new and retrofit installations.

### ✓ Quick and Easy Setup

- Single-point, compact design
- Choice of power and output options (Relays or 4-20 mA)
- Seamlessly integrate into existing infrastructure.

### ✓ Reliable Performance

- Local readout eliminates the need for meters
- Power-up check and 4-20 mA check

### ✓ Minimal Effort Maintenance

- Drift-free electronics for extended calibration-free operation
- Induction sensing to minimize probe cleaning
- Quick Clamp mounting for maintenance without wire disconnection.

## Lower Total Cost of Ownership

**50% Less Commissioning**  
*up to 1 hour compared to up to 2 hours*

**75% Less Maintenance**  
*sensor cleaning 1x per year vs. approximately every 3 months*

**3-5x More Functionality**  
*when compared to comparable devices.*



PM 1-A With Cap Off

## Available PM 1 Models:

- PM 1-T (Transmitter)**..... Loop Powered/4-20mA (2-wire)
- PM 1-A (Alarm)**..... 20VDC to 240 VAC/2 SPST 5A @ 240 VAC
- PM 1-AD (Alarm DC Only)**.....24VDC



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