

# PARTICULATE MATTER MONITORING SOLUTIONS

## Aretas Sensor Networks

### HOW IT WORKS



#### MONITOR

Our monitors gather and transmit data to the communication bridge



#### GATHER DATA

Data from the communication bridge is sent securely to your private online data center account



#### ANALYZE & REPORT

Your data is archived, analyzed and reported in many useful ways



#### 24/7 ACCESS

Decision-making is easy from any computer or smart device

#### SENSOR OPTIONS

CO	Carbon Monoxide
CO2	Carbon Dioxide
dB	Noise
DP	Differential Pressure
NO2	Nitrogen Dioxide
O3	Ozone
TRH-F	Freezer / Fridge
VOC	Volatile Organic Compounds

More options available

### Overview

The Aretas Particulate Matter Monitoring System is able to detect many particle sizes ranging from 0.3, 0.5, 1, 2.5, 5, 10  $\mu\text{m}$ . This easy to install, wireless system displays data online and sends customizable alerts via text message or email. The PM monitoring equipment can include other sensors such as CO, CO<sub>2</sub>, NO<sub>2</sub>, O<sub>3</sub> and VOC to provide you with accurate information about your indoor environments. Secure cloud based data allows decision-makers and maintenance staff to monitor PM levels from anywhere at anytime.

The industrial PM detector comes standard with Temperature and Relative Humidity sensors offering more in depth data as well potential energy-saving and money-saving opportunities.

### What is Particulate Matter?

The term "particulate matter" (PM) refers to the microscopic pieces of material (solid or liquid) that are present in the air we breathe. These airborne particles can be things like soot, pollen, animal dander, dust mites, mold, aerosol, cigarette smoke, radon, formaldehyde, or asbestos.

- Real-time remote wireless monitoring, 24/7, worldwide.
- Customizable alerts via text message and/or email.
- Access to live and historical data to track trends and make comparisons.
- Ability to add other monitoring systems and/or additional sensors, as needed.
- Simple, sturdy case designed to last.

### Product Specifications



#### Wireless PM Monitor Specifications

- Range: 0 to 28,000 pcs/L
- Resolution: 1  $\mu\text{m}$
- Response time: 20s diffusion time
- Operating temperature: 0 to 45 °C
- Operating humidity: 0 to 95% RH
- Accuracy: 50% @ 0.3 $\mu\text{m}$ , 98% @ >0.5 $\mu\text{m}$

### Electrical Characteristics

Voltage input:

- 6xAA or 5V USB Mini-B

Connectivity:

- Digimesh + P2P 900MHz/868MHz long range
- Zigbee

Sensor polling rate: 2 min

### Features

- Battery-powered option with customizable reporting intervals and low power modes that enable long-term battery-powered operation.
- Wireless communication between one or more monitors and the communication bridge or PC-based data collection.
- 24/7 remote monitoring and threshold-based alerting.
- With the optional Internet-based communication bridge, you can access data online from anywhere in the world.
- Data can be exported to geographic information systems or other custom mapping systems.
- Data can also be exported from our large scale data warehouse, via API, to be analyzed by other programs.
- High resistance to radio frequency and electrostatic field noise.