

## FAQ: HPM Series Particle Sensors

### Q. Is indoor air quality a problem in North America?

A. Yes. Indoor air quality impacts us all and is a problem even in North America. The Environmental Protection Agency estimates indoor air can have two to five times as many pollutants as outdoor air,\* meaning we spend a majority of our time being bombarded by contaminants.

### Q. Is poor indoor air dangerous?

A. Yes. Air that has high particulate counts can be a trigger for asthma attacks as well as lead to symptoms such as irritated eyes, nose and throat, coughing, heart disease, and other health-related issues.\*\*

### Q. What is the HPM Series designed to do?

A. The HPM Series is designed to detect airborne particulates in the PM2.5, PM10 ranges (standard) and in the PM1.0, PM2.5, PM4.0, PM10 ranges (compact). When integrated into a variety of systems, the HPM Series can help alert occupants to the presence of airborne particulates and trigger supporting equipment to improve indoor air quality.

### Q. What size particles does the HPM Series detect?

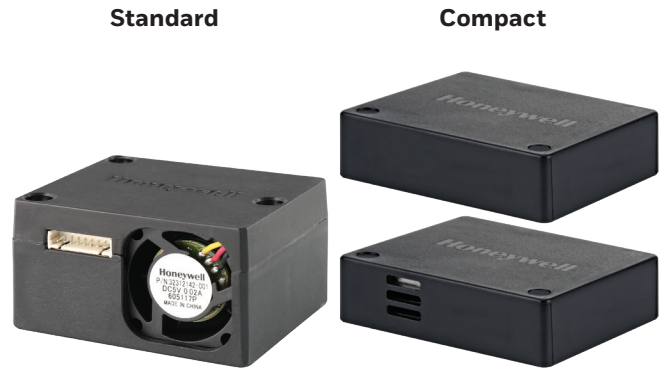
A. The HPM Series can detect particulates from 0.3  $\mu\text{m}$  to 5  $\mu\text{m}$  in size. The sensor uses the particle count data to provide a PM2.5 reading and calculated PM1.0, PM4.0, and PM10 readings.

### Q. What particle distributions are the HPM Series calibrated against?

A. The HPM Series is calibrated to cigarette smoke, which most closely correlates to burnt fossil fuels or smog. The sensor can be calibrated to other particle distributions upon request.

### Q. Where can the HPM Series be integrated?

A. The HPM Series features a compact design, allowing it to be seamlessly integrated into a variety of applications such as traditional HVAC controls, indoor air monitors, air



purification equipment, automotive cabin filtration, and commercial kitchen ventilation.

### Q. How accurate is the HPM Series?

A. Engineered for excellent accuracy, the HPM Series is able to detect particulate densities to within  $\pm 15\%$  accuracy (PM2.5). Some competitive devices offer accuracy of  $\pm 30\%$  or worse.

### Q. Does the HPM Series use a laser or an LED to analyze media?

A. The HPM Series uses a laser-based sensing design which maximizes accuracy.

### Q. What is the expected service life of the HPM Series?

A. The HPM will operate for 10 years when used for 24 hours per day.

### Q. How fast does the HPM Series analyze media and respond?

A. Ultra-fast, the HPM Series analyzes media in less than six seconds. This speed allows the HPM Series to quickly analyze and provide data to supporting equipment, allowing the device to respond to changing conditions in real-time.

\* Environmental Protection Agency: Volatile Organic compounds' Impact on Indoor Air Quality Footnotes

\*\* Environmental Protection Agency: Importance of Indoor Air Quality.

**For more information**

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