

Eave AirWarden™

Particulate Matter Sensor

For air quality applications



Eave AirWarden™ Particulate Matter Sensor

Eave AirWarden™ uses the MCERTS-certified SPS30 particulate matter (PM) sensor - a technological breakthrough in optical PM sensors. Its measurement principle is based on laser scattering and makes use of an innovative contamination-resistance technology. This technology, together with high-quality and long-lasting components, enables precise measurements from the device's first operation and throughout its lifetime of more than eight years.

Compatible with Eave Peak™ and Eave HealthWatch™.

Technology and benefits

Technology	Benefits
Contamination-resistance technology and long-lasting components	Lifetime of more than eight years while operating continuously for 24 hours/day. No need for cleaning and/or maintenance, thus avoiding problems related to sensor drift or malfunction.
Laser-based scattering principle and advanced algorithms	Accurate measurements for different types of dust and other particles.
Accurate high-resolution particle size binning	Enables actions based on detected particle composition.
Small, ultra-slim package	Easy to integrate into sites and locations where size and space are limited

Sensor Specifications

Particulate Matter Sensor Specifications	
Mass concentration accuracy ¹	$\pm 10 \mu\text{g}/\text{m}^3$ @ 0 to 100 $\mu\text{g}/\text{m}^3$ $\pm 10\%$ @ 100 to 1,000 $\mu\text{g}/\text{m}^3$
Mass concentration range	0 to 1,000 $\mu\text{g}/\text{m}^3$
Mass concentration resolution	1 $\mu\text{g}/\text{m}^3$
Particle detection size range ²	Mass concentration: PM1.0, PM2.5, PM4 and PM10 Number concentration: PM0.5, PM1.0, PM2.5, PM4 and PM10
Lower limit of detection	0.3 μm
Minimum sampling interval	1 s (continuous mode)
Lifetime	>8 year operating continuously 24h/day
Dimensions	30cm x 8cm
Operating temperature range	-10 to +60°C
Storage temperature range	-40 to +70°C
Accurate high-resolution particle size binning	Enables actions based on detected particle composition.
Small, ultra-slim package	Easy to integrate into sites and locations where size and space are limited

¹ Specified for PM2.5 at 25°C using potassium chloride salt particles and the TSI DustTrak™ DRX Aerosol Monitor 8533 as a reference.

² PMx defines particles with a size smaller than "x" micrometres (e.g., PM2.5 = particles smaller than 2.5 μm).

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Variants and Accessories

Connectivity
Bluetooth (BLE)
Bluetooth (BLE) + Cellular 4G (LTE)
Sensors
Particulate Matter (PM)
Gas Monitoring, Humidity and Temperature
Particulate Matter (PM) + Gas Monitoring, Humidity and Temperature
Accessories
Tripod for environmental monitoring
Base plate zip tie mount for environmental monitoring
Solar power pack
Body mount for personal monitoring
Environmental cover