



EnviroNode™-PM

Particle Sensor for the EnviroNode Hub

The EnviroNode-PM sensor is a high-quality, lightweight, laser-based particulate sensor for the EnviroNode Hub. It uses the light scattering method to detect and measure particles present in the range of 0 µg/m³ to 1,000 µg/m³. The sensor reports particle concentration in both the <2.5 µm diameter and <10 µm diameter ranges. It has an ultra-fast response time of less than 6s.



The EnviroNode-PM communicates with the EnviroNode Hub over UART. The EnviroNode Hub manages the sensor to save power and maximise the sensor's operating lifetime.

The sensor is supplied with radiation shield, mounting bracket, selectable cable length and IP67 rated weatherproof connector.

Benefits of the EnviroNode-PM Sensor:

- Cost-effective and accurate system to monitor environmental particulate matter
- Ultra-rapid response time allows EnviroNode equipment to respond to environmental conditions in real-time
- Extra-long product life allows up to 7 years of continuous sensing (assuming 8 active sensing hours per day)
- Proven EMC performance enables measurement accuracy in a range of tough environments
- Product is supplied with mounting equipment for easy deployment

Typical Applications:

- Air quality monitoring in private, commercial and industrial settings
- Environmental monitoring
- Air purification systems

EnviroNode™-PM Specifications

Operating Principal	Laser scattering
Particle Detection	PM2.5 - particles <2.5 µm diameter PM10 - particles <10 µm diameter
Data Out	Particle detection in µg/m3
Concentration Range	0 µg/m3 to 1,000 µg/m3
Accuracy (at 25°C ±5°C) 0 µg/m3 to 100 µg/m3 100 µg/m3 to 1000 µg/m3	±15 µg/m3 ±15 %
Response time	<6s
Power Supply	5V
Idle Current	<20mA
Operating Current	<80mA
Operating Temperature	-10°C to 50°C
Storage Temperature	-30°C to 65°C
Data Protocol	UART, 3.3V levels
Product Life	7 years OR 20,000 hours of active sensing
Cable Length	2m, 5m, 10m

