

PPM-01 Series

Portable Particulate Monitors PM1, PM2.5 & PM10

Urban and regional air pollution is a significant environmental threat. Industry, power generation and motor vehicles release pollutants that can lead to photo-chemical smog, haze and acidification. Pollution threatens environmental sustainability and can have harmful effects on human health.

With the economic development and people's awareness of environmental protection, government emphasis on environmental protection. Along with atmospheric environmental monitoring networks are being developed, many countries started to construct atmospheric monitoring station, covering urban ambient air quality monitoring and regional atmospheric environmental monitoring to keep things under sight & control.

At this situation, Next Sense has developed atmospheric monitoring sensors, used in urban air pollution stations (satellite remote sensing field). Normally, PM1, PM2.5, PM10, parameters are monitored.

Our Portable Particulate Monitor (PPM-01) is a hand-held air quality monitor with fashion design, can monitor indoor/ambient air quality and output real-time data of PM1, PM2.5, PM10. Besides, there is built-in Wi-Fi wireless module etc., as an option, which can get remote monitoring by APP for checking out IAQ index at anytime and anywhere. Other wireless remote protocol could be customized.



Features

- Good consistency,
- Real time response,
- Accurate data,
- Low power consumption,
- Minus resolution of particle diameter of 0.3 μ m

Applications:

It's widely used in Ambient/Indoor air monitoring, ventilation systems, as a portable instrument, smart home monitoring, etc...

Specification

Dust Measuring Principle:

Based on the semiconductor laser scattering method, it can detect particles with PM0.3, PM2.5, PM10 three channels.

Model Name	PPM-01		
Particles Detected	PM 1	PM2.5	PM10
Detection Principle	Laser scattering principle		
Detection Range (Increments)	0 – 1000 $\mu\text{g}/\text{m}^3$	0 – 1000 $\mu\text{g}/\text{m}^3$	0 – 1000 $\mu\text{g}/\text{m}^3$
Alarm Set Points	NA	NA	NA
Gas Sampling	Continuous sampling once powered		
Response Time	T90 \leq 45 seconds T90 in 45 seconds		
Accuracy which ever is greater	Dust: 75% accuracy over a PM10 concentration of 12 to 35 pcs/cm ³ (using linear calibration and a 60-second moving average)		
Power Options	Li-ion battery pack		
Continuous Operation	Lithium cell: more than 1,000 hours lifecycle (at 25°C, no backlight)		
Safety Rating	IP 65 with CE (Compliances on BIAS, Fire proofed etc)		
Operating Temp. & Humidity	-10 to 50°C 0~ 85%RH(no condensation)		
Display	20*4 TFT based LCD display		
Standard Accessories	12V & 1Ah Charger		
Warranty	1 Year warranty		

Individuals need personal protection in hazardous areas at all times without adding extra bulky equipment, and the 01 Series can provide that kind of protection at an affordable price. The PPM-01

models are personal single parameter monitors designed for protection from exposure to Particulates, combustible hydrocarbons, oxygen deficiency, hydrogen sulfide, or carbon monoxide.

Acronyms and Abbreviations

<i>List of the acronyms and abbreviations used in this document & instrument, and the meaning of each. (optionally included)</i>
NaN : Not a Number
App : Application
DN : Developer Network
Wiki : Wikipedia
Hr : Hour
Min : Minute
PID : Product ID
Range (0-1000 µg/m ³)
PPM-01 - Model
ID/ Series of the product
Product (GWR- Ground Water Recorder ; WMS - Weather Monitoring Station; IAQ - Indoor Air Quality, PPM – Portable Particulate Monitor etc.)
PPM : Parts Per Million
% : Percentage

1. Operation-functionality

This section walks you through the step-by-step standard operational procedures on how to use the monitor/data logger.

1.1 Section 1: Basic Functionality

>The system has One Button Operation, and it automatically sets zero and starts sampling. It has a charging port to charge the Li-pack.

1.2 Section 2: Startup Window & Fetching Data

>Once the system boots up, it takes ≤ 45 seconds to read the zero command and respond correspondingly to the concentration of particles.

>The sampling method is continuous and has battery back-up for more than 8hrs in a stretch.

>Once the sampling gets started, the values shows up on the main screen, for PM1, PM2.5 & PM10.

2. Maintenance

1.1 Battery Maintenance

Our Monitor are typically powered by either regular batteries or rechargeable batteries. (contact us or battery manufacturer for specific recommendations.) In these extreme cases, you need to do a power-budget analysis to be sure your system has enough power.

As a general rule, replace rechargeable battery(ies) every 3 to 5 years and regular batteries once a year. Battery power backup depends on logging intervals.

1.2 Maintenance of the Sensor

The sensor does not normally require any maintenance other than an occasional cleaning. If the housing of the sensor becomes dirty, clean the housing gently with a cotton cloth. Do not immerse the sensor in water or use any organic solvents to clean the unit.

1.3 Verifying the Sensor Accuracy

It is recommended that you check the accuracy of the sensor annually. The sensors cannot be calibrated on-site. Our factory uses precision components to

obtain accurate measurements. If the smart sensor is not providing accurate data, then it is damaged or possibly worn out if it has been in use for several years.

If you are unsure of the accuracy, you can send the smart sensor back to the factory for inspection and possible replacement of the mechanism or sensors if required.

Contact support@engqenv.com for a Return Merchandise Authorization (RMA) number before sending the sensor.



NextSense Technologies

Street No 4, Iqra Colony, Dhoharra Mafi,
Aligarh, 202001

Support- +91- 9540990415

www.nextsensetechnologies.com