



NextPM Advanced

Next Generation Particulate Matter OEM Sensor - PM1 | PM2.5 | PM10



NextPM Advanced is a high-precision Particulate Matter sensor designed for real-time monitoring of PM1, PM2.5, and PM10, with an extended range up to 10 mg/m³ for demanding industrial applications. Optimised for HVAC systems, it replaces the internal fan with an external pump to handle pressure drops effectively, ensuring accurate measurements in variable airflow conditions.

Key Features

- Real time PM1, PM2.5, PM10 & TSP
- External pump
- Extended operational range
- High accuracy
- Exceptional reliability
- Humidity resistant
- 5 software bins in pcs/L
- Airflow 2.5 L/min
- >10,000 hours run time
- Communication UART / Modbus (RS485)
- Pressure loss compliant

Typical Applications

- Urban air quality
- Indoor air quality monitoring
- HVAC & building control
- Industrial health & safety
- Semiconductor
- Construction
- Laboratory
- Environmental
- Fence line
- Fugitive emissions

Technical Specifications & Performance

| | |
|---|--|
| Technology | Optical |
| Targeted pollutants | Particulate Matter |
| Particle size detection range | 0.3 to 10 µm diameter |
| Concentration detection range / PM1, PM2.5 & PM10 | 0 to 10,000 µg/m ³ (Arizona dust A1 equivalent) |
| Total Suspended Particle (TSP) detection range | 0 to 40,000 µg/m ³ (Arizona dust A1 equivalent) |
| Detection limit | <1 µg/m ³ (Arizona dust A1 equivalent) |
| Lifetime (MTTF) | >10,000 hours run time |
| Airflow | 2.5 L/min standard (1.2 to 2.5 L/min configurable) |
| Refresh rate | 1 / 10 / 60 seconds |
| Warm-up time | 10 seconds |
| Linearity error | <5% |
| Repeatability error | <3% (Calculated with 15 min moving average output) |
| Detection efficiency with 0.3 µm diameter particles | >50% |
| Temperature influence | -20 to 0 °C (<+1.0% / °C) 0 to 30 °C (0% / °C) 30 to 70 °C (<-0.8% / °C) |

Electrical Specification

| | |
|---------------------------------|----------------------------|
| Power supply | 5.0 VDC |
| Power consumption in operation | <50 mA 270 mA (maximum) |
| Power consumption in sleep mode | <20 mA |

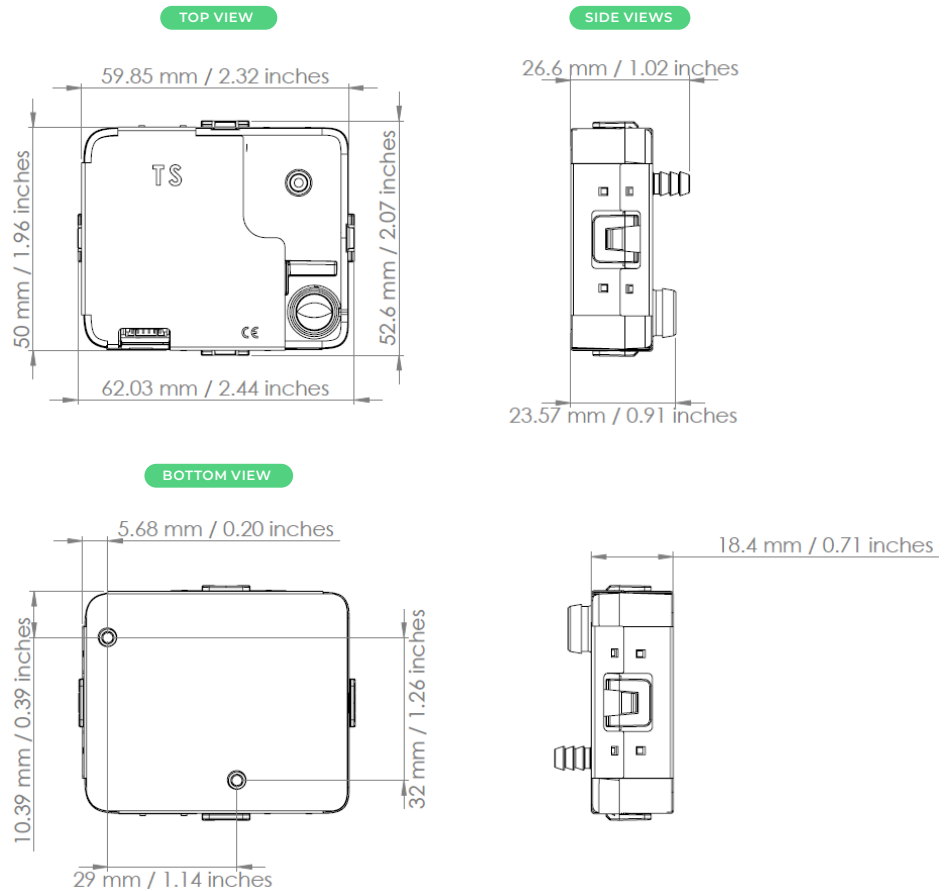
Operation & Storage Conditions

| | |
|-------------|-------------------------|
| Temperature | -20 to 70 °C |
| Humidity | 0 to 95 uncondensed (%) |
| Pressure | 500 to 1500 hPa |

Other

| | |
|-----------------------|--------------------------------|
| Communication | UART / Modbus (RS485) |
| Dimensions and weight | L 62 x W 52 x H 26.6 mm / 45 g |
| Certifications | CE and RoHS compliant |

Drawings



Manufactured by

TERA
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