

DUST SENTRY

OUTDOOR REAL-TIME PARTICULATE MONITORING

Designed for those who need to monitor and manage dust emissions as and when they happen, the Dust Sentry is a nephelometer-based instrument that delivers affordable and accurate real-time measurement of PM₁₀, PM_{2.5}, PM₁, or TSP.

Compared to reference-equivalent monitors like TEOMs and BAMs which lack sensitivity at short sampling periods, the Dust Sentry reports accurately at 1 minute intervals and has a lower total cost of ownership (up to 5x less). In addition, the Dust Sentry is compact, re-locatable and can integrate wind, noise and weather sensors for maximum utility.

Highlights

- Measures and reports data in 1 minute intervals
- Accurate measurement of PM₁₀, PM_{2.5}, PM₁, or TSP.
- On board data storage for up to 15 years of data
- Email and GSM data retrieval and alerts
- Tough weatherproof enclosure with solar shielding for hot climates
- Option to integrate weather, wind, noise and sirens

Applications

- Construction site monitoring
- Roadside and tunnel monitoring
- Mine and quarry perimeter monitoring
- Waste transfer and treatment site monitoring



Specifications



Measurement technology	Near forward light scattering nephelometry
Range	0-2000µg/m ³
Accuracy	+/- (2 ug/m3 + 5% of reading)
Cut points available	PM ₁₀ , PM _{2.5} , PM ₁ , or TSP
Sample flow rate	2.0 LPM
Inlet	36cm heated inlet
Alarm	Relay, Email and SMS (optional)
Display	4-line alpha-numeric
Data logging	8GB SD card (>15 years data storage)
Averaging period	1-60 minutes
Analysis filter	47mm GFA circular filter (optional)
Software	Datalogging and configuration software included
Outputs	RS232 (38400 Baud), 4-20mA / 2-10V (optional)
Mounting	Pole, tripod and wall mounting
Wireless communication options	GSM/GPRS modem with GPS; Orbit DATA (cloud-based DAS)
Integrated sensor options	Wind speed and direction; temp/RH; rain; pressure; noise (Class 1)
Environmental operating range	-10°C to +45°C; 10 to 95% RH (NC)
Power requirements	Power requirements Mains 100 - 260V, 18W (standard) or regulated 12 (+/- 2.5%) VDC with <150 mVp-p ripple and noise (15W)
Enclosure	IP65-rated Lockable GRP Cabinet: Width 330mm x Depth 187mm x Height 483mm (including solar shield armour & mounting brackets)
Weight	<12kg