



**REPSS, Inc.**  
Instrumentation Specialists

**SENSIDYNE**  
Industrial Health & Safety Instrumentation

## Nephelometer

### *Real-Time Handheld Dust Monitor*



Shown with Optional  
Protective Boot

The Sensidyne Nephelometer is an advanced real-time dust monitor accurately measuring dust concentrations using proven light scatter technology. This portable instrument accurately measures and records dust from 1-10,000  $\mu\text{g}/\text{m}^3$  with resolution to 1  $\mu\text{g}/\text{m}^3$ . Sample modes are selectable between 60 second sample, 15 minute STEL, or continuous sampling.

The Nephelometer has an internal pump drawing samples into the iso-kinetic sampling inlet where they meet sheath air that guides samples past the particle sensor. The sensor is a photo detector that measures laser light scattered by particulates in the sample stream.

**Deluxe Model Now Available Offering Size Selection for TSP, PM 2.5, and PM 10 Measurements**

### Accurate Dust Concentration

Proprietary algorithm provides accurate dust concentration. The sheath air feature prevents internal contamination and improves accuracy.

### Reliable and Easy-to-Use

Temperature compensated, durable housing and minimal moving parts ensure reliability. Two-button user-interface ensures easy dust level monitoring.

### Field Portable

All-in-one handheld instrument with long-life batteries that fully charge in less than 3 hours.

### Environment Profiling

Easy to use software allows programming unique environmental profiles and recording sample data.

### Common Applications

- Industrial/Occupational Hygiene Area Surveys
- Particulate Matter Studies
- Immediate Spot Measurement
- Aerosol Research Studies
- Emergency Response Measurements

The instrument multiplies each measurement by a K-factor and displays the real-time reading on the display of the instrument. After each sample the K-factor, Environmental Factor Name, STEL, maximum, minimum, and average readings write to the instrument's data log. When connected to a computer the instrument uploads up to 4,000 data-log records in spreadsheet format.

In addition to high sensitivity and ease-of-use the Sensidyne Nephelometer offers a low cost of ownership, automatic power save, long-life, data-logging, facility monitoring features, and user-replaceable filters.

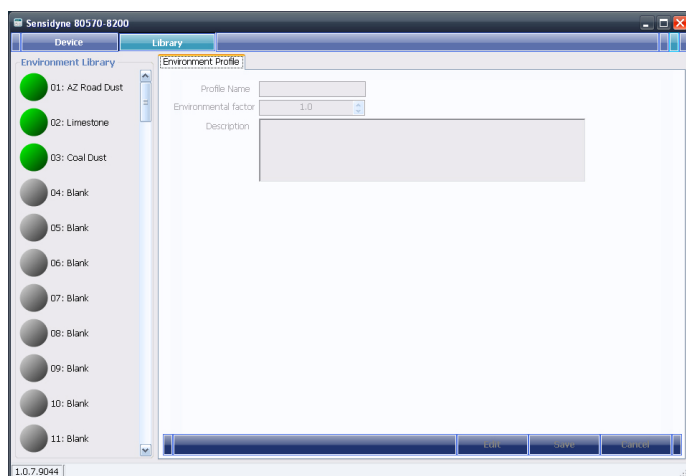
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# Nephelometer

## Real-Time Handheld Dust Monitor



Screen-shot of Facility Monitoring Software

	Part Number	Standard Unit Kits 810-1001-01-US 810-1001-02-Euro	Deluxe Unit Kits 810-1003-01-US 810-1003-02-Euro
PM-2.5 Impactor	811-1004-01		X
PM-10 Impactor	811-1004-02		X
Charger	298-0027-01	X	X
Zero Cap	385-0114-01	X	X
Sheath Air Filter	385-0112-01	X	X
USB Coms Cable	297-0012-01	X	X
PC App/Manual CD	390-0048-01	X	X
<b>Optional Accessories</b>			
Rubber Boot	375-0008-01		
Carrying Case	375-0009-01		
Tri-pod Mount	385-0117-01		

### Product Specifications

#### PERFORMANCE

Measurement Method: Light scatter  
Particle Size Screening: **Standard Model:** TSP  
**Deluxe Model:** TSP, PM 2.5, or PM 10 Selective

Sample Method: ..... Pump sample draw  
Range: ..... 0.1 – 10,000 µg/m<sup>3</sup> (0.0001 to 10 mg/m<sup>3</sup>)

Sample Options: ..... 1 minute, Continuous, or 15 min STEL  
Resolution: ..... 1 µg/m<sup>3</sup> (0.001 mg/m<sup>3</sup>)  
Sensitivity: ..... 1 µg/m<sup>3</sup> (0.001 mg/m<sup>3</sup>)  
Accuracy: ..... ± 5% traceable standard with 0.6 µm (0.0006 mg) PSL  
Data logging: ..... 4000 records of STEL, Max, Min and average reading and k-factor

#### ENVIRONMENTAL

Temperature Ranges  
Operating: ..... 32°F to 122°F (0°C to 50°C)  
Storage: ..... -4°F to 140°F (-20°C to 60°C)

#### GENERAL

Display: ..... 2 line, 16-character LCD  
Controls: ..... 2-button  
Logging: ..... 4000 Record memory  
Dimensions: ..... 3.75W x 6.75H x 2.0D inches  
9.5W x 17.2H x 5.1D cm  
Weight: ..... 24 oz. (0.67 kg)

#### ELECTRICAL

Light Source: ..... Laser diode  
Power: ..... 7.2V Lithium Ion self-contained battery pack providing 30 hours of typical intermittent operation and up to 12 hours continuous use.

Charger: ..... 100-240VAC Lithium Ion Charger  
8.4VDC @ 1500mA typical.

Charging Time: ..... Less than 3 hours  
Communications: ..... USB Mini BType  
Standard Calibration: Arizona Road Dust. K-factors allow direct reading of other substances.

Safety Conformity: ..... • FDA / CDRH This product is tested and complies with 21 CFR, Subchapter J, of the health and Safety Act of 1968.  
• European Community (CE) Directive 89/336/EEC EN 55011 Group 1, Class B (Emissions) and EN 55082-1 (Immunity)  
• IEC 60825-1 Ed.1.1 (1998-01)  
• EN 60825-1 W/A11 (1996)  
• US 21 CFR 1040.10

Supplied: ..... Operation manual, Charger with power cord, zero cap, spare filter, software and USB cable.

Optional: ..... Carrying case and Rubber Protective Boot

Warranty: ..... One year from date of shipment.

