

# Nephelometer

## Real-Time Handheld Dust Monitor



Shown with Optional 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

### Accurate Dust Concentration

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

### Reliable

Temperature compensated, durable housing and minimal moving parts ensure reliability.

### Highly Portable

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

### Facility Monitoring

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

### Common Applications

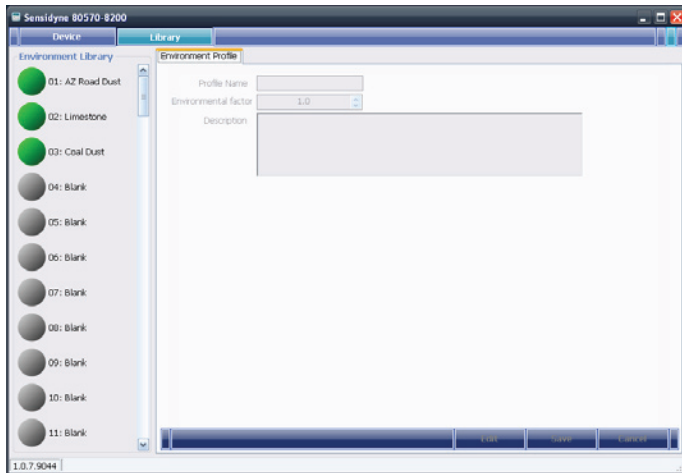
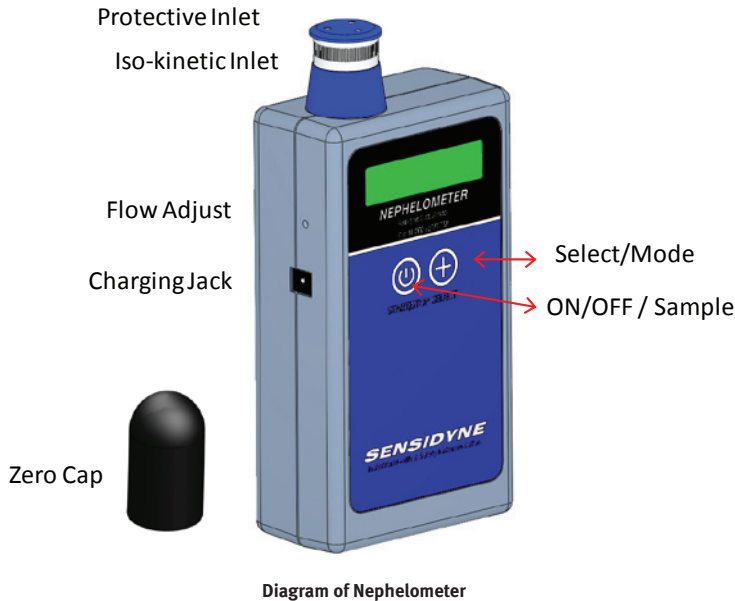
- Industrial/Occupational Hygiene Area Surveys
- Particulate Matter Studies
- Immediate spot measurement
- Aerosol Research Studies

stream. 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 and Environmental Factor Name and STEL, maximum, minimum, and average readings record to the internal 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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Screen-shot of Facility Monitoring Software



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### Product Specifications

#### PERFORMANCE

Measurement Method: Light scatter  
Sample Method: Pump sample draw  
Range: 1 – 10,000 µg/m<sup>3</sup>  
Sample Options: 1 minute, Continuous, or 15 min STEL  
Resolution: 1 µg/m<sup>3</sup>  
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: 19.2 oz. (0.55 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  
Warrenty: One year from date of shipment.