

# 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

### Easy-to-Use

Two-button user-interface ensures easy dust level monitoring.

### Accurate Dust Concentration

Proprietary algorithm provides accurate total suspended particulate (TSP) 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.

### 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

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.

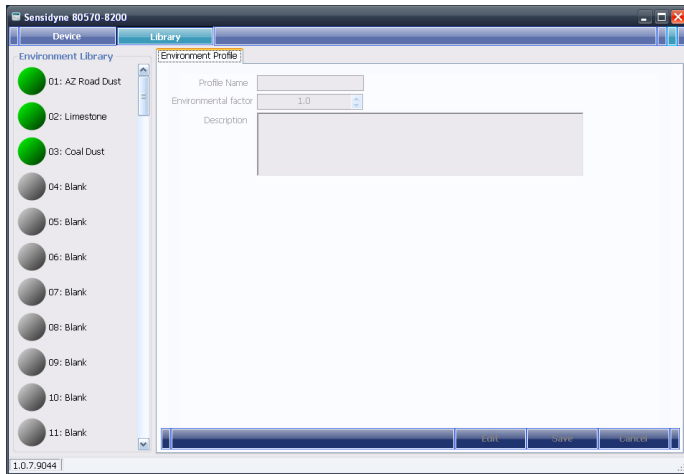
In addition to high sensitivity and ease-of-use the Sensidyne Nephelometer offers a low cost of ownership, automatic power save, long-life, data-logging, facility monitoring features, and user-replaceable filters.

# Nephelometer

## Real-Time Handheld Dust Monitor



Nephelometer Diagram



Screen-shot of Facility Monitoring Software

Description	Part Number
Nephelometer Kit	810-1001-01
Rubber Protective Boot	375-0008-01
Carrying Case	375-0009-01

Nephelometer Kit Includes: Charger with US style plug, USB communications cable, spare filter, zero cap, user manual, and site monitoring software CD.

### Product Specifications

#### PERFORMANCE

Measurement Method:..... Light scatter  
 Sample Method: ..... Pump sample draw  
 Range: ..... 0.1 – 10,000 µg/m3 (0.0001 to 10 mg/m3)  
 Sample Options: ..... 1 minute, Continuous, or 15 min STEL  
 Resolution:..... 1 µg/m3 (0.001 mg/m3)  
 Sensitivity: ..... 1 µg/m3 (0.001 mg/m3)  
 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.