

# BT-645 Portable Dust Monitor

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The **BT-645** Portable Dust Monitor has been designed to continuously measure and record particulate information for indoor work place and public place environments.



## Key Features:

- 'Real Time' monitoring
- Simple operation
- Rugged design
- Built-in Datalogger
- Purge air system
- Low power consumption

## Optical Sensor

A laser optical sensor is used to detect and measure particulate concentrations up to 100 milligrams per cubic meter. The continuous flow optical sensor is combined with purge air to ensure accurate measurements in adverse environments.

## Rugged Design

The optical sensor, matched electronics and backlit display, are enclosed in a rugged metal enclosure to protect the instrument from normal daily use.

## Data Storage

The internal datalogger will store over 5,000 samples. Sample history events can be viewed on the display or downloaded to a computer using Comet software.

## Battery Operation

The internal battery pack provides over 10 hours of continuous operation. Battery recharge time is approximately 2.5 hours.

## Optional Inlets

The standard unit is supplied with a TSP inlet. Optional sampling inlets are available for PM2.5, PM4 and PM10.

## Applications:

- Public and Workplace Monitoring
- Industrial / Occupational Hygiene
- Indoor Air Quality

Note: Not recommended for continuous outdoor use.

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## Measurements & Specifications

### OPERATING PRINCIPLE

Forward light scatter laser nephelometer

### PERFORMANCE

Concentration Range	0 to 100 mg/m <sup>3</sup> (0 to 100,000 µg/m <sup>3</sup> )
Sensitivity	1 µg/m <sup>3</sup>
Accuracy	5% traceable to standard with 0.6 µm PSL
Measuring Time	1, 5, 10, 15, 30 and 60 minutes
Flow Rate	2 LPM

Note: Measurement accuracy requires use of appropriate K-factor for the material being measured.

### ELECTRICAL

Light Source	Laser diode, 5 mW, 670 nm
Power	14.8V Li-ion (Lithium Ion) battery pack
Battery Life	Over 10 hours continuous operation
AC Adapter/Charger	Li-ion battery charger, 100 – 240 VAC, 50/60Hz to 16.8 V @ 1.8 A
Communications	RS-232, USB
Data Storage	Over 5,000 samples

### INTERFACE

Display	4 X 20 LCD
Keyboard	6-key membrane type

### PHYSICAL

Size	Height = 4.25" (10.8 cm) Width = 7.44" (18.9 cm) Thickness = 3.25" (5.4 cm)
Weight	3.7 lbs (1.7 kg)

### ENVIRONMENTAL

Operating Temperature	0°C to +50°C
Relative Humidity	90% (non-condensing)
Storage Temperature	-20°C to +60°C

### ACCESSORIES

Supplied	User Manual USB Cable Communications Software (Comet) AC Adapter / Battery Charger
Optional	PM2.5 Sharp Cut Cyclone (SCC-112) PM10 Sharp Cut Cyclone (SCC-110) Custom Serial Cable (PN 3228)



BT-645 w/SCC-112 PM2.5 Sharp Cut Cyclone

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