

HAZ-DUST I Real-time Particulate Monitor

Hand-held and Area Particulate Survey Tool

- **Easy operation and instantaneous readings in mg/m³**
- **Selectable dual measuring range feature**
 - > Particulate concentration measurements between 0.01 and 20 mg/m³ and from 0.1 to 200 mg/m³
- **Easy-to-read digital display**
- **Highly sensitive — measurements down to 0.01 mg/m³**
 - > Monitors OSHA/NIOSH reference methods
- **Rechargeable 8-hour battery life**
 - > Low battery indicator
- **Unique design provides protection from RFI/EMI**
- **Lightweight, rugged, and portable**
- **Optional tripod mounting**
- **Optional datalogger with user-selectable alarm threshold**
- **Easy-to-use DustComm Pro Software available with datalogger for downloading, basic trend analysis, and comprehensive graphical reporting**
- **CE marked**

Description

With the touch of a button, the portable HAZ-DUST I real-time particulate monitor provides accurate and instantaneous data on airborne particle concentration in accordance with NIOSH Method 0600. Designed for industrial hygiene, indoor air quality, and hazardous materials investigations, HAZ-DUST I saves money by eliminating repetitious and costly gravimetric air sampling and analysis.



The HAZ-DUST I Advantage

- **Saves time and money:** No cassettes to purchase or weigh and no lab analysis needed.
- **Immediate results:** Turn on HAZ-DUST I and the reading is displayed.
- **Flexibility:** Hand-held for survey monitoring or add optional datalogger for continuous unattended monitoring.



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HAZ-DUST I Applications

- Indoor air quality monitoring
- Workplace exposure monitoring
- Evaluating dust generation/suppression
- SARA Title III fugitive emissions monitoring
- HazMat investigations
- Emergency response

Principle of Operation

HAZ-DUST I uses the principle of near-forward light scattering to measure dust concentration. Inside the instrument, an infrared light source is positioned at a 90-degree angle from a photodetector. As airborne particles enter the infrared beam, they scatter the light. The amount of light received by the photodetector is directly proportional to the aerosol concentration. No filter or gravimetric analysis is required.

A Note about Calibration

The HAZ-DUST I is factory calibrated for respirable particulate mass (size range 0.1 to 50 μm) with a 50% cut-point of 4.0 μm ($\pm 10\%$ with SAE fine test dust), which falls under the ACGIH/ISO/CEN criteria. Calibration for thoracic particulate mass with a 50% cut-point of 10 μm is optional.

Optional Datalogger


For maximum automation of data collection, use the HAZ-DUST I Dust Monitor with the optional datalogger to provide data storage, on-screen display of statistics, and a user-selectable alarm threshold. The datalogger includes DustComm Pro Software for PC that provides statistical analysis, graphs, and detailed reports that can be printed for record keeping.

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Performance Profile

Sensing range:	0.01 to 200 mg/m^3
Display:	LCD 3.5 digits mg/m^3 concentration reading
Calibration:	SAE fine test dust compared with NIOSH 0600
Particle size range:	0.1 to 50 μm
Precision:	$\pm 0.02 \text{ mg}/\text{m}^3$
Accuracy:	$\pm 10\%$ to NIOSH 0600
Power:	NiMH rechargeable battery
Operating time:	> 8 hours
Charging time:	10 to 12 hrs
Humidity:	95% non-condensing
Dimensions:	9 x 2.75 x 1.5 in (22.9 x 7.0 x 3.8 cm)
Weight:	1.10 lbs (0.5 kg)
Optional datalogger:	Two-key programmable operation. Real-time clock, display, and user-selectable alarm threshold. Includes software for statistics, graphs, and reports. PC-compatible.
Recording time:	1 sec to 15 mos
Sampling rate:	1 sec, 10 sec, 1 min, 10 min, and 30 min averaging
Signal input:	0 to 2 volt
Output:	RS-232C (9600 baud rate)

Ordering Information

Description	Cat. No.
HAZ-DUST I Monitor includes battery, charger, and carry case 	110-240 V 770-1100
Datalogger , provides data storage, on-screen display of statistics, and user-selectable alarm threshold, includes analog signal cable, computer interface cable, and DustComm Pro Software (<i>printer required for hard copy reports</i>)	770-113
Tripod Stand , adjustable stand and mounting plate for unattended monitoring	770-129
Calibration Standard , light scattering device provides a constant value for verifying calibration	770-102
Zeroing Accessory , for pumping filtered air into a sensor for a zero reading in contaminated environments	770-130
Replacement Battery Pack , NiMH	770-108
Charger , 110-240 V	770-131

 Requires calibration with equipment that is sold separately, see accessories

