

# 831 Aerosol Mass Monitor

Small - Reliable - Affordable



Met One Instruments, Inc.

## Four Mass Ranges (PM1, PM2.5, PM4, PM10)

A mass monitor that simultaneously provides data of four important mass ranges in one minute.

## Handheld Operation

Survey the environment with this extremely portable, size selective mass monitor. This small lightweight instrument is only 28 ounces and is the perfect survey tool for a wide range of applications.

## Simple Operation

Only two front-panel buttons accompany the multifunction rotary scroll wheel to provide simple and efficient operation. Just press and rotate to scroll thru the menu driven platform.

## Sample History

View sample history easily on the display or export data via the USB port using the included software. Unit stores up to 2500 sample events. USB interface provides quick data download and field firmware upgrades.

## Battery Powered

24 hours of typical intermittent operation and up to 8 hours of continuous use. Recharge time is only 2.5 hours. The included AC charger / adapter operates the counter even when the batter pack is discharged.



Figure 1 – Model 831 pictured with optional protective boot

## Applications

Industrial/occupational hygiene	HVAC Applications
Point source location monitoring	Filter Testing
Indoor/Outdoor Air Quality	Mining & Ore Processing
Process Control	Remote Sampling

**Whatever your particular needs,  
The right choice is only natural.**

## Operating Principle

Particle count to mass conversion

## Features

Sample Duration 1 minute  
Data storage 2,500 records  
Display 2-line by 16-character LCD  
Controls 2 button keypad with rotary dial

## Performance

PM Ranges PM1, PM2.5, PM4 and PM10  
Concentration Range 0 – 1,000  $\mu\text{g}/\text{m}^3$   
Resolution 0.1  $\mu\text{g}/\text{m}^3$  (display / serial output)  
Sensitivity 0.5  $\mu\text{m}$   
Accuracy  $\pm 10\%$  to calibration aerosol  
Flow rate 0.1 CFM (2.83 lpm)

## Electrical

Light Source Laser Diode, 780 nm, 40 mW typical  
AC Adapter/Charger AC to DC module, 100 – 240 VAC to 8.4 VDC  
Battery Type Li-ion rechargeable Battery  
Battery Operating Time 8 hours continuous operation  
24 hour intermittent operation  
Battery Recharge Time 2.5 hours typical  
Communication USB Mini B Type

## Physical

Size Height: 6.25" (15.9 cm) Width: 3.63" (9.22 cm)  
Thickness: 2.00" (5.08 cm)  
Weight 1.74 lbs – 28 ounces – (0.79 kg)

## Environmental

Operating Temperature 0° C to +50° C  
Storage Temperature -20° C to +60° C

## Accessories

Supplied Battery charger / adapter  
USB Cable  
Operation manual  
Comet software  
Optional Carrying Case (P/N 8517)  
Protective Boot (P/N 80450)  
Zero Filter Kit (P/N 80846)  
Flow Meter Kit (P/N 80530)