

MET ONE 227A/227B

Handheld Airborne Particle Counters



Easy to use, reliable and flexible handheld air particle counter

Features

- 0.5 micron at 0.1 CFM (227A)
- 0.3 micron at 0.1 CFM (227B)
- User-selectable second channel
- AC or battery operation
- Stores data from 200 locations
- Labels data with location
- Internal rechargeable battery
- Weighs only 0.97 kg (2.1 lbs)
- Compatible with PortAll™ Version 2 software

Applications

- Monitor and verify cleanrooms
- Test filters in place
- Investigate particle sources
- Monitor:
 - Laminar Air Flow (LAF)
 - Biohazard benches
 - Cleanroom laundries
 - HVAC systems
 - Computer rooms
 - Food and beverage packaging
 - Hospital pharmacies, surgery rooms
 - Indoor Air Quality (IAQ)
 - Aerospace assembly
 - Medical device assembly
 - Automotive paint spray booths

The Met One 227 Handheld Airborne Particle Counter features the sensitivity of larger instruments and easy handheld operation. Weighing only two pounds, the 227 features a 0.3 micron sensitivity (227B) or a 0.5 micron sensitivity (227A), and uses reliable laser diode technology.

The Met One 227 counts two sizes of particles; the second size is user-selectable. Configure sample times from one second up to 24 hours. To make the most of its portability, the 227 features several counting modes for quick analysis of cleanroom conditions.

- Concentration mode:** Gives a continuously updated approximation of the number of particles per liter or cubic foot. The approximation is based on a user-selectable sample period of one to ten seconds.
- Auto mode:** Automatically takes a specified number of samples and stops, allowing unattended operation.
- Average mode:** Calculates the average, minimum, and maximum count after a specified number of samples.
- Beep mode:** Sounds a beep each time it counts a specified number of particles.

To protect cleanrooms, the Met One 227 contains an exhaust filter. The pump and sensor are turned off when the battery charge drops below a safe operating level, maintaining power to preserve data stored in memory.

Print results to a remote printer or download data to a computer or facility monitoring system. Use PortAll Version 2 software with the 227 to schedule automated data collection of particle counts. Track and identify trends to eliminate particle contamination sources.



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Performance Specifications

Size Channels	227A	ch1	0.5 µm
		ch2	user selectable—0.7, 1.0, 3.0, or 5.0 µm
	227B	ch1	0.3 µm
		ch2	user selectable—0.5, 1.0, 3.0, or 5.0 µm
Flow Rate	2.83 LPM (0.1 CFM)		
Light Source	Laser diode with 30,000 hours Mean Time to Failure (MTTF)		
Coincidence Loss	Less than 5% at 70,600 particles/L (2,000,000 particles/ft ³)		
Factory Calibration	Mono-dispersed polystyrene spheres (NIST traceable)		
Display	4-line LCD, 7 digits		
Outputs	RS-232C/RS-485 for computer or printer		
Location Labels	100, appear on printout		
Data Storage	200 samples, rotating buffer		
Sample and Hold Times	1 second to 24 hours		
Count Alarms	1 to 9,999,999 each channel		
Concentration Mode	1 second samples, 1 to 10 samples averaged, display updated every second; displays counts/L or counts/ft ³		
Power	AC adapter or internal battery pack		
Battery	Rechargeable NiMH		
Battery Recharge Time	90% in 10 hours; 100% in 12 hours		
Operating Time	8 hours continuous		
Size	10.3 w x 17.5 h x 5.9 d cm (4 x 6.9 x 2.3 inches)		
Weight	0.97 kg (2.1 lbs)		
Environment Operating	12 to 29°C (55 to 84°F), 20 to 95% relative humidity, non-condensing		
Storage	-40 to 70°C (-40 to 160°F), up to 98% relative humidity, non-condensing		
Accessories Included	Isokinetic Probe (direct mount); Purge Filter; Recharger Stand; AC Adapter; Operator Manual		
When ordering, specify	Minimum Sensitivity	0.5 µm (227A) or 0.3 µm (227B)	
	Power (AC)	AC adapters for 100 VAC, 115 VAC, or 230 VAC	
Optional Accessories	Relative Humidity/Temperature Sensor High Pressure Diffuser Printer, external Carrying/Shipping Case PortAll Version 2 Software		

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