New Star Environmental LLC

"Providing Instrumentation for Air Quality"

1 (770) 998 0296

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AeroStar 2000

The AeroStar 2000 is a light-scattering aerosol monitor that combines two separate instruments in one enclosure - a handheld particle counter and a handheld particulate mass concentration air sampler.

A laser diode-based optical sensor allows the AeroStar 2000 to function as both a portable particle counter AND a portable particulate mass monitor. Results are displayed as particles per size range or converted into particle mass.

When used as a particle counter the AeroStar 2000 provides visual real time count information in two channels on the LCD display. After one minute, the AeroStar 2000 totalizes the count information and displays the result in particles per cubic foot for all particles larger than 0.5• and 5.0•.

When used as a particulate mass monitor, the AeroStar 2000 provides a fast indication of particulate mass concentration per cubic foot of sampled air for the most commonly tested particle size fractions: PM1, PM2.5, PM7, PM10 and TSP.

Data records are stored in the on-board memory and can be transported to a PC using the standard supplied software or printed with the optional portable printer. The P/N AS20012 Printer is a complete 40-character wide portable printer with an internal battery & an external AC adapter/charger.

Relative humidity & temperature measurements may be added to the AeroStar 2000 at any time by connecting the P/N AS20010 Relative Humidity / Temperature Sensor to the top of the unit. The screen will now include actual readings of both measurements and the data includes the measurements in each data record.

FEATURES

- Operates as either a particle counter or mass particulate monitor
- Two-channel particle counter - above 0.5 & 5.0-microns
- PM1, PM2.5, PM7, PM10 and TSP mass ranges
- Hand-held portability with highly precise measurements
- Self-contained battery

The AeroStar 2000 is unique from any other instrument operating in one of two modes:

- Particle Counter - Size-based particle counts are displayed as cumulative counts above 0.5 and 5.0 microns.

- Mass Particulate Monitor - Particles are detected, sized and counted in multiple size ranges with particle mass displayed as PM1, PM2.5, PM7, PM10 and TSP. Particle mass is determined using mass-density conversion factors or user-programmable parameters based on unique field conditions.

On-line printing can be provided through the serial communication port and optional Portable Printer. Stored data or real-time records can be printed.

Product ID #:

- view all

Specifications:

Measurement Principle	Optical light-scatter using a laser diode
Light Source	Laser diode, 5 mW, 780 nm
Display	16 Character x 4 line LCD
Keyboard	7 key membrane type
Flow Rate	0.1 cfm (2.83 lpm)
Measurement Range	Counter: two channels - 0.5•m and greater & 5.0•m and greater Mass: PM1, PM2.5, PM7, PM10 and TSP
Accuracy	±10%, to calibration aerosol
Sensitivity	Counter: 0.5•m Mass: 0.1•m
Concentration Limit	Counter: 2,500,000 particles per cubic foot (0.5•m) Mass: 1 milligram @ PM10
Measurement Time	Counter: 1 minute Mass: 2 minutes
Communication	RS-232, 9600 Baud

Software supplied with the monitor creates data files for view or export to EXCEL and other spread sheets.

The optional Relative Humidity/Temperature Sensor may be installed with measurements supplied to the display screen and the on-board data logger.

APPLICATIONS AS A PARTICLE COUNTER

- Clean room monitoring, verification & HEPA filter testing
- Indoor & outdoor air quality studies
- Finding leaks & sources of contamination in air ducts & filtration systems
- Hospitals & nursing homes
- Testing the efficiency of residential air purifiers & vacuum cleaners
- Epidemiological studies
- Re-entrainment studies

APPLICATIONS AS A PARTICULATE MASS MONITOR

- Process control monitoring in quarries, grain elevators & sawmills
- Ore processing plants & mines
- Outdoor & indoor air quality studies
- Finding leaks & sources of contamination in air ducts & filtration systems
- Concerned citizen groups insisting on their own air quality studies
- Fenceline & event monitoring
- Epidemiological studies

Software	Supplied software creates data files for review/ export to EXCEL & other spread sheets
Operating Temperature	32-122°F (0-50° C)
Power	Self-contained battery, 6V NiCd
Dimensions, L x W x D	6.5 x 4 x 2-inches (16.5 x 10 x 5cm)
Weight	26 ounces (0.737kg)
Supplied Accessories	Battery charger/ power supply, isokinetic probe, carrying case, serial cable, screwdriver & software
Optional Accessories	Relative humidity/ temperature sensor & portable printer

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