

E-SAMPLER Aerosol Monitor

A New Standard in Real-Time Aerosol Monitoring

The E-SAMPLER is a comprehensive system that provides both real-time monitoring and filter-based sampling capability. Whatever your monitoring objectives, the E-SAMPLER will provide accurate, dependable and relevant data.

Features

- Aluminum Weatherproof Enclosure
- Programmable Auto Zero & Span
- Integral 47mm Filter
- Adjustable Sample Flow
- Actual Flow Control
- Programmable Inlet Heater
- Sheath-Air Protected Optics
- Auto-Ranging
- 10-Channel Data Logger
- Meteorological Sensor Inputs
- Internal Battery

Dual Technology

The E-SAMPLER combines real-time measurement utilizing light-scatter technology, and the ability to conduct gravimetric and chemical analysis.

Particulate loading on the filter does not reduce the performance of the light-scattering detector. Flow, temperature and pressure parameters are continuously measured, allowing the on-board microprocessor to control the actual sampling rate.

Principle

The E-SAMPLER provides real-time measurement through its near-forward light scattering technique. The on-board sample pump draws air at 1.0 to 3.5 lpm into the sensing chamber. A state-of-the-art detector measures the intensity of scattered light, which is proportional to the particulate concentration.



Applications

The E-SAMPLER is designed to measure particulate levels for a variety of applications, including:

- Ambient Air Monitoring
- Emergency Response Monitoring
- Perimeter Monitoring
- Industrial Hygiene Surveys



Met One Instruments

Maintenance

In addition to the 47mm sample filter, the E-SAMPLER has two internal filters. One protects optical surfaces and the other prevents damage to the flow controller. Both filters are easily accessible from the front panel. Filter life will exceed one year of operation in the harshest of conditions.



A curtain of clean air continuously protects all optical surfaces within the detector. This sheath-air allows the instrument to be used in adverse environments without performance degradation.

Operation

The E-SAMPLE is rugged, portable and easy to use. Initial set-up is simple. Once configured, simply turning the monitor on will begin operation. The unit will continue to operate until user intervention, or the battery has failed.

Auto-Zero and Auto-Span ensure that the data collected will be of the highest quality. Both Zero and Span can be operated manually, or programmed to occur at user specified intervals.

The E-SAMPLER can also be programmed to operate at defined intervals (start / stop times). Other parameters that may be controlled by the user include recording periods and averaging time.

Data Collection and Software

The optional AirPlus software provides communication, data collection and comprehensive report generating capability. This software supports a variety of modems, direct connection and data transfer modules.

Specifications

Ranges:	0.5, 1, 10, 65 mg/m ³
Sensitivity:	0.001 mg/m ³
Sampling Rate:	1 second
Flow Rate:	1 - 3.5 lpm
Accuracy:	8% of NIOSH 0600
Precision:	2% of reading
Auto-Cal Interval:	0.25 - 24 hours
Averaging Period:	0.1 - 60 minutes
Display:	4 x 20 LCD
Outputs:	1, 2.5 or 5 VDC
Serial Port:	RS232
Data Capacity:	12,000 records
Alarm:	Contact Closure
Inlet Heater:	RH Controlled
Power:	12VDC
Consumption:	275mA
Battery Type:	Lead Acid
Battery Life:	40 hours
Operating Range:	-10° to +50° C
Dimensions:	267 x 235 x 145 mm

Standard Equipment

TSP Inlet
Universal Power Supply
Battery Charger
47mm Filter Holder
TUS Software
Output Cable
Instruction Manual

Options & Accessories

PM₁₀, PM_{2.5}, PM₁ Sharp Cut Cyclones
Aluminum Tripod
Wind Speed & Direction Sensor
Ambient RH Sensor
Spare Filter Cartridge
Communication Modems
Weatherproof Power Supply
External Battery Cable
Solar Power Panels
AirPlus Software



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