Met One Instruments

ES-405

SIMULTANEOUS PARTICULATE PROFILER

APPLICATIONS:

- Air Quality Surveillance
- Rapid Source Apportionment Determination
- Emergency Responder Applications
- Near-Roadside Monitoring
- Particulate Emission Studies
- Environmental Clean Up Sites
- Obtain Localized Particulate Data for Community Health & Policy

The ES-405 is a near reference air quality sensor designed to provide accurate real-time measurements of PM_{10}, PM_4, $PM_{2.5}$, and PM_1 particulate concentrations simultaneously. It reports these four key particulate concentrations in both indoor and outdoor environments. The rugged weatherproof enclosure allows use in the harshest environments for reliable continuous outdoor operation, and the inlet heater reduces moisture-related measurement error. The sensor incorporates sheath air to prevent particles from contaminating the internal optics of the sensor. The ES-405 can be wall-mounted or installed on a vertical mast.

All ES-405 Particulate Profilers are manufactured at an ISO-9001 facility. Calibrations are performed to NIST traceable standards.

Data output can be configured as fast as each minute or with longer averaging intervals. Send data directly to the cloud for remote download and analysis with a CCS Modem 2 accessory. External meteorological sensors can be connected to the unit.

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STANDARD ACCESSORIES:

- Weatherproof TSP Inlet with Debris Screen
- External Power Cable
- Mounting Bracket
- USB Cable

Ask About the AQ EAGLE System:

A Preconfigured Air Monitoring Solution Utilizing the ES-405!

Optional Accessories:

- Alarm Contact Closure Can be Used to Signal an External Warning Light, Logic Controller, or Logger Input to Take Action
- CCS Comet Cloud Modem
- AIO 2 Sonic Weather Sensor
- MSO Weather Sensor
- 10' Aluminum Tripod
- RS232 Communication Cable
- RS485 Communication Cable

SPECIFICATIONS

ES-405

Model Number	ES-405
Operation	Right angle light scatter detection, using a laser diode as light source.
Measurement Resolution	0.1 µg/m^3
Number of Mass Channels	4 (PM_1, $PM_{2.5}$, PM_4, PM_{10})
Measurement Range	PM_{10}: 10,000 µg/m^3; $PM_{4.0}$: 4,000 µg/m^3; $PM_{2.5}$: 2,000 µg/m^3; $PM_{1.0}$: 300 µg/m^3
Data Storage Intervals	1, 5, 10, 15, 30, or 60 minutes
Sample Air Flow Rate	1.0 LPM
Sheath Air Flow Rate	1.0 LPM
Flow Control	Active volumetric flow control
Communications Connections	RS-485, RS-232, USB, Optional CCS Modem
Operating Temperature	0° to +50° C
Storage Temperature	-20° to +60° C
Ambient Humidity Range	0 to 95%, non-condensing
User Interface	Menu-driven interface with 4 x 20 character OLED display and dynamic keypad.
Power Supply	Universal 100 - 240 VAC input, 50/ 60 Hz.
Power Consumption	12 VDC. Max operating current 1300 mA.
Alarm Contact	Normally open/ normally closed contact closure relay output. Contact rating 1.0 A @ 30 VDC max.
Closure Weight	8.5 lbs without power supply, 10 lbs with power supply.
Dimensions Communications	Height: 20" Width: 8" Depth: 6"
Protocol	Terminal Command Set, Modbus 7500 Protocol

Specifications are subject to change at any time.

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