Thermo Scientific FH 62 C14 Continuous Particulate Monitor

Continuous, real-time measurement

The Thermo Scientific™ FH 62 C14 Continuous Particulate Monitor measures the mass concentration of suspended particulate matter (e.g., PM Coarse, PM10, PM2.5, PM1 and TSP) and by use of beta attenuation.

- Continuous, real-time measurement by a C14 monitor
- Radon gas activity measurement eliminates interference of natural airborne radioactivity
- Control and data exchange over two serial interfaces possible
- Storage of half-hour average concentrations over a whole year
- Insensitive to vibration and diurnal temperature

In addition, the ambient radioactive influence of natural Radon (Rn-222) gas is measured as a refinement step toward better sensitivity at lower ambient particulate concentrations.

The particulate sample collection area of the FH 62 C14 monitor is located between both the C14 source and the proportional detector.

While ambient particulate matter is being deposited onto a filter tape sample spot, the dynamic filter loading is measured continuously by the attenuation of the C14 source beta rays. As a result, a continuous, real-time measurement of airborne particulate is provided. It is not necessary to move the filter spot from the sample position to the detector position for zero and mass determination.

Additional features of the FH 62 C14 monitor include:

- User selectable reporting of mass concentration based on standard or actual flow rate
- processor-controlled calibration of all sensors.

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Measuring Principle	Continuous and simultaneous particulate collection through beta ray attenuation
Source	Carbonium-14 (C14) < 3.7MBq (<100µCi)
Ranges	0 to 5,000µg/m3 or 0 to 10,000µg/m3
Minimum detection limit	<1 µg/m3 (24-hour average); <4 µg/m3 (1-hour average)
Precision of two monitors	± 2 µg/m3 (24-hour)
Resolution	± 1 µg/m3 (instantaneous)
Correlation coefficiant	R > 0.98
Measurement cycle	Single filter spot in position for 24 hours (default); user selectable 30-minutes to 24 hours
Data averages	Each full 1/2, and 24 hour values automatically stored; each full 1/2, 1, 3 and 24 hour
Air flow rate	1 m3/h (16.67 lpm) measured across an internal subsonic orifice; user selectable from 0 to 20 lpm
Sample Flow Rate	0.6 liters/min.
Operating temperature	-22 to 140°F (-30 to 60°C)
Output	Serial interface RS 232 Analog output: 4-20mA or 0-10V output of concentration (µg/m3)
Power Requirements	Instrument: 100-240V, 50/60Hz, 330W max., 15W without pump or heater Pump: 100-110/100-120V, 50/60Hz or 220/240V, 50/60Hz, 100W
Dimensions	Instrument: 19" (W) x 12.25" (H) x 13" (D) / 483mm (W) x 311mm (H) x 330mm (D) Pump: 8.25" (W) x 8.75" (H) x 4.25" (D) / 210mm (W) x 222mm (H) x 108mm (D)
Weight	Instrument: 50 lbs (22.5 kg) / Pump: 18 lbs (8.16 kg)
Approvals and Certifications	Approved to meet U.S. EPA Equivalent PM10 Method (EQPM-1102-150) and the CARB California Approved Sampler (CAS) for PM10 and PM2.5

Additional Information

Optional Accessories

- Adjustable tube heaters
- Analog I/O expansion board
- TSP or PM10 Inlets
- Mass & Flow Rate calibration Kkits
- WINS Impactor, Sharp-Cut Cyclone & Very Sharp-Cut Cyclone for PM2.5

To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your air quality equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific products.

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This product is manufactured in a plant whose quality management system is ISO 9001 certified.

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