

Thermo Scientific Speciation Sampler, Partisol[®] 2300

Air sampling system for the collection of gaseous and particulate atmospheric species



Key Features

- Flexible sequential (12-channel) unit with Partisol-style user interface
- ActiVol[™] flow control with 4 flow controllers; straight flow path
- PM-2.5 & PM-10 impactors ensure sharp size cut point similar to FRM
- Programmable flows (up to 18 l/min)
- Base (4-Channel) and flexible sampling platform configurations available

The Thermo Scientific Speciation Sampler, Partisol-2300 provides a convenient and flexible means of collecting atmospheric species in gaseous and particulate form for later analysis in a laboratory. The system incorporates the well-characterized ChemComb Speciation Cartridges developed and patented by Harvard University.

The system is available in a basic 4-channel and sequential 12-channel speciation configurations. Both versions contain four individual mass flow controllers that actively maintain a constant volumetric sampling flow rate, and can be operated either as single-day or sequential samplers

In four-channel systems, channels may be operated in groups of four, two or one. Up to four channels may be operated

concurrently at a flow rate of up to 16.7 l/min (1 m³/h).

In the twelve-channel configuration, sampling channels may be defined as three groups of four, three groups of three, six groups of two, or twelve groups of one.

The sampler measures, averages and stores the ambient temperature, pressure and relative humidity. In addition, it contains a connection for an optional wind vane/anemometer and three additional analog inputs for capturing other externally-generated data.

The Partisol Speciation Sampler complies with the USEPA performance requirements for the chemical speciation of PM-2.5.

Product Specifications

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 air quality products.

Speciation Sampler, Partisol-2300

Regulatory Designations	Meets the USEPA PM-2.5 speciation sampler requirements for the agency's national PM chemical speciation sampling network.
Safety/Electrical Designations	Designed to meet the following safety and electrical designations: CE: EN61326:1997 (Emissions and Immunity), EN61010-1:1995 (Safety) ETL: UL- and CSA-equivalent approval
System Configurations	Basic 4-channel configuration: This version of the sampler is usually set up to operate all four of its flow channels during a single interval, although it can also be defined to operate sequentially as two groups of two channels or four groups of one channel
Advanced 12-channel configuration	This version of the sampler is usually set up as three groups of four flow channels, allowing a different group to be run on each day of operation. Flow channels can also be configured as three groups of three, six groups of two, or twelve groups of one. Sequential sampling with the above 4- and 12-channel units can be either time-based, or triggered by meteorological or external input. Flexible Sampling Platform (FSP) configuration: This 12-channel version of the sampler contains 12 modular push-to-connect fittings to support a wide variety of sampling applications.
Sample Collection Media and Placement	In the 4-channel and sequential 12-channel configurations, the sampler houses ChemComb Speciation Sampling Cartridges for the collection of gaseous and/or particulate matter-related species.
Internal Data Storage	Interval Data (every 5 minutes), Input Data (stored at user-defined interval) and Filter Data (one record for each ChemComb Cartridge exposed). This stored information may be viewed on the display and retrieved through the RS232 interface. The sampler has the following capacities: <i>16 days of Interval Data (stored every 5 minutes)</i> <i>32 days of Input Data (stored every 30 minutes, default)</i> <i>50 Filter Data records</i>
Data Input and Output	Keypad/display for data retrieval and user programming. RS232 interface for data retrieval and remote operation. Supports advanced bidirectional AK Protocol and RPCOMM software. 3 user-defined analog outputs (0-5 VDC) for data logging. 2 user-defined TTL alarm outputs. Wind vane/anemometer connection with 15 VDC power output and 2 0-5 VDC inputs for wind speed and direction. 3 averaged analog inputs (0-5 VDC) with conversion to engineering units (in addition to wind speed and direction above). RS485 interface for connection with other Thermo Scientific devices.
Meteorological Features	The sampler always stores the following meteorological information in each record of Input Data and Filter Data: average ambient temperature, average ambient pressure, average ambient relative humidity. With an optional wind vane/anemometer connected to the unit, the following data are also stored in each record of Input Data and Filter Data: average wind speed, average wind velocity (vector averaged), average wind direction (vector averaged) per second.
Operating Range, Dimensions & Power Requirements	Temperature: -30 to +50 °C. Dimensions (enclosure only): 28.2" (71.6 cm) W x 19.7" (50.0 cm) H x 15.0" (38.1 cm) D. Height of rack above enclosure: 27" (68.6 cm). Weight: 160 lb (73 kg). Stand (top): 30.8" (78.2 cm) W x 27.1" (68.8 cm) H x 14.0" (35.6 cm) D. Stand (footprint): 42.0" (106.7 cm) W x 18.1" (46.0 cm) D. Power Requirements: 15 A @ 120 VAC, 7.5 A @ 240 VAC.

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

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