

Hand-Held Monitor/Data Logger

Thermo Scientific pDR-1500 personal DataRAM

The Thermo Scientific pDR-1500 personal DataRAM is a fully integrated, active sampling personal scale instrument with greater accuracy, increased capabilities, low size and weight, maximum ease-of-use and increased operating time.

The pDR-1500 personal DataRAM accurately measures aerosol concentration in real-time, with relative humidity compensation, true volumetric flow control and legacy pDR nephelometry. An integrated sample filter enables post-gravimetric validation of data.

FEATURES

- True volumetric flow control
- Interchangeable cyclones for higher accuracy cut points
- Personal aerosol instrument with benchtop performance
- Full compensation for environmental variables
- Suitable for NIOSH Methods 0500 and 0600t

ACCESSORIES & OPTIONS

Standard Accessories

The pDR-1500 is provided to the user with the following standard accessories:

- Universal power supply cable
- RS-232 communications cable
- USB communications cable
- pDR Port Software CD ROM
- Belt clip kit
- Total particulate inlet
- 8 alkaline batteries
- 2 ea. stainless steel filter support and holder assembly*
- 1pk/100 37-mm glass fiber filters*
- Zeroing/recirculation tubing
- Zeroing filter
- Instruction manual

*One of each is installed in the instrument at the time of shipping.

Optional Accessories

The pDR-1500 is available with the following options:

- Red Cyclone – provides an ACGIH traceable D50 AED cut point ranging from 3 to 12 micrometers
- Blue Cyclone – provides an ACGIH traceable D50 AED cut point ranging from 1 to 4 micrometers
- 5 Micron PVC Filters – for NIOSH gravimetric methods (use glass fiber filters, as backing filter)
- Stainless Steel Filter Support Screen
- Carrying Case
- Analog Data Cable – supporting both concentration output and alarm status
- Tripod Support Kit



APPLICATIONS

- Site Remediation
- Size Discrimination
- Mass Validation
- Exposure Modeling
- Protection of Asthma Patients

CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205

(303) 320-4764 • **(800) 833-7958** • FAX (303) 322-7242

email: sales@geotechenv.com website: www.geotechenv.com

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SPECIFICATIONS

Concentration Measurement Range	0.001 to 400 mg/m ³ range (auto ranging) ¹
Scattered Coefficient Range	1.5 x 10 ⁻⁶ to 0.6 m ⁻¹ (approx) @ lambda= 880nm (not displayed)
Precision/Repeatability Over 30 days	±2% of reading or ±0.005 mg/m ³ , whichever is larger, for 1 second (2-sigma) ² averaging time ±0.5 of reading or ±0.0015 mg/m ³ , whichever is larger, for 10 second averaging time ±0.2% of reading or ±0.0005 mg/m ³ , whichever is larger, for 60 second averaging time
Accuracy¹	±5% of reading ±precision (traceable to SAE Fine Test Dust)
Resolution	0.1% of reading or 0.001 mg/m ³ , whichever is larger
Particle Size Range of Max. Response	0.1 to 10 µm
Flow Rate Range	1.0 to 3.5 liters/minute
Aerodynamic Particle Cut-Point Range	1.0 to 10 µm
Concentration Display Updating Interval	1 second
Concentration Display Averaging Time³	1 to 60 seconds (user selectable)
Data logging Averaging Periods³	1 second to 1 hour
Total # of Data Points That Can Be Logged in Memory	>500,000
Number of Data Tags	99 (maximum)
Logged Data	Averaging concentration, temperature, RH, barometric pressure, time/date, and data point number
Readout Display	LCD 16 characters (4 mm height) x 2 lines
Serial Interface	USB/RS-232, 19, 200 baud
Computer Requirements	IBM-PC compatible, Pentium I or higher processor, Windows 95® or higher, 32 MB RAM, 10 MB hard disc drive, CD drive, VGA or higher resolution monitor
Real Time Analog Signal	0 to 5V and 4 to 20 mA. Selectable full scale ranges of: 0 - 0.1, 0 - 0.4, 0 - 1.0, 0 - 4.0, 0 - 10, 0 - 40, 0 - 100, and 0 - 400
Internal Battery Run Time	4 AA alkaline, >24 hr run time, 5 V peak-to-peak @ 1.2 L/min; > 6 hour @ 3.5 L/min
Run Time @ 25°C	Run time may vary with temperature
Current Consumption	70 to 450 mA (in Run Mode); 32 mA (in Ready Mode)
Operation Environment	-10° to 50°C (14° to 122°F), 10 to 95% RH, non-condensing
Storage Environment	-20° to 70°C (-4° to 158°F)
Dimensions (Maximum External)	181 mm (7.1in) H X 143mm (5.6in) W x 84mm (3.3in) D
Weight	1.2kg (41oz.)

Notes:

1. Referred to gravimetric calibration with SAE Fine (ISO Fine) test dust (mmd = 2 to 3 µm, g = 2.5, as aerosolized).
2. At constant temperature and full battery voltage.
3. User selectable.

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