

SIDEPAK™ PERSONAL AEROSOL MONITOR MODEL AM510

The SidePak™ AM510 Personal Aerosol Monitor for industrial hygiene and safety professionals displays and data logs aerosol concentration in real time. The rugged, belt-mountable laser photometer is compact and quiet, minimizing interference and worker discomfort. The built-in sampling pump lets you attach a wide variety of size-selective aerosol inlet conditioners for breathing zone or area measurements with a respirable cyclone or one of the three integrated impactors.



The SidePak AM510 monitor incorporates TSI's Smart Battery Management System™ technology. This system utilizes a built-in "gas gauge" in the battery packs to monitor battery condition and provide precise run time information.

Applications

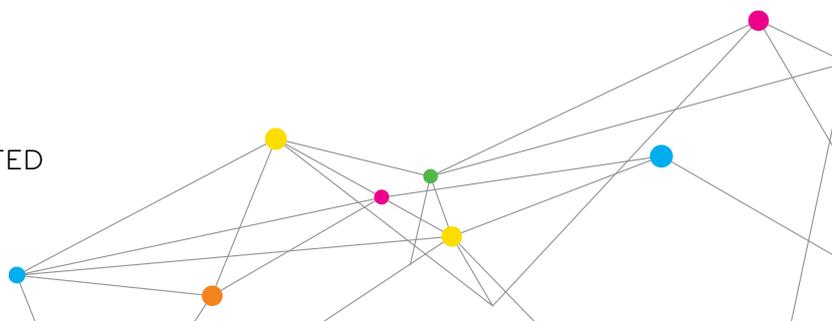
- + Personal Exposure monitoring/IH studies
- + Ambient/work area monitoring
- + Trending/screening
- + Engineering studies
- + Epidemiology health studies
- + Environmental sampling

Features and Benefits

- + Intrinsically safe (CSA Approval) for use in hazardous environments (see model and battery specific information)
- + Multiple battery options including 1650 mAH, 2700 mAH NiMH battery packs or a 6-cell, AA-size battery pack
- + Precise run time information in minutes remaining
- + Integrated pump allows use of size-selective aerosol inlet conditioners
- + Built-in impactors: for 1.0, 2.5, 10-micron cut off
- + 10-mm Dorr-Oliver cyclone for respirable sampling
- + Real-time concentrations (mg/m^3) and TWA during sampling
- + Statistics functions: max, min, and average readings, elapsed time and 8-hour TWA
- + TrakPro™ Data Analysis Software



UNDERSTANDING, ACCELERATED



The SidePak AM510 monitor's easy-to-read display shows your data as both real-time aerosol mass-concentration and 8-hour time-weighted average (TWA). With its convenient data logging and long battery life, the AM510 is also ideal for extended sampling. The easy-to-use TrakPro Data Analysis Software lets you create effective graphs and reports.

User Friendly

- + Small, lightweight and quiet to maximize worker acceptance
- + Rugged design with secure belt clip
- + Easy-to-understand user interface with only four keys
- + Lockable keypad prevents tampering while sampling
- + User-adjustable sample flow rate
- + Define, label and store multiple calibration constants
- + Easy-to-read LCD display
- + Convenient, threaded tripod socket accommodates area sampling

Advanced Features

- + Smart Battery Management System provides precise run time information, maximizes battery capacity and speeds charging
- + Integrated pump allows use of size-selective aerosol inlet conditioners
- + Built-in impactors let you choose "none," 1.0, 2.5 or 10-micron cut off
- + 10-mm Dorr-Oliver cyclone for respirable sampling
- + Display shows real-time concentrations (mg/m^3) and "on-the-fly" TWA as you data log
- + Display statistics: max, min and average readings, elapsed time and 8-hour TWA

Quick and Easy Reports

- + Convenient preprogramming for occupational exposure sampling
- + Data log for long periods and store multiple tests
- + Analyze data, print graphs and create reports with TrakPro Data Analysis Software
- + USB port lets you conveniently connect to your computer

Power to Spare

- + Long-lasting NiMH rechargeable battery packs eliminate "memory" issues
- + Choice of rechargeable NiMH smart battery packs or AA-cell pack



**Model AM510
SidePak Personal Aerosol Monitor**

Sensitivity

Sensor Type 90° light scattering,
670 nm laser diode
Aerosol Concentration Range 0.001 to 20 mg/m³
(calibrated to respirable
fraction of ISO 12103-1,
A1 test dust)
Particle Size Range 0.1 to 10 micrometer (µm)
Minimum Resolution 0.001 mg/m³
Zero stability ±0.001 mg/m³ over 24 hours
using 10-second time-constant
Temperature Coefficient Approximately +0.0005 mg/m³ per
°C (for variations from temperature
at which instrument was
last zeroed)

Flow Rate

Range User-adjustable, 0.7 to 1.8
liters/min (L/min)

Temperature Range

Operating Range 32 to 120°F (0 to 50°C)
Storage Range -4 to 140°F (-20 to 60°C)

Operational Humidity

0 to 95% RH, non-condensing

Time Constant (LCD display)

Range User-adjustable, 1 to 60 seconds

Data Logging

Data Points Approx. 31,000
Logging Interval User-adjustable, 1 second to 1 hour

User-Select Calibration Factors

Factory Setting 1.0 (non-adjustable)
User-defined Settings 3, with user-defined labels
Range 0.1 to 10.0, user-adjustable

Physical

External Dimensions 4.2 x 3.7 x 2.8 in. (106 x 92 x 70
mm) with 801723, 801724, 801729
or 801743 battery 5.1 x 3.7 x 2.8
in. (130 x 92 x 70 mm) with
801708, 801722, 801728, 801735,
or 801736 battery
Weight 16 oz (0.46 kg) with 801723,
801724, 801729 or 801743 battery
19 oz (0.54 kg) with 801708, 01722,
801728, 801735, or 801736 battery
Display 2 line x 12 character LCD
Tripod Socket 1/4-20 female thread

Power Supply/Charger (P/N 2613210)

Input Voltage Range 100 to 240 VAC, 50 to 60 Hz
Output Voltage 9 VDC @ 1.0 A

Maintenance

Factory Clean/Calibrate Recommended annually
User Zero Calibration Before each use
User Flow Calibration As needed

Communications Interface

Type USB 1.1
Connector, Instrument USB Mini-B (socket)

**Minimum Computer Requirements for
TrakPro™ Data Analysis Software**

Communications Port Universal Serial Bus (USB)
v 1.1 or higher
Operating System Microsoft Windows® XP, or 7
(32-bit or 64-bit) operating systems

Battery Performance

Battery Options	Charge Time (hrs)*	Intrinsic Safety Rating	Run Time (hrs @ 1.7 L/min)
1600 mAh NiMH Pack, 4.8 V (P/N 801723)	3.0	No	7.1
1650 mAh NiMH Pack, 4.8V (P/N 801724, 801729 or 801743)	3.5	CSA**	7.5
2700 mAh NiMH Pack, 4.8 V (P/N 801722 or 801728)	5.5	No	12.0
2700 mAh NiMH Pack, 4.8 V (P/N 801735)	5.5	No	12.0
6-Cell AA-size Alkaline Pack*** (P/N 801708 or 801736 with six user-supplied AA cells)	N/A	No	22.5

*Of a fully depleted battery

**All dust plugs and dust gaskets must be installed.

***Using Energizer AA-size, E91 alkaline batteries.

Battery Level Indicator

The Smart Battery Management System™ technology utilizes a built-in “gauge” in the SidePak™ battery packs. The gauge monitors battery capacity and calculates run time information by dividing capacity of the battery (mAh) by the instantaneous current consumed by the instrument (mA). This calculation is correct for current operating conditions and can change due to current (mA) consumption or changes in battery capacity.

SPECIFICATIONS

SIDEPAK™ PERSONAL AEROSOL MONITOR MODEL AM510

APPROVALS

Intrinsic Safety Rating Information

(All dust plugs and dust gaskets must be installed)

TSI Battery Pack P/Ns: 801722, 801724, 801728, 801729 or 801743

INTRINSICALLY SAFE CSA (only)

Exia

Class I Groups A, B, C, D

Class II Groups E, F, G

Class III

T2A with 801724, 801729 or 801743

T2C with 801722 or 801728

File: 200507



0344

Immunity	EN61326-1:1997 + A11998 Clause 6
Emissions	EN61326:1997 + Amendment A1:1998

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TSI Incorporated - Visit our website www.tsi.com for more information.

USA	Tel: +1 800 874 2811	India	Tel: +91 80 67877200
UK	Tel: +44 149 4 459200	China	Tel: +86 10 8251 6588
France	Tel: +33 4 91 11 87 64	Singapore	Tel: +65 6595 6388
Germany	Tel: +49 241 523030		