SIDEPAK™ AM510 Personal Aerosol Monitor

Intrinsically Safe

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

The SIDEPAK monitor's easy-to-read display shows your data as both real-time aerosol mass-concentration and 8-hour time-weighted average (TWA). The monitor's intrinsic safety rating makes it ideal for hazardous/explosive environments. With its convenient data logging and long battery life, the SIDEPAK 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
- 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 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

TSI®

Specifications

SIDEPAK AM510 Personal Aerosol Monitor

Sensitivity

Sensor Type	90° light scattering, 670 nm laser diode
Aerosol Concentration Range	0.001 to 20 mg/m^3 (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/m^3
Zero stability	±0.001 mg/m^3 over 24 hours using 10-second time-constant
Temperature Coefficient	Approximately +0.0005 mg/m^3 per °C (for variations from temperature at which instrument was last zeroed)

Flow Rate

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

Temperature Range

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

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 Dimensions	106 mm × 92 mm × 70 mm (4.2 in. × 3.7 in. × 2.8 in.) with 801723, 801724 or 801729 batteries 130 mm × 92 mm × 70 mm (5.1 in. × 3.7 in. × 2.8 in.) with 801708, 801722, 801728 or 801736 batteries
Weight	0.46 kg (16 oz) with 801723, 801724 or 801729 batteries 0.54 kg (19 oz) with 801708, 801722, 801728 or 801736 batteries
Display	2 line × 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

Specifications are subject to change without notice.
Windows is a registered trademark of Microsoft Corporation.
Energizer is a registered trademark of Eveready Battery Company, Inc.

Maintenance

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

Battery Performance

Battery Options	Charge Time* (hrs)	Safety Rating	Run Time (hrs @ 0.7 lpm)	Run Time (hrs @ 1.7 lpm)
1600 mAH NiMH Pack, 4.8 V (P/N 801723)	TBD	ATEX**	TBD	TBD
1650 mAH NiMH Pack, 4.8 V (P/N 801724 or 801729)	3.5	CSA**	11.5	9.2
2700 mAH NiMH Pack, 4.8 V (P/N 801722 or 801728)	5.5	CSA**	19.8	15.6
6-cell AA-size Alkaline Pack***, (P/N 801708, 801736 with six user-supplied AA cells)	NA	NA	29.6	22.5

TBD–Currently under evaluation.   ** All dust plugs and gaskets must be installed.
* Of a fully depleted battery   ***Using Energizer® AA-size, E91 alkaline batteries.
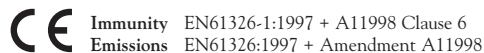
Communications Interface

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

Minimum Computer Requirements for TRAKPRO Software

Communications Port   Universal Serial Bus (USB) v1.1 or higher
Operating System   Microsoft Windows® 98, Me, 2000, XP (USB not supported in Windows 95 or NT)

Approvals
Intrinsic Safety
Rating Information

TSI Battery Pack P/Ns: 801722, 801724, 801728 or 801729
INTRINSICALLY SAFE CSA
Exia
Class I Groups A, B, C, D
T2A with 801724 or 801729
T2C with 801722 or 801728
Class II Groups E, F, G
Class III
File: 200507
TSI Battery Pack P/N: 801708 or 801736
NOT INTRINSICALLY SAFE

TSI Incorporated
500 Cardigan Road
Shoreview, MN 55126-3996
Made in USA

Type: AM510
This instrument with TSI
Battery Pack PN 801723

CE 0344

Ex II 1 G
EEx ia IIC T2
LCIE 05 ATEX 6134

DO NOT REMOVE BATTERY
IN A POTENTIALLY
EXPLOSIVE ATMOSPHERE

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