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 (21 days logging once per minute)
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	106 mm × 92 mm × 70 mm (4.2 in. × 3.7 in. × 2.8 in.) with 801724 battery 130 mm × 92 mm × 70 mm (5.1 in. × 3.7 in. × 2.8 in.) with 801722 or 801708 battery
Weight	0.46 kg (16 oz) with 801724 battery 0.54 kg (19 oz) with 801722 battery 0.54 kg (19 oz) with 801708 battery
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
Battery charge time	6.5 hours

Specifications are subject to change without notice.
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Maintenance

Factory clean/calibrate	Recommended annually
User zero calibration	Before each use
User flow calibration	As needed

Battery Information

Battery Option	Charge Time*	Intrinsically Safe
1650 mAH NiMH Pack (P/N 801724)	3.5 Hours	Yes**
2700 mAH NiMH Pack (P/N 801722)	5.5 Hours	Yes**
6-Cell AA-size Pack (P/N 801708)	NA	No

* Of a fully depleted battery
** All dust plugs and gaskets must be installed.

Typical Battery Life

Battery Pack	Cell Type	Hours @ 0.7 lpm	Hours @ 1.7 lpm
1650 mAH NiMH Pack (P/N 801724)	NiMH (4.8 V, 1650 mAH)	11.5	9.2
2700 mAH NiMH Pack (P/N 801722)	NiMH (4.8 V, 2700 mAH)	19.8	15.6
6-Cell AA-size Pack (P/N 801708, with six user-supplied AA cells)	AA Alkaline Cells	29.6	22.5
	AA NiMH Cells (1600 mAH per cell. Cells cannot be charged while inside AA Pack)	8.8	6.7

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

	TSI Battery Pack P/Ns: 801722 or 801724
Intrinsic Safety	INTRINSICALLY SAFE CSA
Rating Information	Exia Class 1 Groups A, B, C, D T2A with 801724 T2C with 801722 File: 200507 TSI Battery Pack P/N: 801708 NOT INTRINSICALLY SAFE

CE

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

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