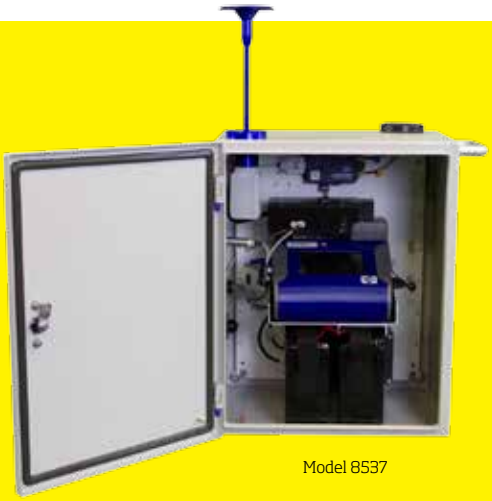
DUSTTRAK™ AEROSOL MONITOR ENVIRONMENTAL ENCLOSURE MODELS 8535 AND 8537

The DustTrak™ II and DRX Aerosol Monitor Models 8530, 8530EP, 8533 and 8533EP are portable, battery-operated, laser-photometers that measure and record airborne dust concentrations. The DustTrak Aerosol Monitors have custom-designed, waterproof Environmental Enclosure Models 8535 and 8537 for added security and protection. Primarily for use in outdoor applications, the enclosures are also advantageous for use in indoor industrial applications to provide a secure method of deploying the DustTrak Aerosol Monitor and optional accessories.

Model 8535



Model 8537

Features and Benefits

+ 360° omni-directional sampling inlet specifically designed to sample efficiently in a broad range of wind conditions
+ Water trap that prevents precipitation from entering the instrument
+ Optional accessories
  - Internal Battery System
  - Heat Shield
  - Solar Power System
  - GSM/GPS communication modem
  - Heated Inlet Sample Conditioner

Applications

+ Outdoor environmental monitoring
  - Fugitive emissions monitoring
  - Site perimeter monitoring
  - Fence-line monitoring
  - Dust control operations
  - Environmental research studies
+ Construction sites
+ Harsh industrial environments
+ Urban pollution studies

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DustTrak Aerosol Monitor Environmental Enclosure		
		
Available Optional Accessories	**Model 8535**	**Model 8537**
	Portable, polypropylene weatherproof case	Weatherproof NEMA 3R rated metal case
Internal Battery System	P/N 801807	
Heated Inlet Sample Conditioner	P/N 801850 (with Autozero module) P/N 801851 (without Autozero module)	
GSM/GPS Communication Modem (Netronix™ Thiamis™)	P/N 801901	P/N 801900
Heat Shield	P/N 801810	P/N 801846
Solar Power System	P/N 801811	
Built-in Survey Tripod Mounting Plate	Included	N/A
Pole Mounting Kit	N/A	P/N 801844

Optional Accessories

Cloud Data Management System

TSI partners with Netronix to provide the most comprehensive turnkey remote dust monitoring solution on the market. Using purpose-built telemetry hardware along with the Netronix Thiamis, the DustTrak Aerosol Monitor Models II/DRX can constantly stream data from the field to be hosted on the Netronix Cloud. The data can be accessed on demand anytime, anywhere – with the ability to auto-send alert notifications direct to email inbox and SMS text messages.

TSI DustTrak Aerosol Monitor in Environmental Enclosure
Real-time, data logging instrument configured with telemetry hardware enclosed in protective case.

Netronix Thiamis GSM/GPS Communication Modem
Remote monitoring unit with built-in GSM modem and GPS that connects the DustTrak to the Netronix Cloud.

Netronix Cloud
A network of data centers that offer reliable and secure operation of the remote monitoring service.

Netronix Environet™ Communication Management System
Comprehensive web-based application for data analysis and monitoring. Monthly access fees apply. Features include:

+ Real-time data analysis
+ Accessible anytime, anywhere from any internet enabled device
+ Sophisticated alert monitoring with email and SMS text messaging notifications
+ Google™ Maps display for instrument pinpointing

Heated Inlet Sample Conditioner

Heated Inlet Conditioning Module plugs into the Autozero Module atop the DustTrak Aerosol Monitor to condition sample to select humidity level.

Internal Battery System

Provides continuous power to the DustTrak Aerosol Monitor and the wireless radio modems when dedicated AC power is not available, allowing 24/7 operation. Includes two 22 Ah lead acid batteries (charge one while using the other) and battery charger with universal line cord.

Heat Shield

Custom metal cover to shield the enclosure from solar radiation (includes mounting hardware).

Solar Power System

Provides continuous power to the DustTrak Aerosol Monitor and the wireless radio modems when dedicated AC power is not available. Works is conjunction with the internal battery system to aid in autonomous 24/7 operation. Includes two solar panels with stand, weatherproof battery and charge regulator enclosure, charge regulator, extended-life lead acid battery and DC power cable.

Pole Mounting Kit

Includes bracket, hardware and mounting straps to attach environmental enclosure to a fixed pole ranging 4"- 6" in diameter.

SPECIFICATIONS

DUSTTRAK™ AEROSOL MONITOR ENVIRONMENTAL ENCLOSURE MODELS 8535 AND 8537

Sampling Conditions

Wind Speed	0 to 22 mph (0 to 36 kph)
Operating Temperature	32 to 120°F (0 to 50°C)
Storage Temperature	-4 to 140°F (-20 to 60°C)

Physical (Model 8535)

External Dimensions (H x W x D)	8.1 x 16.9 x 20.6 in. (21 x 43 x 52 cm)
Weight (with Internal Battery System and DustTrak)	38 lb (17 kg)

Physical (Model 8537)

External Dimensions (H x W x D)	20 x 16 x 12 in. (50.8 x 40.6 x 30.5 cm)
Weight (enclosure only)	36 lb (16.3 kg)
Weight (with battery system, DustTrak EP, Heated Inlet, Modem)	76 lb (34.5 kg)

INTERNAL BATTERY SYSTEM

Power Requirements

Internal Battery Pack	12 VDC, 22 Ah

Battery Run-time

DustTrak II/DRX with External Pump	21 - 24 hours (typical)
DustTrak II/DRX EP & Heated Inlet	approx. 15 hours
Dual Battery Wiring Harness	Run-time is typically twice the time #801817, two 22Ah quoted for a single battery pack battery packs #801808

Battery Charge Time

8-9 hours at 72°F (22°C) (New battery, deep discharge to 95% charge)

SOLAR POWER SYSTEM

Power Requirements

Solar System Run-time sunlight)	Continuous (with adequate
Rated Power	80 x 2 watts
Power Tolerance	±5%
Nominal Voltage	12 volts
External Battery Pack	12 VDC, 100 Ah
Battery Run-time	90 to 120 hours (typical)
Battery Charge Time	<10 hours at 72°F (22°C) (New battery, deep discharge to 95% charge, with adequate sunlight)
Operating Temperature	32 to 120°F (0 to 50°C)
Storage Temperature	-4 to 140°F (-20 to 60°C)

Physical (Solar Panels)

Dimensions (H x W x D)	2 x 43 x 48 in. (5 x 109 x 122 cm)
Weight	34 lb (15.3 kg)

Physical (Battery and Case)

Dimensions (H x W x D)	8.5 x 15.3 x 17 in. (22 x 39 x 43 cm)
Weight	85 lb (38.3 kg)

HEATED INLET SAMPLE CONDITIONER

Power Consumption	12 VDC, 13 watt
Operating Conditions	Indoor/outdoor use Temperature 0 to 50°C (32 to 122°F) 2,000 m (6,561 ft.) Humidity: 5-95% Rh, non-condensing Pollution degree II Overvoltage degree II
Storage Temperature	-20 to 60°C (-4 to 140°F)
Dimensions	7.6 x 3.5 x 2.3 in. (19.3 x 8.9 x 5.8 cm)
Weight	approx. 1 lb (454 g)
Warm-up Time	17 minutes
Settings	30%/40%/50% Rh

GSM/GPS COMMUNICATION MODEM

Quad-band EGMS	850/900/1800/1900 MHz
Output Power	Class 4 (2W) @ 850/950 MHz Class 1 (1W) @ 1800/1900 MHz
Sensitivity	-107 dBm (typ.) @ 850/900 MHz -106 dBm (typ.) @ 1800/1900 MHz
GPRS	Class 10
Antenna	SMA male connector
SIM Card	Pre-installed

GPS

Sensitivity	-159 dBm (indoor operation)
Accuracy	<2.5 m (8 ft.)
Channel	20
SBAS Support	WAAS and AGNOS
Correlators	>200,000
Antenna	SMB jack connector
Input Voltage	6-24 VDC
Current Consumption	50mA
Operating Temp	-30 to 75°C (-22 to 167°F)
Humidity Range	0-85% non-condensing
Clock	Real Time
Memory	4 MB (up to 16 MB)
Digital ports	RS-485, RS232, (3 multiplexed), SDI-12
DeltaPort	Expansion port for Analog and Digital I/O Module
Dimensions (L x W x H)	5.1 x 2.72 x 1 in. (13.0 x 6.9 x 3.0 cm)

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