TSI
® **Knowledge Beyond Measure.**

DustTrak™ Aerosol Monitor Environmental Enclosure

Model 8535

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 a custom-designed, waterproof Environmental Enclosure Model 8535 for added security and protection. Primarily for use in outdoor applications, the enclosure can be advantageous for use in indoor industrial applications to provide a secure method of deploying the DustTrak Aerosol Monitor and optional accessories.

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
  - Cloud Data Management System
  - 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

DustTrak™ Aerosol Monitor Environmental Enclosure

Available Optional Accessories	Model 8535
	Portable, polypropylene weatherproof 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
Heat Shield	P/N 801810
Solar Power System	P/N 801811
Built-in Survey Tripod Mounting Plate	Included
Pole Mounting Kit	N/A

Shown with Solar Power System

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.

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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)

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 #801817, two 22Ah battery packs #801808	Run-time is typically twice the time quoted for a single battery pack

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	Continuous (with adequate sunlight)
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)

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

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