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, weatherproof Environmental Enclosure Model 8535 for making the same accurate and precise measurements outdoors.



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

Features and Benefits

- + Optional accessories
 - Internal Battery System
 - Heat Shield
 - Solar Power System
 - Wireless Radio Modem
- + 360° omni-directional sampling inlet specifically designed to sample efficiently in a broad range of wind conditions
- + Mount enclosure to a standard survey tripod equipped with a 5%"-11 threaded stud
- + Water trap that prevents precipitation from entering the instrument
- + Rugged enclosure provides a secure method of deploying the DustTrak Aerosol Monitor and its accessories



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Any Environment, Any Application

The DustTrak Environmental Enclosure Model 8535 can be used in conjunction with a DustTrak Aerosol Monitor for many different applications. While its primary use is in outdoor applications, it may also be advantageous in indoor industrial applications to provide additional security and protection for the instrument. The enclosure should be set up in a location where it can easily sample the aerosols of interest. It should be placed away from obstructions which may affect wind currents. The sampling inlet on the Environmental Enclosure samples most efficiently from 0 to 22 mph (0 to 36 kph).



Optional Accessories

Internal Battery System–this internal power system will provide continuous power to the DustTrak Aerosol Monitor and the wireless radio modems when dedicated AC power is not available, allowing autonomous, 24-hour operation of the DustTrak Environmental Enclosure. This optional accessory is supplied with two batteries, allowing one battery to be charged while the other is in operation. It includes; two 22 Ah lead acid batteries, and battery charger with universal line cord.

Heat Shield—is mounted directly to the top of the Environmental Enclosure and is for use in applications where the enclosure needs to be shielded from direct sunlight.

Solar Power System-is an external power system that provides continuous power to the DustTrak Aerosol Monitor and wireless radio modem when dedicated AC power is not available for remote, long-term unattended sampling applications. It will power all equipment and charge the external battery during the daytime, and then automatically switches to battery power during the night or in low-light conditions. It includes; two solar panels with stand, weatherproof battery and charge regulator enclosure, charge regulator, extended-life lead acid battery, and DC power cables.

Wireless Radio Modem–provides for two-way communications between the DustTrak II or DRX aerosol monitor using TrakPro™ Data Analysis Software. You can set up and program your DustTrak II or DRX Aerosol Monitor for remote sampling and retrieve data remotely using this new system. It includes; wireless radio (922 MHz or 2.4 GHz) modems for computer and instrument (sold separately), USB cable, dipole antenna, modem configuration software CD, and manual.

TO ORDER

Model 8535 DustTrak Environmental Enclosure Specify Description

8535 Weatherproof Case with Survey Tripod Mount 360° Omni-directional Sampling Inlet, Water Trap Bottle, internal equipment bracket with VELCRO® brand Straps, Dust Caps, Tubing, Plug, O-rings, and external weatherproof AC/DC Power Supply.

Optional Accessories

Specify	Description
801807	Internal Battery System
801810	Heat Shield
801811	Solar Power System
801820	922 MHz Modem with Antenna Mount
	for Enclosure
801821	922 MHz Computer Modem
801825	2.4 GHz Modem with Antenna Mount
	for Enclosure
801826	2.4 GHz Computer Modem
801685	External Battery Charger
3332-10	Dilution System (10:1 dilution ratio)
3332-100	Dilution System (100:1 dilution ratio)
8535	Environmental Enclosure

Specifications are subject to change without notice.

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SPECIFICATIONS

DUSTTRAK[™] AEROSOL MONITOR ENVIRONMENTAL ENCLOSURE **MODELS 8535**

Sampling Conditions

Wind Speed Operating Temperature Storage Temperature

Physical

Clean Inlet

over 30 mg/m³

As needed

Re-grease O-rings

Power Requirements

Internal Battery Pack

Battery Run-time

External Dimensions $(H \times W \times D)$ Weight (with Internal Battery System and DustTrak)

8.1 x 16.9 x 20.6 in. (21 x 43 x 52 cm)

38 lb (17 kg)

Weekly, under normal conditions, or daily if concentrations are

0 to 22 mph (0 to 36 kph)

32 to 120°F (0 to 50°C)

-4 to 140°F (-20 to 60°C)

Physical (Solar Panels)

Dimensions (H x W x D)

Weight

Physical (Battery and Case)

Dimensions (H x W x D)

Weight

WIRELESS RADIO MODEM

Power Requirements

Power Supply Voltage **Receive Current**

Transmit Current

5-12 V -90 mA @ 922 MHz -115 mA @ 2.4 GHz -185 mA @ 922 MHz -200 mA @ 2.4 GHz 50 mA

2 x 43 x 48 in. (5 x 109 x 122 cm)

34 lb (15.3 kg)

8.5 x 15.3 x 17 in.

(22 x 39 x 43 cm)

85 lb (38.3 kg)

Power Down Current

Operating Temperature

32° F to 158° F (0° C to 70° C)

Storage Temperature

-4° F to 158° F (-20° C to 70° C)

Physical

Dimensions (H x W x D)	1.12 x 5.50 x 2.75 in. (3 x 14 x 7 cm)
Weight	7.1 oz (200 g)

Country specific wireless transmission information

922 MHz

2.4 GHz

US, Canada, Australia, New Zealand Europe, Asia

Transmission Ranges (typical-line-of-sight)

Indoor/Urban Range with 2.1 dB dipole antenna + Up to 1500 feet (450 m) @ 922 MHz + Up to 600 feet (180 m) @ 2.4 GHz Outdoor RF line-of-sight range With 2.1 dB dipole antenna + Up to 7 mi (11 km) @ 922 MHz With high gain antenna + Up to 3 mi (5 km) @ 2.4 GHz Outdoor RF line-of-sight range + Up to 20 mi (32 km) @ 922 MHz + Up to 10 mi (16 km) @ 2.4 GHz Transmit Power Output + 100 mW (20 dBm) @ 922 MHz

+ 50 mW (17 dBm) @ 2.4 GHz

Data Rate

9,600 bps



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12 VDC, 22 Ah 21 - 24 hours (typical) 34 - 36 hours (typical) Dual Battery Wiring Harness #801817, Run-time is typically using this setup twice the time quoted for a single

battery pack for either internal or external pump configurations.

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

INTERNAL BATTERY SYSTEM

DustTrakII/DRX with External Pump

DustTrakII/DRX with Internal Pump

two 22Ah battery packs #801808

SOLAR POWER SYSTEM

Power Requirements

Solar System Run-time Rated Power Power Tolerance Nominal Voltage External Battery Pack Battery Run-time Battery Charge Time

Operating Temperature Storage Temperature

±5% 12 volts 12 VDC, 100 Ah 90 to 120 hours (typical) <10 hours at 72°F (22°C) (New battery, deep discharge to 95% charge, with adequate sunlight) 32 to 120°F (0 to 50°C) -4 to 140°F (-20 to 60°C)

Continuous (with adequate sunlight)

80 x 2 watts