ENVIRONMENTAL DUSTTRAK™ AEROSOL MONITORS
MODELS EDTPM2.5/EDTPM10/EDTDRX

REAL-TIME DUST MONITORING FOR ANY OUTDOOR ENVIRONMENT

The Environmental DustTrak™ Aerosol Monitor is built upon proven DustTrak technology that thousands of people use every day. It is a reliable solution to easily and accurately facilitate long-term outdoor environmental monitoring. Packaged in three convenient system configurations, each is fit for purpose dependent upon what mass fraction you want to measure. The compact, weather-proof enclosure houses the newly enhanced Environmental DustTrak Photometer along with other newly designed key components, including long-life pump, built-in auto zero module, and optional heated inlet and internal heater accessories. Combine all that with the Cloud Data Management System, the Environmental DustTrak Monitor is the most efficient, flexible, and affordable solution for providing real-time access to dust measurement data.

Features and Benefits

+ Conveniently packaged solutions for measurement of PM10, PM2.5, or simultaneous PMTotal, PM10, PM2.5 and PM1.0
+ Robust design enables long-term runtime in environments from -4 to 122°F (-20 to 50°C)*
+ Field-replaceable, longer-life pump increases measurement uptime (life expectancy >10,000 hours)
+ Optional heated inlet sample conditioning improves measurement accuracy in humid environments >50% RH
+ Real-time access to secure data and sophisticated alert system via the Cloud Data Management System
+ MCERTS models available for PM10, PM2.5, and both PM10 and PM2.5

* Requires internal heater option

Applications
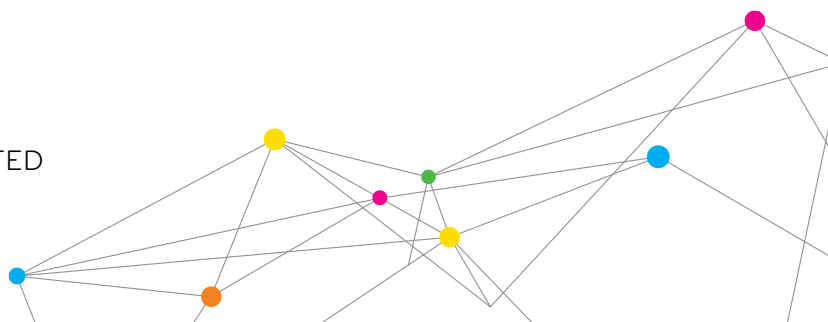
+ Fugitive emissions monitoring
+ Site perimeter monitoring
+ Fence-line monitoring
+ Environmental remediation
+ Construction and mining sites
+ Hazardous waste sites
+ Dust control operations

mCERTS
THE ENVIRONMENT AGENCY'S
MONITORING CERTIFICATION SCHEME

Sira MC160316/00
Sira MC160317/00
Sira MC160318/00

TSI

UNDERSTANDING, ACCELERATED

THE ENVIRONMENTAL DUSTTRAK ADVANTAGE

CONVENIENTLY PACKAGED SOLUTIONS

Measured Mass Fraction	Base Model Number	Base Model Contents	Optional Accessories
PM10	EDTPM10	+ Environmental DustTrak Photometer + Environmental DustTrak Enclosure + Netronix Thiamis 1000 Quad-Band 3G/GPRS Modem, including WiFi and Bluetooth + Omni-directional Inlet with Water Trap + Impactor (not necessary for EDTDRX)	+ Heated Inlet Sample Conditioner + Rechargeable Battery System, AC Power or Solar Power System + Pole Mount Kit + Solar Shield + Metrology Sensors
PM2.5	EDTPM2.5		
PMTotal, PM10, PM2.5 and PM1.0 (simultaneous measurements)	EDTDRX		

Robust Design For Long Run Time

+ Built upon patented, proven DustTrak Aerosol Monitor technology
+ Long-life pump (life expectancy >10,000 hours)
+ Built-in auto zero module minimizes drift over long sample runs and temperature changes
+ Extended beam dump minimizes optical contamination
+ Secure, weather-proof enclosure
+ Active volumetric flow control
+ Heated inlet sample conditioning minimizes effects of humidity and water vapor to provide more consistent measurement

Reduced Cost Of Operation

+ Instant access to real-time data–anytime, anywhere–via the web
+ Manage multiple sites from a single location eliminates costly field trips
+ Generate reports quickly and easily
+ SMS text messaging and email alert capabilities directs workers to take action
+ Long-lasting parts minimize downtime
+ Easy maintenance with field-replaceable parts

MCERTS MODELS

Measured Mass Fraction	MCERTS Model Number	MCERTS Model Contents	Optional Accessories
PM10	EDTPM10M	+ Environmental DustTrak Photometer + Environmental DustTrak Enclosure + Omni-directional Inlet with Water Trap + Impactor (not necessary for EDTDRX) + Heated inlet sample conditioner	+ Rechargeable Battery System, AC Power or Solar Power System + Pole Mount Kit + Solar Shield + Metrology Sensors + Heater for enclosure
PM2.5	EDTPM2.5M		
PMTotal, PM10, PM2.5 and PM1.0 (simultaneous measurements)	EDTDRXM		

Environmental DustTrak for 24/7 real-time remote dust monitoring

CLOUD
hosted by netronix

KEY COMPONENTS

**Environmental DustTrak Photometer
Models 8540/8543**

The Environmental DustTrak Photometers are the heart and soul of the systems for real-time, second-by-second measurement of PM10, PM2.5 and PM1.0. They use a sheath air system that isolates the aerosol in the optics chamber to keep the optics clean for improved reliability and low maintenance as well as an extended beam dump to minimize optical contamination. Also a built-in auto zero module works to improve measurement accuracy while a robust, long-life pump maximizes uptime. A removable 37 mm filter cassette enables site-specific gravimetric calibration or sample analysis. Using patented technology, only the Environmental DustTrak DRX Photometer can simultaneously measure PMTotal, PM10, PM2.5 and PM1.0 mass fractions.

Cloud Data Management System *(Optional for MCERTS Models)*

TSI partners with Netronix to provide the most comprehensive turnkey remote dust monitoring solution on the market. Using purpose-built telemetry the Environmental DustTrak Aerosol Monitor continuously logs the data. The data can be accessed on demand—anytime, anywhere—with the ability to auto-send alert notifications via email and SMS text messages.

OPTIONAL ACCESSORIES

Heated Inlet Sample Conditioner *(Included on MCERTS Models)*

Conditions the sampled aerosol to improve measurement accuracy by minimizing the effects of humidity when environments are consistently >50% RH.

Rechargeable Battery System

Provides continuous power to the Environmental DustTrak base system when AC power is not available. Includes two 22 Ah rechargeable batteries and battery charger.

Solar Power System

Provides continuous power to the Environmental DustTrak base system. Includes two 90W solar panels with stand, weatherproof battery and charge regulator enclosure, charge regulator, 100 Ah rechargeable battery and DC power cable.
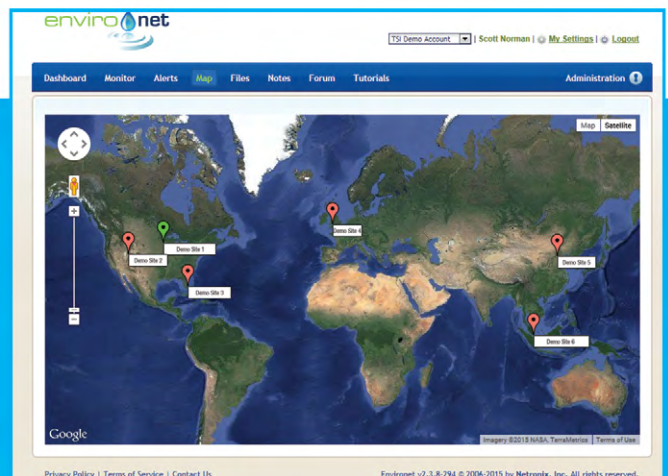
Pole Mounting Kit

Includes bracket, hardware and mounting straps to attach Environmental DustTrak Enclosure to a fixed pole (not supplied) ranging 4"-6" (100-150 mm) in diameter.

Solar Shield

Custom metal cover to shield the enclosure from sun light. Recommended for environments >104°F (40°C).

Metrology Sensors

We offer two metrology sensors. The base model measures temperature, humidity and pressure, while the advanced version measures wind speed and wind direction including temperature, humidity and pressure. Both versions include data, power connections and mounting hardware.

SPECIFICATIONS

ENVIRONMENTAL DUSTTRAK AEROSOL MONITORS
MODELS EDTPM2.5/EDTPM10/EDTDRX

	Base Models		
Model Number	EDTPM10 EDTPM10M	EDTPM2.5 EDTPM2.5M	EDTDRX EDTDRXM
Measured Mass Fraction	PM10	PM2.5	Simultaneous PMTotal, PM10, PM2.5 and PM1.0
Concentration Range	0-400 mg/m³	0-400 mg/m³	0-150 mg/m³
Resolution	±0.1% of reading or 0.001 mg/m³, whichever is greater		
Zero Stability	±0.002 mg/m³ per 24 hours at 10 sec time constant		
Sample Flow Rate	3.0 L/min (±5% of factory set point, internal flow controlled)		
Detection Method	Light scattering laser photometer; 90° off-axis detector		
Gravimetric Sampling	Removable 37 mm cartridge (filter media not supplied)		
Communications	Wireless: Cloud service capability via Netronix Thiamis 1000 Quad-Band 3G/GPRS Modem, including WiFi and Bluetooth		
	Wired: USB (host and device) and Ethernet		
Data Logging	Via Thiamis 1000: 1 Hz data rate: user selectable reporting interval from 1 minute to 24 hours (average reading). 2 GB of on-board memory, expandable to 32 GB. Stored data accessible using Environet software.[1]		
	Via internal manual mode: User selectable, 1 second to 1 hour log interval. 5 MB of on-board memory (>60,000 data points), 45 days at 1 minute logging interval. Internally stored data accessible using TrakPro Software (supplied).		
SMS Text Messaging and Email Alert Capability[1]	User programmable from Environet software		
Operating Environment	32° to 122°F (0° to 50°C) standard; extended temperature range capability of -4° to 120° F (-20° to 50° C) available with optional enclosure heater[2]; 0 to 100% RH		
Environmental Enclosure	Lockable, enclosure; 16 x 12 x 12.25 inches (HWD) (411 x 305 x 311 mm)		
Sample Inlet	Omni-directional inlet with water trap		
Power Requirements*	Requires AC mains, rechargeable batteries or solar power system		
Weight[3]	~ 30 lbs. (13.6 kg)		
Mounting	Wall and pole mount		
Approvals	+ CE + MCERTS for EDTPM10M, EDTPM2.5M and EDTDRXM		

* See Required Power Options table

TSI Data Plans

TSI P/N 801910	Monthly data plan (includes activation fee and 3 months of data access)
TSI P/N 802915	12-month data plan (no activation fee)

System Accessories

TSI P/N 854041	Heated Inlet Sample Conditioner
TSI P/N 854031	Pole Mounting Kit
TSI P/N 854020	PM10 Impactor
TSI P/N 854021	PM2.5 Impactor
TSI P/N 854022	PM1.0 Impactor
TSI P/N 854032	Solar Shield
TSI P/N 854060	Solar Power System
TSI P/N 854050	Metrology Sensor (Lufft WS300)
TSI P/N 854051	Metrology Sensor (Lufft WS500)
TSI P/N 854033	Heater for 854030 Enclosure

Required Power Options

TSI P/N 854034	AC Power Mains (100-240 VAC, 50/60Hz)
TSI P/N 854036	Rechargeable Battery System (Includes two 22Ah rechargeable batteries capable of running base model 42-48 hours (approx. 30 hours when using base model plus heated inlet accessory)
TSI P/N 854060	Solar Power System (Includes two 90 watt solar panels and 100 Ah rechargeable battery)

[1] Requires purchase of TSI data plan.

[2] For extended temperature range capability, order Environmental DustTrak Monitor Models EDTPM10-HEAT, EDTPM2.5-HEAT or EDTDRX-HEAT (all require and include AC mains power).

[3] Weight includes base model components only. Consult TSI Representative for additional information.

Specifications are subject to change without notice.

TSI and the TSI logo are registered trademarks, and DustTrak and TrakPro are trademarks of TSI Incorporated.

TSI patents can be found at tsi.com/patents.

Netronix is a trademark of Netronix Inc.

MCERTS
THE ENVIRONMENT AGENCY'S
MONITORING CERTIFICATION SCHEME

Sira MC160316/00
Sira MC160317/00
Sira MC160318/00