



# EVM Environmental Monitors



**The TSI® Quest™ EVM Environmental Monitors simultaneously measure particulates and gas concentration in real-time. These monitors measure select toxic gases, volatile organic compounds (VOCs), relative humidity and temperature.**

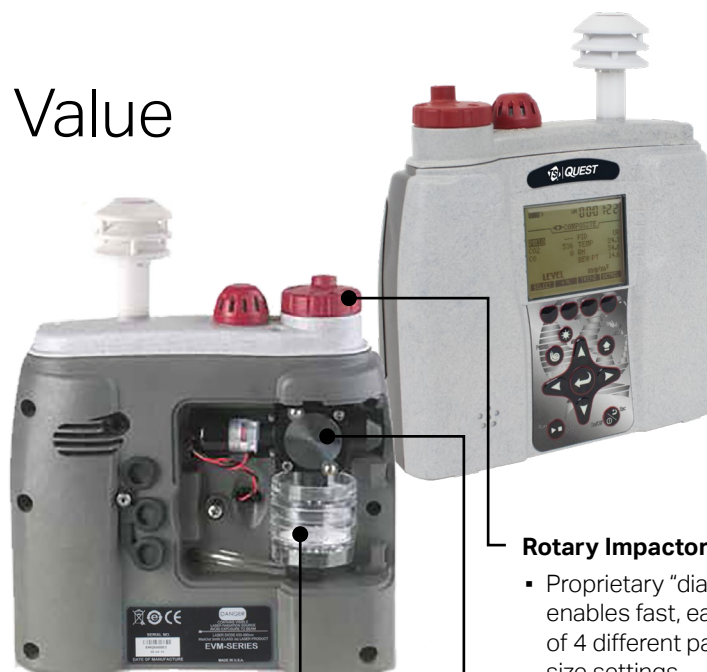
## **Features and Benefits**

- Particulate, gas and photoionization detector (PID) measurement from a single device
- Less equipment to carry to job site; compact, user-friendly design
- 90-degree light scattering laser photometer measures particulates in real-time
- Proprietary technology for selecting particulate settings; no need for external cyclones
- Built in sampling pump allows for gravimetric analysis
- Large, easy-to-read display with trend graphing of measurements
- Time history data logging and compatibility with Detection Management Software makes analysis efficient

# Dual-Analysis Outstanding Efficiency and Value

## Simultaneous Measurement

- Measures particulate mass concentrations (0.1–10  $\mu\text{m}$ ), select toxic gases, select volatile organic compounds, carbon dioxide, relative humidity and temperature.
- Helps control equipment costs, by combining three instruments into one.



### Built-in Sampling Pump

- Allows user to easily capture particulate samples for on/off-site analysis.
- Identify and confirm particulate concentration in question.

### Rotary Impactor

- Proprietary "dial-in" technology enables fast, easy selection of 4 different particulate size settings.
- Eliminates the need to switch out cyclones for different measurement parameters.

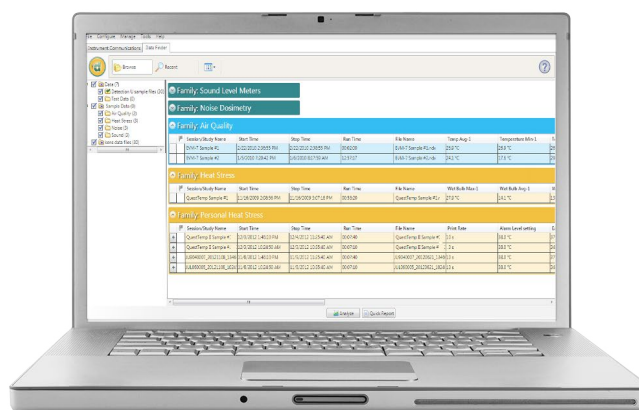
### 90° Light-Scattering Laser Photometer

- Enables real-time measurement of particulates.

## Detection Management Software

Designed for dosimetry, sound level measurements, heat stress assessments and environmental monitoring, this advanced software helps safety and occupational professionals:

- Configure instrumentation and save pre-configured setups
- Retrieve, download, share, and save instrument data
- Create charts, tables, and reports to intuitively interpret your measurements
- Export and share recorded results



The software integrates with TSI® Quest™ Detection Solutions data logging instruments and will help you improve both operating efficiency and reporting in acoustics, heat stress and environmental monitoring.

# Choose the Model That Best Meets Your Needs

	EVM-7 Indoor Air Quality/ Particulate Monitor (eliminates the need for separate meters)	EVM-4 Indoor Air Quality Monitor (no particulates)	EVM-3 Particulate Monitor (no Indoor Air Quality Monitor)
Temperature	▪	▪	▪
Relative Humidity	▪	▪	▪
Particulates (mass concentration)	▪		▪
Toxic Gas (choose from nine sensors)	▪ (optional)	▪ (optional)	
Carbon Dioxide	▪	▪	
Select Volatile Organic Compounds	▪	▪ (optional)	
Intrinsic Safety Approval			▪

## Simultaneous Measurement

Method	Base Units	Display Resolution	Display Range	Accuracy Repeatability
<b>VOC: 10.6eV Photoionization Detector</b>				
Low Sensitivity PID	select ppm or mg /m <sup>3</sup>	0.01	0.00 - 2,000	+/-5% / 2%*** at calibration level
High Sensitivity PID	select ppb or mg /m <sup>3</sup>	1	0 - 50,000	+/-5% / 2%*** at calibration level
<b>CO<sub>2</sub></b>				
NDIR (Non-Dispersive Infrared)	ppm	1	0 - 5,000 ppm; autoranging (Non-condensing)	+/-100 ppm @20 deg C, 1 bar pressure at 2,000 ppm applied gas
<b>Temperature</b>				
Junction Diode	deg C	0.1	0.0 - 60.0	+/- 1.1 deg C
	deg F	0.1	32.0 - 140	+/- 2 deg F
<b>Relative Humidity</b>				
Capacitive	% humidity	0.1	0.0 - 100	+/-5% RH* of signal between 10%-90%

Method	Base Units	Display Resolution	Display Range	Accuracy Repeatability
<b>Particulates</b>				
90° Light Scattering / Integrating Photometer	mg /m <sup>3</sup>	0.001	0.00 - 200.0	+/-15% (rel ARD*)
	µg /m <sup>3</sup>	1	0 - 20,000	+/-15% (rel ARD*)
Particulates Size Range	µm	N/A	0.1 - 10	**
<b>Electrochemical Sensor</b>				
CO - Carbon Monoxide Sensor	ppm	1	0 - 1,000	+/-5% / 2% of signal
Cl <sub>2</sub> - Chlorine Sensor	ppm	0.1	0.0 - 20	+/-5% / 2% of signal
EtO - Ethylene Oxide Sensor	ppm	0.1	0.0 - 20	+/-5% / 2% of signal
HCN - Hydrogen Cyanide Sensor	ppm	0.1	0.0 - 50	+/-5% / 2% of signal
H <sub>2</sub> S - Hydrogen Sulfide Sensor	ppm	1	0.0 - 500	+/-5% / 2% of signal
NO - Nitric Oxide Sensor	ppm	0.1	0.0 - 100	+/-5% / 2% of signal
NO <sub>2</sub> - Nitrogen Dioxide Sensor	ppm	0.1	0.0 - 50	+/-5% / 2% of signal
O <sub>2</sub> - Oxygen Sensor	%	0.1	0.0 - 30	+/-5% / 2% of signal
SO <sub>2</sub> - Sulfur Dioxide Sensor	ppm	0.1	0.0 - 50	+/-5% / 2% of signal

## Specifications

# EVM Environmental Monitors

### General

Display Languages	English, French, German, Italian, Portuguese, and Spanish
User Interface	10 push buttons and 4 softkeys, menu driven
Display Type	Transreflective 128 x 64 LCD with backlighting
Software Compatibility	TSI® Quest™ Detection Management Software DMS
Standards	CE Mark and RoHS compliant
Particulate Impactors	
Size Fractions	PM2.5, PM4, PM10 or TSP (within the instrument's measurement range)
Flow Rate	1.67 L/min

### Displayed Data

Measurements	Level, Minimum, Maximum, Average, Short-Term Exposure Level (STEL), Time Weighted Average (TWA)
Real-Time Measurement	Once per second display update rate
Time History Data	
Logging Intervals	Seconds: 1, 5, 15, 30 / Minutes: 1, 5, 10, 15, 30, 60
Trend Graphing Intervals for All Parameters	Minutes: 1.5, 3, 15 / Hours: 1.5, 3, 8, 12, 24
Status Indicators	Battery, Run, Stop, Overload and UnderRange
Averaging Time	1 to 30 seconds

### Physical Characteristics

Size	7.5" x 7.5" x 2.75" (19 cm x 19 cm x 7 cm)
Weight	2.9 lb (1.3 kg)
Housing	Static dissipative ABS Polycarbonate housing
Tripod Mount	Standard photographic mount on bottom, 1/4" - 20 screw heads

### Operating Conditions

Temperature Range	32°F - 122°F (0°C to 50°C)
Pressure Range	65 kPa to 108 kPa
Relative Humidity Range	10% to 90% non-condensing

### Storage Conditions

Temperature	-4 °F to 140 °F (-20 °C to 60 °C)
Humidity	0% to 95% RH, non-condensing

### Electrical Characteristics

Intelligent Sensors	Auto-detectable when inserted at power-off mode
Battery Pack	Rechargeable lithium-ion
Battery Life	Minimum of 8 hours under continuous operation
External DC Power Input	10 to 16 Volt power inlet (nominal 12V DC) 1.5A
Power Adapter	Universal AC adapter 100 to 240 VoltAC, 50-60 Hz

\* ARD - Arizona Road Dust, RH - Relative Humidity

\*\* The photometer can detect particulates up to 100 µm; however, accuracy is reduced for sizes greater than 10 µm.

\*\*\* Relative Isobutylene

Specifications are subject to change without notice.

TSI, and the TSI logo are registered trademarks of TSI Incorporated in the United States and may be protected under other country's trademark registrations.



**Knowledge Beyond Measure.**

**TSI Incorporated** - Visit our website [www.tsi.com](http://www.tsi.com) for more information.

<b>USA</b>	Tel: +1 800 874 2811	<b>India</b>	Tel: +91 80 67877200
<b>UK</b>	Tel: +44 149 4 459200	<b>China</b>	Tel: +86 10 8219 7688
<b>France</b>	Tel: +33 1 41 19 21 99	<b>Singapore</b>	Tel: +65 6595 6388
<b>Germany</b>	Tel: +49 241 523030		