

EVM-7 Environmental Monitor

2-in-1 Particulate and Gas Concentration Measurement

EVM-7 Key Features:

- Simultaneous particulate mass and gas concentration measurement
- Twist and click impactor for PM2.5, PM4, PM10, or TSP* measurement without disassembly and external cyclones
- 90-degree light scattering photometer for mass particle concentration measurement and real-time display
- Built-in compensating sample pump for simultaneous gravimetric sampling on a 25 or 37-mm filter cassette inside the instrument.
- Smart auto-recognized toxic gas sensors
- High-performance 10.6 eV PID for VOCs

* Within the instrument's measurement range



Additional EVM-7 Features:

- Time history datalogging
- Factory calibrated relative to ISO 12103-1, A2 (Arizona Road Dust)
- Site correction factors for particulates (*user supplied*)
- Auto run and security code protection for unattended monitoring
- Carbon dioxide trending algorithms for calculation of room air exchange rates (*with QuestSuite Pro II Software*)
- Real-time measurement with once-per-second update rate
- Trend graphing for all parameters
- Menu-driven user interface with 10 pushbuttons/4 softkeys
- User selectable digital output for external functions
- Displayed measurements of Level, Minimum, Maximum, Average, STEL, and TWA
- Displays in 6 languages

Monitor multiple air quality hazards/parameters using one instrument with the Quest® EVM-7 environmental monitor. EVM-7 simultaneously measures particulates, volatile organic compounds (VOCs), toxic gas, carbon dioxide, relative humidity, temperature, and air velocity (with accessory probe). Two instruments in one means lower cost of ownership and elimination of multiple instruments.

EVM-7 Applications

- Worksite monitoring
- Industrial hygiene surveys
- Military site evaluation
- Aircraft and train environment sampling
- Construction/mining site monitoring
- Engineering studies
- Industrial fence-line monitoring
- Remediation sampling
- IAQ walk-through and stationary studies
- Air quality assessment
- VOC screening and monitoring
- Regulatory compliance



Additional EVM Models

EVM-4 and EVM-3 feature the durability, quality, and overall design of the EVM-7.

EVM-4 Comprehensive IAQ Analysis

Monitors and logs:

- Carbon monoxide
- Relative humidity
- Temperature
- Carbon dioxide (room air exchange rates calculated in QuestSuite Pro II Software)
- Optional sensor accessories: AirProbe-10 velocity probe, PID, particulates, replace CO sensor with one of 8 other toxic gas sensors

EVM-3 Real-time Direct-reading Particulate Monitor

Measures and logs:

- Particulate mass concentration (PM2.5, PM4, PM10, or TSP*)
- Temperature
- Relative humidity
- Optional sensor accessories: AirProbe-10 velocity probe, CO or select from 8 other toxic gas sensors, CO₂, PID



Removable sensor bar for easy access to sensors



Easy access to gravimetric sample filter cassette

Performance Profile

Method	Base Units	Display Res.	Display Range	Accuracy/ Repeatability
Particulates				
<i>Light-scattering Photometer</i>	mg/m ³	0.001	0.000-199.9	± 15% (rel ARD†)
<i>Particulates Size Range</i>	µm	N/A	0.1-10	**
VOCs				
<i>10.6 eV PID</i>	ppm	0.01	0.00-2000	± 5%/2% (rel to Isobutylene) at calibration level
Carbon Dioxide				
<i>NDIR</i>	ppm	1	0-20,000	± 2% of signal, ± 50 ppm between 0-2500
Toxic Gas (Electrochemical Sensors)				
<i>Carbon Monoxide</i>	ppm	1	0-1000	± 5%/2% of signal
<i>Chlorine</i>	ppm	0.1	0.0-20	± 5%/2% of signal
<i>Ethylene Oxide</i>	ppm	0.1	0.0-20	± 5%/2% of signal
<i>Hydrogen Cyanide</i>	ppm	0.1	0.0-50	± 5%/2% of signal
<i>Hydrogen Sulfide</i>	ppm	1	0-500	± 5%/2% of signal
<i>Nitric Oxide</i>	ppm	0.1	0.0-100	± 5%/2% of signal
<i>Nitrogen Dioxide</i>	ppm	0.1	0.0-50	± 5%/2% of signal
<i>Oxygen</i>	%	0.1	0.0-30	± 5%/2% of signal
<i>Sulfur Dioxide</i>	ppm	0.1	0.0-50	± 5%/2% of signal
Temperature				
<i>Junction Diode</i>	deg C	0.1	-10.0-60.0	± 1.1 deg C
	deg F	0.1	14.0-140.0	± 2 deg F
Relative Humidity				
<i>Capacitive</i>	% humidity	0.1	0.0-100	± 5% RH of signal between 10 - 90%
Air Velocity				
<i>Omni-directional Heated Thermistor Windprobe</i>	m/sec	0.1	0.0-20	± 0.12 m/s + 4.5% of signal
	ft/min	1	0-3940	± 23.6 ft/min + 4.5% of signal

General	
Size Fractions	PM2.5, PM4, PM10, or TSP**
Sample Pump Flow Rate	1.7 L/min
Power/Run Time	Rechargeable Li-Ion battery pack provides minimum of 8 hrs of continuous operation
Weight	2.9 lb (1.3 kg)
Standards	CE marked and RoHS compliant

† Arizona Road Dust (ARD)

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



Ordering

EVM Monitors		Cat. No.
EVM-7 IAQ/Dust Monitor with 5 Sensors: VOCs, CO₂, Dust, Temperature, and Humidity includes datalogging monitor with sensors for VOCs (PID), CO ₂ , particulates, temperature, and humidity (with air probe input connector), two 37-mm filter cassettes (for pump protection), 12-V DC universal power supply, USB cable, silicone dielectric grease, PID cleaning kit, 10-pk pump protection filters, dust zero calibration assembly, toxic gas calibration adapter, and storage case. <i>Purchase Air Probe-10 Air Velocity Probe separately.</i>		755-EVM7
EVM-7 CO/IAQ/Dust Monitor with 6 Sensors: VOCs, CO₂, CO, Dust, Temperature, and Humidity includes datalogging monitor with sensors for VOCs (PID), CO ₂ , CO, particulates, temperature, and humidity (with air probe input connector), two 37-mm filter cassettes (for pump protection), 12-V DC universal power supply, USB cable, silicone dielectric grease, PID cleaning kit, 10-pk pump protection filters, dust zero calibration assembly, toxic gas calibration adapter, and storage case. <i>Purchase Air Probe-10 Air Velocity Probe separately.</i>		755-EVM7CO
EVM-4 IAQ Monitor with 3 Sensors: CO₂, Temperature, and Humidity includes datalogging monitor with sensors for CO ₂ , temperature, and humidity (with air probe input connector), 12-V DC universal power supply, toxic gas calibration adapter, USB cable, and storage case. <i>Purchase Air Probe-10 Air Velocity Probe separately.</i>		755-EVM4
EVM-4 CO/IAQ Monitor with 4 Sensors: CO₂, CO, Temperature, and Humidity includes datalogging monitor with sensors for CO ₂ , CO, Temperature, and humidity (with air probe input connector), 12-V DC universal power supply, toxic gas calibration adapter, USB cable, and storage case. <i>Purchase Air Probe-10 Air Velocity Probe separately.</i>		755-EVM4CO
EVM-3 Dust Monitor with 3 Sensors: Dust, Temperature, and Humidity includes datalogging monitor with sensors for particulates, temperature, and humidity (with air probe input connector), two 37-mm filter cassettes (for pump protection), 12-V DC universal power supply, USB cable, silicone dielectric grease, 10-pk pump protection filters, dust zero calibration assembly, and storage case. <i>Purchase Air Probe-10 Air Velocity Probe separately.</i>		755-EVM3
Sensors		
Dummy Sensor, seals empty sensor socket		755-54899
Oxygen Smart Sensor		755-54873
Hydrogen Sulfide Smart Sensor		755-54874
Carbon Monoxide Smart Sensor		755-54875
Nitric Oxide Smart Sensor		755-54877
Sulfur Dioxide Smart Sensor		755-54878
Nitrogen Dioxide Smart Sensor		755-54880
Chlorine Smart Sensor		755-54881
Hydrogen Cyanide Smart Sensor		755-54886
Ethylene Oxide Smart Sensor		755-54722
Accessory		
AirProbe-10 Air Velocity Kit includes AirProbe-10, mounting bracket, adapter cable, 120-V AC charger, and carry case		120 V 220 V
		755-AIRPROBE-3 755-AIRPROBE-4

Additional accessories are available. Contact SKC.

