



UV254 ORGANICS MONITOR UVM5000

STANDARD FEATURES

- Patent pending Ortho-Beam technology
- 254nm wavelength UV light source
- User friendly interface
- 4-20mA analog output
- Modbus digital communications
- Dry contacts for user configurable alarms
- 2 year warranty

OPTIONAL FEATURES

- Turbidity compensation
- Automatic chemical cleaning system
- Battery backup
- Dual sample feed capability

BENEFITS

- Surrogate measurement for TOC/DOC/BOD/COD
- Performs both UV Transmittance and UV Absorbance measurements
- Online continuous operation
- Significantly reduced need for cleaning
- Continuous automatic calibration
- No need for reagents
- Affordable compared to other online organics monitors

APPLICATIONS

Water Treatment

- Detect changes in coagulant demand
- Monitor organics removal
- Optimize UV disinfection systems
- Monitor potential for disinfection byproducts (DBPs)

Distribution System Monitoring

- Detect system contamination

Wastewater Treatment

- Monitor effluent discharge

DESCRIPTION

The UVM5000 provides online continuous organics monitoring utilizing a 254 nm ultraviolet light source. The amount of light absorbed at this wavelength provides an indication of natural organic matter (NOM) in a given sample. More specifically, UV 254 is the best detector of aromatic organics which when combined with chlorine, can form disinfection by-products (DBPs). The patent pending Ortho-Beam technology provides many significant advantages while maintaining affordability. The innovative design allows for continuous automatic calibration during operation, thereby enabling the UVM5000 to overcome many challenges faced by similar instrumentation. The monitor's unique ability to automatically detect and compensate for UV lamp fluctuations and quartz fouling minimizes losses in accuracy over time, and significantly reduces maintenance.



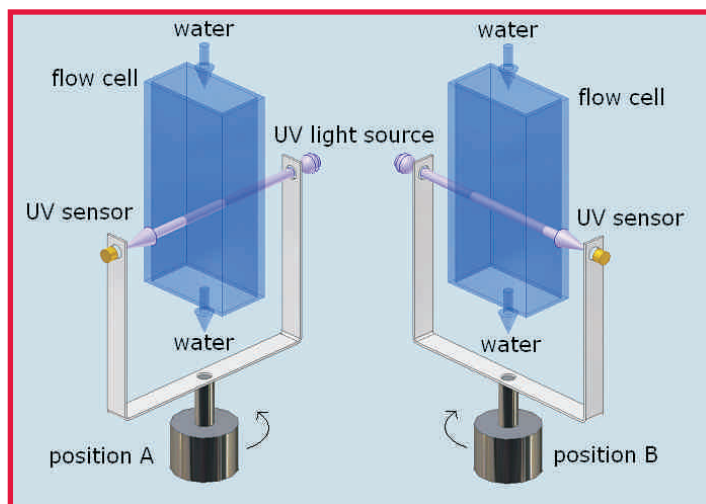
Organics

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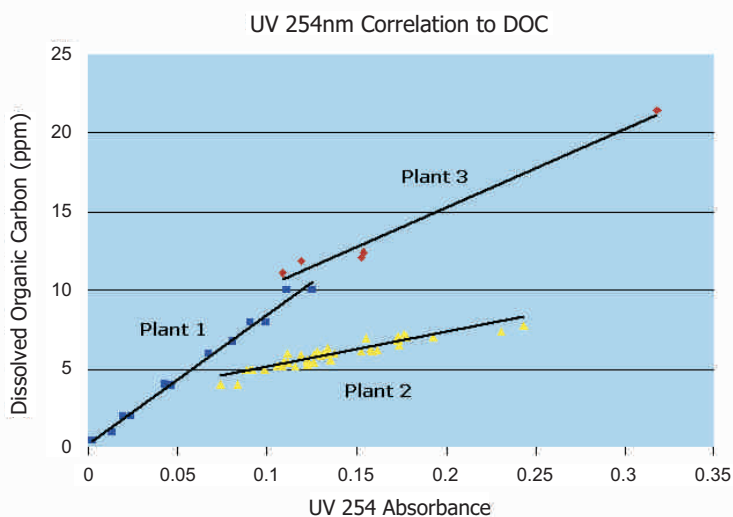
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GENERAL SPECIFICATIONS

Range:	0 - 100% UVT, 0 -3 UVA
Accuracy:	±1.0% UVT
Repeatability:	±0.1% UVT
Resolution:	0.1% UVT, 0.0001 UVA
Units:	Operator configurable: cm^{-1} , m^{-1}
Path Length:	2cm
Sampling Time:	4 seconds
Flow Rate:	0.75 L/min.
Response Time:	5 seconds
Calibration:	Ortho-Beam technology allows continuous automatic calibration during operation
Cleaning:	Significantly reduced cleaning requirements due to Ortho-Beam technology Automatic cleaning (optional)
Self Diagnostics:	Continuous detection of excessive fouling, lamp output, and electrical fault
Operator Interface:	Five quick select pushbuttons, four menu control buttons, and a numeric keypad
Display:	2 line x 20 character backlit LCD with numeric keypad
Alarms:	Dry-contact terminals allow operator configurable alarms for: high and low readings low lamp output excessive fouling (cleaning required) electrical fault detection
Memory:	Operator configurable memory stores sample readings
Outputs:	4-20 mA output configurable to either UVT or UVA RS485 with Modbus protocol (other PLC communication protocols optional) RS232 for configuration via PC
Wavelength:	253.7 nm
Light Source:	Low pressure mercury UV lamp
Lamp Life:	2 years
Compensation:	Turbidity compensation optional
Dimensions:	14" H x 12" W x 8" D
Enclosure:	Nema 4, wall mountable
Fluid Connections:	1/4" tube compression 316 stainless
Electrical:	24 VDC with battery backup optional
Storage Temp:	-4° to 140° F (-20° to 60° C)
Operating Temp:	32° to 113° F (0° to 45° C)
Warranty:	2 year limited warranty



With the Ortho-Beam technology, UV 254 nm measurements are alternately taken at 90-degree angles to each other through a rectangular quartz flow cell by rotating the lamp/sensor fixture back and forth between the two positions. The two UV 254 nm readings give the amount of light able to transmit/absorb through two different path lengths of the test water. From these two measurements alone, quartz fouling and lamp fluctuations are intrinsically compensated for by the measurement process.



Site-specific correlations can be made between UV 254 and other organic test parameters.