

Online UV254 Absorption and Transmission

The UV254Sense UV254 analyzer is the first in the world to be designed in modular form so that it can be integrated with other sensors such as pH, turbidity and streaming current to provide all the tools needed for either a stand alone UV254 analyzer or a coagulation monitoring or as part of a coagulation control instrumentation package.

As a stand alone instrument the UV254 analyzers can be correlated and used as a surrogate measurement for TOC, BOD or COD, or in UV Transmission mode, can be used to control UV disinfection processes.

- Tough field-proven and reliable
- Stable and reliable - excellent process control
- Suitable for all potable waters*
- Up to 12 months between maintenance
- User sensor verification
- More than 5,000 installed worldwide



“This modular adaptation of the Realtech UV254 monitor is a big step forward for this technology”

CRIUS NA UV254Sense



- Highest Quality - Low Cost
- Multilingual
- High resolution color display
- Intuitive user interface
- Downloadable data logs
- Customizable home pages
- Additional Features
 - Up to 4 sensors
 - Remote access via LAN
 - Remote access via GPRS
 - Expandable to 16 sensors

For more information please see the separate CRIUS NA brochure

Sensor Options

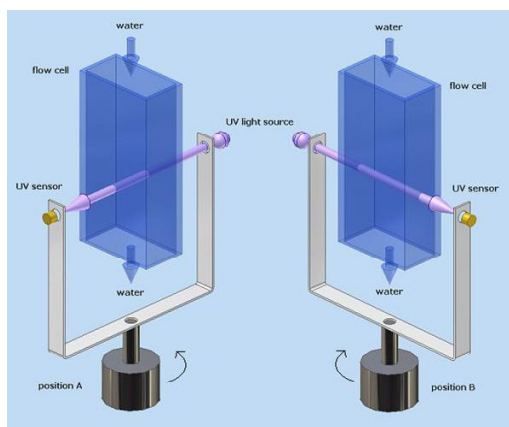
- Automatic Cleaning
- Seawater Option
- Multi Unit Option
- Dual Stream



Stream 1 Stream 2

Principle of Operation

With the Ortho-Beam technology, UV254nm measurements are alternately taken at 90 degree angles to each other through a rectangular quartz flow cell by rotating the lamp/sensor fixture backwards and forwards between the two positions. The two UV254nm readings give the amount of light able to transmit/absorb through two different path lengths of the sample water. From these two measurements alone, quartz fouling and lamp fluctuations are intrinsically compensated for by the measurement process.



Ortho-Beam Technology

Specification UV254Sense

Range:	0-120% UVT, 0-5 UVA
Accuracy:	+/- 0.5% FS
Repeatability:	+/- 0.1% UVT
Resolution:	0.1% UVT, 0.001 UVA
Path Length:	1 cm
Sampling Time:	10 seconds
Flow Rate:	300 - 1000 ml/min
Cleaning:	Automatic cleaning option (specify at time of order)
Self Diagnostics:	Detection and diagnosis of internal system fault
Humidity Control:	Humidity sensor with large regenerable desiccant
Wavelength:	253.7nm
Light Source:	Low pressure Hg lamp
Lamp Life:	2 year warranty
Dimensions:	17"H X 14"W X 8"D
Enclosure:	IP65 (NEMA 4X) wall mount
Fluid Connections:	1/4" push-fit inlet/outlet
Electrical:	90 - 250 VAC
Operating Temp:	32F - 113F
Storage Temp:	-4F - 140F
Warranty:	2 year limited warranty

The patent pending Ortho-Beam technology provides many significant advantages while maintaining affordability. 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.

The UV254Sense provides online continuous organics monitoring utilizing a 254nm ultraviolet light source. The amount of light absorbed provides an ongoing indication of natural organic matter (NOM) in a flowing sample, and serves as a continuous surrogate measurement for total organic carbon (TOC). More specifically, UV254 is the best detector of aromatic or reactive organics which when combined with chlorine, can form disinfection by products (DBPs).

This information, along with pH, turbidity, and streaming current monitoring (all available from EquipSolutions) can give all the information required to control coagulation in a water treatment plant.

Applications

When using the transmission mode (UVT) the UV254Sense can be used to optimize the light level in UV disinfection equipment providing confidence whilst minimizing power levels.

When used in absorbance mode (UVA) the instrument can monitor the NOM levels present. This value can then be used in a feed forward control manner to regulate coagulant dosage levels in water treatment plants.

The UV254Sense can be married with other sensors like pH, turbidity, and streaming current to give a full coagulation control system.

Standard Features

- Online continuous operation
- Patent pending Ortho-Beam technology
- 254nm wavelength UV light source
- Display either UV transmittance or UV absorbance values
- Turbidity compensation as standard

Optional Features

- Automatic chemical cleaning system
- Dual sample feed capability
- Seawater version

Recommended Reading

Technical Note 19 Correlating the UV254 Water Quality Parameters to Other Organics Parameters.