



## Water Quality Analysers



### UV254Sense - UV254 Absorption and Transmission

With the UV254Sense range of UV254 Monitors you get a world's first. The UV254Sense UV254 analyser 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 a coagulation monitoring or a coagulation control instrumentation package.

As a stand alone instrument the UV245 monitor 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 devices.

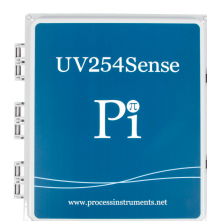
**Tough-field proven**

**Stable and reliable - excellent process control**

• **Surrogate for TOC, BOD or COD**

**Suitable for all waters**

**UVT for UV disinfection control**



*"This modular adaptation of the Realtech UV254 monitor is a big step forward for this technology." Ron Hallett, Canada*

The UV254Sense sensors are available with different controllers giving you the same great performance with different communication, display, and control options. With the Pi range of UV254 monitors, you get everything that you need - and nothing that you don't, **without** sacrificing the quality of measurement.

#### CRONOS® UV254Sense



- High quality and multilingual
- Lowest purchase cost
- Up to 3 sensors
- Options include:
  - up to 3 4-20mA outputs
  - up to 4 relays (solid state or mechanical)
  - modbus TCP
  - modbus ASCII/RTU
  - profibus
  - HART
  - flow switch input
  - PID control
  - automatic cleaning
- Can combine with other sensors

#### CRIUS® UV254Sense



- High quality and multilingual
- Low cost
- Colour display and keypad
- Sophisticated comms and control
- Datalogging
- Up to 6 sensors
- Options:
  - All CRONOS® options plus:
  - text and email alarms via GSM
  - remote internet access via GPRS/LAN
  - cleaning
  - 5.7" colour touchscreen
- Can combine with other sensors

#### CRATOS UV254Sense



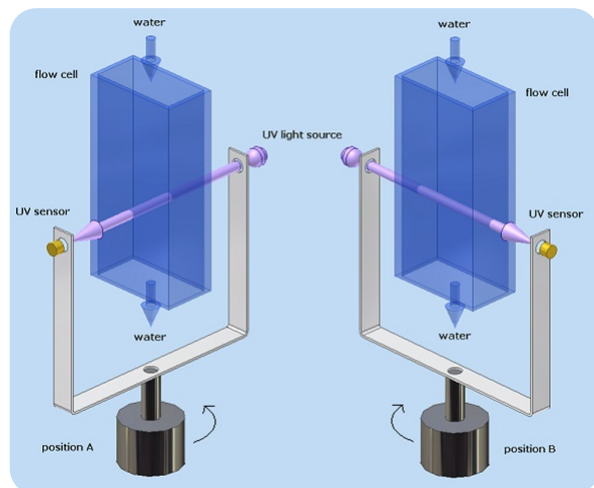
- High quality and multilingual
- Medium cost/lowest cost per point
- Colour touchscreen
- Datalogging
- Up to 12 sensors
- Options:
  - All CRONOS® and CRIUS® options
- Can combine with other sensors

*For more information please see the individual brochure - CRONOS®, CRIUS® and CRATOS*

find us at [www.processinstruments.net](http://www.processinstruments.net)

## Principle of Operation

With the Ortho-Beam technology, UV254nm measurements are alternately taken at 90° 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 test water. From these two measurements alone, quartz fouling and lamp fluctuations are intrinsically compensated for by



*Ortho-Beam Technology*

the measurement process. 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 minimises losses in accuracy over time, and significantly reduces maintenance.

## Applications

The UV254Sense provides online continuous organics monitoring utilising 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 Pi) can give all the information required to control coagulation in a Water Treatment Plant.

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

For more information visit:

[www.processinstruments.net/products/uv254-analyzer.php](http://www.processinstruments.net/products/uv254-analyzer.php)

## Specification \*

<b>Range:</b>	0-100% UVT, 0-2 UVA
<b>Accuracy:</b>	±1.0% UVT
<b>Repeatability:</b>	±0.1% UVT
<b>Resolution:</b>	0.1% UVT, 0.001 UVA
<b>Path Length:</b>	1cm
<b>Sampling Time:</b>	10 seconds
<b>Flow Rate:</b>	300-800mL/min
<b>Cleaning:</b>	Significantly reduced cleaning requirements due to Ortho-Beam technology Automatic cleaning (optional)
<b>Self Diagnostics:</b>	Continuous detection of excessive fouling, lamp output, and electrical fault
<b>Humidity Control:</b>	Humidity sensor with large regeneratable desiccant system
<b>Wavelength:</b>	253.7nm
<b>Light Source:</b>	Low pressure mercury UV lamp
<b>Lamp Life:</b>	2 years (warranted)
<b>Dimensions:</b>	16"H x 14"W x 8"D
<b>Enclosure:</b>	IP65 (Nema 4X) wall mountable
<b>Fluid Connections:</b>	¼" tube compression in/out
<b>Electrical:</b>	100-240VAC
<b>Operating Temp:</b>	32° to 113°F (0° to 45°C)

<b>Storage Temp:</b>	-4° to 140°F (-20° to 60°C)
<b>Warranty:</b>	2 year limited warranty
<b>Optional Accessories:</b>	Automatic chemical cleaning Dual sample capability

## Standard Features

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

## Optional Features

- Automatic chemical cleaning system
- Dual sample feed capability

*\*All subject to change without notice*

everything you need, and nothing you don't  
find your local supplier at [www.processinstruments.net](http://www.processinstruments.net)

