



# Water Quality Analysers



## SoliSense® - Turbidity and Suspended Solids Monitor

With the SoliSense® range of Suspended Solids/Turbidity analyzers you get a world's first sensor. The first sensor to successfully incorporate four measuring technologies. For multiple measuring ranges the one sensor can monitor Turbidity and Suspended Solids from 0.02 NTU to 8% solids in one sensor. A less expensive SoliSense® is available for 0-10 NTU.

**Autoclean optical sensor**

**Stable and reliable - excellent process control**

**Suitable for all potable, waste and process waters**

**Up to 6 months between maintenance**

**Up to 3 months between calibration**

**From 0.02 NTU to 8% Solids**



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

### CRONOS® SoliSense®



- 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

### CRIUS® SoliSense®



- High Quality and Multilingual
- Low Cost
- Colour Display and Keypad
- Sophisticated Comms and Control
- Datalogging
- Up to 6 sensors
- All CRONOS® options plus:
  - texting alarms via GSM
  - remote internet access via GPRS
  - automatic cleaning
  - automatic calibration
  - integrated flow control

### CRATOS SoliSense®



- High Quality and Multilingual
- Medium Cost
- Colour Touchscreen
- Datalogging
- Up to 12 sensors
- All CRONOS® and CRIUS® options plus:
  - lowest cost per point

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

## Principle of Operation

### Multi-beam Technology

Each probe is equipped with 2 light sources and 4 detectors. Each light source uses long-life emitters (at least 20,000 operating hours), and these are turned off when not required to conserve energy and extend the life.

By using multiple light emitters and detectors in a single probe it is possible to:

- Measure solids from 0.02 NTU to 8% solids
- Monitor and compensate for fouling of the optics
- Monitor and compensate for aging of the optics
- Measure the forward scattering of light (low NTU values)
- Measure the side scattering of light (ISO7027 requires a 90° side scatter measurement). (NTU)
- Measure transmitted light (low % solids)
- Measure the back scatter of light (higher % solids)

The electronics provide a fully scalable output allowing the CRIUS® SoliSense® to measure any part, or the whole of the scale from 0.02 NTU to 8% solids. The sensor probe comes equipped with the capability of having a water jet regularly sweep over the optical lenses keeping them clean.

If you have an application that ranges from low NTU all the way to %age solids then the CRIUS® SoliSense® is certainly the monitor for you! With only 3 or 4 calibration points you can accurately monitor your process all the way from low NTU to 8% solids.

The probes are stainless steel and are built to work in the demanding environment of a WwTW. If you want to monitor solids at any point in your waste water treatment plant, this instrument has the self cleaning sensor and accessories to do it, even if other instruments have failed.

### Insertion



Dip



By Pass

## Specification

|                             |  |
|-----------------------------|--|
| <b>Signal:</b>              | The SoliSense® sensor provides up to four user selectable outputs, which are proportional to the measured concentration range selected |
| <b>Range:</b>               | Selectable   |
| <b>Accuracy:</b>            | < 1% of measuring range end value  |
| <b>Reproducibility:</b>     | 0.5 %  |
| <b>Weight:</b>              | Installation type ca. 1.5kg Immersion type ca. 0.5kg   |
| <b>Comms:</b>               | TCP/IP, Modbus, RS232, RS485, 4-20mA   |
| <b>Power supply:</b>        | 100-250 V AC, 50/60 Hz 8-36 V DC   |
| <b>Ambient temperature:</b> | -20 to +50°C   |
| <b>Process temperature:</b> | 0-50°C   |
| <b>Lamp Source:</b>         | IR LED   |
| <b>Housing Materials:</b>   | Wetted parts, stainless steel, quartz glass, and polypropylene   |
| <b>Cleaning Cycles:</b>     | User settable cleaning cycle time and cleaning time  |
| <b>Cleaning:</b>            | Autoclean water or air jet   |
| <b>Reliability:</b>         | Simplified design with no moving parts   |
| <b>Durability:</b>          | Hard-wearing stainless steel/epoxy/quartz glass  |
| <b>Pipe Options:</b>        | Pipe connection, pipe insertion or immersion versions to suit individual applications  |
| <b>Enclosure rating:</b>    | IP65   |
| <b>Display:</b>             | Value and Alarms at the same time, controller dependent  |

### SoliSense Installation

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

