



NitraSense Probe

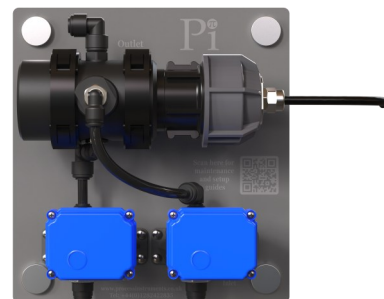
Online Nitrate Sensor

The NitraSense Probe from Pi is a solid state at-line or dip sensor for the continuous monitoring of nitrates in the range 0-25 mg/l. It gives a long lifetime, fast response output to nitrates in water and is successfully used in several applications including:

- **Source water monitoring for drinking water**
- **Final effluent monitoring for waste water plants**
- **Inlet monitoring for waste water plants**
- **Aeration control and optimisation**
- **Optimization for denitrification plants**
- **Industrial process control**

The NitraSense Probe sensors are available with different controllers giving you the same great performance with different communication, display, and control options.

Also available with self-cleaning options, the NitraSense offers an unequalled sensor for accuracy, reliability, and ease of use. With no moving parts, reagents, or maintenance, the NitraSense is easy to own and offers excellent value for money.



"Nitrate monitoring in the harshest environments made reliable."

CRONOS® NitraSense



- High Quality - Lowest Cost
- Multilingual
- High resolution grayscale display
- 9 buttons for easy navigation
- Graphing and datalogging
- Enclosure; wall, panel, pipe or pole mounting. IP65/Nema 4x.
- Options:
 - **Modbus RS485/LAN**
 - **Profibus DPV 1**
 - **Up to 2 sensors**
 - **PID/flow proportional controls**
 - **Remote sensors**
 - **Colour display**
 - **Downloadable data logs**

CRIUS® 4.0 NitraSense

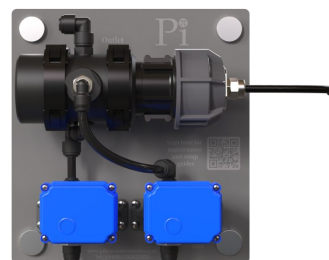


- High Quality - Lowest Cost
- Multilingual
- High resolution colour display
- Intuitive user interface
- Downloadable data logs
- Customisable home pages
- All CRONOS® options plus:
 - **Up to 8 sensors**
 - **Remote access via LAN**
 - **Remote access via 3G/4G**
 - **Expandable to 16 sensors**

For more information please see the individual brochures for CRONOS® and CRIUS® 4.0

Sensor Options

- **At-Line**



- **Dip**



- **Automatic Cleaning Sample Strainer for Raw Water**



Principle of Operation

Pi's online nitrate sensor has at its heart, long life (approx. 10 years life) IR and UV LED. LEDs are known to be stable and reproducible, meaning that as a light source for a nitrate sensor good quality LEDs provide the low energy, long life and stability that's required. Using 2 LEDs provides compensation for interference to the nitrate measurement from turbidity and organics.

Standard Features

- Online continuous operation
- Organics and suspended solids compensation

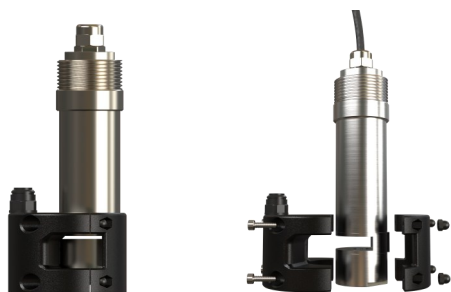


Fig. 1. Dip Mounting Self Cleaning

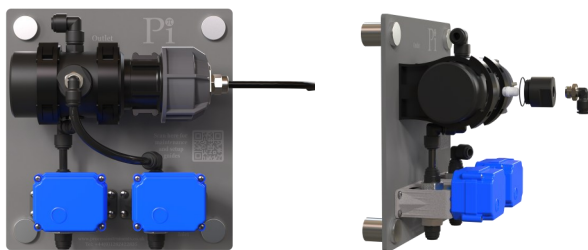


Fig. 2. At Line Self-Cleaning

Sensor Fouling

With any sensor, keeping it clean and free from particulate fouling is a challenge. As with all of Pi's sensors, the NitraSense comes with an automatic cleaning system, providing trouble free monitoring of nitrates on any water source. The NitraSense comes equipped with the ability to clean itself using directed air or water flushes. In addition, the sample can be pre-filtered using the automatic back flushing filter from Pi.

Optional Features

- Automatic cleaning system (no moving parts)
- Dip or at-line mounting
- Self-cleaning sample filter

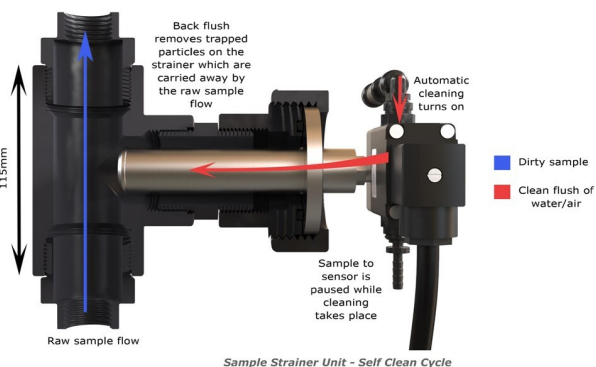
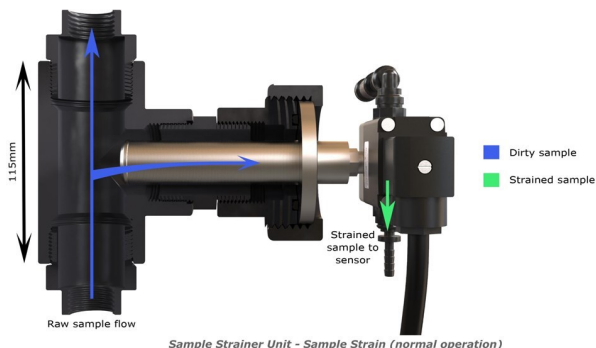


Fig. 3. Sample Strainer Unit

Specification*

Measurements	Nitrate (COD and TSS Compensation)
Range	0-25 mg/L , 0-50 mg/L
Accuracy	±1%
Repeatability	±0.5%
Path Length	10mm
Sampling Time	60 Seconds
Material	316 Stainless Steel
Light Source	Deep UV LED, IR LED
Dimensions	Probe: 39mm diameter, Height 150mm + path length
Operating Conditions	1 to 45C, max 80% relative humidity (non-condensing)
Storage Conditions	-20 to 60C, max 80% relative humidity (non-condensing)
Enclosure Rating	Probe IP67
Submersible	To 1 metre (IP67)
Warranty	1 year
Cleaning System	Spray wash (Optional)
Conformity Safety	EN61010
Conformity EMC	EN61326
Cable Length	Standard 10m

*All subject to change without notice