HypoSense

Chlorine in Sodium Hypochlorite (Bleach) 0-16%

The HypoSense range of chlorine in industrial sodium hypochlorite analysers use an optical sensor with a range of 0-16%. They are optical devices which are specifically designed to withstand the harsh chemical environment of industrial bleach (sodium hypochlorite). They are insensitive to changing pH, use no reagents, are extremely stable, and have reduced maintenance and reduced whole life costs. An in-built temperature sensor means that they are automatically temperature compensated.

- **Optical sensors -** solid state and no moving parts
- **No chemical reagents -** lower cost of ownership
- **Stable and reliable -** excellent process control
- **Zero maintenance -** reduced costs
- **Up to 15 years life -** reduced costs

"The only fully integrated hypo sensor in the world"

Mike Riding, UK

The HypoSense sensor and 3/4" T fitting is available with different controllers giving you the same great performance with different communication, display and control options including; relays, digital inputs, analogue outputs, LAN and modem connections with Modbus, Profibus and MQTT comms protocols.

CRONOS® HypoSense

- 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 HypoSense

- High Quality - Lowest Cost
- Multilingual
- High resolution colour display
- Intuitive user interface
- Downloadable data logs
- Customisable home pages
- All CRONOS® options plus:
  - **Up to 4 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

Mounting Options

In pipe mounting in a PVC T fitting. Simple to install, rugged and reliable

Principle of Operation

The optical sensor shines light of a particular wavelength (near UV) through the industrial hypo and the amount that is absorbed is proportional to the concentration of chlorine in the sodium hypochlorite. The sensor has a reference light source and detector for stability and an in-built temperature sensor for integrated temperature compensation.

The hypo keeps the sensor clean and bubbles are encouraged to flow through the sensor and not settle on the optical surfaces by orienting the flow through T such that the flow path is vertical.

Calibration is by comparison to titration test kits, and is generally on a 3 or 6 month schedule. Calibration input is via a simple wizard on the controller display.

Applications

- **MCA generation**
- **Hypochlorite generation**
- **Large industrial bleach users e.g. paper mills**

The HypoSense sensor is being successfully used in many harsh and demanding applications where the concentration of the bleach is important for the efficiency of the process.

Installation

Typically on the inlet or outlet of a bleach pump using the PVC T fitting supplied.

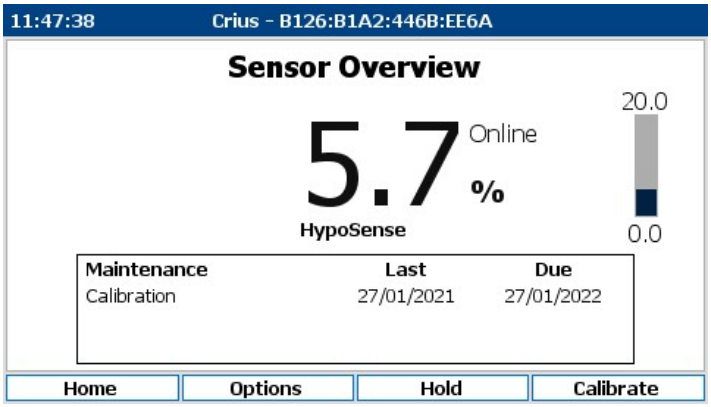
Controller Integration

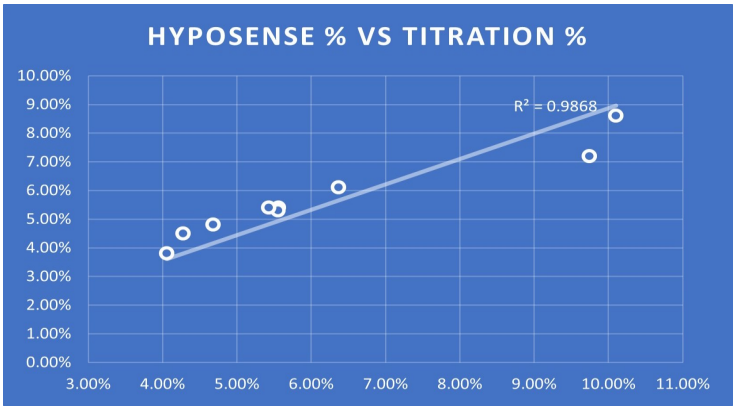
The HypoSense sensor integrates with the CRIUS®4.0 or CRONOS® controller using Modbus, which gives full communication with the sensor. Please see the separate controller brochures for details of the I/O, communications, control and remote access capabilities of the controllers.

Key Benefits

- **Low cost of ownership**
- **Fully integrated with the controller**
- **Temperature compensated**
- **Stable and reliable**
- **No Reagents**

For more information and to discuss your application, process control requirements and any remote communications please contact Pi and talk to one of our technical specialists.





Specification*

	HypoSense Chlorine Sensor
Type:	Optical, near UV absorption
Range (ppm):	0.1-16%
Resolution:	0.01%
Stability:	Approx. +/-1% per month
Flow rate:	No min or max
Temperature range:	0-45°C
Temperature compensation:	Automatically by an integrated thermistor
Installation:	3/4" Inline T
Calibration:	Off line titration
Housing material:	CPVC, fused silica
Maintenance intervals:	No maintenance

All subject to change without notice