pHSense

Continuous Online pH Meter

The pHSense range of pH analyzers from Pi utilize the very latest and best pH sensors available in the world today for measuring the online pH of any aqueous solution. They are combination glass electrodes with integral reference, automatic temperature compensation, which use no reagents, are extremely stable, and have reduced maintenance and reduced whole life costs.

- **Up to 3 years continuous operation**
- **Stable and reliable - excellent process control**
- **Suitable for all potable and process waters**
- **Suitable for very low conductivity waters**
- **Integral temperature compensation**
- **Suitable for use in Autoflush (see separate brochure)**

"The pH sensors from Pi are much more stable than others we've tried and they seem to last forever!" **Kahraman Kalyoncu, Turkey**

The pHSense sensors and flow cells are available with different controllers giving you the same great performance with different communication, display, and control options. With the pHSense range of online pH meters, you get everything that you need - and nothing that you don't.

CRONOS® pHSense

- 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**
  - **Up to 2 sensors**
  - **PID/flow proportional controls**
  - **Remote sensors**
  - **Color display**
  - **Downloadable data logs**

CRIUS® pHSense

- Highest Quality - Low Cost
- Multilingual
- High resolution color display
- Intuitive user interface
- Customizable home pages
- All CRONOS® options plus:
  - **Up to 4 sensors**
  - **Remote access via LAN**
  - **Remote access via GPRS**
  - **Expandable to 16 sensors**

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

Sensor Selection

pH1

- **Suitable for pools and spas**
- **Max. temp 80°C**
- **Flow cell mounting options**

pH2*

- **Suitable for potable and process waters**
- **Max. temp 80°C**
- **Flow cell, at line tee, autoflush flow cell and welding stub mounting options**

pH3*

- **Suitable for waste and process water**
- **Max. temp 80°C**
- **Autoclean immersion, at line tee, handrail and welding stub mounting options**

pH5*

- **Suitable for potable, waste and process waters and boiler feedwater**
- **Max. temp 100°C**
- **Flow cell, at line tee, autoflush flow cell, handrail and welding stub mounting options**

pH6*

- **Suitable for potable and process waters and boiler feedwater**
- **Max. temp 100°C**
- **Flow cell, at line tee, autoflush flow cell, handrail and welding stub mounting options**

**Includes a temperature sensor for automatic temperature compensation.*

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Principle of Operation

At the heart of the pHSense are the pH electrodes. The pH5 electrode has a double-junction reference to prevent contamination of the reference from sample components. This design gives the electrode a longer life compared to ordinary electrodes (up to 3 years). The electrode also has a hemi-shaped glass measuring surface which is more durable than the traditional bulb-shaped glass. Although they command a higher price in the market place, these sensors are more than cost effective with their longer life and lower maintenance requirements, typically only needing calibration once per two or three months.

pH5 and pH6 are particularly sensitive to difficult applications such as very low ionic strength waters or high temperature applications. pH1 - pH3 are less expensive, more traditional combination electrodes.

Autoflush

As described in a separate brochure (ISB36 Autoflush), the pHSense can come equipped to automatically clean itself at user defined intervals with all the benefits of no operator intervention for 6 months. The Autoflush is particularly useful in food preparation, pulp and paper, and many applications where there is likely to be a build up of solids in the sample. Autoflush is available for at line, and in line versions including dip and screw in autoclean pipe version. Please see the Autoflush brochure (ISB36) available on our website, or if you are online, please click here.

Applications

- **Remote Sites**
- **Food Preparation**
- **Potable Water**
- **Cooling Towers**
- **Paper Mills**
- **Chemically Challenging Applications**

Anywhere you have a requirement to measure pH is a suitable application for the pHSense. The pHSense pH meter range is particularly suited to working in sites where reliability and ease of use are most important. One area where the pHSense excels is in the measurement of pH in very low conductivity or ultra clean water.

Multi-Sensor Systems

The whole range of pHSense pH meters can be fitted with additional sensors such as chlorine or ORP. Please ask your local distributor for more details.

"Multi-sensor systems can save considerable sums without compromising measurement integrity"

Dr Craig Stracey, UK

Installation

The pHSense can be installed in a variety of auxiliary flow cells and self-cleaning devices. Please see the pH Selection guide (ISB56) available on our website, or if you are online, please click here.

Specification*

pH Electrodes

	pH1	pH2	pH3	pH5	pH6
Type:	Combined reference, and measuring electrode			Combined reference, and measuring electrode	
Reference Type:	Ag/AgCl gel filled	Ag/AgCl gel filled	Ag/AgCl gel filled	Ag/AgCl gel filled	Ag/AgCl gel filled
pH Range:	0-12	0-14	0-13	0-14	0-14
Slope:	95-102%	95-102%	95-102%	≥97%	≥97%
Pressure Range:	0-7 Bar	0-7 Bar	0-7 Bar	0-7 Bar	0-7 Bar
Impedence:	≤135 MOhm	≤150 MOhm	≤130 MOhm	<150 MOhm	<150 MOhm
Response Time:	95% of step pH2 to pH12 <5s			95% of step pH2 to pH12 ≤3s	
Temperature Range:	0-80°C	-5-80°C	0-80°C	0-100°C	0-100°C
Conductivity:	>100µS/cm	>100µS/cm	>100µS/cm	>300µS/cm	>300µS/cm
Wetted Surface:	PVC/Glass	PVC/Glass	PVC/Glass	RYTON/Glass	RYTON/Glass
Junction:	Single Gelled	Single Gelled	Double Gelled	Double Gelled	Double Gelled
Cable Length:	1m	3m	6m	6m	6m
Shelf Life:	12 months	12 months	12 months	12 months	12 months
ATC:	-	PT100	PT100	PT100	PT100
Estimated Life (Application Dependent):	12-18 months	12-18 months	12-18 months	3 years	18 months
Warranty:	3 months	3 months	3 months	6 months	6 months

All subject to change without notice

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