ConductiSense

Online Conductivity Meter

The ConductiSense range of Conductivity meters from Pi utilize a range of conductivity sensors for measuring the conductivity from 0 to 2,000,000µS/cm (range selectable). You can choose between a standard graphite sensor and a more sophisticated toroidal sensor, or stainless steel sensors for high temperature, high pressure applications.

- **Low purchase cost**
- **Low cost of ownership**
- **Different sensor materials for different applications**
- **Easy installation**
- **Multiple mounting options**
- **TDS and salinity outputs (optional)**

The ConductiSense sensors and accessories are available with different controllers giving you the same great performance with different communication, display, and control options. With the ConductiSense range of Conductivity Monitors, you get everything that you need - and nothing that you don't.

CRONOS® ConductiSense

- 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**
  - **Color display**
  - **Downloadable data logs**

CRIUS® ConductiSense

- Highest Quality - Low Cost
- Multilingual
- High resolution color display
- Intuitive user interface
- Downloadable data logs
- Customizable 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®

Sensor Selection

Graphite

- **0-5,000µs/cm (higher ranges available by special request)**
- **K = 0.1, 1 (10 by special request only)**
- **Flow cell or pipe mounted**
- **Submersible, potable, clean water**

Toroidal

- **0-2,000,000µs/cm**
- **In pipe or dip mounted**
- **Dirty water**
- **Noryl**

Stainless Steel

- **0-50,000µs/cm**
- **K=0.1, 1, 10**
- **High temp**
- **High pressure**
- **Clean in place**
- **Stainless steel**

All of Pi's conductivity sensors can be used to measure salinity and TDS (Total Dissolved Solids).

Principle of Operation

Graphite

Our light industrial conductivity sensor utilizes graphite technology. The durable epoxy body construction provides a rugged and dependable sensor for potable water and clean water. Mount them in-line, in a pipe "T" fitting, or submerse them into a tank. For many applications, the epoxy body conductivity sensors are the lowest cost, most reliable conductivity sensor to use, especially for process applications. Rugged epoxy bodies make the sensors virtually unbreakable. These are an excellent choice to use as standard online conductivity electrodes in the water and related industries.

The table below shows the measuring ranges available with the graphite sensor.

		Cell Constant (K)		
Measuring Range (µS/cm)		**0.1**	**1**	**10**
	Low Range	0-10	0-100	0-1000
	Medium Range	0-50	0-500	0-5000
	High Range	0-100	0-1000	0-10,000
	Over Range*	0-500	0-5000	0-50,000

**Sensors should only be used 'Over Range' after discussion with your Pi sales contact.*

Toroidal

The toroidal inductive conductivity sensors feature a wide measurement range and dependable toroidal technology over the range 0-2,000,000µS/cm. Resistant to corrosion, coatings and fouling common to contacting conductivity sensors, this probe is designed for a trouble free and long service life. Noryl is the standard material of construction and has a wide solvent tolerance and temperature stability to 105ºC. All models can be submersed by utilizing the 3/4" MNPT threads on the sensor or installed in 2" NPT tees for in-line deployment. A temperature sensor is built into the conductivity sensor for automatic temperature compensation.

Stainless Steel

The stainless steel conductivity sensors utilize the same measurement technology as the graphite sensors giving the same reliability of measurement but in a more robust, and resistant, body. This added robustness, over the standard graphite probe, means that they can be used in high pressure and/or high temperature environments, for example boiler or CIP applications. The stainless steel conductivity sensors are available in 3 different K-factors giving a very wide, potential range of measurement.

TDS and Salinity

Total Dissolved Solids (TDS) and salinity are both measured with conductivity sensors, and the Pi controllers can provide outputs and on screen displays of calculated TDS and salinity readings from the conductivity sensors. All ConductiSense controllers come with standard user adjustable, factors for calculating TDS and salinity.

Specification*

	Graphite	Toroidal	Stainless Steel
Measuring Range:	0-5000µS/cm (higher ranges available on request)	0-2,000,000µS/cm (0-2000mS/cm)	0-50,000µS/cm
Cell Constants:	K=0.1, 1 (10 by special request only)	N/A	K=0.1, 1, 10
Measuring Surface:	Graphite	N/A	Graphite
Body Material:	Epoxy	Noryl	Stainless Steel
Max. Temperature:	70°C	105°C	200°C
Max. Pressure:	7.5 Bar (110 PSI)	10 Bar (145 PSI)	17 Bar (250 PSI)
Temp. Compensation:	Included	Included	Included
Cable:	4 wire	6 wire plus shields	4 wire
Cable Length:	6m (20ft)	6m (20ft)	6m (20ft)
Process Connection:	Gland fitting required for submersion, $^3/_4$" tee, flow cell	$^3/_4$" MNPT for submersion, 2" standard tee with adapter	$^3/_4$" MNPT for insertion

All subject to change without notice