



# ConductiSense

## Online Conductivity Meter

The ConductiSense range of Conductivity meters from Pi utilise a range of conductivity sensors for measuring the conductivity from 0 to 2,000,000  $\mu\text{S}/\text{cm}$  (range selectable). You can choose between a standard graphite sensor and a more sophisticated toroidal sensor, or stainless steel 'special' sensors for high temperature, high pressure applications.

- **Low purchase cost**
- **Low cost of ownership**
- **Resists coating, corrosion and fouling**
- **Durable Noryl construction**
- **Easy installation**
- **Custom tee for in-line mounting**
- **TDS and salinity outputs**



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
  - Colour display
  - Downloadable data logs

### CRIUS® ConductiSense



- Highest Quality - Low 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®**

### Sensor Selection

#### Graphite



- 0-5,000  $\mu\text{S}/\text{cm}$  (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



- 0-2,000,000  $\mu\text{S}/\text{cm}$
- In pipe or dip mounted
- Dirty water
- Noryl

#### Specials



- Contact Pi
- 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 utilises 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 submerge 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.



### 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 Sensor

<b>Type:</b>	Graphite
<b>Measuring range:</b>	0-5,000 $\mu\text{S}/\text{cm}$ (higher ranges available on request)
<b>Cell Constants:</b>	K=0.1, 1, (10 by special request only)
<b>Measuring Surface:</b>	Graphite
<b>Body Material:</b>	Epoxy
<b>Max Temperature:</b>	70°C
<b>Max Pressure:</b>	7.5 Bar
<b>Temp Comp:</b>	Included
<b>Cable:</b>	22 AWG 4-wire. 20ft standard (6m) unless otherwise specified
<b>Process Connection</b>	Gland fitting required for submersion, $\frac{3}{4}$ " tee, flow cell



For specialist **high temperature applications**, please contact Pi or your local sales organisation for more details.

*\*All subject to change without notice*

### Toroidal

The toroidal inductive conductivity sensors features a wide measurement range and dependable toroidal technology over the range 0-2,000,000  $\mu\text{S}/\text{cm}$ . 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 105°C. All models can be submersed by utilising the  $\frac{3}{4}$ " 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.



### Specification\*

#### Toroidal Sensor

<b>Type:</b>	Toroidal
<b>Measuring Range:</b>	0-2,000,000 $\mu\text{S}/\text{cm}$ (0-2000 mS/cm)
<b>Body Material:</b>	Noryl
<b>Max Temperature:</b>	105°C
<b>Max Pressure:</b>	10 Bar
<b>Temp Comp:</b>	Included
<b>Cable:</b>	20 ft (6m), 6 conductor plus shields
<b>Process Connection:</b>	$\frac{3}{4}$ " MNPT for submersion, 2" standard tee with adapter

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

Measuring Range ( $\mu\text{S}/\text{cm}$ )	Cell Constant (K)		
	0.1	1	10 (Special Request Only)
<b>Low Range</b>	0-10	0-100	0-1000
<b>Medium Range</b>	0-50	0-500	0-5000
<b>High Range</b>	0-100	0-1000	0-10,000
<b>Over Range</b>	0-500	0-5000	0-50,000