



**TURTLE  
TOUGH**

The Turtle Tough Ultra Pure Water pH Digital Smart Sensor is designed for pure water, low Ion concentration applications.

## Ultra Pure Water, pH Digital Smart Sensor

The Ultra Pure Water pH Digital Smart Sensor is designed for pure water, low Ion concentration applications. Our unique pure water measurement technology combined with our Digital Smart Sensor technology makes this a truly market leading product for Pure Water applications.

### Features

- Designed for pure water, low Ion concentration applications
- Rugged polypropylene body
- Sensitive glass bulb (<30MΩ at 25°C)
- Provides outstanding performance in ultra pure water
- Temperature range: 0°C to 90°C Standard
- Longer life and greater stability than competitor products due to its unique technology
- Optimal measurement reliability
- Communication: MODBUS RTU (RS-485)



Ultra Pure Water  
pH Smart Sensor

## Ultra Pure Water, pH Digital Smart Sensor



Ultra Pure Water Digital Smart pH Sensor

The Turtle Tough Industrial Smart Sensor for Ultra Pure Water has some incredibly unique properties that separates it from competitors. Pure water sensors are usually entirely glass, making them fragile and subject to a high incidence of breakage. By contrast, the TT-PURE-pH-DSS sensor has a rugged polypropylene housing and a large surface area, low resistance, sensitive glass bulb (<math><30M\Omega</math> at 25°C) that provides outstanding performance in ultra pure water.

The sensor utilises a gel electrolyte and solid electrolyte salt bridge which is composed of two different colloidal electrolytes. This unique technology means we have a longer life and greater stability than competitor products. A large PTFE liquid junction and advanced solid dielectric reduce fouling and create less maintenance than traditional sensors.

Like in all Turtle Tough pH and ORP sensors, a long reference diffusion path greatly prolongs the service life of the sensor in harsh environments. Additionally, the unique design of the glass bulb prevents the generation of interfering bubbles in the internal buffer, improving measurement reliability.

Of great importance to low conductivity applications, are signal quality and signal noise. As such, the TT-PURE-pH-DSS sensor adopts high-quality low-noise cables. This sensor is widely used in circulating water, pure water, RO water and other low conductivity applications.

### SMART Sensor Technology

SMART Sensors have revolutionised the way our customers manage and maintain sensors. Unlike most other smart sensors, Turtle Tough provide you with the option of a propriety digital signal or an open-source MODBUS RTU signal that is universally accepted. This allows the sensor to be directly connected to your industrial network without the need for proprietary hardware. Turtle Tough also provide state-of-the-art analysers and controllers should you require a sophisticated turnkey control solution.

SMART sensors have the added benefit of storing a detailed performance history and diagnostics on-board enabling superior sensor management. Sensors can be cleaned and calibrated offline to facilitate a hot swapping maintenance regime. Need to know more about [hot swapping?](#) Ask our team



Sensor name	ULTRA PURE Water pH Smart Digital Sensor
Measuring type	pH
Measurement range	2-12pH
Accuracy	±0.05pH
Output	<b>Smart Digital sensor:</b> Direct Smart Sensor Technology (-DSS). This open source digital signal output (MODBUS RTU) is compatible with a wide range of devices that can accept a MODBUS signal*. 9~36VDC/RS485 MODBUS RTU
Measure material	Glass/silver+ silver chloride; SNEX
Housing material	Polypropylene
Pressure resistance	87 psig (0.6Mpa)
Temperature compensation	PT1000
Temperature range	0-90 °C
Junction material	Kynar (Poly-Vinylidene-Fluoride)
Calibration	Sample calibration, standard liquid calibration
Cable length	Standard 10m cable. Optional lengths available
Installation thread	¾" MNPT
Waterproof grade	IP68
Connection	Quick Connect Plug
Application	Ultra-pure water
Storage	Keep at room temperature with closed protector cap
Warranty	12 Month Conditional Warranty. Go to: <a href="http://turtletoughsensors.com/support/warranty-returns">turtletoughsensors.com/support/warranty-returns</a>