

# Datalogging Water Quality Sensor

## *Seametrics TempHion™ Submersible pH/ORP Sensor with Datalogging*

The TempHion™ is a submersible water quality sensor and datalogger that comes with powerful, easy-to-use Aqua4Plus software. Each unit includes a pH/ORP element as well as one thermistor-based temperature element.

With a patented reference electrode, the TempHion™ provides long-term stability for continuous or intermittent monitoring – making unattended in-situ pH testing possible without frequent calibrations or service.

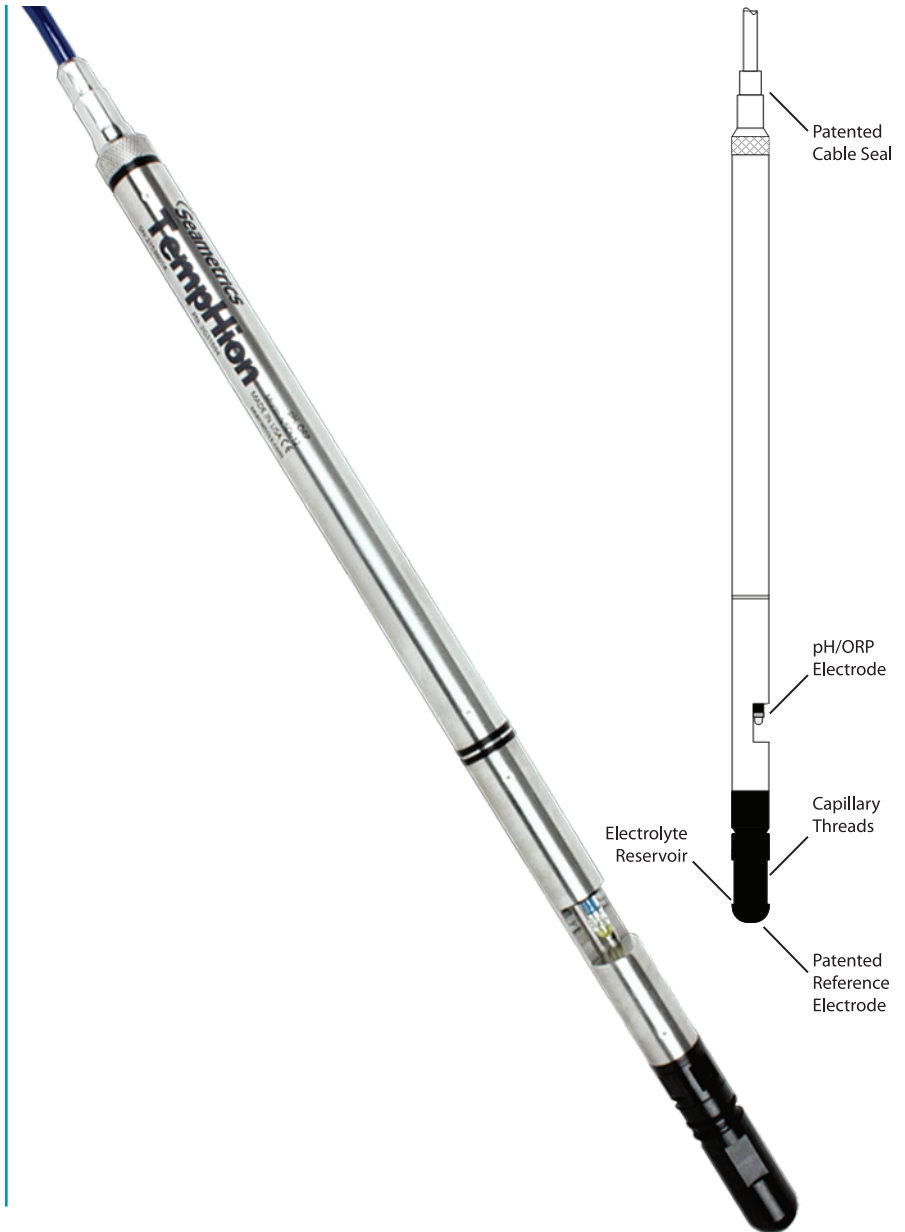
### FEATURES

- **Measures and records pH, ORP, temperature, and time**
- **Low power**  
*field replaceable AA batteries*
- **Modbus® RTU (RS485) and SDI-12 interface**  
*great flexibility*
- **Measure pH at up to 150 PSI**
- **Patented reference electrode**  
*6-month sensor stability\**
- **Solution ground**  
*for excellent noise protection*
- **Small diameter**  
*0.75" (1.9 cm)*
- **200,000 record non-volatile memory**  
*no data loss in the event of a power failure*
- **Wireless connectivity**  
*radios and/or cellular*
- **Free, easy-to-use Aqua4Plus software**

\* may vary due to environmental factors

### APPLICATIONS

- **Single- or multi-well tracer tests**
- **Saltwater intrusion tracking**
- **Tidal influence studies**
- **Waste water treatment discharge**
- **pH monitoring**



**CALL GEOTECH TODAY (800) 833-7958**

**Geotech Environmental Equipment, Inc.**

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### SPECIFICATIONS

#### Housing & Cable

Weight	0.8 lb. (0.4 kg)
Body Material	Acetal & 316 stainless or titanium
Wire Seal Material	Fluoropolymer and PTFE
Cable	Submersible: polyurethane, polyethylene, or ETFE (4 lb./100 ft., 1.8 kg/30 m)
Field Connector	Standard

#### Temperature

Operating Range	0° to 55°C (32° to 131°F)
Storage Range	Without batteries: -20° to 80°C (-4° to 176°F)

#### Power

Internal Battery	Two lithium 'AA' batteries – Expected battery life: 18 months at 15 min. polling interval (may vary do to environmental factors)
Auxiliary	12 VDC – Nominal, 6-16 VDC – range

#### Communication

Modbus®	RS485 Modbus® RTU, output = 32-bit IEEE floating point
SDI-12	SDI-12 (ver. 1.3) – ASCII

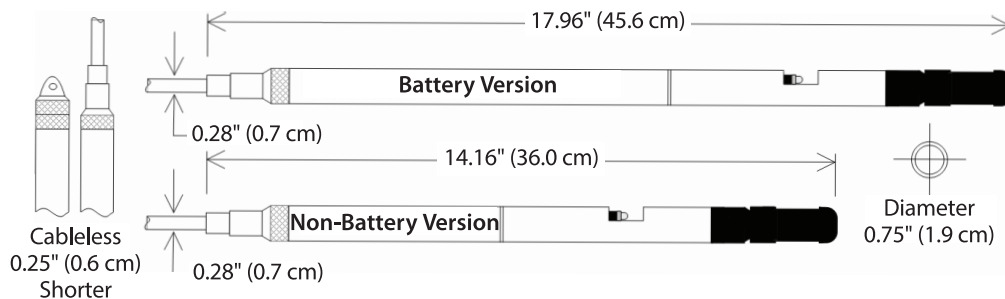
#### Logging

Memory	4MB – 200,000 records
Logging Types	Variable, user-defined, profiled
Logging Rates	2x/sec. maximum, no minimum
Baud Rates	9600, 19200, 38400
Software	Complimentary Aqua4Plus 2.0 and Aqua4Plus Lite
Networking	32 available addresses per junction (Address range: 1 to 255)
File Formats	.a4d and .csv

#### Output Channels

	Temperature	pH	ORP
Element	30K ohm thermistor, Epoxy bead/external housing	Glass combination electrode	Platinum ring
Accuracy	±0.2°C	±0.2 pH units, 0.1% mV value (typical)	0.1 mVH, 0.1% mV value (typical)
Resolution	0.1°C	0.01 pH units	0.01 mVH units
Units	Celsius, Fahrenheit, Kelvin	pH, mV	Eh, mV
Range	0° to 55°C (32° to 131°F)	0-14 pH units/-538 to 260mV	±1200mV
Compensated	–	0° to 40°C (32° to 104°F)	0° to 40°C (32° to 104°F)
Calibration	–	One or two point calibration w/pH buffers (4 & 7 or 7 & 10)	EH 1 pt. calibration
Reference Solution	–	Potassium Nitrate – (KNO <sub>3</sub> )	Potassium Nitrate – (KNO <sub>3</sub> )
Reference	Ag/AgCl solid state electrode, capillary liquid junction, TempHion™ reference solution		
Max. Depth	700 ft. (210m)/300psi		
Environmental	IP-68, NEMA 6P		

Specifications subject to change.  
Modbus is a registered trademark of Schneider Electric.



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