

TempHion™ Submersible Smart pH/ORP Sensor

WITH DATA LOGGING



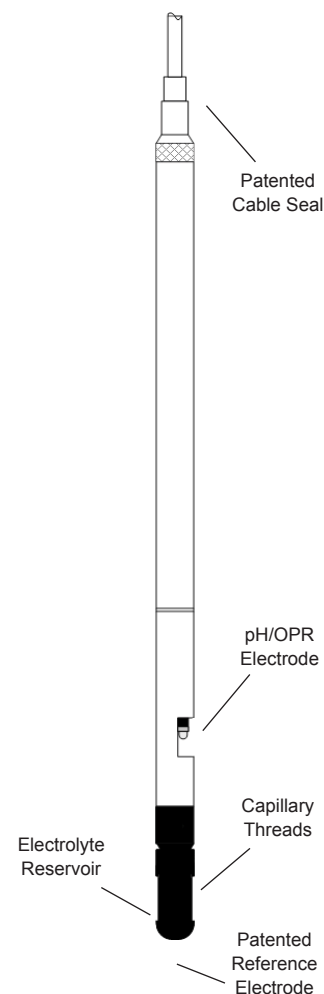
APPLICATIONS

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

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 software

** may vary due to environmental factors*

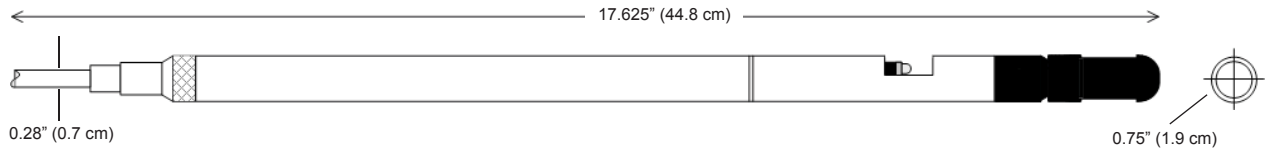


True data, measure by measure

1-800-PRO-WELL
WWW.INWUSA.COM



TempHion™ Submersible Smart pH/ORP Sensor



GENERAL

| | |
|--|---|
| Length | 17.625" (44.8 cm) |
| Diameter | 0.75" (1.9 cm) |
| Weight | 0.85 lb. (0.4 kg) |
| Body Material | Delrin® & 316 stainless steel or titanium |
| Wire Seal Material | Viton® and Teflon® |
| Submersible Cable | Polyurethane, polyethylene, or FEP |
| Protection Rating | IP68, NEMA 6P |
| Terminating Connector | Available |
| Communication | RS485 Modbus® RTU SDI-12 (ver.1.3) |
| Direct Modbus Read Output | 32-bit IEEE floating point |
| Millivolt Channels | |
| <i>No. Available Channels</i> | 2mv, 1 temp |
| <i>Range</i> | ± 1200mV |
| <i>Accuracy</i> | 0.1% value |
| <i>Resolution</i> | 0.1mV |
| Reference | |
| <i>Electrode</i> | Ag/AgCl solid-state electrode |
| <i>Junction</i> | Patented capillary liquid junction |
| <i>Electrolyte</i> | TempHion™ reference solution |
| Operating Temp. Range | -0° C to 55° C |
| Storage Temp. Range¹ | -20° C to 80° C |
| Maximum Depth | 700 ft (210 m) 300 PSI |

LOGGING

| | |
|--|--|
| Memory | 2MB - 200,000 records |
| Log Types | Variable, user-defined, logarithmic, profiled |
| Programmable Baud Rate (optional) | 9600, 19200, 38400 |
| Logging Rate | 2x/sec maximum |
| Software | Complimentary Aqua4Plus or Aqua4Push |
| Networking | 32 available addresses per junction w/ batching capabilities (up to 255) |
| File Formats | .xls / .csv / .a4d |

POWER

| | |
|-----------------------------------|--|
| Internal Battery | 2x1.5V AA alkaline ² |
| Auxiliary Power | 12VDC - Nominal 6-15VDC - Range |
| Exp. Alkaline Battery Life | 18 months at 15m polling interval ³ |

TEMPERATURE

| | |
|-------------------------|-----------------------------|
| Element Type | 30K ohm thermistor |
| Element Material | Epoxy bead/external housing |
| Accuracy | ± 0.2° C |
| Resolution | 0.1° C |
| Range | -5° C to 60° C |
| Units | Celsius, Fahrenheit, Kelvin |

pH/ORP

| | |
|-----------------------------|--|
| Sensor Type/Material | |
| <i>pH</i> | Glass combination electrode |
| <i>ORP</i> | Platinum ring |
| Ranges | |
| <i>pH</i> | 0-14 pH units / -538mV to 260mV |
| <i>ORP</i> | ± 1200mV |
| Units | pH, mV, Eh |
| Typical Accuracy | |
| <i>pH</i> | ± 0.2 pH units |
| <i>ORP</i> | 0.1 mVH |
| Resolution | |
| <i>pH</i> | 0.01 pH units |
| <i>ORP</i> | 0.01 mVH units |
| Compensated Range | 0° C to 40° C |
| Calibration | |
| <i>pH</i> | One or two point calibration w/ pH buffers (7 & 4 or 10) |
| <i>ORP</i> | EH 1 pt. calibration |
| Reference Solution | Potassium Nitrate - (KNO ₃) |

¹ Storage without batteries
² Lithium available upon request
³ May vary due to environmental factors

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