



# SMAR**TROLL**<sup>™</sup> Multiparameter Handheld

#### Hold the future of water quality monitoring in your hand.

The SMARTROLL Multiparameter (MP) Handheld combines industryleading water quality sensors with revolutionary smartphone mobility. The intuitive iSitu<sup>®</sup> Application eliminates training time and runs on your iPhone<sup>®</sup>, iPod touch<sup>®</sup>, or iPad<sup>®</sup> device. The SMARTROLL MP simultaneously measures 14 parameters:

- **Chemical parameters:** Dissolved oxygen (optical sensor), conductivity (actual and specific), pH, ORP, salinity, total dissolved solids, resistivity, and density
- **Physical parameters:** Air and water temperature, barometric pressure, water level, and water pressure

Simply connect the SMARTROLL MP Probe to a battery pack, launch the iSitu App, and start reading results. No warm-up time or tedious setup. The iSitu App guides you through spot checks, calibrations, and data management.

#### **Be Mobile**

- Use the SMARTROLL MP System anywhere: Reduce field equipment requirements for routine monitoring and low-flow sampling events.
- Instantly collaborate with colleagues: Use a wired or wireless connection to send real-time snapshots of data.
- Streamline data management: Consolidate all site information on your smartphone and tag data with site photos and GPS coordinates. Log data to your smartphone and download results in a standard file format.

#### **Be Smart**

- Eliminate errors: Smart sensors automatically recognize calibration solutions, store calibration data in the sensors, and perform diagnostics. Start monitoring immediately. Sensors are pre-calibrated at the factory with NIST<sup>®</sup>-traceable standards (where applicable).
- **Reduce maintenance:** Robust sensors stand up to field use and calibrations can last for months.
- Get accurate results: Internal logic automatically compensates measurements for barometric pressure and salinity.

#### **Be In-Situ**

- Receive free, 24/7 technical support and mobile help in the field.
- Order supplies from the In-Situ e-store with your smartphone.
- Get guaranteed 7-day service for maintenance (U.S.A. only).

### **Applications**

- Ambient water quality spot checking
- Low-flow groundwater sampling
- Mine water monitoring
- Stormwater management
- Vertical profiling

## SMAR**TROLL**<sup>™</sup> Multiparameter Handheld Specifications

| General                                   | SMARTROLL Multiparameter Handheld Instrument  |   |                     |   |
|---|---|---|---------------------|---|
| Operating temp.                           | -5 to 50° C (23 to 122° F)  |   |                     |   |
| Storage temp.                             | -40 to 65° C (-40 to 149° F)  |   |                     |   |
| Dimensions & weight                       | Dimensions: 4.7 cm (1.85 in.) OD x 26.9 cm (10.6 in.) with restrictor installed (does not include connector). Weight: 694 g (1.53 lbs)          |   |                     |   |
| Wetted materials                          | PVC, 316 stainless steel, titanium, Acetal, Viton®, PC/PMMA   |   |                     |   |
| Environmental rating                      | Probe: IP68 with all sensors and cable attached. IP67 with sensors removed and cable detached.<br>Battery pack: IP67 with battery cover closed. |   |                     |   |
| Reading rate                              | 1 reading every 10 seconds; data logged to a mobile device.   |   |                     |   |
| Power                                     | 6 VDC from battery pack   |   |                     |   |
| Interface                                 | iPhone® 4S, iPod touch® 5, or iPad® 3, 4, mini or later; iOS 6.0 or later. BLE radio. Purchase the iSitu® App at the Apple® App Store.          |   |                     |   |
| Cable                                     | Black polyurethane. Standard lengths available: 1.5 m, 4.6 m, 9.1 m, 30.5 m (5 ft, 15 ft, 30 ft, 100 ft)  |   |                     |   |
| Standard Sensors                          | Accuracy  | Range                                   | Resolution          | Units of Measure  |
| Level, Depth, Pressure                    | Typical ±0.1% FS @ 15° C;<br>±0.3% FS max. from 0 to 50° C  | 76 m (250 ft); absolute<br>(non-vented) | ±0.01% FS or better | Pressure: psi, kPa, bar, mbar, mmHg, inHg<br>Level: mm, cm, m, in., ft  |
| Barometric pressure<br>(battery pack)     | ±3 mbar max.  | 300 to 1100 mbar                        | 0.01 mbar           | psi, kPa, bar, mbar, mmHg, inHg, Torr, atm  |
| Conductivity                              | Typical ±0.5% + 1 μS/cm;<br>±1% max.  | 5 to 100,000 μS/cm                      | 0.1 μS/cm           | Actual conductivity (μS/cm, mS/cm)<br>Specific conductivity (μS/cm, mS/cm)<br>Salinity (PSU)<br>Total dissolved solids (ppt, ppm)<br>Resistivity (0hms-cm)<br>Density (g/cm³) |
| Dissolved oxygen<br>Optical RDO* Fast Cap |   | sed hydrocarbons may swell the sen      |                     | mg/L, % saturation, ppm<br>3%; gaseous sulfur dioxide; gaseous chlorine.<br>oy it. Examples include, but are not limited to,  |
| ORP                                       | ±5.0 mV   | ±1400 mV                                | 0.1 mV              | mV  |
| pН  | ±0.1 pH unit (0 to 12 pH)   | 0 to 14 pH units                        | 0.01 pH unit        | pH units  |
| ,<br>Temp., air<br>(battery pack)         | ±2°C  | -20 to 70° C<br>(-4 to 158° F)          | 0.1°C               | Celsius, Fahrenheit   |
| Temp., sample (probe)                     | ±0.1°C  | -5 to 50° C<br>(23 to 122° F)           | 0.01° C or better   | Celsius, Fahrenheit   |
| Warranty                                  | 2-year warranty on probe. 1-year warranty on battery pack. 1-year warranty on cable.  |   |                     |   |

Low-Flow Sampling System (left) simplifies field setups and delivers realtime data to your clients.

Rugged Sensors (right) stand up to demanding conditions. Sensors automatically recognize calibration solutions and calibrations are stored in the sensors. The optical Rugged Dissolved Oxygen (RDO<sup>®</sup>) Sensor uses In-Situ Inc.'s EPA-approved methodology.



Recognize sites quickly and simplify data management with photo and GPS tags.



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