



## Aqua TROLL® 400 Multiparameter Probe

**CONFIGURING YOUR INSTRUMENT CAN BE TIME-CONSUMING, FRUSTRATING, AND EXPENSIVE. THE COMPACT AQUA TROLL 400 MULTIPARAMETER PROCESS PROBE SIMPLIFIES DECISION MAKING BY OFFERING A STANDARD SUITE OF SIX WATER QUALITY SENSORS, HOUSED IN A SUB-2 INCH UNIT.**

**This all-in-one, durable probe continuously measures 12 parameters from six sensors:**

1. Actual and specific conductivity, salinity, total dissolved solids, resistivity, and density
2. Dissolved oxygen (optical RDO®)
3. ORP
4. pH
5. Temperature
6. Water level and water pressure (absolute)

Leveraging proven technologies, like the patented, EPA-approved optical RDO® Sensor, the Aqua TROLL 400 decreases setup, calibration, and maintenance time. Ideal for long-term groundwater and surface water monitoring projects, you can deploy the probe for months of unattended operation. Partner with In-Situ to meet the challenges of reduced manpower and 24/7 demand.

[www.in-situ.com](http://www.in-situ.com)

CALL OR CLICK TO PURCHASE OR RENT  
1-800-446-7488 (toll-free in U.S.A. and Canada)  
1-970-498-1500 (U.S.A. and international)

### CONFIDENCE IN YOUR DATA

- Field-tested sensor technologies lower your total cost of ownership and provide stable, accurate results.
- Receive 3D factory calibrated sensors that are validated with NIST®-traceable standards (where applicable).
- DO readings are automatically compensated for salinity. With the Con TROLL® PRO System, DO and level readings are automatically compensated for barometric pressure.

### GREATER EFFICIENCY AND FLEXIBILITY

- Easy installation reduces errors and training time, while increasing productivity.
- Integrate with the VuSitu app, telemetry systems and HydroVu Data Services for real-time feedback on all of your water monitoring sites.
- Open communication protocols allow integration with your current radio, controller, data logger, sampler or SCADA/PLC system.
- Long-lasting calibrations reduce site visits.
- The narrow-diameter instrument operates in fresh, marine, and process waters.

### TOTAL FIELD SUPPORT

- Application and deployment guidance
- 24/7 technical support is always just a phone call away
- Seven-day service for maintenance and calibration (U.S.A. only)

### Applications:

- LONG-TERM GROUNDWATER AND SURFACE WATER MONITORING
- COASTAL DEPLOYMENTS—ESTUARIES AND WETLANDS • REAL-TIME WATER QUALITY MONITORING NETWORKS • REMEDIATION AND MINING • STORMWATER MANAGEMENT • GROUNDWATER SAMPLING (LOW-FLOW KIT AVAILABLE)

GENERAL		AQUA TROLL 400 MULTIPARAMETER PROBE					
OPERATING TEMP.	-5 to 50° C (23 to 122° F)						
STORAGE TEMP.	-40 to 65° C (-40 to 140° F)						
DIMENSIONS AND WEIGHT	Dimensions: 4.7 cm (1.85 in.) OD x 26.9 cm (10.6 in.) with restrictor installed (does not include cable connector). Weight: 694 g (1.53 lbs)						
WETTED MATERIALS	PVC, 316 stainless steel, titanium, Acetal, Viton®, POFMMA						
ENVIRONMENTAL RATING	IP68 with all sensors and cable attached. IP67 with sensors removed or cable detached.						
MAX. PRESSURE RATING	112 m (368 ft); 160 psi						
OUTPUT OPTIONS	Modbus/RS485 and SDI-12						
PROBE READING RATE	1 reading every 5 seconds (no internal logging)						
POWER	Required: 8-36 VDC (no internal battery). Measurement current: 16 mA @ 24 VDC. Sleep current: 40 µA @ 24 VDC						
SOFTWARE	Android™: VuSitu through Google Play™ or Amazon® App Store; iOS: VuSitu through Apple® App Store; Windows®: Win-Situ 5. Data Services: HydroVu						
INTERFACE	In-Situ Con TROLL PRO System; In-Situ Tube and Cube Telemetry System; SCADA/PLC; HydroVu Data Services; Wireless TROLL Cam, and third party data loggers, samplers, controllers, and telemetry systems.						
CABLE	Customizable, non-vented (absolute) RuggedCable® System is available in either Tefzel® or polyurethane.						
STANDARD SENSORS	ACCURACY	RANGE	RESOLUTION	SENSOR TYPE	RESPONSE TIME	UNITS OF MEASURE	METHODOLOGY
LEVEL, DEPTH, PRESSURE	Typical ±0.1% FS @ 15° C; ±0.3% FS max. from 0 to 50° C	76 m (250 ft); absolute (non-vented)	±0.07% FS or better	Fixed	Instantaneous in thermal equilibrium	Pressure: psi, kPa, bar, mbar, mmHg Level: mm, cm, m, in., ft	Piezoresistive; ceramic
CONDUCTIVITY	Typical ±0.5% + 1 µS/cm; ±7% max.	5 to 100,000 µS/cm	0.1 µS/cm	Fixed	Instantaneous in thermal equilibrium	Actual conductivity (µS/cm, mS/cm) Specific conductivity (µS/cm, mS/cm) Salinity (PSU) Total dissolved solids (ppt, ppm) Resistivity (Ohm-cm) Density (g/cm <sup>3</sup> )	Std. Methods: 2510 EPA 120.1
DISSOLVED OXYGEN OPTICAL RDO-X CAP	±0.1 mg/L ±2% of reading	0 to 20 mg/L 20 to 60 mg/L Full operating range: 0 to 60 mg/L	0.01 mg/L	Fixed with replaceable RDO Sensor Cap. Supports Classic, Fast, and RDO-X caps. Ships with RDO-X cap.	T90: <45 sec. T95: <60 sec.	mg/L, % saturation, ppm, ppO <sub>2</sub>	EPA approved In-Situ Methods: 1002-B-2009 1003-B-2009 1004-B-2009
Interferences: Alcohols >5%; hydrogen peroxide >3%; sodium hypochlorite (commercial bleach) >3%; gaseous sulfur dioxide, gaseous chlorine. Organic solvents and certain petroleum based hydrocarbons may swell the sensing element and destroy it. Examples include, but are not limited to, acetone, chloroform, methylene chloride, and BTEX compounds.							
ORP	±5.0 mV	±1400 mV	0.1 mV	Replaceable pH/ORP combo sensor	<15 sec.	mV	Std. Methods: 2580
pH	±0.1 pH unit	0 to 14 pH units	0.01 pH unit	Replaceable pH/ORP combo sensor	<15 sec., pH 7 to pH 4	pH units, mV	Std. Methods 4500 H+ EPA 150.2
TEMPERATURE*	±0.1° C	-5 to 50° C (23 to 122° F)	0.01° C or better	Fixed	T90: <120 sec.	Celsius, Fahrenheit	EPA 170.1
WARRANTY	2 years						



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\* 163 < 30s, 190 < 120s, 195 < 210s. Typical when exposed to 40°C temperature change. Response times will vary based on magnitude of temperature change.