In-Situ

Innovations in **Water Monitoring** | Spec Sheet

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
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.

Confidence in Your Data

- Field-tested sensor technologies lower your total cost of ownership and provide stable, accurate results.
- Sensors are factory-calibrated 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.
- With open communication protocols, the instrument easily interfaces with your current system. Access data anytime with a radio, controller, data logger, sampler, telemetry system, or SCADA/PLC system, or HydroVu™ Data Services.
- Long-lasting calibrations reduce site visits.
- The narrow-diameter instrument operates in fresh, marine, and process waters.

Outstanding Customer Service

- 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**
- **Reat-time water quality monitoring networks**
- **Remediation and mining**
- **Stormwater management**

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)
WWW.IN-SITU.COM

Aqua TROLL® 400 Multiparameter Probe

Spec Sheet

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 connector). **Weight:** 694 g (1.53 lbs)						
Wetted materials	PVC, 316 stainless steel, titanium, Acetal, Viton®, PC/PMMA						
Environmental rating	IP68 with all sensors and cable attached. IP67 with sensors removed and 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						
Interface	In-Situ Con TROLL PRO System; In-Situ Tube and Cube Telemetry System; SCADA/PLC; HydroVu Data Services, 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)	±0.01% 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; ±1% 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 (Ohms-cm) Density (g/cm^3)	Std. Methods 2510 EPA 120.1
Dissolved oxygen Optical RDO® Classic Cap	±0.1 mg/L ±0.2 mg/L ±10% of reading	0 to 8 mg/L 8 to 20 mg/L 20 to 50 mg/L Full operating range: 0 to 50 mg/L	0.01 mg/L	Fixed with replaceable RDO Classic Sensor Cap	T90: <45 sec. T95: <60 sec.	mg/L, % saturation, ppm, ppO$_2$	EPA-approved In-Situ Methods 1002-8-2009 1003-8-2009 1004-8-2009
	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	<30 sec.	Celsius, Fahrenheit	EPA 170.1
Warranty	2-years						

Specifications are subject to change without notice. NIST is a registered trademark of the National Institute of Standards and Technology. Tefzel is a registered trademark of E.I. du Pont de Nemours & Co. Viton is a registered trademark of DuPont Performance Elastomers L.L.C. *Temperature response only. System response time depends on site conditions.

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221 East Lincoln Avenue, Fort Collins, CO 80524 USA