Aqua TROLL® 600 Multiparameter Sonde

Reduce operational expenses with this customizable, powerful, and easy-to-use multiparameter sonde. The Aqua TROLL 600 combines unique industry-leading water quality technology, built-in LCD display, and revolutionary smartphone mobility. Low power consumption and advanced antifouling for up to 9+ month deployment supports long-term installation in any application.

The Aqua TROLL 600 water quality platform is rugged in groundwater and corrosion-resistant in surface water, delivering accurate, reliable data in an easy-to-use, flexible instrument that performs for years. Base sensor configuration includes EPA-approved optical dissolved oxygen, pH/ORP, turbidity, conductivity, temperature, and pressure. Integrate with In-Situ telemetry systems and HydroVu™ Data Services for real-time feedback on your remote monitoring sites.

Be Mobile

- **Use the Aqua TROLL 600 anywhere:** Titanium components and vented or non-vented options make it perfect for challenging environments and long-term deployments in fresh and salt water. Every detail has been engineered to be easy, reliable, and cost-effective.
- **Save time in the field:** Intuitive software simplifies instrument configuration, data analysis, and reporting. No training required, and no waiting for sensor warm-up or set-up.
- **Streamline data management**: Set up logs and manage data from the field using the VuSitu™ Mobile App. Consolidate all site information on your mobile device and tag sites with photos and GPS coordinates. Log data to your smartphone and download results in a standard file format for profiling, low-flow sampling, and more.

Be Smart

- **Status in an instant**: LCD display gives you an instant visual indication of sensor status, data log, battery life, and overall functionality to give confidence during deployment. The onboard SD card allows for quick and easy data backup and transfer.
- **No fuss antifouling**: Antifouling to protect all sensors. The only multiparameter sonde to have a sub-2 inch active antifouling system with cleanable conductivity.
- **Get accurate results**: Self-compensating tubidity/RDO/level, smart diagnostics, and stable sensor technology provide minimal drift and increased accuracy with NIST-traceable factory calibration report. Smart sensors store information internally, maintaining data and calibration within the sensor for traceable results.

Be In-Situ

- Receive 24/7 technical support and online resources.
- Order products and accessories from the In-Situ website.
- Get guaranteed 7-day service for maintenance (U.S.A. only).

Applications

- **Lake, stream and wetland monitoring**
- **Stormwater management**
- **Coastal deployments**
- **Dam monitoring**
- **Low-flow groundwater sampling**
- **Remediation and mine water monitoring**

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® 600 Multiparameter Sonde

Spec Sheet

In-Situ

General

Operating Temperature (non-freezing)	-5 to 50° C (23 to 122° F) ISE: Ammonium & Nitrate 0 to 40° C ; Chloride 0 to 50° C	***Reading Rates***	1 reading every 2 seconds
Storage Temperature	Components w/o fluid: -40° C to 65° C (non-freezing water); pH/ORP: -5° C to 65° C; Ammonium/Nitrate: 0 to 40 ° C; Chloride: 0 to 50° C	***Data Logging***	50 logs (defined, scheduled to run, or stored)
Dimensions	4.7 cm (1.85 in.) OD x 60.2 cm (23.7 in.) (includes connector) With bail: 72.9 cm (28.7 in.)	***Logging Modes***	Linear, Linear Average, Event
Weight	1.45 kg / 3.2 lbs (includes all sensors, batteries, and bail)	***Logging Rate***	1 minute to 99 hours
Wetted Materials	PC, PC alloy, Delrin™, Santoprene™, Inconel™, Viton™, Titanium, Platinum, Ceramic, Nylon	***Hex Screw Driver***	0.050, 1.3 mm
Environmental Rating	IP68 with all sensors and cable attached IP67 without the sensors, battery cover or cable attached	***Communication Device***	TROLL Com or Wireless TROLL Com
Max Pressure Rating	Up to 350 PSI	***Cable Options***	Vented or non-vented polyurethane or vented Tefzel®
Output Options	RS-485/MODBUS, SDI-12, Bluetooth®	***LCD Display***	Integrated display shows status of sonde, sensor ports, data log, battery and connectivity.
Internal Memory[1] ***Micro SD Card[2]***	16 MB; 8+ GB micro SD card included, user replaceable	***Software***	Android™: VuSitu through Google Play™, Windows®: Win-Situ 5, Data Services: HydroVu
Internal Power Battery Life[3]	2 internal user-replaceable Alkaline D batteries >6 months typical with wiping >9 months typical with no wiping	***Interface***	Android 4.4, requires Bluetooth 2.0; Win-Situ 5 Software
External Power Voltage ***External Power Current[4]***	8-36 VDC (not required for normal operation) Sleep: 0.10 mA typical Measurement: 16 mA typical, 45 mA max	***Certifications***	CE, FCC, WEEE, RoHS Compliant

Standard Sensors	**Accuracy**	**Range**	**Resolution/Precision**	**Response Time**	**Units of Measure**	**Method**
Temperature[5]	± 0.1° C	-5 to 50° C (23 to 122° F)	0.01° C	T63<2s, T90<15s, T95<30s	Celsius or Fahrenheit	EPA 170.1
Barometric Pressure	± 1.0 mbars	300 to 1,100 mbar	0.1 mbar	T63<1s, T90<1s, T95<1s	Pressure: psi, kPa, bar, mbar, inHg, mmHg	Silicon strain gauge
pH[6]	±0.1 pH unit or better	0 to 14 pH units	0.01 pH	T63<3s, T90<15s, T95<30s	pH, mV	Std. Methods 4500-H+/ EPA 150.2
ORP[7]	±5 mV	±1,400 mV	0.1 mV	T63<3s, T90<15s, T95<30s	mV	Std. Methods 2580
Conductivity[8]	+/-0.5% of reading plus 1 µS/cm from 0 to 100,000 µS/cm; +/-1.0% of reading from 100,000 to 200,000 µS/cm	0 to 350,000 µS/cm	0.1 µS/cm	T63<1s, T90<3s, T95<5s	Actual conductivity (µS/cm, mS/cm); Specific conductivity (µS/cm, mS/cm); Salinity (PSU); Total dissolved solids (ppt, ppm); Resistivity (Ohms-cm); Density (g/cm3)	Std. Methods 2510/ EPA 120.1
TDS (derived from conductivity and temp)	-	0 to 350 ppt	0.1 ppt	-	ppt, ppm	-
Salinity (derived from conductivity and temp)	-	0 to 350 PSU	0.1 PSU	-	PSU, ppt	Std. Methods 2520A
Rugged Dissolved Oxygen (RDO) with RDO-X[9]	±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	0.01 mg/L	T63<15s, T90<45s, T95<60s	mg/L, % saturation, ppm	EPA-approved In-Situ Methods: 1002-8-2009, 1003-8-2009, 1004-8-2009
Turbidity	±2% of reading or ±2 NTU, FNU, whichever is greater	0 to 4,000 NTU	0.01 NTU (0 to 1,000); 0.1 NTU (1,000 to 4,000)	T63<1s, T90<1s, T95<1s	NTU, FNU	ISO 7027
TSS (derived from turbidity)[10]	-	0 to 1,500 mg/L	0.1 mg/L	-	ppt, mg/L	-
Ammonium (NH_4^+ - N)[11,12] Rated to 25m depth	±10% or ±2 mg/L w.i.g.	0 to 10,000 mg/L as N	0.01 mg/L	T63<1s, T90<10s, T95<30s	mg/L, ppm, mV	-
Unionized Ammonia, Total Ammonia (derived from Ammonium & pH sensor)		0 to 10,000 mg/L as N	0.01 mg/L	-	mg/L, ppm	-
Nitrate (NO_3^- - N)[11] Rated to 25m depth	±10% or ±2 mg/L w.i.g.	0 to 40,000 mg/L as N	0.01 mg/L	T63<1s, T90<1s, T95<1s	mg/L, ppm, mV	Std. Methods 4500 NO_3 D
Chloride (Cl^-)[11]	±10% or ±2 mg/L w.i.g.	0 to 150,000 mg/L as Cl	0.01 mg/L	T63<1s, T90<10s, T95<30s	mg/L, ppm, mV	Std. Methods 4500 Cl^- D
Pressure[13] (Optional)	±0.1% full scale (FS)	Non-Vented or Vented 9.0 m (30ft) (Burst: 27 m; 90 ft) 30 m (100 ft) (Burst: 40 m; 130 ft) 76 m (250 ft) (Burst: 107 m; 350 ft) 200 m (650 ft) (Burst: 229 m; 750 ft)	0.01% full scale	T63<1s, T90<1s, T95<1s	Pressure: psi, kPa, bar, mbar, inHg, mmHg Level: in, ft, mm, cm, m, cmH20, inH20	Piezoresistive; Ceramic

Warranty[14]

2 year - Sonde, RDO and sensor cap, temperature/conductivity, temperature only, turbidity (excluding pH/ORP)
1 year - pH/ORP, accessories
90 days - ISE Sensors; Other: see warranty policy (www.in-situ.com/warranty)

Notes

1) For 30 parameters >100,000 data records, > 3 years at 15 min. interval. A single data record includes timestamp, temperature, RDO, pH, ORP, turbidity and conductivity logged in Linear or Linear Average mode. 2) Log data recorded to SD card in comma delimited variable (CSV) file format. Greater than 32 GB not supported. 3) Logging all sensors at 15 min interval on 2 D Alkaline batteries. Battery life dependent on site conditions and wiping. 4) Dependent on display and wiping. 5) Sensor only, when transferring from air to ambient water temperature. Typical system response time with all sensors and restrictor: T63<30s, T90<3.5m, T95<7.5m. 6) Response time at thermal equilibrium. 7) Accuracy from calibration standard @ 25C, response-at thermal equilibrium immediately following calibration measuring from air to +400 mV. 8) Accuracy at calibration points. 9) RDO sensor full range 0-50mg/L, 0-500% sat. EPA-approved under the Alternate Test Procedure process. 10) User-defined reference. 11.) Between 2 calibration points immediately following proper conditioning and calibration. Varies on site conditions and environmental interferents. See sensor summary sheet for potential interferences. 12.) Average response; can be longer with increasing concentrations of ammonium. 13) Typical performance across full temperature and pressure calibrated range. 14) Extended warranty option for sonde only (1 to 3 year extension for up to 5 years total).

Specifications are subject to change without notice.

EPA RDO METHOD Approved — EPA-Approved RDO Method

RoHS compliant CE FC

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