

Your Eyes in the Field®

# Aqua TROLL® 500 Multiparameter Sonde



**REDUCE MONITORING COSTS AND GET BETTER DATA FASTER WITH THE AQUA TROLL 500, A COST-EFFECTIVE MULTIPROBE IDEAL FOR BOTH SPOT CHECKS AND LONG-TERM MONITORING. THIS WIRELESS-ENABLED INSTRUMENT STREAMLINES DATA COLLECTION, SAVING HOURS IN THE FIELD WHILE DELIVERING MORE RELIABLE DATA.**

The customizable sonde comes with sensors that include:

- RDO Optical Dissolved Oxygen
- Actual and specific conductivity
- pH/ORP
- Salinity
- Total dissolved solids (TDS)
- Resistivity
- Density
- Turbidity
- Temperature and pressure
- Ion Selective Electrodes

Connect the Aqua TROLL 500 to a Wireless TROLL Com and use it as a handheld, or connect the probe to control systems or telemetry for remote monitoring.

#### BE IN-SITU

- Get free 24/7 tech support and application guidance in the field
- Guaranteed 7-day maintenance turnaround
- Top rated for customer service for over 40 years

#### BE SMART

- **Lower cost of ownership:** Rugged probe with wet-mateable sensors replaces single parameter instruments and requires minimal maintenance and calibration.
- **Data you can count on:** The corrosion-resistant probe withstands harsh environments, highly stable sensors with simple calibration. LCD readout of sensor health and connectivity gives you confidence in your deployment.
- **Simple setup:** Connect easily with telemetry, PLC/SCADA or dataloggers, or download real-time data wirelessly via mobile app for spot checks and profiling. The app walks you through SOPs, just click to download and share data—no training or post-processing required.

#### BE MOBILE

- **Save time in the field:** Auto-configuration and fast sensor response speed up sampling, while automated data collection eliminates the need to record data in field logs.
- **Use the Aqua TROLL 500 anywhere:** Flexible multiprobe works for spot checks and low-flow sampling as well as long-term deployments. Anti-fouling wiper and titanium construction provide reliability even in challenging conditions.
- **Take your data with you:** VuSitu Mobile App records data directly from the probe to your mobile device when using the instrument as a handheld. For long-term monitoring, our HydroVu platform provides 24/7 online data access.

#### Applications:

- SURFACE WATER SPOT SAMPLING AND PROFILING
- REMOTE MONITORING VIA TELEMETRY
- LONG-TERM DRINKING WATER, WASTEWATER OR STORMWATER MONITORING
- AQUACULTURE
- IDEAL FOR WIRED OR WIRELESS WATER QUALITY NETWORKS

Find out more at more [thermofisher.com.au](http://thermofisher.com.au) | [thermofisher.co.nz](http://thermofisher.co.nz)

**ThermoFisher**  
SCIENTIFIC

GENERAL		Aqua TROLL® 500 Multiparameter Sonde	
OPERATING TEMPERATURE (NON-FREEZING)	-5 to 50°C (23 to 122°F) ISE: Ammonium and Nitrate 0 - 40°C, Chloride 0 - 50°C	EXTERNAL POWER VOLTAGE EXTERNAL POWER CURRENT <sup>1</sup>	8-36 VDC; Required for normal operation Sleep: < 0.2 mA typical; Measurement: 40 mA typical, 75 mA Max
STORAGE TEMPERATURE	Components Without Fluid -40°C to + 65°C (Non Freezing Water) pH/ORP Sensors -5°C to +65°C Ammonium/Nitrate: 0 - 40°C Chloride: 0 - 50°C	INTERNAL MEMORY AND DATA LOGGING	Use external datalogger or telemetry
DIMENSIONS	Length: 46 cm (18.145") (includes connector). With bail: 59 cm (23.25") Diameter: 4.7 cm (1.860")	READING RATES	1 reading every 2 seconds
WEIGHT	0.978 kg / 2.15 lbs. (includes instrument, sensors, restrictor and bumpers)	COMMUNICATION DEVICE	Wireless TROLL Com
WETTED MATERIALS (SONDE AND SENSORS)	PC, PC alloy, Delrin, Santoprene, Inconel, Viton, Titanium, Platinum, Ceramic, Nylon, PVC, Graphite	CABLE OPTIONS	Vented or non-vented polyurethane or vented Tefzel®
SENSOR HEX SCREW DRIVER	0.050, 1.3 mm	LCD DISPLAY	Integrated display shows status of sonde, sensor ports, power voltage and connectivity, enable/disable BT.
ENVIRONMENTAL RATING	IP68 with all sensors and cable attached IP67 without the sensors or cable attached	SOFTWARE	Android: VuSitu through Google Play Windows: Win-Situ 5 Data Services: HydroVu
MAX PRESSURE RATING	Up to 150 PSI Ammonium/Nitrate up to 30PSI	INTERFACE	Android 4.4, requires Bluetooth 2.0
OUTPUT OPTIONS	RS-485/MODBUS, SDI-12, Bluetooth	CERTIFICATIONS	CE, FCC, WEEE, RoHS Compliant

STANDARD SENSOR	ACCURACY	RANGE	RESOLUTION/ PRECISION	RESPONSE TIME	UNITS OF MEASURE	METHOD
TEMPERATURE <sup>2</sup>	+/- 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 (VENTED MODELS ONLY)	+/- 1.0 mBars	300 - 1100 mBars	0.1 mBar	T63<1s, T90<1s, T95<1s	Pressure: psi, kPa, bar, mbar, inHg, mmHg;	Silicon strain gauge
pH <sup>3</sup>	±0.1 pH unit or better	0-14 pH	0.01 pH	T63<3s, T90<15s, T95<30s	pH, mV	Std. Methods 4500-H+, EPA 150.2
ORP <sup>4</sup>	+/- 5 mV	±1400 mV	0.1 mV	T63<3s, T90<15s, T95<30s	mV	Std. Methods 2580
CONDUCTIVITY <sup>5</sup> -TDS (TOTAL DISSOLVED SOLIDS) -SALINITY	+/-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	0 to 350,000 µS/cm 0-350 ppt 0-350 PSU	0.1 µS/cm 0.1 ppt 0.1 PSU	T63<1s, T90<3s, T95<5s	Actual conductivity (µS/cm, mS/cm); Specific conductivity (µS/cm, mS/cm); Salinity (PSU, ppt); Total dissolved solids (ppt, ppm); Resistivity (Ohms-cm); Density (g/cm <sup>3</sup> )	Std. Methods 2510, EPA 120.1 Std. Methods 2520A
RUGGED DISSOLVED OXYGEN (RDO) WITH RDO-X OR FAST CAP <sup>6</sup>	±0.1mg/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	RDO-X: T63<15s, T90<45s, T95<60s Fast Cap: T63<1s, T90<15s, T95<30s	mg/L, %saturation, ppm	EPA-approved In-Situ Methods: 1002-8-2009, 1003-8-2009, 1004-8-2009
TURBIDITY - TSS (TOTAL SUSPENDED SOLIDS) <sup>7</sup>	+/-2% of reading or +/-2 NTU, FNU, w.i.g. <sup>12</sup>	0 - 4,000 NTU 0-1,500 mg/L	0.01 NTU (0-1,000); 0.1 NTU (1,000-4,000) 0.1 mg/L	T63<1s, T90<1s, T95<1s	NTU, FNU ppt, mg/L	ISO 7027
AMMONIUM (NH <sub>4</sub> <sup>+</sup> - N) <sup>8,9</sup> RATED TO 25 m DEPTH -Unionized Ammonia, Total Ammonia (requires salinity, temperature and pH)	±10% or ± 2 mg/L, w.i.g. <sup>12</sup>	0-10,000 mg/L as N	0.01 mg/L	T63<1s, T90<10s, T95<30s	mg/L, ppm, mV	-
NITRATE (NO <sub>3</sub> <sup>-</sup> - N) <sup>8</sup> RATED TO 25 m DEPTH	±10% or ± 2 mg/L, w.i.g. <sup>12</sup>	0-40,000 mg/L as N	0.01 mg/L	T63<1s, T90<1s, T95<1s	mg/L, ppm, mV	Std. Methods 4500-NO3 D
CHLORIDE (Cl <sup>-</sup> ) <sup>8</sup>	±10% or ± 2 mg/L, w.i.g. <sup>12</sup>	0-150,000 mg/L	0.01 mg/L	T63<1s, T90<10s, T95<30s	mg/L, ppm, mV	Std. Methods 4500-Cl- D
PRESSURE (OPTIONAL) <sup>10</sup>	±0.1% full scale (FS)	Non-Vented or Vented 9.0 m (30 ft.) - Burst: 27 m (90 ft.) 30 m (100 ft.) - Burst: 40 m (130 ft.) 76 m (250 ft.) - Burst: 107 m (350 ft.) 100 m (325 ft.) - Burst: 200 m (650 ft.)	0.01% full scale	T63<1s, T90<1s, T95<1s	Pressure: psi, kPa, bar, mbar, inHg, mmHg; Level: in, ft., mm, cm, m; Level: in, ft., mm, cm, m	Piezoresistive; Ceramic

## WARRANTY<sup>11</sup>

2 year - Sonde, RDO and sensor cap, temperature/conductivity, temperature only, turbidity (excluding pH/ORP); 1 year - pH/ORP, chloride ISE, accessories 90 Days - Nitrate and Ammonium ISE sensors; See warranty policy ([www.in-situ.com/warranty](http://www.in-situ.com/warranty))

## Authorised distributor

### In Australia:

For customer service, call 1300-735-292  
To fax an order, use 1800-067-639  
To email an order, [ordersau@thermofisher.com](mailto:ordersau@thermofisher.com)

### In New Zealand:

For customer service, call 0800-933-966  
To fax an order, use 0800-329-246  
To email an order, [ordersnz@thermofisher.com](mailto:ordersnz@thermofisher.com)