

Water Level Logger

In-Situ Level TROLL® Water Level Monitor and Logger

The Level TROLL® contains everything needed for water level measurement and datalogging – level and temperature sensors, a data logger, internal power and a lot of exciting new capabilities. Since it is built entirely from rugged titanium welded to eliminate O-ring seals, you can have total confidence in all applications, even marine environments. The Level TROLL® is the easiest way to monitor water levels ever!

With the Level TROLL®, you'll discover perfect connections with our new Twist-Lock™ connectors (patent pending) and RuggedCables®. And they are extendable – an industry first!

FEATURES

- **GUARANTEED BATTERY LIFE**
Only industry guarantee for battery life – 5 years or 2 million readings or free instrument replacement!
- **SUPERIOR ACCURACY AND PERFORMANCE**
In-Situ® uses the newest sensor technologies. All instruments undergo an extensive full-scale calibration procedure for both pressure and temperature. A serialized calibration report comes with each instrument.
- **RUGGED AND RELIABLE**
All Level TROLL® sensors are designed for use in many applications. Use 316 stainless steel (300) and titanium (500, 700) sensors in all types of environmental waters. For superior corrosion-resistance in brackish or saltwater, choose acetal alloy or titanium.
- **FLEXIBLE COMMUNICATIONS**
The Level TROLL® 300, 500 and 700 instruments feature Modbus (RS485), SDI-12 and 4-20mA outputs. Connect each of these units to a SCADA or PLC system without any special adaptors.
- **INDUSTRY-LEADING WIN-SITU SOFTWARE**
The communication platform used to set up, control and manage data from Level TROLL® instruments. The software has been designed to be powerful and easy-to-use. Win-Situ 5 software is included with the purchase of Level TROLL® 300, 500 and 700 instruments.



CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.

2650 East 40th Avenue • Denver, Colorado 80205

(303) 320-4764 • **(800) 833-7958** • FAX (303) 322-7242

email: sales@geotechenv.com website: www.geotechenv.com

Water Level Logger

In-Situ Level TROLL® Water Level Monitor and Logger

APPLICATIONS

- Aquifer characterization – slug and pumping tests
- Long-term ground water monitoring
- Lake and reservoir monitoring
- Flood and storm surge monitoring
- Storm water monitoring
- Estuary level and tide monitoring
- Wetlands monitoring
- River and stream gaging
- Water resource management, dams
- River crest stage gaging
- Dewatering
- Dual-phase extraction
- Landfill monitoring
- Municipal and process monitoring



CALL GEOTECH TODAY (800) 833-7958

Geotech Environmental Equipment, Inc.
2650 East 40th Avenue • Denver, Colorado 80205
(303) 320-4764 • (800) 833-7958 • FAX (303) 322-7242
email: sales@geotechenv.com website: www.geotechenv.com

Water Level Logger



In-Situ Level TROLL® Water Level Monitor and Logger

SPECIFICATIONS

	Level TROLL® 300	Level TROLL® 500	Level TROLL® 700
Operating Temp. Range	-20° to 80°C	-20° to 80°C	-20° to 80°C
Outer Diameter (OD)	0.82" (2.08 cm)	0.72" (1.83 cm)	0.72" (1.83 cm)
Length	9.0" (22.9 cm)	8.5" (21.6 cm)	8.5" (21.6 cm)
Weight	0.54 lb. (0.24 kg)	0.43 lb. (0.197 kg)	0.43 lb. (0.197 kg)
Output Options	Modbus RS485, SDI-12, 4-20mA	Modbus RS485, SDI-12, 4-20mA	Modbus RS485, SDI-12, 4-20mA
Housing Material	Stainless steel	Titanium	Titanium
Nose Cone Material	Black Delrin®	Black Delrin®	Black Delrin®
Internal Battery	3.6V lithium	3.6V lithium	3.6V lithium
Battery Life	5 years or 2 M readings, min.	5 years or 2 M readings, min.	5 years or 2M readings, min.
External Power	8-36V DC	8-36V DC	8-36V DC
Memory	1 MB	2 MB	4 MB
Data Records	50,000	100,000	350,000
Fastest Logging Rate	1 per second	2 per second	4 per second
Fastest Output Rate			
Modbus	2 per second	2 per second	2 per second
SDI-12	2 per second	2 per second	2 per second
4-20 mA Update Rate	2 per second	2 per second	2 per second
Measurement Types	Linear, fast linear, event	Linear, fast linear, event	Linear, linear average, event, true logarithmic, step linear, fast linear
PRESSURE SENSOR	Silicon strain gauge	Silicon strain gauge	Silicon strain gauge
Sensor Material	Stainless steel	Titanium	Titanium
Accuracy @ 15°C	±0.1% FS	±0.05% FS	±0.05% FS
Accuracy @ 0-50°C	±0.2% FS	±0.1% FS	±0.1% FS
Resolution	±0.01% FS or better	±0.005% FS or better	±0.005% FS or better
Ranges	Non-Vented: (30 psia) 0-35 ft. (10.5m) (100 psia) 0-200 ft. (60m) (300 psia) 0-650 ft. (200m)	Non-Vented: (30 psia) 0-35.76 ft. (10.90m) (100 psia) 0-197.2 ft. (60.11m) (300 psia) 0-658.6 ft. (200.7m) (500 psia) 0-1120 ft. (341.3m) Vented: (5 psig) 0-11.54 ft. (3.517m) (15 psig) 0-34.61 ft. (10.55m) (30 psig) 0-69.21 ft. (21.10m) (100 psig) 0-230.7 ft. (70.32m) (300 psig) 0-692.1 ft. (211.0m) (500 psig) 0-1154 ft. (351.7m)	Non-Vented: (30 psia) 0-35.76 ft. (10.90m) (100 psia) 0-197.2 ft. (60.11m) (300 psia) 0-658.6 ft. (200.7m) (500 psia) 0-1120 ft. (341.3m) (1000 psia) 0-2274 ft. (693.1m) Vented: (5 psig) 0-11.54 ft. (3.517m) (15 psig) 0-34.61 ft. (10.55m) (30 psig) 0-69.21 ft. (21.10m) (100 psig) 0-230.7 ft. (70.32m) (300 psig) 0-692.1 ft. (211.0m) (500 psig) 0-1154 ft. (351.7m)
Burst Pressure	Maximum 2X range; Burst 3X range	Maximum 2X range; Burst 3X range	Maximum 2X range; Burst 3X range
Units of Measure – Pressure	psi, kPa, bar, mbar, mmHg, inHg, cmH ₂ O, and inH ₂ O	psi, kPa, bar, mbar, mmHg, inHg, cmH ₂ O, and inH ₂ O	psi, kPa, bar, mbar, mmHg, inHg, cmH ₂ O, and inH ₂ O
Units of Measure – Level	m, mm, cm, inch, feet	m, mm, cm, inch, feet	m, mm, cm, inch, feet
TEMPERATURE SENSOR	Silicon	Silicon	Silicon
Accuracy	±0.1°C	±0.1°C	±0.1°C
Resolution	0.01°C or better	0.01°C or better	0.01°C or better
Units of Measure	Fahrenheit, Celsius	Fahrenheit, Celsius	Fahrenheit, Celsius

Minimum Computer System Requirements: 400 MHz Pentium® II, 128 MB RAM, 100 MB free disk space, Internet Explorer® 6.01 or higher. Windows® 2000 Professional SP4 or better, or Windows® XP Professional SP2 or better, or Windows Vista®, CD ROM drive, serial or USB port.

Geotech Environmental Equipment, Inc.
2650 East 40th Avenue • Denver, Colorado 80205
(303) 320-4764 • (800) 833-7958 • FAX (303) 322-7242
email: sales@geotechenv.com website: www.geotechenv.com