

Level Temperature Data Logging all-in-one design!

Accurate, rugged, and easy...
...for Absolute Confidence!

NEW! Level**TROLL**TM

**MADE & SERVICED
IN THE U.S.A!**

**TELEMETRY &
SCADA CAPABLE!**

Do You Need: *Introducing the NEW Level**TROLL**... a breakthrough for water level and temperature monitoring. The Level**TROLL** contains everything needed for water level measurement and data logging--level and temperature sensors, a data logger, internal power in a 18.3mm (0.72 in) diameter housing with a lot of exciting new capabilities. Since it is built entirely from rugged titanium that is 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 level ever!*

unmatched accuracy?

perfect connections?

halogen-free cables?

open communications?

to monitor marine waters?

the flexibility to extend cables?

easy-to-use desiccant options?

to manage data based on your sites?

to protect vented cables from flooding?

to operate from the comfort of your office?

the ability to pause, re-start, undelete log files?

With the **Level**TROLL****, you'll discover perfect connections with our new **Twist-LockTM** connectors (patent pending) and **Rugged CablesTM**. And, they are extendable--an industry first! Forget having to change batteries. Our new super low-power system guarantees 5 years or 2-million data points of operation and it can use external power. System integration is a snap with RS-485/232 **Modbus**, **SDI-12**, and **4-20mA** communications. Are you ready to monitor level with absolute confidence? Put our new **Level**TROLL**** in place!

FEATURES:

- Level, temperature & data logging in a 18.3mm (0.72 in) OD--fits in a 25mm (1 in) well !
- Ultra rugged, all-Titanium design. Perfect for fresh and marine water monitoring
- Forget changing batteries -- super low-power management system
- **Twist-LockTM** connectors that "lock" tight. 100% reliability **PLUS** Extendable cables!
- Easiest software that will get you to your data fast!
- Best accuracy, lowest drift, open communications, and more!

APPLICATIONS

- > River, lake & stream gauging
- > Aquifer testing - step pumping & slug
- > Long-term groundwater monitoring
- > Water resource management, dams

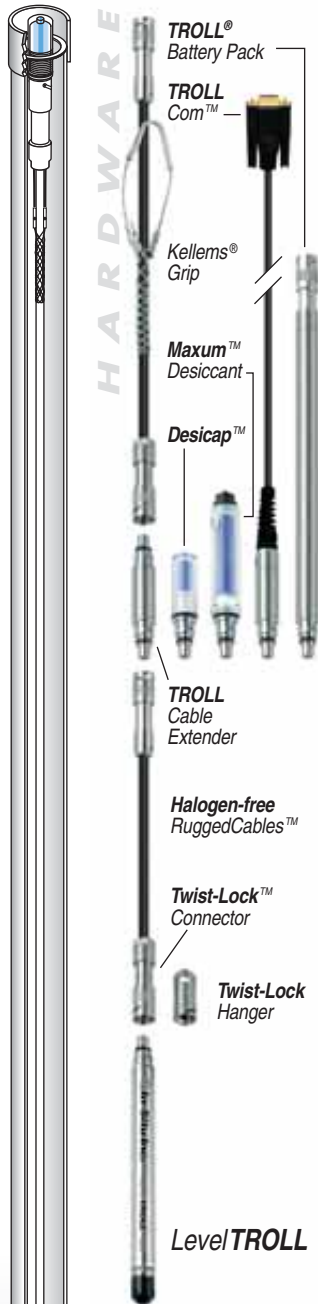
Level**TROLL** for absolute confidence in level monitoring!

- > Estuaries and coastal monitoring
- > Tidal influence & wave characterization
- > Landfill & industrial water levels
- > Water pumping management
- > Combined sewer overflow (CSO)
- > Landslide & flood prevention
- > Marine buoys
- > Mine sites

FRESH WATERS

BRACKISH WATERS

MARINE WATERS



SOFTWARE Win-Situ™

Connect to the Level TROLL and view data in a format you like faster and easier than ever before! We've completely redesigned our leading **Win-Situ** software with our customers in mind.

Win-Situ is organized around the key functions that you do most: viewing real-time data (Home), Logging, Calibration, Settings, and managing and viewing data (MyData). A key concept is that data is now saved by 'Sites' allowing you to quickly add and view data by site or project without re-entering information each time.

Every screen has an easy-to-read graphical 'dashboard' with indicators on the status of the unit. Plus friendly Wizards guide every step. View data in report or graph format or export data to MS Excel.

With Win-Situ, you can expect flawless connections and instant data access!



Features:

- > Start, Stop, Pause or Restart logging files
- > **RuggedReader**® / Windows Mobile®
- > Specify start and stop times
- > **Multi-step pumping tests**
- > Real-time data viewing
- > Set alarms with ease
- > Export to CSV, Excel®
- > Site management
- > Automation tools
- > Add notes
- > and more!

	Baro TROLL	Level TROLL 500	Level TROLL 700
General			
Operating temperature range	-20° to 80°C	-20° to 80°C	-20° to 80°C
Dimensions, OD	18.3mm (0.72")	18.3mm (0.72")	18.3mm (0.72")
Length	21.6cm (8.5")	21.6cm (8.5")	21.6cm (8.5")
Weight	0.197 kg (0.43 lb)	0.197 kg (0.43 lb)	0.197 kg (0.43 lb)
Output options	Modbus (RS-485) SDI-12, 4-20mA	Modbus (RS-485) SDI-12, 4-20mA	Modbus (RS-485) SDI-12, 4-20mA
Housing material	Titanium	Titanium	Titanium
Nose cone material	Black Delrin®	Black Delrin®	Black Delrin®

	Baro TROLL	Level TROLL 500	Level TROLL 700
Power			
Internal battery	3.6V Lithium	3.6V Lithium	3.6V Lithium
Typical life*	5 yrs or 2-million dr	5 yrs or 2-million dr	5 yrs or 2-million dr
External power	8-36VDC	8-36VDC	8-36VDC

	Baro TROLL	Level TROLL 500	Level TROLL 700
Logging			
Memory / data records**	1 MB / 100,000+	1 MB / 100,000+	4 MB / 350,000+
Logging Rate	1 min - 49 days	0.5 sec - 49 days	0.25 sec - 49 days
Modbus	0.5 sec	0.5 sec	0.5 sec
SDI-12	0.5 sec	0.5 sec	0.5 sec
Measurement Types	Linear	Linear	Linear, Linear Average, Event, True Logarithmic, Step Linear, Fast Linear

**data records = one reading with time stamp

	Baro TROLL	Level TROLL 500	Level TROLL 700
Level Sensor			
Type	Silicon strain gauge Non-vented	Silicon strain gauge Non-vented or vented	Silicon strain gauge Vented
Material	Titanium	Titanium	Titanium
Accuracy***, FS	15°C +/-0.1%	+/-0.05%	+/-0.05%
FS = Full Scale	-5 to 50°C -20 to -5°C & 50 to 80°C	+/-0.1%	+/-0.1%
Resolution	+/-0.25% typical	+/-0.25% typical	+/-0.25% typical
Range	0.005% FS or better Non-vented: 1.14 bar (16.5 psi)	0.005% FS or better Vented: 3.5, 11, 21, 70, 210, 351m (11.5, 35, 69, 231, 692, 1153ft) Non-Vented: 30, 100, 300, 500 psia (10.9, 60.1, 200.7, 341.3m / 35.8, 197.3, 658.7, 1120 ft)	0.005% FS or better Vented: 3.5, 11, 21, 70, 210, 351m (11.5, 35, 69, 231, 692, 1153ft)

*** Accuracy with 4-20mA output option: +/-0.25% typical

	Baro TROLL	Level TROLL 500	Level TROLL 700
Temperature Sensor			
Material	Silicon	Silicon	Silicon
Accuracy	-5 to 50°C	+/-0.1°C	+/-0.1°C
Resolution	0.01°C or better	0.01°C or better	0.01°C or better

Twist-Lock Cables

Connector*	Twist-Lock connector OR stripped & tinned wire
Number of conductors	6
Internal Conductor Material	Polypropylene
Diameter	6.7mm (0.265")
Break strength	127 kg (280 lbs)

Cable Types:

- Vented or Non-Vented Polyurethane
- NEW!** Vented or Non-Vented Halogen-Free Polyurethane - LSZH rated
- Vented FEP (Generic Teflon®)

Minimum Computer System Requirements: 400MHz Pentium® II, 128MB RAM, 100MB free disk space, Internet Explorer® 5.0 or higher, Windows® 2000 Professional SP2 or better, or Windows XP Professional SP1 or better

FRESH WATERS BRACKISH WATERS MARINE WATERS

