

In-Situ loggers

In-Situ® data loggers are precision instruments used to automatically collect pressure, level, temperature and water quality data from groundwater and surface water.

Why choose In-Situ?

Making an informed selection when choosing a data logger can be difficult given the many types of loggers available. Like for like comparison of technical specifications is not always possible, with each manufacturer using different test and calibration standards to claim advantages over competitors' products. So how do you assess the claims of manufacturers?



A logger for every application

- Surface, coastal and groundwater — monitoring and characterisation
- Process and industrial control systems

A model for every budget

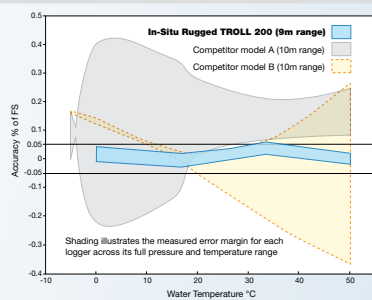
- Choose from 7 vented and non-vented loggers across 3 model ranges

Models	Logging Parameters			Housing		Gauging System	
	Temp	Level	EC	Ti	SS	NV	V
Rugged TROLL®	●	●		●		●	
Level TROLL®	●	●		●	●	●	●
Aqua TROLL®	●	●	●	●		●	●

EC - Electrical Conductivity; Ti - Titanium; SS - Stainless Steel.
 NV - Non-Vented (Absolute); V-Vented (Gauged).

Accuracy

- Calibration across the whole temperature and pressure range
- Calibration traceable to national standards (NIST)
- Dynamic density compensation (Aqua TROLL®)



Note how accuracy can vary according to temperature and applied pressure (see over).

Non-vented (absolute) and vented (gauged) systems

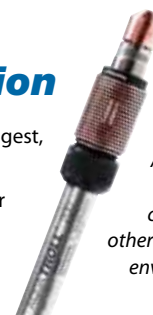
- Rugged TROLL System: choice of suspension or high-quality, direct-read cable.
- Level TROLL and AquaTROLL: RuggedCable® System with twist-lock connectors for vented and non-vented systems.
 - Ability to detach loggers from cable
 - Ability to join cable of different lengths
 - Pressure and load rated titanium connectors and cable for use at up to 1200m

Software & communications

- Intuitive FREE Win-Situ® Software for PC
- Use with industry standard handheld PDA device (RuggedReader®)
- Modbus/RS485, SDI-12, 4-20mA outputs as standard
- Telemetry and SCADA ready

Rugged construction

- Ceramic and titanium sensors for longest, trouble-free deployment
- Durable titanium logger housings for long-term corrosion resistance
- TROLL® Shield Antifouling System



Antifouling system for coastal and other aggressive environments

Logger features

- Low power consumption — batteries last longer
- Slim diameter (18mm) Level TROLL and Aqua TROLL
- 3.5m to 350m range water depth sensors

Training & technical support

- 24/7 technical support by phone, email and web
- Downloadable video and PowerPoint training guides
- Product and CPD accredited application training by technical specialists

Rentals & sales

- Loggers available to rent — try before you buy
- Rental pool uses highest spec vented and non-vented loggers
- Experienced and knowledgeable product advice

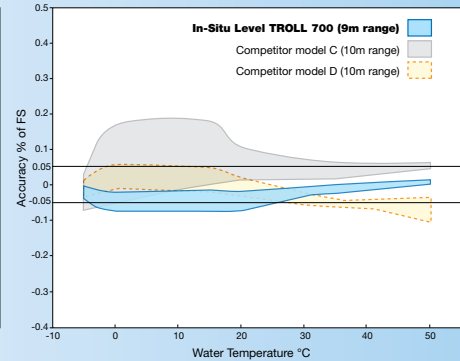
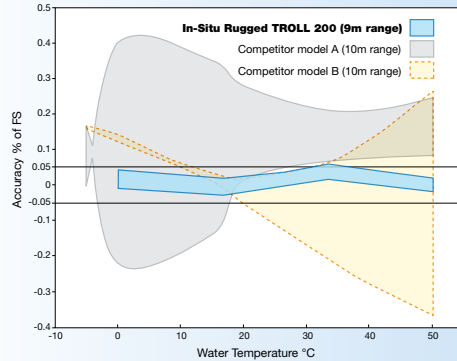
In-Situ loggers

Accuracy

In-Situ loggers are factory calibrated to NIST standards (National Institute of Standards and Technology, USA). This ensures that every In-Situ logger conforms fully to its stated accuracy across the whole temperature and pressure range.

The same cannot be said for many of our competitors (see graphs) who often quote 'typical' accuracy at specific temperature values masking variations at higher and lower temperatures.

For an independent view, see: *Sorensen & Butcher 2011, GWMR 31(4) 56-62.*



Shading illustrates the measured error margin for each logger across its full pressure and temperature range.

Direct-read cable

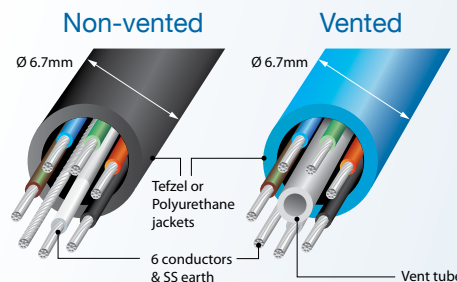
Non-vented cable for Rugged TROLL[®]



- Delrin screw fit connectors
- Quality cable — 68 kg break strength
- Tougher than all the competition
- Sealed and pressure rated to 100m
- Cable lengths customizable to 300m (for RS485 cable only)
- Optional SDI-12, stripped-and-tinned cable

RuggedCable[®] Systems

For Level TROLL[®] & Aqua TROLL[®]



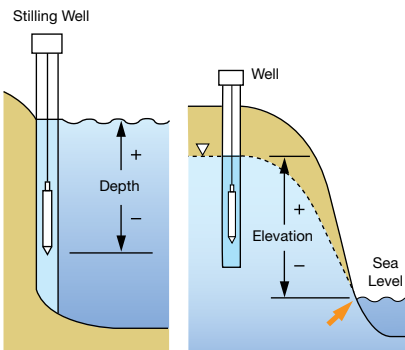
RuggedCable[®] Systems are custom-built to endure harsh environments and to last for years.

- Titanium twist-lock connectors & cable extenders
- Sealed and pressure rated to 1200m
- Vented and non-vented systems
- Optional stripped-and-tinned cable ends
- Optional bulkhead connector



In-Situ RuggedCable Systems are designed for flexibility to allow easy joining of component parts and cable

Surface water, groundwater and industrial applications



TROLL[®] Shield antifouling system

To combat biofouling and corrosion of the Level TROLL and Aqua TROLL instrument, In-Situ provides the specially designed TROLL Shield System.

The shield extends instrument deployment in aggressive environments by weeks and improves instrument accuracy and performance.

Right
The antifouling system includes a coiled copper guard and copper nose cone.



Instruments after a 3-month deployment in sea water: (left) with antifouling protection; (right) without.

