



Level TROLL® 700H Data Logger

COMPLY WITH THE OFFICE OF SURFACE WATER BY USING THE INDUSTRY'S MOST ACCURATE PRESSURE TRANSDUCER. THE LEVEL TROLL 700H DATA LOGGER MEETS THE USGS SURFACE WATER SPECIFICATION OF ± 0.01 FOOT. THE VENTED (GAUGED) LEVEL TROLL 700H DATA LOGGER PROVIDES CONTINUOUS WATER LEVEL, WATER PRESSURE, AND TEMPERATURE MEASUREMENTS, WITH TITANIUM CONSTRUCTION FOR DURABILITY AND LONG-LASTING PERFORMANCE IN ANY ENVIRONMENT.

BE EFFECTIVE

- **Increase productivity:** Reduce training and installation time with In-Situ intuitive software platform and integrated components. Patented twist-lock connectors, included on Level TROLL 700H Loggers and RuggedCable® Systems, ensure error-free deployments.
- **Select a logging mode that suits your application:** Linear, Fast Linear, Linear Average, Event, Step Linear, and True Logarithmic. Automate data collection and customize logging intervals. Capture multiple peak flow events on one data log by using the Event logging mode.
- **Streamline data management:** Connect wirelessly to your data loggers through the VuSitu® Mobile App and Wireless TROLL® Com. Consolidate all site information on your mobile device, and tag data with site photos and GPS coordinates. Log data to your smartphone and download results in a Universal Data File, or integrate with

VuLink Telemetry and cloud-based HydroVu® Data Services for real-time data access and reporting. Simplify instrument setup, reduce errors and improve data use with VuSitu's Log Setup Assistant and Panoramic Live Data.

BE RELIABLE

- **Deploy in all environments:** Install loggers in fresh water, saltwater, and contaminated waters. Solid titanium, sealed construction outperforms and outlasts specially-coated data loggers.
- **Log accurate data:** Get optimal accuracy under all operating conditions. Sensors undergo a 3D, NIST-traceable factory calibration across the full pressure and temperature range. Collect accurate surface water data with this vented (gauged) logger – no barometric compensation required.
- **Get long-lasting operation:** Reduce trips to the field with this low-power logger that typically operates for 10 years or 2 million readings. 8-36 VDC input is compatible with external batteries and solar power. Outputs include standard Modbus/RS485, SDI-12, and 4-20 mA.

TOTAL FIELD SUPPORT

- **Receive free, responsive technical support and online resources.**
- **Order data loggers and accessories from the In-Situ website.**
- **Get guaranteed 7-day service for maintenance (U.S. only).**

Applications:

- REAL-TIME MEASUREMENT OF HYDROLOGIC CONDITIONS, INCLUDING PEAK STREAMFLOW AND GAGE HEIGHT
- STREAM AND RIVER GAGING
- COASTAL DEPLOYMENTS: TIDE/HARBOR LEVELS, STORM SURGE SYSTEMS, AND WETLANDS RESEARCH
- STORMWATER MANAGEMENT

GENERAL	LEVEL TROLL 700H DATA LOGGER
TEMPERATURE RANGES ¹	Operational: -20 to 80° C (-4 to 176° F) Storage: -40 to 80° C (-40 to 176° F) Calibrated: 0 to 40° C (32 to 104° F)
DIAMETER	1.83 cm (0.72 in.)
LENGTH	21.6 cm (8.5 in.)
WEIGHT	124 g (0.27 lb)
MATERIALS	Titanium, EPDM, Acetal
OUTPUT OPTIONS	Modbus/RS485, SDI-12, 4-20 mA
BATTERY TYPE & LIFE ²	3.6V lithium; 10 years or 2M readings
EXTERNAL POWER	8-36 VDC
MEMORY Data records ³ Data logs	4.0 MB 260,000 50
FASTEST LOGGING RATE & MODBUS RATE	4 per second
FASTEST SDI-12 & 4-20 MA OUTPUT RATE	1 per second
LOG TYPES	Linear, Fast Linear, Linear Average, Event, Step Linear, True Logarithmic
REAL-TIME CLOCK	Accurate to 1 second/24-hour period
SENSOR TYPE/ MATERIAL	PIEZORESISTIVE; TITANIUM
RANGE	Gauged (vented) 15 psig; 11 m (35 ft)
BURST PRESSURE	Maximum 2x the range; burst >3x range
ACCURACY ⁴	±0.01 foot up to 15 ft and ±0.1% of reading > 15 ft
RESOLUTION	±0.005% FS or better
UNITS OF MEASURE	Pressure: psi, kPa, bar, mbar, mmHg, inHg, cmH2O, inH2O Level: mm, cm, m, in., ft
TEMPERATURE SENSOR	SILICON
ACCURACY	±0.1° C
RESOLUTION	0.01° C or better
UNITS OF MEASURE	Celsius or Fahrenheit
WARRANTY ⁵	3 years

NOTES: ¹Temperature range for non-freezing liquids.
²Typical battery life when used within the factory-calibrated temperature range.
³1 data record = date/time plus 2 parameters logged (no wrapping) from device within the factory-calibrated temperature range.
⁴Across factory-calibrated pressure and temperature ranges.
⁵Up to 5-year (total) extended warranties are available for all sensors – call for details.
 Delrin is a registered trademark of E.I. du Pont de Nemours & Co.
 NIST is a registered trademark of the National Institute of Standards and Technology, U.S.A.
 This product may be covered by patents identified at in-situ.com/patents.
 Specifications are subject to change without notice.



The Level TROLL 700H meets the USGS surface water specification is ±0.01 ft up to 10 ft or 0.10% of the effective stage.



Wireless TROLL Com allows you to connect to your data loggers wirelessly using your mobile device. Quickly set up logs with easy-to-use guided workflows. Calibrate any instrument that is connected.



Open communications protocols easily integrate with Vulink® cellular telemetry or existing third-party telemetry systems.



Get real-time, decision-quality data anywhere, anytime with cloud-based HydroVu Data Services. HydroVu gives you up-to-date access to your data while simplifying the task of filtering the data for important results.