

Water Level Logger

In-Situ BaroTROLL®

The BaroTROLL® is a low-cost, self-contained logger that measures barometric pressure. It contains highly precise barometric and temperature sensors, a data logger, and internal power in a 18.3mm (0.72 in.) diameter housing. The low-powered system practically eliminates the need to change batteries and guarantees long-term operation. Alternatively, the unit can be powered with external power. System integration is a snap with built-in RS485 Modbus, SDI-12, and 4-20mA communications.

The BaroTROLL® is typically used in conjunction with one or more of the non-vented Level TROLL® instruments to compensate for changes in water level due to barometric fluctuations. Readings from the BaroTROLL® can be automatically subtracted from data collected by a Level TROLL®. Due to its small size, it can be installed at the surface or inside the well casing – even in 25mm (1 in.) wells! Built entirely from rugged titanium and welded to eliminate O-ring seals, you can have total confidence in harsh environments.

FEATURES & BENEFITS

- **Barometric pressure, 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 corrosive sites.
- **TIG-welded seals** – Prevents flooding of instrument.
- **Ultra-low power system guarantees 5 years or 2 million readings** – Forget about changing batteries or running out of power.
- **Uses external battery or line power** – Never run out of power.
- **Sealed Twist-Lock hanger** – 100% reliability
- **Easy-to-use Win-Situ® software** – Get the data you need fast! Large, sizable display that's easy to see from a distance.
- **Extremely accurate sensors** – Record minute changes in barometric pressure and temperature.
- **Data saved by sites not files** – Collect and save information by site automatically. No need to transfer data later.
- **Easy-to-read memory and battery gauges** – Know exactly how much power is left.
- **Modbus, SDI-12, and 4-20mA** – Provides for easy connections to existing and online systems.
- **Specify start and stop times for logging** – Collect the data you need up to the date you want and no more.
- **User-friendly wizards guide every step** – Reduces complicated steps and the need for tedious manuals.
- **-20° to 80°C temperature range** – Use for research and applications with higher temperatures.
- **65,000 data records (1 MB)** – Reduces the interval between data collection.
- **CE and FCC approved** – Prevents susceptibility to outside emission interference and transient electrical surges.

APPLICATIONS

- **Barometric pressure monitoring**
- **Temperature monitoring**
- **Atmospheric research**



CALL GEOTECH TODAY (800) 833-7958

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In-Situ BaroTROLL®

SPECIFICATIONS

General

Temperature Ranges	Operational:	-4-176°F (-20-80°C)
	Storage:	-40-176°F (-40-80°C)
	Calibrated:	23-122°F (-5-50°C)
Diameter		0.72 in. (1.83 cm)
Length		8.5 in. (21.6 cm)
Weight		0.43 lb. (197 g)
Materials		Titanium body; Delrin nose cone
Output Options		Modbus/RS485, SDI-12, 4-20 mA
Battery Type & Life		3.6 Volt lithium; 5 years or 2 million readings ¹
External Power		8-36 Volts DC
Measurement Current		4 mA
Sleep Current		180 µA
Memory		1.0 MB
	Data Records ²	65,000
	Data Logs	2
Fastest Logging Rate & Modbus Rate		1 per minute
Fastest SDI-12 & 4-20 mA Output Rate		1 per second
Log Types		Linear
Real-time Clock		Accurate to 1 second/24-hour period

Sensor

Type/Material	Piezoresistive; titanium
Range	0 to 16.5 psi; 0 to 1.14 bar
Burst Pressure	Vacuum/over-pressure above 16.5 psi damages sensor
Accuracy @ 15°C	±0.1% FS
Accuracy (FS)	±0.2% FS ³
Resolution	±0.005% FS or better
Units of Measure	Pressure: psi, kPa, bar, mbar, mmHg, inHg, cmH ₂ O, inH ₂ O

Temperature Sensor

	Silicon
Range	Calibrated: 23-122°F (-5-50°C)
Accuracy & Resolution	±0.1°C; 0.01°C or better
Units of Measure	Fahrenheit, Celsius

Warranty

BaroTROLL instruments come with a 1-year warranty. Up to 5-year extended warranties are available.

¹ Battery life guaranteed when used within the factory-calibrated temperature range.

² 1 record = date/time plus 2 parameters logged (no wrapping) from device within the factory-calibrated temperature range.

³ Across factory-calibrated temperature range.

Specifications are subject to change without notice. Delrin is a registered trademark of E.I. du Pont de Nemours and Company.

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