

# BaroTROLL® Instrument Specifications

## BaroTROLL® Instruments

The BaroTROLL and BaroTROLL 100 instruments measure and log barometric pressure and temperature. BaroTROLL instruments are used in conjunction with one or more non-vented (absolute) Level TROLL® instruments to compensate for changes in water level due to barometric fluctuations. Readings from a BaroTROLL can be automatically subtracted from data collected by a Level TROLL instrument. The instrument uses a low-power system that extends deployment and guarantees long-term operation. Applications include:

- Monitor barometric pressure and temperature
- Conduct atmospheric research
- Calculate barometric efficiency

VERSIONS	BaroTROLL 100	BaroTROLL
<b>General</b>		
<b>Operational temp. range</b>	-20° to 50° C (-4 to 122° F)	-20° to 80° C (-4 to 176° F)
<b>Diameter, OD</b>	1.03" (2.62 cm)	0.72" (1.83 cm)
<b>Length</b>	5.5" (14 cm)	8.5" (21.6 cm)
<b>Weight</b>	0.375 lb (0.17 kg)	0.43 lb (0.197 kg)
<b>Output options</b>	USB or RS232 via docking station; Modbus RS485 or SDI-12 via Level TROLL 200 cable	Modbus RS485, SDI-12, 4-20mA
<b>Housing material</b>	ABS	Titanium
<b>Nose cone material</b>	ABS	Black Delrin®
<b>Power</b>		
<b>Internal battery</b>	3.6 V lithium	3.6 V lithium
<b>Battery life</b>	5 years or 2M readings, minimum	5 years or 2M readings, minimum
<b>External power</b>	NA	8-36 VDC
<b>Logging</b>		
<b>Memory</b>	1 MB	2 MB
<b>Data records*</b>	50,000	100,000
<b>Fastest logging rate</b>	1 per second	1 per minute
<b>Modbus RS485</b>	2 per second	2 per second
<b>SDI-12</b>	2 per second	2 per second
<b>4-20 mA update rate</b>	NA	2 per second
<b>Measurement types</b>	Linear	Linear
<b>Barometric Sensor</b>		
<b>Sensor type</b>	Piezoresistive	Silicon strain gauge
<b>Sensor material</b>	Ceramic	Titanium
<b>Sensor accuracy @ 15° C</b>	±0.1 FS typical	±0.05%
<b>Sensor accuracy -5 to 50° C (FS)</b>	±0.3% FS maximum	±0.1% FS**
<b>Sensor resolution</b>	±0.01% FS or better	±0.005% FS or better
<b>Sensor range (FS)</b>	7-30 psi; 0.5-2 bar	0-16.5 psi; 0-1.14 bar
<b>Units of measure (pressure)</b>	psi, kPa, bar, mbar, mmHg	psi, kPa, bar, mbar, mmHg, cmH <sub>2</sub> O, and inH <sub>2</sub> O
<b>Temperature Sensor</b>		
<b>Range</b>	-20° to 50° C (-4 to 122° F)	-20° to 80° C (-4° to 176° F)
<b>Material</b>	Silicon	Silicon
<b>Temperature accuracy</b>	±0.3°C	±0.1°C
<b>Temperature resolution</b>	0.01°C or better	0.01°C or better
<b>Units of measure</b>	Fahrenheit, Celsius	Fahrenheit, Celsius

Specifications subject to change without notice. Minimum computer system requirements: 400MHZ Pentium® II, 128MB RAM, 100MB free disk space, Internet Explorer® 6.01 or higher. Windows® 2000 Professional SP2 or better, or Windows XP Professional SP2 or better, or Windows Vista®, CD ROM Drive, Serial or USB port.

\* Data record = Date/time plus one parameter logged

\*\* Accuracy with 4-20 mA output option: ±0.25% typical. Outside of calibrated temperature range: ±0.25%.

### Warranty

BaroTROLL instruments come with a 1-year warranty. RuggedCable® systems come with a 2-year warranty. Extended warranties available, call for details.



## BaroTROLL Instrument

The titanium BaroTROLL instrument contains highly precise barometric and temperature sensors, a data logger, and internal power in a 0.72-inch (1.83-cm) diameter housing. For system integration, the instrument includes built-in Modbus RS485, SDI-12, and 4-20 mA. To download data, use the TROLL® Com device. Use the BaroTROLL in conjunction with a Level TROLL 300, 500, or 700 instrument.



## BaroTROLL 100 Instrument

Use the economical BaroTROLL 100 instrument with either a Level TROLL 100 or 200 instrument. To download data, use either the low-cost TROLL® Com 200 device or a docking station.



## Win-Situ® Baro Merge™ software

Win-Situ Baro Merge software simplifies post-correction of data from absolute Level TROLL instruments by using data from a BaroTROLL instrument or from user-defined barometric readings.



### CALL TO PURCHASE OR RENT



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