

# miniTROLL ATA GLANCE: water level temperature data logging 1 MB memory internal power Quick-Connect™ 32-bit software 18.3 mm (0.72 in) OD Get connected with the world's most advanced submersible Quick-Connect™ cables. Polyurethane or FEP\*. Desiccant and hydrophobic membrane block moisture. Tame harsh environments. **Need Power?** User-replaceable AA 316 stainless steel batteries easily slide in body is durable and and out, no tools required. corrosion resistant. Last up to 18 months.\* Super smart, super small, Unmatched accuracy. Advanced microprocessor is Ultimate 4-way compensationpacked with 1 MB of memory -Pressure readings are automatically log data for over six years at 15 compensated for barometric minute intervals! pressure, temperature, liquid density \*Teflon<sup>®</sup>eguivalent. and gravitational acceleration! \*\*2 AA alkaline batteries, 15 minute sampling interval at 20°C.

# **USE IT FOR:**

data collection in ground and surface water, including aquifers, estuaries, contaminated waters and effluent:

- · aquifer testing: step, slug and pump tests
- · mine and construction site dewatering
- · long-term groundwater observation
- · industrial water management
- · water production wells
- · small diameter wells
- thermal profiling
- · tidal influence
- · pump control

MAKE A

MONITORING

**LEAP** INTO THE FUTURE OF

Introducing the NEW miniTROLL—the most

powerful, smallest-diameter data logger on

the planet. It is completely self-contained

and only 18.3 mm (0.72 in.) in diameter!

Being the smallest has its advantages. Now, 25 mm

(1 in.) wells can easily be monitored. Take a closer look:

• 1 MB non-volatile memory. Stores 440,000 data points

Internal pressure and temperature sensors with 4-way

• NEW SDI-12, networking and Pocket PC options

• Real-time crystal clock. Accurate to ±2 min. per year.

· User-replaceable AA batteries. Think of the conven-

Plus, Wizard-based software that is so easy to use!

Touch the future. Experience the technology.

The miniTROLL will change the way you monitor.

ience! Extended-life battery packs are also available.

compensation.

QUANTUM

## Easy access!



Cable connection and battery replacement are a snap.

Reduce your travel and labor costs with telemetry and network solutions

**QUAD-Boxes** and T-Boxes for networking

the perfect solution for remote sites, automated data collection. Multiplewell installations are a snap using T-Boxes or Quad-Boxes. Create a network of up to 32 units!

modem or up to 32 total units T-box

# Win-Situ 2000



Easy-to-use Windows-based Win-Situ 2000 software is your key to harnessing the miniTROLL's power.

- define tests in the office or field with your PC
- display data in your
- define water level reference values

Win-Situ 2000 lets you define and store in the miniTROLL's computer s, ready for manual or scheduled start.

**Convenient Wizards** help you set up tests, connect new devices, □ 1: Linear - Test#1 2: Log - Test#2 3: Event-Test#3 4: Linear Average - Test #4 ✓ Temperature - OnBoard T Level (TOC) - OnBoard Pri E 5: Linear - Test#5



With the click of a Well 3 button the Data Viewer switches between report (tabular) and graph mode, or exports data to Excel. Customize and print graphs of



VEW!

Telemetry systems are

#### **General:**

	Internal Power Model	External Power Model
Dimensions	18.3 mm (0.72 in) OD, 295.9 mm (11.65 in) long	18.3 mm (0.72 in) OD, 197.4 mm (7.77 in) long
Weight (includes backshell)	0.31 kg (0.68 lb) with batteries	0.22 kg (0.48 lb)
Wetted materials	316 stainless steel, Viton®, FEP* or polyurethane (cable), both models	
Resolution	16-bit A-D converter: 1mm (0.00531% FS) for a 21m (30 psi) sensor, both models	

#### Sensors:

	Pressure Sensor	Temperature Sensor
Operating principle	integrated silicon strain-gauge pressure sensor	silicon temperature sensor
Ranges / Accuracies**	11 m, 35 ft (103.4 kPa, 15 psi) / ±0.1% of FS 21 m, 69 ft (206.8 kPa, 30 psi) / ±0.05% of FS 70 m, 231 ft (689.5 kPa, 100 psi) / ±0.05% of FS 211 m, 692 ft (2068 kPa, 300 psi) / ±0.05% of F3 351 m, 1153 ft (3447 kPa, 500 psi) / ±0.05% FS	<del>-</del> S
Pressure rating	2x range/3x burst (11 m = 3x range/5x burst)	NA
Operating temperature	-5 °C to 50 °C (23 °F to 122 °F)	-5°C to 50°C (23°F to 122°F)
Measurement schedules	linear (0.5 sec. minimum), linear average, logarithmic or event (applies to both sensors)	

### Ask about the Standard, Advanced and Professional models.

The miniTROLL comes in versions—one for every application and budget, and always upgradeable.

### **How accurate is it?**

Calculating accuracy as a distance is easy. Simply multiply the range by the accuracy rating.

What is the accuracy of a sensor with an 21 meter range?

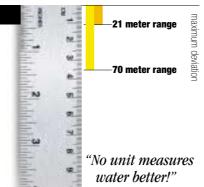
**Answer:** 21 m (68.9 ft) x 0.05% =

10.5 mm (0.41 in) of water

Maximum deviation is ±10.5 mm (0.41 in) over the entire pressure range at 15°C.

Do you correct your level data for fluid density and gravitational acceleration?

With the miniTROLL and Win-Situ 2000 software vou get maximum accuracy in your level data. Ask for our specific gravity tech note.





Environmental Monitoring Systems. Buy the Best.™

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or

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*800 4INSITU* 

(800 446 7488, toll-free in US and Canada)

or visit our web site at www.in-situ.com



#### **Protect vour** investment.

We have locking well caps for a secure well installation.





## NEW! Pocket-Situ so little space, so much fun!

Pocket-Situ is a NEW ultra portable user interface for In-Situ instruments. It runs on the Pocket PC and it sure is fun! Forget taking a PC to the field-

take it in your pocket!

Install the miniTROLL in vour well and leave it. The miniTROLL is entirely concealed and safe!

### Power for up to 11 years\*\*\*

with Extended-Life Battery Packs. Equipped with or without pass-through communication cable. Both versions fit in 50 mm (2 in) well casings. Long-life 3V lithium or long lasting 9V alkaline batteries.



-miniTROLL

well sleeve

well dock

-service grip

Well docks with

carabiner are available for 50 mm (2 in) and 100 mm (4 in)

well casings. A service grip

(suspends the miniTROLL from

the well dock) is included on each Quick-Connect

cable.



Printed on recycled paper

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\*\*EPP (fluorinated ethylene propylene) is the generic equivalent of DuPont Teflon.

\*\*Accuracies listed for 15 °C. Accuracy over entire temperature range from -5 to 50 °C is ±0.2 and ±0.1 for 15 and 30 psi sensors and ±0.8 for 100, 300, and 500 psi sensors.

\*\*Lithium battery, 20 minute sampling interval at 20 °C with 30m (100 ft) of cable or less.