



## Virtual HERMIT® Aquifer Testing Kit

**STREAMLINE YOUR NEXT GROUNDWATER CHARACTERIZATION EVENT BY RENTING THE VIRTUAL HERMIT AQUIFER TESTING KIT OFFERED EXCLUSIVELY THROUGH IN-SITU RENTALS. SEE RESULTS IN REAL TIME WHEN YOU USE THE KIT TO CONDUCT STEP-DRAWDOWN AND CONSTANT-RATE PUMP TESTS.**

### **SIMPLIFIES TESTING**

- Monitors an entire well field with one system—connects up to eight Level TROLL® 700 Data Loggers (maximum of 15 when using multiple hubs).
- Simultaneously configures, starts, displays, steps, or stops all connected Level TROLL 700 Data Loggers.
- Allows data downloads while a test is running.
- Integrates BaroTROLL® Data Logger for barometric pressure compensation. Use barometric pressure data to calculate barometric efficiency for confined/semi-confined systems (requires aquifer test analysis software).

### **REDUCES FIELD TIME**

- Captures pump and recovery data on the same log without reprogramming.
- Steps a logarithmic log as the test progresses.
- Displays real-time data—enables quick adjustments to aquifer test protocols.
- Minimizes data processing—exports one time-synchronized data log for all deployed Level TROLL 700 Data Loggers.

### **MANAGES UNIQUE SITUATIONS**

- Collects data during aquifer recovery—disconnect and secure laptop PC, Rugged TROLL Net Hub, and cables. Level TROLL 700 Data Loggers continue to log data while locked safely inside wells.
- Allows for data collection at difficult to reach sites. Instruments can be set up in wells prior to the test and set to start logging data at a pre-determined time. After recovery, data is downloaded and merged with other level data.

Your rental will include Virtual HERMIT Software for PC; an eight-port Rugged TROLL Net Hub; up to eight Level TROLL 700 Data Loggers; one RuggedReader® Handheld PC to download data from difficult-to-access sites; and a USB or RS232 TROLL Com Communication Device.

[www.in-situ.com](http://www.in-situ.com)

CALL OR CLICK TO PURCHASE OR RENT  
1-800-446-7488 (toll-free in U.S.A. and Canada)  
1-970-498-1500 (U.S.A. and international)

### **Applications:**

- **CHARACTERIZATION OF AQUIFERS AND FLOW SYSTEM BOUNDARIES**
- **ENVIRONMENTAL ASSESSMENTS OF CONTAMINATED SITES, GROUNDWATER DEVELOPMENT PROJECTS, AND DEWATERING PROJECTS**

## VIRTUAL HERMIT SOFTWARE

- Maximum 15 Level TROLL® 700 Data Loggers when connecting two Rugged TROLL® Net Hubs
- All instruments within a “HERMIT” must be running the same log type
- Must configure logs with Virtual HERMIT Software
- Level TROLL 700 data logs are compatible with Win-Situ® 5, Win-Situ® Mobile, Win-Situ® Sync, and Win-Situ Baro Merge® Software.
- Minimum system requirements: 2 GHz Pentium® processor, 1 GB RAM, 100 MB free disk space, Windows XP Professional SP2 or higher, or Windows Vista SP1, or Windows 7 or higher, CD-ROM drive, and a USB or serial communications port

## RUGGED TROLL NET HUB

A low-power Rugged TROLL Net Hub can network up to eight Level TROLL 700 Data Loggers from In-Situ® Rentals.

- Field-ready case with eight bulkhead connectors
- Compatible with RuggedCable® System—Available in either Tefzel® or polyurethane with titanium twist-lock connectors

GENERAL	RUGGED TROLL NET HUB
ENCLOSURE	NEMA 4X/IP-67
OPERATIONAL TEMP.	-40 to 60° C (-40 to 140° F), 95% relative humidity
STORAGE TEMP.	-40 to 85° C (-40 to 158° F), 95% relative humidity, noncondensing
DIMENSIONS (WxHxD)	33 x 12.1 x 26cm (13 x 4.75 x 10.25 in.)
WEIGHT	2.32 kg (5.1 lbs)
POWER REQUIREMENTS	9-36 VDC (refer to instrument documentation for cable length and voltage limitations)
CURRENT DRAW	20 µA sleep mode (without instrument load) 60 mA wake mode (without instrument load)
BATTERY LIFE	70 hours continuous life for two 9V batteries

Specifications are subject to change without notice. Tefzel and Delrin are registered trademarks of E.I. du Pont de Nemours & Co. Pentium is a registered trademark of Intel Corp. Windows is a registered trademark of Microsoft Corp.

<sup>1</sup> Temperature range for non-freezing liquids

<sup>2</sup> Typical battery life when used within the factory-calibrated temperature range

<sup>3</sup> 1 data record = date/time plus 2 parameters logged for a total of 750,000 data points (no wrapping).

<sup>4</sup> Across factory-calibrated pressure range

<sup>5</sup> Across factory-calibrated pressure and temperature ranges

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## LEVEL TROLL 700 DATA LOGGER

GENERAL	LEVEL TROLL 700
TEMPERATURE RANGES <sup>1</sup>	Operational: -20-80° C (-4 to 176° F) Storage: -40-80° C (-40 to 176° F) Calibrated: -5-50° C (23 to 122° F)
DIAMETER	1.83 cm (0.72 in)
LENGTH	21.6 cm (8.5 in)
WEIGHT	197 g (0.43 lbs)
MATERIALS	Titanium body; Delrin® nose cone
OUTPUT OPTIONS	Modbus/RS485, SDI-12, 4-20 mA
BATTERY TYPE & LIFE <sup>2</sup>	3.6V lithium; 10 years or 2M readings
EXTERNAL POWER	8-36 VDC
MEASUREMENT CURRENT	4 mA
SLEEP CURRENT	200 µA
MEMORY Data records <sup>3</sup> Data logs	4.0 MB 260,000 50
FASTEST LOGGING RATE	4 per second
FASTEST OUTPUT RATE	Modbus: 2 per second SDI-12 and 4-20 mA: 1 per second
LOG TYPES	Linear, Fast Linear, Linear Average, Event, Step Linear, True Logarithmic
SENSOR TYPE/MATERIAL	PIEZORESISTIVE; TITANIUM
RANGE	<i>Absolute (non-vented)</i> 30 psia: 11 m (35 ft) 100 psia: 60 m (197 ft) 300 psia: 200 m (658 ft) 500 psia: 341 m (1120 ft) 1000 psia: 693 m (2273 ft)  <i>Gauged (vented)</i> 5 psig: 3.5 m (11.5 ft) 15 psig: 11 m (35 ft) 30 psig: 21 m (69 ft) 100 psig: 70 m (231 ft) 300 psig: 211 m (692 ft) 500 psig: 351 m (1153 ft)
BURST PRESSURE	Maximum 2x range; burst > 3x range
ACCURACY @ 15° C <sup>4</sup>	±0.05% FS
ACCURACY (FS) <sup>5</sup>	±0.1% FS
RESOLUTION	±0.005% FS or better
UNITS OF MEASURE	Pressure: psi, kPa, bar, mbar, mmHg, inHg, cmH <sub>2</sub> O, in H <sub>2</sub> O Level: mm, cm, m, in, ft