



## LEVEL, TEMPERATURE, DATA LOGGING PRESSURE TRANSDUCERS

YSI's Level Scout® contains a highly accurate pressure transducer in a field-rugged, titanium housing. Accurate measurements, low power consumption and easy data management make the Level Scout ideal for your next water level monitoring study.

### Features:

- Vented gauge corrects each data point for barometric pressure, increasing the accuracy of your level measurements without the need to post-process your data
- Maintenance-free vented field cables for worry-free deployments
- Fastest sample rate available (up to 8 readings per second)
- High accuracy,  $\pm 0.05\%$  FS (level ranges > 10 ft)
- Two year warranty on instrument and cable
- All software included with the instrument and free for download
- Small diameter (0.75 in/1.9 cm) titanium housing
- Built in sampling modes - linear, linear average, logarithmic and event-based
- User-replaceable batteries, 3-year life at 15 minute sampling intervals
- Field-upgradeable firmware
- Memory logs up to 393,120 data sets

The **Level Scout** measures and logs pressure/level and temperature data along with time stamp at user-selectable sampling modes and rates. Internal batteries and low power consumption provide years of data logging capabilities. The internal (2) AA batteries are user-replaceable with a quick-disconnect cable assembly.

**Data Scout** software allows you to communicate with up to 16 Level Scouts at one time in order to set up tests, view live data, download logged data and configure alarms. Logged files can be viewed in Excel® or **DS Playback**. Level Scout software is compatible with Windows® 7, Vista, XP and other common PC operating systems.

**NEW!** Vented field cable has unique in-line, life-time vent filter that allows for **worry-free** and **maintenance-free** deployments. The field cable allows for atmospheric compensation, direct data readout and communication to any Level Scout. A waterproof patch keeps water out of the vent tube while internal desiccant absorbs any condensation. All of the vent tubing is internal to the cable so you'll never need to worry about accidentally crimping it and adversely affecting your data! Includes cable hanger for easy deployment and a drain wire for grounding.



*The YSI Level Scout provides highly accurate pressure and water level measurements.*

### Applications include:

- Groundwater monitoring - long-term studies, resource management
- Well monitoring, aquifer testing - pump, slug, step, and recovery tests
- Soil Vapor Extraction Tests (SVE)
- Open channel monitoring
- Gaging stations - rivers, streams, lakes
- Tank level measurement
- Watershed management





To order, or for more information, contact YSI.

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ISO 9001

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All specifications are subject to change. Please visit YSI.com for the latest product specification information.

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Who's Minding the Planet?®

### Level Scout Specifications

<i>Level Ranges<sup>1</sup></i>	<i>Full Scale Level Range</i>	10, 50, 75, 250 (3, 15, 23, 76)	ft H <sub>2</sub> O (m H <sub>2</sub> O)	vented gauge
<i>Proof Pressure</i>		2.0	x FS	
<i>Burst Pressure</i>		3.0	x FS	
<i>Measurement Accuracy</i>	<i>Level</i>	±0.05 ±0.10	%FS TEB <sup>2,3</sup> %FS TEB <sup>2,3</sup>	for level ranges >10 ft (3 m) H <sub>2</sub> O for level ranges ≤ 10 ft (3 m) H <sub>2</sub> O
	<i>Temperature</i>	±0.2	°C	

### Level Scout Data Logging Specifications

<i>Modes of Sampling</i>	Linear, Linear Average, Event, Logarithmic	user selectable
<i>Pressure Units</i>	psi, ft H <sub>2</sub> O, mm H <sub>2</sub> O, cm H <sub>2</sub> O, m H <sub>2</sub> O, kPa	user-specified or by slope and offset
<i>Sampling Rate<sup>4</sup></i>	Programmable	8 readings per second max
<i>Internal Non-Volatile Memory</i>	4	Mbyte
<i>Maximum Pressure Logs</i>	393,120	with time stamp
<i>Maximum Pressure and Temperature Logs</i>	288,288	with time stamp
<i>Time Stamp Accuracy</i>	±2	min/year over compensated temp range
<i>Data Upload Time</i>	100	data sets/sec pressure and temp with time stamp per second @ 19200 baud rate

### Level Scout General Specifications

<i>Compensated Temperature Range</i>	14 to 104 (-10 to 40)	°F (°C)	
<i>Temperature Coefficient</i>	0.001 to 0.01	%/°C	
<i>Operating Temperature Range</i>	-4 to 122 (-20 to 50)	°F (°C)	All level ranges with polyurethane cables and level ranges ≤ 100 ft with ETFE cables
	32 to 122 (0 to 50)	°F (°C)	Level ranges >100 ft with ETFE cables
<i>Storage Temperature Range</i>	-40 to 176 (-40 to 80)	°F (°C)	without batteries
	-4 to 122 (-20 to 50)	°F (°C)	with batteries
<i>Protection Rating and Certifications</i>	IP-68, NEMA 6P, On-board surge protection, RoHS, CE		
<i>Internal Battery</i>	2 each 1.5 V	AA	alkaline recommended
<i>Battery Life</i>	3	years	15 minute sampling intervals w/alkaline
<i>External Excitation</i>	6 to 16	VDC	
<i>External Input Current</i>	13.0	mA	average current during measurement
	25.0	mA	15 mS peak current during page writes
	0.25	mA	quiescent
<i>Communication Interface</i>	RS-485, networkable		3 volt p-p differential w/ selectable baud rates from 1200 to 19200
<i>Communication Protocol</i>	SDI-12		ver 1.3 compliant
<i>Software Compatibility</i>	Windows® XP, Vista, 7		Data Scout, Data Scout Advanced
	Windows Mobile 5, 6 (requires master serial or USB port)		Data Scout Mobile
<i>Approximate Weights</i>	0.70 (318)	lb (g)	transducer with batteries
	0.15 (57)	lb (g)	cable assembly (less cable)
	0.05 (79)	lb/ft (g/m)	cable
	0.005 (8)	lb/ft (g/m)	suspension wire
<i>Dimensions</i>	0.75 (19.0)	in. (mm)	diameter
	12.44 (316.00)	in. (mm)	length
<i>Measurement Resolution</i>	24 bit AD convertor		
<i>Display Time Resolution</i>	1	second	
<i>Sensor Response Time</i>	<1	millisecond	

1 Special measurement ranges available upon request.  
2 Total Error Band (TEB) includes the combined errors due to non-linearity, hysteresis, non-repeatability, and thermal effects over the compensated temperature range per ISA S51.1  
3 Additional error of <0.1 %FS/year may be incurred due to offset drift  
4 For sampling rates greater than 3 Hz, the pressure/temperature averaging must be reduced as required