



Control Electronics, Inc.

ERS-560 Ultrasonic Level Monitor

Technology for a Demanding Future

- *Highly Accurate*
- *Quick Setup*
- *Economical*
- *Flexible*

Control Electronics advanced ERS-560 Ultrasonic Level Monitor is a highly accurate, non-contacting liquid level measuring device. The system is microprocessor controlled and will monitor level in most tank configurations.

Applications range from monitoring levels in sewage works to monitoring industrial tank levels.



CONTROLLER

Reliable, Accurate, Smart

Precise liquid depth measurements are continuously made under processor control. Ultrasonic sound pulses are transmitted from the sensor and elapsed time of echo return is accurately calculated. This information is converted to a depth measurement and is applied to the respective equation for the tank configuration selected to produce a total-gallons stored in tank.

Proportional analog level signals, relay contact closures and RS-232 outputs are available for remote indicating, recording and process control such as pump control in a wet well.

Complete solid-state design ensures repeatable, long term, trouble-free operation. All circuits are protected in a NEMA 4X enclosure with a clear polycarbonate hinged cover for easy viewing of level indications. The controller can be located up to 1500 feet from the measuring site.

SENSOR

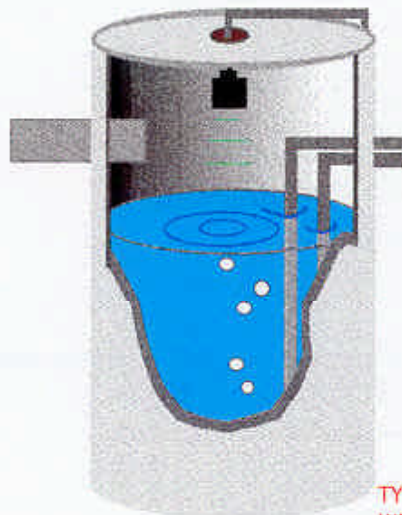
Unique, Efficient, Non-Hazardous

The Sensor is a non-contacting, Ultrasonic type probe. Unlike many other flowmeters that apply a high voltage (as much as 1700 volts) to their sensor cable, the ERS-560 sensor requires a pulse of only 24 to 40 volts maximum. This means the sensor is non-hazardous, eliminating potential arcing of a faulty cable which could be a threat to personnel or the environment. The rugged sensor is housed in solid PVC, requires no maintenance and is explosion-proof, corrosion resistant and submersible.

PROGRAMMABLE

Flexible, Cost Effective, Simple

Programming of the Level Monitor is accomplished by four (4) pressure sensitive buttons on the front panel. All parameters and level information are indicated on the user friendly menu-driven alpha numeric display. Level indication in PERCENT, INCHES, FEET, GALLONS along with sensor temperature and data logging are all selectable from the front panel.



The programming options in the ERS-560 allow the meter to be extremely flexible in application. A special section permits the operator to save a set of presets while operating the level meter under different level parameters. This provides for quick return to original operational settings.

All programmed data is password protected and saved in non-volatile memory in the event of a power failure.

TYPICAL APPLICATION IN WET WELL FOR PUMP CONTROL

DATA LOGGING

Sophisticated, Extensive, Standard

The ERS-560 automatically logs daily levels for the past 31 days with auto wrap around. It records the daily average level and the min/max levels and the time they occurred. When using an optional serial printer, the user can print on demand the past number of days desired or set to print automatically on a daily bases.

A second data logging records and time stamps the average level between samples taken. The logging sample rate is adjustable from 0 to 99 minutes. The samples can be viewed at the meter individually or set to auto advance ahead or back by ever 10 samples for hands free viewing.

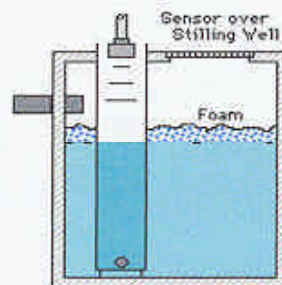
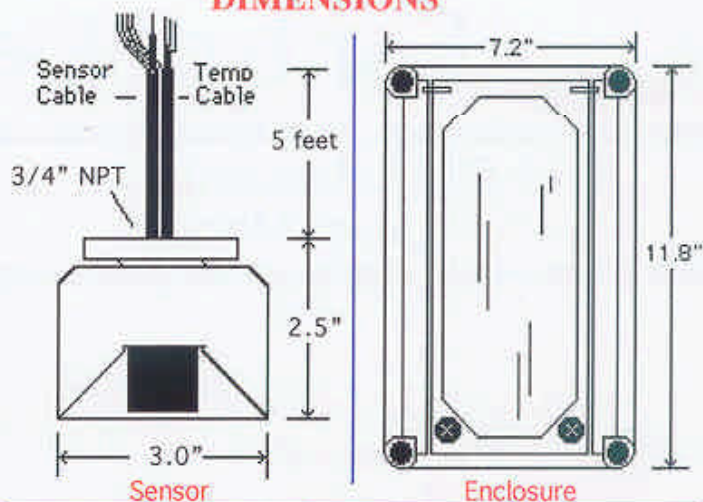
All data logged information is available through the RS-232 output.

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*****
Date: 11/15/97
ID Number: LT-01
Average Daily Level = 76.45 inches
Minimum Level      = 43.75 inches
Time: 03:10 AM
Maximum Level     = 95.07 inches
Time: 08:56 AM
Total stored gallons = 11634
*****
    
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Typical Print Out

DIMENSIONS



Use the ERS-560 in stilling wells, Spherical tanks and Horizontal tanks or Rail Road tank cars.



ERS-560 Specifications

Specifications and design subject to change without notice.
Made in USA Bulletin # 97-560-03

Electronics

Power Requirements:	120/220 VAC, $\pm 15\%$, 50/60 Hz 12-24 VDC @ 10W max.
Temperature:	30°F to 120°F (-5°F with opt. heater)
Display:	2 line x 20 character, Alphanumeric, LCD with LED backlighting
Outputs:	0-10 VDC adjustable, 4-20 mA isolated into 1000 ohm, RS-232, RS-485 1 relay alarm/endpoint output, SPDT 7A/250 VAC
Span Range:	0-1.00" to 0-200.00" full scale
Dead Band (blinking):	Automatic/Dynamic 10" to 175"
Resolution:	0.01"
Accuracy*:	$\pm 0.5\%$ of Range or better calculated error less than $\pm 0.04\%$
Memory:	Flash and non-volatile RAM
Tank Equations:	Cylindrical, Horizontal, Spherical, Rectangular/Square

*Note: field conditions, such as turbulence, etc., may affect the apparent accuracy.

Sensor

Material:	PVC Housing, Epoxy, Aluminum (teflon opt.)
Beam Pattern:	6° Conical Max (3° from centerline)
Temperature:	-40°F to 160°F
Cable:	5 foot corrosion-resistant, 1500 ft. max.
Mounting:	3/4" NPT
Dimensions:	3.0" dia. x 2.5" len

Enclosure

Material:	Fiberglass with clear hinged Polycarbonate cover.
Rating:	NEMA 4X, IP65, Water-Tight, Dust-Tight
Corrosion-Resistant:	CSA, UL listed
Dimensions:	7.2"x11.8"x6.8"; mounting 4.92"x12.3" with stainless steel mounting feet

Options

Strip Chart and Circular Recorders, Heater/Thermostat, PVC Sensor Bracket, Sensor Cable, Serial printer, External Temperature Probe

Warranty: The ERS-560 system is pre-tested and quality control inspected before shipping. Warranty is against defects in parts and workmanship for a period of 1(one) year.

Control Electronics, Inc.

Represented by:



Sales & Service
Call

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