



Water Level Transducer WLT-904

Description



The WLT-904 is a programmable RTU water monitoring system. The WLT-904 water level transducer is designed to monitor water level and status information from remote locations with a high degree of accuracy. This RTU transducer is used to convert water level information, measured in a remote stilling well, to a telemetry output using an on-board modem.

The WLT-904 is completely programmable using BASIC instructions. This allows the WLT-904 to make calculations such as: rate-of-change, flow, high & low limits, alarm conditions.

Features:

external alarms 3 each available dry contact closure

relay output 2 each (spdt)

leased line/cable
operation 1200 bps half duplex

radio operation 2 watt or 5 watt at 136-174 Mhz or
2 watt or 4 watt at 403-470 Mhz

ambient temperature -40 to +60 deg C

Power requirements
Operating voltage 12 vdc standard

Optional voltages 120 vac, 125 vdc, 48 vdc, 24 vdc

Current drain 30 ma at 12 vdc

Physical
Wlt-940 housing 13" x 9.1" x 5" H
Mounting 12.2" x 7.1" hole pattern
Overall 14.75" L x 9.1" W x 7" H

	<u>Range</u>	<u>Resolution</u>	<u>Accuracy</u>
	0 to 2 ft	0.001 ft.	+/-0.005 ft.
	0 to 10 ft	0.01 ft.	+/-0.01 ft.
	0 to 20 ft	0.01 ft	+/-0.015 ft.
	0 to 40 ft	0.01 ft	+/-0.02 ft



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A water level change is sensed by a float-tape-counterweight system that causes a corresponding precision rotation of the input shaft. The shaft rotation is scaled through a set of gears and applied to a high resolution potentiometer. The resulting electrical signal is fed into the remote telemetry unit (rtu) for processing and data transmission.

The wlt-904 uses a bell 202 modem to communicate over leased lines, cables, or radio links. This device will transmit on a continuous basis, periodic (timed) basis, or it will respond to an interrogation from a master unit. The wlt-903 water level transmitter will communicate with any device capable of generating or receiving standard ASCII characters. Communication with SCADA networks, DCS systems, and personal computers is provided by emulations of industry-standard protocols. The wlt-904 RTU water level monitor is a low power device that can operate from standard 12 volt battery power and solar panel charging system, 120 vac power, or a variety of DC voltage inputs. The wlt-903 RTU can be programmed using BASIC instructions to provide a variety of status conditions or calculated outputs as listed below.

FLOW-The water level can be converted into flow information that can be transmitted with the level.

LEVEL ALARMS-High & Low level alarms can be set and transmitted.

RATE-OF-CHANGE-Rate-of-Change measurements in the water level can be computed and transmitted.

TRASHRACK/EXCESS FLOW-In those applications where two water levels are required from one site, such as, trashrack measurements the WLT-903 can be connected to a slave water level transducer. The slave water level transducer can be a Model WLT-700, WLT-75, or pressure transducer.

PRIMARY/SECONDARY MONITORING-Since the wlt-904 RTU can accept two level inputs, a secondary or redundancy measurement can be made. The secondary measurement can be from a pressure transducer or other level monitoring devices.

TIME AND DATE TAGS-Time and date information can be sent along with the water level for data logging. A lithium battery maintains clock/calendar and memory for two years of no power.

REMOTE PROGRAMMING-The wlt-904 rtu comes with a rs-232 serial connection for remote programming and debugging.