



What is the best technology to measure the level of water or wastewater?

SITRANS L offers the best technology for continuous level measurement in any water and wastewater application. Siemens gives the choice of radar and ultrasonic technology.

Answers for industry.

SIEMENS

The right solution for level measurement in the water/wastewater industry

From wetwells and rake control to open channel flow applications – the best technology to measure liquid level is ultrasonic. Ultrasonic technology can be used safely and legally in open air applications and can accurately measure level in narrow wetwells filled with obstructions. For digester vessels containing CO₂ or CH₄, Siemens radar transmitters offer incomparable performance. No matter what technology you choose, you can achieve operational efficiency using any one of our solutions:

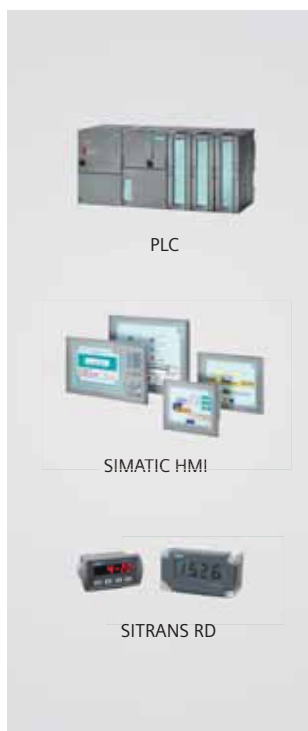
SITRANS Probe LU is the **most economical choice**, with the ultrasonic transmitter and level sensor in one instrument. Add the SITRANS RD200 for level readings at an alternative location. For control flexibility, integrate with a PLC.

For applications that require a **local control solution**, the ultrasonic HydroRanger 200 with an Echomax transducer provides optimal material handling.

For **monitoring level in closed vessels** with heavy vapor or foam, choose SITRANS Probe LR or SITRANS LR250. These choices provide accurate and safe level control in nasty environments.

No matter what you choose, you always get:





- Sonic or Process Intelligence – our field-proven echo-processing algorithms guarantee the most reliable performance available in the market.
- Unmatched beam angle – stronger pulse and sensitivity in a compact beam angle make our ultrasonic transducers the most powerful in the industry.
- SIMATIC NET and SINAUT – Siemens industrial communication products and systems ensure company-wide efficiency. The SINAUT system provides efficient and flexible remote execution of automated monitoring and controlling systems. SIMATIC NET is based on proven standards, so you can implement powerful, integrated data networks with support for HART, PROFIBUS PA and Modbus.
- Million in one – our products have the field experience of over a million points of level built into every unit.
- Global network – sales and support in your neighborhood. Our extensive global reach means you get sales and support when and where you need it.



With Totally Integrated Automation (TIA), Siemens provides a comprehensive, integrated product and system spectrum for the efficient automation of the entire production process. TIA enables realization of perfectly tailored automation solutions to meet all individual production requirements.

Thanks to the uniquely integrated qualities of TIA, companies are able to optimize their production processes, accelerate time to market, and reduce production costs – while maintaining a high level of investment security and minimizing overall project complexity.

The SITRANS RD series offers remote digital displays and a remote data manager.

	SITRANS Probe LU	HydroRanger 200	SITRANS Probe LR	SITRANS LR250
				
	2-wire, loop powered ultrasonic transmitter for level, volume, and flow monitoring of liquids in storage vessels, simple process vessels and open channels.	Ultrasonic level controller for up to six pumps provides control, differential control, and open channel flow monitoring.	2-wire, 6 GHz pulse radar level transmitter for continuous monitoring of liquids and slurries in storage vessels with nominal pressure and temperature.	2-wire, 25 GHz pulse radar level transmitter for continuous monitoring of liquids and slurries in storage and process vessels including high temperature and pressure.
Range	6 m: 0.25 to 6 m (0.8 to 20 ft) 12 m: 0.25 to 12 m (0.8 to 39 ft)	0.3 to 15 m (1 to 50 ft), transducer and material dependent	20 m (66 ft)	20 m (66 ft)
Temperature	-40 to 85 °C (-40 to 185 °F)	-20 to 50 °C (-4 to 122 °F)	-40 to 80 °C (-40 to 176 °F)	-40 to 200 °C (-40 to 392 °F)
Pressure	0.5 bar g (7.25 psi g)	Transducer dependent	Up to 3 bar g (43.5 psi g)	Up to 40 bar g (580 psi g)
Beam angle	10°	XRS-5: 10° or XPS-15: 6°	28°	Horn dependant, from 8 to 19°
Accuracy	± the greater of 0.15% of range or 6 mm	± the greater of 0.25% of range or 6 mm	± the greater of 0.1% of range or 10 mm	5 mm
Outputs	<ul style="list-style-type: none"> • 4 to 20 mA/HART • PROFIBUS PA • Intrinsically Safe (optional) 	<ul style="list-style-type: none"> • Six relays standard • Two 4 to 20 mA outputs (isolated) • One or three relays optional, single channel level reading only 	4 to 20 mA/HART	<ul style="list-style-type: none"> • 4 to 20 mA/HART or PROFIBUS PA • NE 21, NE 43
Communications	<ul style="list-style-type: none"> • HART or PROFIBUS PA • EDD for SIMATIC PDM for remote configuration and diagnostics 	<ul style="list-style-type: none"> • Built-in Modbus RTU or ASCII via RS-485 • Compatible with SIMATIC PDM via Modbus RTU 	<ul style="list-style-type: none"> • HART • EDD for SIMATIC PDM for configuration and diagnostics 	<ul style="list-style-type: none"> • HART or PROFIBUS PA • Enhanced EDD for SIMATIC PDM for configuration and diagnostics • Enhanced EDD for AMS and 375 (HART) • FDT/DTM
Approvals	CE, ATEX, FM, CSA, C-TICK	CE, FM, CSA, UL Listed, C-TICK, MCERTS	CE, ATEX, FM, CSA, IECEx	CE, ATEX, FM, CSA, C-TICK, IECEx
Features	<ul style="list-style-type: none"> • High signal-to-noise ratio • Sonic Intelligence echo processing • Auto False-Echo Suppression • Level-to-volume or level-to-flow conversion • Infrared Intrinsically Safe (IS) handheld programmer • ETFE or PVDF copolymer transducer 	<ul style="list-style-type: none"> • Sonic Intelligence • Single or dual point • Controls up to six pumps • Screen rake automation • Open channel flow monitor • Volume conversion • High level back-up alarm input • One mA input • Two discrete inputs 	<ul style="list-style-type: none"> • Process Intelligence advanced echo processing • Auto False-Echo Suppression • Level and volume measurement • Infrared IS handheld programmer • Patented, shielded, and hermetically sealed polypropylene antenna/process connection; 100 mm (4") shield standard 	<ul style="list-style-type: none"> • Process Intelligence advanced echo processing • Reliable and accurate – extremely high signal and low noise yields high performance • Graphical user interface (LUI) makes operation simple with plug-and-play setup using the intuitive Quick Start Wizard

Ultrasonic technology key applications:

- Chemical vessels
- Filter beds
- Waste disposal bins
- Open channel flow
- Wash water vessels
- Wetwell/lift stations
- Drainage systems
- Bar screen
- Pump control
- Differential level

Radar technology key applications:

- Anaerobic digesters
- Storage/process control of activated carbon
- Lime silos
- Foaming wetwell sump
- Hydrochloric acid, ammonia, nitric acid storage vessels



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