

**SIEMENS**



Process Instrumentation

# The world's most accurate level controller

SITRANS LUT400: precision built on decades of experience. In over a million applications. And did we mention it's easy to use? Welcome to the evolution of ultrasonics.



[siemens.com/sitransLUT400](https://www.siemens.com/sitransLUT400)

# The world's most accurate ultrasonic controller for level measurement

Customer-driven features. Setup in under a minute. Intuitive operation.

All of this plus a world-leading accuracy of 1 mm (0.04").

Siemens brings you the SITRANS LUT400 series ultrasonic controllers. Compact, single point controllers that excel at continuous level monitoring and control in liquid, solid, or slurry applications in a wide range of industries.

Three models make up the series:

- SITRANS LUT420 Level Controller
- SITRANS LUT430 Level, Pump, and Flow Controller
- SITRANS LUT440 High Accuracy Open Channel Monitor (OCM), which also provides a full suite of advanced level, volume, and pump controls

These controllers are a flexible solution for a world of applications: water/wastewater monitoring and pumping, inventory management, crusher control, truck load-outs, or anything in between.

High accuracy keeps operations in all of these applications cost-effective: inventory monitoring is always precise, processes can be better controlled, and expensive spill cleanups can be avoided.

A reliable ultrasonic level controller reduces the need to send operators to the application for maintenance. By keeping workers out of hazardous situations altogether, you can immediately reduce the chance of accidents and the consequences to your company.

SITRANS LUT400 series features Siemens' patented Sonic Intelligence, which continuously evaluates and adjusts for noise level and changing process conditions. The controllers have three relays combined with a suite of pump, alarm, and other control features.

All three models are compatible with the full line of Siemens Echomax transducers. These transducers feature self-cleaning faces and submergence detection, with an operating range of 0.3 to 60 meters (1 to 200 ft.), making them an ideal fit for a wide range of industries.



Installing the SITRANS LUT400 series controllers is simple with a selection of mounting options, whether you prefer a DIN rail, pipe, or wall mount. Operators can program the controllers in less than a minute using the four-button local user interface and intuitive menu options.

- **Industry-leading accuracy** – SITRANS LUT400's  $\pm 1$  mm (0.04") accuracy gives you confidence in your measurements
- **Easy to use** – local user interface with four-button programming, menu-driven parameters, and Wizard support for key applications
- **Quick to configure** – graphical Quick Start Wizards guide you during setup
- **Next generation Sonic Intelligence** – improved performance in noisy environments thanks to digital receiver technology
- **Consistently high performance** – patented digital receiver technology ensures reliability even in the harshest environments
- **Saving you money** – energy-saving algorithms and real time clock help you reduce pump operation costs by avoiding peak energy periods
- **Integrated datalogger** – record historic performance and alarm events
- **Communications convenience** – HART® communications with access via the local user interface, SIMATIC PDM, Emerson AMS™, FC375/475, FDTs, and web-browser
- **Enhanced diagnostics** – echo profile and trend view on the display
- **Installation simplicity** – wall, pipe, and DIN rail mounting configurations with ¼-turn fasteners for quick access and hassle-free wiring with removable terminal strips

Standard specifications	SITRANS LUT400 series
<b>Range</b>	0.3 to 60 m (1 to 200 ft), transducer and material dependent
<b>Accuracy</b>	<ul style="list-style-type: none"> <li>• Standard accuracy: <math>\pm 1</math> mm (0.04") plus 0.17% of distance*</li> <li>• High accuracy configuration (SITRANS LUT440): <math>\pm 1</math> mm (0.04"), within 3 m (10 ft) range</li> </ul>
<b>Resolution</b>	0.1% of measured range or 2 mm (0.08"), whichever is greater
<b>Ambient temperature</b>	-20 to 50 °C (-4 to 122 °F)
<b>Application temperature</b>	-40 to 150 °C (-40 to 302 °F)
<b>Interface</b>	<ul style="list-style-type: none"> <li>• Back-lit LCD 60 x 40 mm (2.36 x 1.57")</li> <li>• Removable display, operational up to 5 m (16 ft) from enclosure base</li> </ul>
<b>Communications</b>	HART, USB
<b>Programming</b>	Four local push buttons, SIMATIC PDM, Emerson AMS™, web browser (Internet Explorer), Field Device Tool (FDT), Field Communicator 375/475 (FC375/FC475)
<b>Output</b>	<ul style="list-style-type: none"> <li>• Three relays: One form C (SPDT) relay, two form A (SPST) relays</li> <li>• One 4 to 20 mA output (Active or Passive)</li> </ul>
<b>Input</b>	<ul style="list-style-type: none"> <li>• Two discrete inputs (0-50 V DC max switching level) with 24 V DC bias for contact level device and/or pump interlock</li> <li>• One temperature sensor input for optional TS-3 temperature sensor</li> </ul>
<b>Enclosure</b>	Wall/ Pipe/ DIN Rail mount <ul style="list-style-type: none"> <li>• ½ DIN - (HxWxD): 144 mm (5.7") x 144 mm (5.7") x 146 mm (5.75")</li> <li>• Type 4X/NEMA 4X/IP 65***, panel mount display IP 54 (Type 3/NEMA 3/IP 54)</li> <li>• Polycarbonate</li> </ul>
<b>Power</b>	<ul style="list-style-type: none"> <li>• AC version: 100 to 230 V AC <math>\pm 15\%</math>, 50/60 Hz, 36 VA 10 W</li> <li>• DC version: 10 to 32 V DC 10 W</li> </ul>
<b>Approvals</b>	<ul style="list-style-type: none"> <li>• General purpose: CE, CSA<sub>USIC</sub>, FM, UL Listed, C-TICK</li> <li>• Hazardous location: Canada - CSA Class I, II, III, Division 2 (Groups A, B, C, D, F, G) International/Europe - CE, ATEX 3D, IECEx, C-TICK</li> </ul>

\* Standard accuracy :  $\pm 1$  mm (0.04") plus 0.17% of distance applies to all models excluding the SITRANS LUT440 in high accuracy mode.

\*\* Note - Use of the knock-out on the blind lid for the panel mount version reduces the electronics enclosure rating to IP 20/NEMA 1.

More information:

[www.siemens.com/ultrasonic](http://www.siemens.com/ultrasonic)  
[www.siemens.com/sitransLUT400](http://www.siemens.com/sitransLUT400)

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