Process Instrumentation

Every drop of water and every unit of energy counts

Environmental: Water
Siemens’ instrumentation offers you the technology to put you in control. We not only give you accuracy and reliability of measurement but also the reassurance of seamless integration from the planning and engineering phase to operation and modernization. Siemens Totally Integrated Automation (TIA) ensures that the data and alerts from your instrumentation and process analytics devices are translated into early and effective action.

Faster and more efficient processes and operations in the water industry
To save time and money, processes need to be simplified and run efficiently. Integrated engineering with COMOS and SIMATIC PCS 7, the Consultant DVD and the Industry Library from Siemens offer outstanding solutions.

A complete portfolio
We offer a complete portfolio of field instruments for flow, level, pressure and temperature measurement. Our technology is designed to fit your individual needs. We feel responsible for sustainable resource management and for efficient use of energy.

Besides inline flow measurement, clamp-on technology, ideal for retrofit installations, extends the standard offering. Custody transfer-approved instruments guarantee accurate billing of water or heating/cooling energy. Battery-operated meters and wireless technology enable you to control stand-alone devices in remote or inaccessible locations, giving you reliable information from the field as well as reduced cabling or other infrastructure costs.

Siemens Process Instrumentation is part of the Siemens Environmental Portfolio
This covers all Siemens products that are of extraordinary benefit for the environment and for our customers. Siemens flowmeters for water applications and valve positioners for compressed air applications are certified products.

With Siemens you have the reassurance of best-in-class products and a partner who understands your industry. Discover more in this brochure and at: www.usa.siemens.com/pi
PIA Life Cycle Portal

The PIA Life Cycle Portal is a web-based application for easy and convenient product selection and configuration.

How to get access
You can access the PIA Life Cycle Portal around-the-clock at usa.siemens.com/pia-portal. It offers you active support to find the best solution from the extensive Siemens portfolio of sensors and process analytical products. The portal can be used to see how different solutions can be put to use in process and factory automation.

You can choose between several selection access options to find the appropriate product solution for your specific requirements:

• Direct access sends you straight to a specific configuration if you know the product you are seeking.
• “Guided selection” lets you to select the appropriate application, technology or industry and specify the measurement task based on the various relevant parameters for your particular application.

Advantages at a glance:
• Convenient product selection support with answers to typical questions
• A variety of selection possibilities: see the sample processes and simply select from the recommended process instrumentation and analytics products
• Project lists for an order enquiry can be quickly created
• Different possibilities for processing data and information
• No separate installation needed
• Product selection for spare parts
• The latest product data and information for Siemens process instrumentation and analytics

usa.siemens.com/pia-portal

Scan to explore the PIA Life Cycle Portal
# Product range

## Level measurement

### Radar

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<th>Typical applications</th>
<th>More information</th>
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<tr>
<td><strong>SITRANS Probe LR</strong></td>
<td>Compact 2-wire loop-powered, 6 GHz pulse radar transmitter with polypropylene rod antenna for level measurement up to a range of 20 m (65 ft).</td>
<td>• Uni-Construction polypropylene rod antenna standard&lt;br&gt;• Easy installation and simple start-up&lt;br&gt;• Patented Sonic Intelligence® signal processing&lt;br&gt;• Extremely high signal-to-noise ratio&lt;br&gt;• Auto False-Echo Suppression of false echoes&lt;br&gt;• Measuring frequency: 5.8 GHz (6.3 GHz for North America)&lt;br&gt;• Programming using infrared Intrinsically Safe hand-held programmer, SIMATIC PDM or HART® handheld communicator&lt;br&gt;• Communication: HART®, PROFIBUS PA</td>
<td>Level and volume measurement of aggressive liquids such as acids, lime and other slurries, alum, polymers, sodium hypochlorite &lt;20% etc. in chemical storage tanks in water and wastewater treatment plants.</td>
<td>usa.siemens.com/level</td>
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<tr>
<td><strong>SITRANS LR250</strong></td>
<td>2-wire loop-powered, 25 GHz pulse radar level transmitter with a full range of antennas: horn-/PVDF-/fully encapsulated flanged antenna up to 20 m (66 ft).</td>
<td>• Smaller process connections and narrow beam allows installation anywhere on a vessel&lt;br&gt;• Short blanking distance&lt;br&gt;• Process Intelligence® for advanced echo processing&lt;br&gt;• Reliable and accurate for extremely high signal and low noise yields&lt;br&gt;• Full vessel capacity for high accuracy of low and high levels&lt;br&gt;• Quick Start Wizard for easy configuration and operation in a few minutes&lt;br&gt;• Infrared handheld programming or over a network using SIMATIC PDM via HART® or PROFIBUS PA</td>
<td>Continuous level and volume monitoring of aggressive liquids and slurries in chemical storage and process vessels, e.g. acids/alkalis, polymers, sodium hypochlorite &gt;20%, chlorinates, buffer and mixing tanks in water and wastewater treatment plants.</td>
<td>usa.siemens.com/level</td>
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<tr>
<td><strong>SITRANS LR200</strong></td>
<td>2-wire, 6 GHz pulse radar level transmitter for continuous monitoring of liquids and slurries up to a range of 20 m (66 ft).</td>
<td>• Graphical local user interface (LUI) makes operation simple with plug-and-play setup using the intuitive Quick Start Wizard&lt;br&gt;• LUI displays echo profiles for diagnostic support&lt;br&gt;• Process Intelligence signal processing for improved measurement reliability and Auto False-Echo Suppression of fixed obstructions&lt;br&gt;• Programming using infrared Intrinsically Safe hand-held programmer or over a network using SIMATIC PDM, Emerson AMS, or Field Device Tools, such as PACTware or Fieldcare via SITRANS DTM&lt;br&gt;• Communication: HART®, PROFIBUS PA&lt;br&gt;• Approvals: ATEX, CSA/FM, NEPSI, C-TICK, INMETRO, GOST</td>
<td>Continuous level and volume monitoring of liquids and slurries in anaerobic digesters, storage and process vessels in water and wastewater treatment plants.</td>
<td>usa.siemens.com/level</td>
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<tr>
<td><strong>SITRANS LR560</strong></td>
<td>2-wire, 78 GHz FMCW radar level transmitter for continuous monitoring of solids in silos up to a range of 100 m (328 ft).</td>
<td>• High-frequency technology ensures reliable operation in dusty and vaporous environments&lt;br&gt;• Lens antenna, eliminating large parabolic or horn antennas, providing a narrow 4° beam angle. Highly resistant to product buildup&lt;br&gt;• Integrated air purge connection as standard for particularly difficult installations&lt;br&gt;• Communication: HART®, PROFIBUS PA, FOUNDATION Fieldbus&lt;br&gt;• Approvals: CSA, FM, FFC, C-Tick, IECEX, ATEX, INMETRO, NEPSI</td>
<td>Continuous level monitoring of bulk solids and powders such as lime and activated carbon in water and wastewater treatment plants for both batch and continuous operation.</td>
<td>usa.siemens.com/level</td>
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<td>Guided Wave Radar</td>
<td>Ultrasonic</td>
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<td><strong>SITRANS LG</strong></td>
<td><strong>SITRANS LU150</strong></td>
<td><strong>SITRANS Probe LU</strong></td>
<td><strong>HydroRanger 200</strong></td>
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<tr>
<td>Guided wave radar series for liquids, solids, slurries, inventory, process control, aggressive materials and more.</td>
<td>2 wire, 4 to 20 mA loop powered transmitter is ideal for liquids, slurries, and bulk materials in open or closed vessels to 5 m (16.4 ft). The transducer is available in PVDF copolymer, making the device suitable for use in a wide variety of applications.</td>
<td>2-wire loop-powered ultrasonic transmitter for level, volume and flow monitoring of liquids. Continuous level measurement up to 12 m (40 ft) range.</td>
<td>Versatile short to medium range up to 15 m (50 ft) ultrasonic single- and multi-vessel controller for use in a wide range of environmental industries.</td>
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<tr>
<td><strong>Brief description</strong></td>
<td><strong>Features and benefits</strong></td>
<td><strong>Typical applications</strong></td>
<td><strong>More information:</strong> <a href="usa.siemens.com/level">usa.siemens.com/level</a></td>
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<tr>
<td>• Versatile and reliable level measurement even with aggressive vapors, high temperatures and pressure, dust, steam, or material buildup</td>
<td>• Sonic Intelligence provided highly reliable measurement</td>
<td>• Continuous level and volume monitoring of liquids such as ammonia. Measurement in storage and process vessels in water and wastewater treatment plants.</td>
<td>More information: <a href="usa.siemens.com/level">usa.siemens.com/level</a></td>
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<tr>
<td>• Measures level, level interface and volume in a wide range of applications from material storage to bypass pipes</td>
<td>• Easy to install and maintain</td>
<td>• Level in chemical small storage vessels, filter beds, liquid storage vessels, in water and wastewater treatment plants.</td>
<td>More information: <a href="usa.siemens.com/level">usa.siemens.com/level</a></td>
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<td>• Rod and cable lengths can be field adjusted to fit your application</td>
<td>• Easy two-button programming</td>
<td>• Continuous level monitoring and control of wet wells, open-channel flow monitoring of flumes/weirs. Bar screen control, level monitoring and control of screenings/sludge storage hoppers, non-aggressive chemical storage, liquid storage, and dry solids storage tanks in water and wastewater treatment plants.</td>
<td>More information: <a href="usa.siemens.com/level">usa.siemens.com/level</a></td>
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<td>• Quick Start Wizard for easy configuration and operation in a few minutes</td>
<td>• PVDF transducer</td>
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<td>More information: <a href="usa.siemens.com/level">usa.siemens.com/level</a></td>
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<td>• Patented Sonic Intelligence echo processing</td>
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<td>• Integral temperature compensation</td>
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<td>• 4 to 20 mA output</td>
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<td>• General Purpose</td>
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<td>Level measurement</td>
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<td><strong>Ultrasonic</strong></td>
<td><strong>Hydrostatic Pressure</strong></td>
<td><strong>Point Level</strong></td>
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<tr>
<td>SITRANS LUT400</td>
<td>Echomax Transducers</td>
<td>SITRANS LH100</td>
<td>SITRANS LVL100 / 200</td>
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<tr>
<td>Brief description</td>
<td>Compact, single-point, long-range ultrasonic controllers for continuous level, or volume measurement of liquids, slurries, and solids, and high-accuracy monitoring of open channel flow. ±1 mm high accuracy in standard operation. Measuring range up to 60 m.</td>
<td>Range of ultrasonic transducers provides reliable continuous level measurement. Various models for a wide range of applications.</td>
<td>2-wire submersible pressure transmitter to measure hydrostatic pressure, compact version.</td>
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<tr>
<td>Features and benefits</td>
<td>• Separated transceiver/transducer (Echomax) protects the electronics from extreme vibration • High-frequency, non-contacting ultrasonic transducer is free of electronic components and fully potted to provide long-term reliability • Energy-saving algorithms for minimizing pump operation during high-cost energy periods • Sonic Intelligence is standard and is proven to provide superior performance in difficult conditions • Communication: HART™ • Approvals: MCERTs, CSA, FM, UL, C-Tick</td>
<td>• Narrow beam angle from 6 to 12° • Chemically resistant PVDF copolymer enclosure and CMS rubber face • Fully submersible • Integral temperature compensation • Max. cable length of 365 m (1200 ft) • Choice of mounting brackets available for ease of installation • Approvals: ATEX, FM, CSA</td>
<td>• IP68 stainless steel housing (23,4 mm diameter) with a piezoresistive sensor and ceramic diaphragm • Converts the level-proportional hydrostatic pressure into a standardized signal 4 – 20 mA • Accuracy ± 0.3 % • Measuring range: Standard 4, 5, 6, 10 and 20 m (60 ft H₂O), on request from 4 to 30 m (98 ft H₂O) • Communication: 4 – 20 mA • Approvals: ATEX, ICEEx</td>
<td>• Compact insertion length of 40 mm for tight spaces • Test function standard to confirm correct operation • Fault monitoring for corrosion, loss of vibration, or line break to the piezo drive independent of dielectric and other material conditions such as vapors, gases, bubbles, foam • Robust design with threaded piezo drive system to prevent failure in aggressive applications • Approvals: EHEDG, 3A, FDA, WHG, ATEX, FM, CSA, SIL2, IECEx</td>
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<tr>
<td>Typical applications</td>
<td>Open-channel flow monitoring in sewers, combined sewer overflow. Wet well level and pump control, storm water tank and level monitoring in holding tanks / vessels in water and wastewater treatment plants.</td>
<td>Installation in tanks, vessels, hoppers, open space like in dam or in open channel along with ultrasonics controllers like SITRANS LUT, HydroRanger 200 to form complete ultrasonics level or flow measurement system.</td>
<td>Level monitoring under harsh environmental conditions and for installation in tight spaces, e.g. in deep narrow wells, very foamy sumps &amp; wet wells, grease traps, irrigation canals, dams and reservoirs in water and wastewater treatment processes.</td>
<td>High and low point level detection for liquid or slurries in various chemical and process water storage tanks and sumps in water and wastewater treatment plants.</td>
</tr>
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**More information:**
- usa.siemens.com/level
- usa.siemens.com/level
- usa.siemens.com/level
- usa.siemens.com/level
### Features

**Applications**

- Ultrasonic Hydrostatic Pressure Point Level
- Sewer overflow
- Wet well level and pump control
- Storm Open-channel flow monitoring in sewers, combined

**Approvals**

- MCERTs, CSA, FM, UL, C-Tick

**Energy-saving algorithms**

- For minimizing pump operation.

**Measuring range**

- Up to 60 m.

**Sonic Intelligence**

- Proven to provide superior performance in difficult conditions.

**Energy-saving algorithms**

- During high-cost energy periods.

**Temperature compensation**

- Integral temperature compensation.

**Compact design**

- Single-point, long-range ultrasonic controllers.

**Protection**

- IP68 stainless steel housing (23.4 mm diameter).

**Material resistance**

- Chemical resistant PVDF copolymer enclosure and chemically resistant PVDF copolymer.

**Enclosure**

- IP68 stainless steel housing (23.4 mm diameter).

**Accuracy**

- Accuracy ≦ 0.3%

**Technology**

- Remote electronics option.
- Replaceable electronics.
- Digital version: integral LCD display.
- Standard version: 3 LED indicators for adjustment control, fingerprint, easy commissioning, SENSORPROM unit automatically uploads calibration values and settings.
- Approvals: CSA, FM, ATEX, C-Tick, WHG, Pattern approval china.

### Flow measurement

#### Electromagnetic

**SITRANS LVS100 / 200**

- Vibrating fork for dry bulk solids point level detection up to 20 m (65 ft).

**Pointek CLS100 / 200**

- Compact 2-wire inverse frequency shift capacitance switch for level detection in constricted spaces for interfaces, solids, liquids, slurries and foam.

**SITRANS F M MAG 1100**

- Electromagnetic flow sensor with stainless steel housing for chemical dosing.

**SITRANS F M MAG 3100**

- Electromagnetic flow sensor in a rugged, fully-welded design, can be upgraded to IP68 on site to be buried.

### More information

- [usa.siemens.com/level](usa.siemens.com/level)
- [usa.siemens.com/mag](usa.siemens.com/mag)
# Flow measurement

## Electromagnetics

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<td>SITRANS F M MAG 5100 W</td>
<td>Electromagnetic flow sensor in a rugged, fully-welded design, can be upgraded to IP68 on site to be buried and flooded. Designed for the water and wastewater industry.</td>
<td>• Hard rubber lining guarantees consistent accuracy throughout the entire pressure and temperature range</td>
<td>For all water applications such as groundwater, drinking water, cooling water, wastewater, sewage and sludge applications. Installation in water networks for leak detection and billing.</td>
<td>More information: usa.siemens.com/mag</td>
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<tr>
<td>SITRANS F M MAG 5000 / 6000 / 6000 I</td>
<td>Electromagnetic flow transmitter for flow and volume measurement in combination with any electromagnetic flow sensor. Can be used with sensors including MAG1100, MAG3100 and MAG5100W.</td>
<td>• Superior signal resolution for optimum turndown ratio</td>
<td>Transmitter for all electrically conductive liquids and slurries. The MAG5000 and MAG6000 are compatible with the Siemens Verificator. The rugged die-cast aluminium housing of the SITRANS F M MAG 6000 provides exceptional protection, even in the most rugged environment, including versions suitable for FM CL1 Div 2 installations.</td>
<td>More information: usa.siemens.com/mag</td>
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<td>SITRANS F M Verificator</td>
<td>The Verificator provides the ability to confirm accurate performance of your Siemens Magnetic Flow Meter. The Verificator works with the MAG5000/6000 transmitters and MAG 1100 &amp; 1100F, MAG3100 &amp; 3100P, and MAG5100W sensors.</td>
<td>• In-situ check of performance without interrupting the flow meter installation</td>
<td>The Verificator is routinely used to confirm the performance of the Siemens Magmeter and Transmitter without the need to remove the Magmeter from the process line. The Verification process can extend or eliminate the need to have the flow meter calibrated by either the manufacturer or a third party agency.</td>
<td>More information: usa.siemens.com/mag</td>
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<tr>
<td>SITRANS F M MAG 8000 / CT / Irrigation</td>
<td>Battery-operated electromagnetic water meter for stand-alone water applications, optional built-in wireless communication module. IP68 designs allow the sensor to be buried and flooded.</td>
<td>• Compact or remote solution</td>
<td>Water distribution network: Optimize water supply &amp; reduce leakage. Revenue metering: CT approved meter for accurate billing. Irrigation: Long-term performance, maintenance-free fair billing.</td>
<td>More information: usa.siemens.com/mag</td>
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### Ultrasonic

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<th>SITRANS F US SONOKIT</th>
<th>SITRANS Sono 3100/3300</th>
<th>SITRANS FUS1010</th>
<th>SITRANS FST020</th>
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<td><strong>Features and benefits</strong></td>
<td><strong>Typical applications</strong></td>
<td><strong>More information:</strong></td>
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<tr>
<td>Simple and accurate alternative to traditional flowmeters because it can be retrofitted onto existing pipelines.</td>
<td>- Cost-effective solution – contains all necessary components for retrofitting</td>
<td>- Flowmeter for retrofit of all the following applications:</td>
<td>usa.siemens.com/flow</td>
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<td>- Easy to install in pipeline sizes DN 100 to DN 4000 (4” to 160”) – without process shutdown or flow interruption.</td>
<td>- Raw water intake for water treatment plants, ground water, drinking water, treated wastewater.</td>
<td>usa.siemens.com/flow</td>
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<td>- High accuracy – the bigger the pipe, the more accurate the result.</td>
<td>- Advanced and highly accurate clamp-on ultrasonic flowmeter allows simultaneous measurement of up to 4 independent pipes and bidirectional flow operation.</td>
<td>usa.siemens.com/clamp</td>
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<td>- Solid construction and no moving parts for a 100% maintenance and obstruction free flowmetering</td>
<td>- Operation in Wide-Beam transit-time or Doppler mode</td>
<td>usa.siemens.com/clamp</td>
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<td>- Automatic calculation of the calibration factor when pipe geometry data are entered in the transmitter</td>
<td>- Easy installation; external sensors, no need to cut pipe or stop flow</td>
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<td>- Battery-powered option with FUS080</td>
<td>- No pressure drop or energy loss</td>
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<td>- Communication: HART®, PROFIBUS PA, IrDA optical eye via Modbus RTU (FUS080 only)</td>
<td>- Wide turndown ratio</td>
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<td>- Approvals: ATEX with FUS060</td>
<td>- Choice of single channel or dual channel/dual path, with doppler capability. Four channel/four beam optional</td>
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<td>- Zeromatic Path automatically sets zero without stopping flow and reduces zero drift, even at low flow</td>
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<td>- 1 MByte data logger with logger storage</td>
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<td>- Approvals: INMETRO, CSA, FM, ATEX, C-Tick, HART®, BacNET MSTP/BACNet IP, Modbus RTU/TCP/IP, Ethernet IP</td>
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<td>- Communication: RS232</td>
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<td>- No process shutdown for installation</td>
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<td>- Minimal maintenance: external sensors do not require periodic cleaning</td>
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<td>- No moving parts to wear or foul</td>
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<td>- No pressure drop or energy loss</td>
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<td>- Compact, integral design reduces installation cost</td>
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<td>- Wide-Beam technology ensures high performance</td>
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<td>- Zeromatic Path eliminates zero drift</td>
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<td>- Bidirectional flow operation</td>
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<td>- 1 MByte data logger with both site &amp; data logger storage</td>
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<td>- Approvals: UL, ULC, C-Tick</td>
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<td>- Communication: BACnet MSTP, Modbus RTU, VT100, RS232</td>
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</table>

**Typical applications:**
- Water leak detection and water monitoring applications, wastewater
- Influent and effluent, processed sewage and sludge
- GM/CW systems, sewage treatment plants.
- Raw water intake for water treatment plants, irrigation systems, hydro power stations, district heating and cooling plants, cooling systems, sewage treatment plants.
- Water leak detection and water monitoring applications, wastewater
- Influent and effluent, processed sewage and sludge
<table>
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<th>Flow measurement</th>
<th>Pressure measurement</th>
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<tr>
<td><strong>Ultrasonic clamp-on</strong></td>
<td><strong>Pressure measurement</strong></td>
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<td><strong>Vortex</strong></td>
<td>SITRANS FUP1010 clamp-on non-intrusive ultrasonic flow transmitter offers maximum versatility plus battery power for portable field use. It can operate in either WideBeam transit time or reflexor (Doppler) mode, making it suitable for virtually any liquid, even those with high aeration or suspended solids.</td>
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<tr>
<td><strong>SITRANS P 200 / 210 / 220</strong></td>
<td><strong>SITRANS P300</strong></td>
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<tr>
<td><strong>SITRANS P300</strong></td>
<td><strong>Digital pressure transmitter for gauge, absolute pressure and level measurement.</strong></td>
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</table>

**Features and benefits**
- Operation in WideBeam transit-time or Doppler mode
- No process shutdown for installation
- No pressure drop or energy loss
- Battery-Powered up to 7 hours
- IP67 Weatherproof enclosure
- Impact Resistant
- Single or Dual channel/path configurations available
- 1 MByte data logger with logger storage
- FUP1010 Water check metering kit for water/waste water available
- Compact or remote design (max. 15 m)
- Single or dual transmitter version
- Flow, pressure and temperature reading at one single point
- Accuracy: ± 0.75 % ... 2.5 % (depending on media)
- Fully-welded stainless steel construction; high corrosion, pressure and temperature resistance
- Isolation valve to protect pressure sensor during pressure/leak testing in the pipe
- Communication: HART®
- Approvals: FM, ATEX, IEC Ex
- Piezoresistive measuring cell with ceramic diaphragm (P200) or SS diaphragm (P210 / 220)
- Fixed-range transmitter
- Measuring range starting at 100 mbar up to 600 bar
- For aggressive and non-aggressive gases, vapors and liquids
- High measuring accuracy < 0.25 %
- Rugged stainless steel enclosure
- Compact design
- EPDM gaskets for drinking water
- Ingress protection up to Fully IP67
- Available in explosion-protected design according to ATEX
- Piezoresistive measuring cell, oil-filled
- Measuring range from 10 mbar to 400 bar
- High measuring accuracy up to 0.075 %
- Configuration through push buttons and LCD, HART® or PROFIBUS PA
- Ingress protection up to IP68
- Front flush mounted membrane and housing made of stainless steel
- FDA-compliant filling oils
- Excellent surface quality (Ra value ≤ 0.8 μm for process wetted parts)
- Communication: 0–20 mA, HART®, PROFIBUS PA or FF
- Approvals: EHEDG, 3 A

**Typical applications**
- Potable water, chemicals, Influent and effluent, sludges, check measurement, process control, and water leak detection.
- Consumption measurement in compressed air systems and other industrial gases or steam installations.
- Compact and economical pressure measurement in clean water and waste water process.
- Pressure measurement in raw water intake, sludge line, grit wash water, methane gas, chemical storage, industrial utility applications, desalination and irrigation.

**More information:**
- [usa.siemens.com/clamp](usa.siemens.com/clamp)
- [usa.siemens.com/flow](usa.siemens.com/flow)
- [usa.siemens.com/pressure](usa.siemens.com/pressure)
- [usa.siemens.com/pressure](usa.siemens.com/pressure)
<table>
<thead>
<tr>
<th><strong>Brief description</strong></th>
<th><strong>Features and benefits</strong></th>
<th><strong>Typical applications</strong></th>
<th><strong>More information:</strong></th>
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<tbody>
<tr>
<td><strong>Positioner</strong></td>
<td>Advanced digital pressure transmitter for gauge, absolute and differential pressure, level and flow measurement. Integral square root extractor for venturi flow.</td>
<td>Various pressure, level and flow measurement in water/wastewater plants, chemical storage and other utility installations. Desalination &amp; irrigation installations.</td>
<td>usa.siemens.com/pressure</td>
</tr>
<tr>
<td><strong>Temperature</strong></td>
<td>Pneumatic, digital valve positioner with unique low air bleed design.</td>
<td>For all pneumatic control valve and on/off valve applications.</td>
<td>usa.siemens.com/temperature</td>
</tr>
<tr>
<td></td>
<td>SITRANS TS sensors for a wide range of temperature applications.</td>
<td>For all temperature applications, e.g. surfaces, bearings, machinery, equipment, in vessels and pipes.</td>
<td>usa.siemens.com/temperature</td>
</tr>
<tr>
<td></td>
<td>Portfolio of temperature transmitters for head, rail or field mounting, for connection to many different thermocouples, resistance thermometers, as well as mV and resistance sensors.</td>
<td>For all temperature applications.</td>
<td></td>
</tr>
</tbody>
</table>
## Weighing

### SITRANS weighfeeder
- **Applications**: Lime slaking, Solids sludge transport on conveyors, Remote process monitoring.
- **Features and benefits**:
  - ±0.25 – 0.5% accuracy over a 10 – 100% capacity rate range.
  - Complete process control with Milltronics BW500 integrator.
  - Easy to set up and program.
  - Flexible outputs with up to eight relays and eight digital I/O for process control alarming.
- **Typical applications**: Lime slaking.
- **More information**: usa.siemens.com/weighing

### Milltronics MSI
- **Applications**: Remote process monitoring.
- **Features and benefits**:
  - ±0.5% accuracy over a 20 – 100% capacity rate range.
  - Self-cleaning belt support pans or bars.
  - Painted mild steel, galvanized or stainless steel options.
  - Single idler compact design for easy retrofit or new installations.
  - Easy-to-read, dual-line display with 35 mm (1.2”) high LED.
- **Typical applications**: Solids sludge transport on conveyors.
- **More information**: usa.siemens.com/weighing

## Communication and software

### SITRANS RD100 / 200
- **Applications**: Remote process monitoring.
- **Features and benefits**:
  - Easy-to-read, dual-line display with eight brightness levels.
  - Flexible outputs with up to eight relays and eight digital I/O for process control alarming.
- **Typical applications**: Remote process monitoring.
- **More information**: usa.siemens.com/pi

### SITRANS RD300
- **Applications**: Remote process monitoring.
- **Features and benefits**:
  - Easy access to data remotely installed.
  - Collects and sends sensor data to logistics systems providing up-to-date, timely, and accurate information.
- **Typical applications**: Remote monitoring of inventory levels, process and environmental applications.
- **More information**: usa.siemens.com/pi

### SITRANS RD500
- **Applications**: Remote monitoring of inventory levels, process and environmental applications.
- **Features and benefits**:
  - Integrated web and ftp server, email and sms for alarming, and up to 2 GB for data logging of instrumentation.
  - Simple access to data remotely installed instrumentation.
  - Collects and sends sensor data to logistics systems providing up-to-date, timely, and accurate information.
- **Typical applications**: Remote monitoring of inventory levels, process and environmental applications.
- **More information**: usa.siemens.com/pi

## Service & Support

### SIMATIC PDM
- **Applications**: Permits the plant to back up parameters as well as access programming.
- **Features and benefits**:
  - Allows the user to access any instrument or field device.
  - Available as point-to-point or as an integrated part of SIMATIC S7/PCS 7.
- **Typical applications**: Local support, Training, Troubleshooting.
- **More information**: usa.siemens.com/simatic-pdm

### SITRANS Library
- **Applications**: Provides web access to most types of field instrumentation, including flow, level, pressure, temperature measurement and weighing.
- **Features and benefits**:
  - Implemented just by using already existing features and diagnostics parallel with SIMATIC WinCC and panels.
  - Automation solutions can be implemented just by using already existing features and diagnostics parallel with SIMATIC WinCC and panels.
- **Typical applications**: Fast and flexible operation of valves with SIPART PS2.
- **More information**: usa.siemens.com/library

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**Image Reference:**
- Weighing: Images of SITRANS weighfeeder and Milltronics MSI.
- Communication and software: Images of remote displays and remote monitoring devices.
## Typical Features

### Brief description

- Approvals: Hazardous rated component options available
- Communication (BW500): 4 – 20 mA, Modbus ASCII, PROFINET, PROFIBUS DP, DeviceNet, Modbus RTU, Modbus TCP/IP, Ethernet/IP
- Complete process control with Milltronics BW500
- Self-cleaning belt support pans or bars
- Painted mild steel, or stainless steel options
- Compact design for easy retrofit or new installations
- ± 0.25 – 0.5 % accuracy over a 10 – 100 % capacity
- Continuous feed rate control of lime for slaking in weighfeeders ensure uninterrupted control for water purification processes. With dust-tight enclosure

### Applications and benefits

- Continuous feed rate control of lime for slaking in weighfeeders ensure uninterrupted control for water purification processes. With dust-tight enclosure
- Up to 12,000 tph flow rate capacity
- Proven triple-beam parallelogram stainless steel
- Painted mild steel, galvanized or stainless steel options
- Hazardous and trade approvals.
Totally Integrated Automation

Products from the controller level to the field level

With Totally Integrated Automation (TIA), Siemens is the only provider of an end-to-end integrated portfolio of products and systems for the automation of the entire production workflow.

Totally Integrated Automation reduces the complexity of the automation solution and enables what really counts: the practical combination of optimally coordinated individual components – without interface problems.

Totally Integrated Automation integrates not only the production process but all parts of the company – from the field level to the management level. The result: a perfectly coordinated overall concept that enables higher productivity.

Example: SIMATIC PCS 7. The innovative process control system offers numerous options for connecting I/Os as well as for sending and receiving process signals via sensors and actuators.
With Siemens Process Instrumentation you are in complete control of your water and wastewater operations. That's why it's so important that your team be fully trained to maintain and handle any situation that may arise. Our comprehensive training classes are led by field-proven and experienced instructors who combine extensive application and instrumentation knowledge with many years of training experience.

Our 3 day, comprehensive, hands on water and wastewater class provides students with the technical knowledge required to specify, apply, install, and maintain process instruments utilized in both drinking water and waste water applications.

Want to learn even more? Our technology focused courses delve deeper into a wide array of specific topics, including pressure, temperature, level, valve positioners, loop controllers, flow, weighing and industrial communications.

Classes are offered throughout the year at various locations or through our mobile training platform we can bring the class right to you!

For more information please send an email to piatraining.industry@siemens.com, or call 1-800-365-8766, Prompt 7.
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