SIEMENS

Level up your world with SITRANS LR500

Advanced liquids and solids 80 GHz radar transmitters to level up all your operations—taking you from simply measuring to mastering. Because it #makessense.

siemens.com/SITRANSLR500

Level up with SITRANS LR500

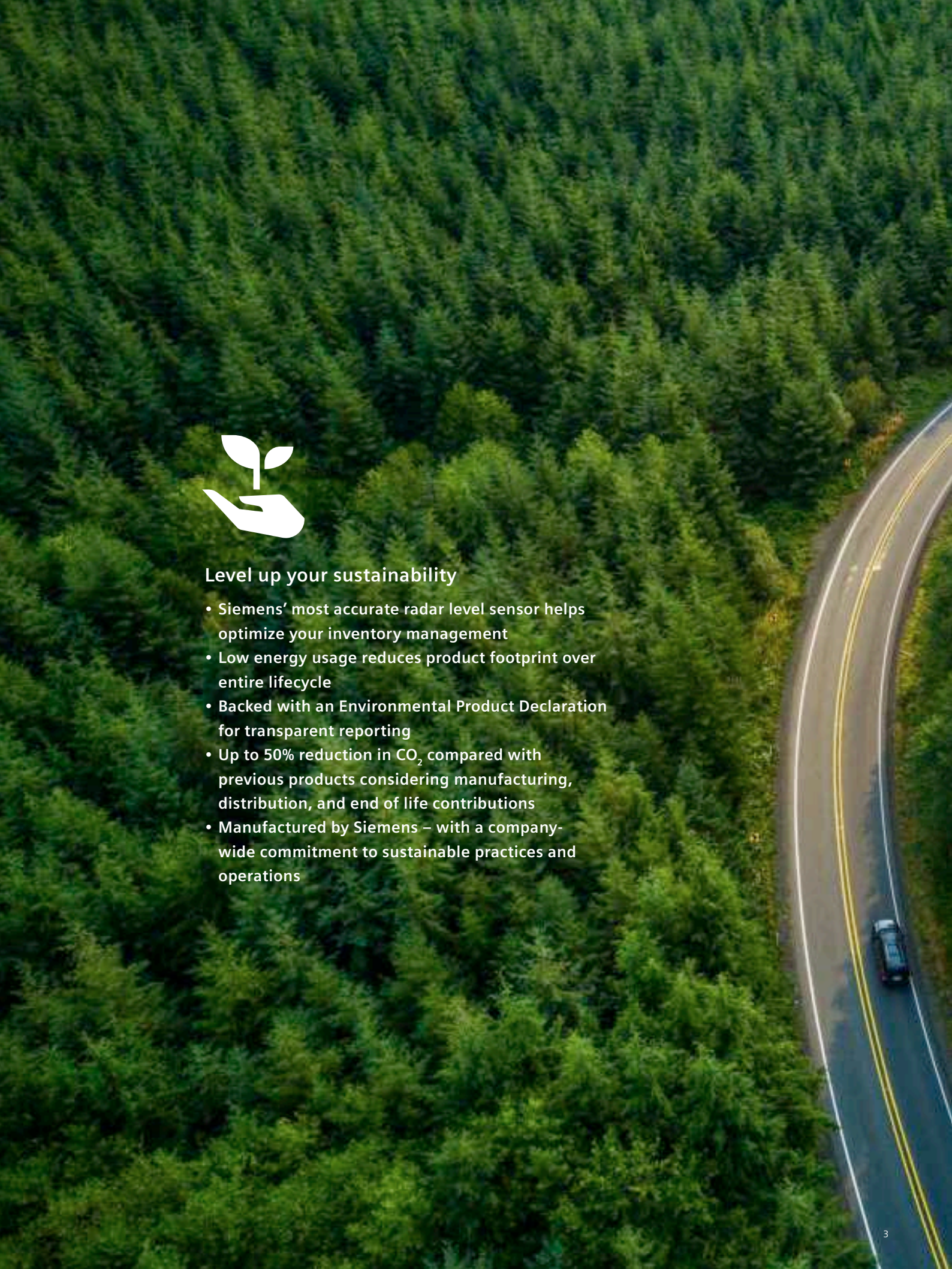
The first with 80 GHz radar for level measurement—a decade later and Siemens is still your first choice for a digitalized radar portfolio that delivers. Longevity. Sustainability. Productivity. Then, now—and into a more sustainable future. Because it #makessense.

Level up your safety

- Lightning-fast update rate and always-reliable measurements prevent accidental overflows
- Non-contacting level technology keeps operators away from hazardous situations such as the top of vessels
- Built-in safety, Second Line of Defense seal, extreme temperature service, and hazardous area approvals
- Cybersecurity features according to IEC 62443-4-2

Level up with a trusted partner

- Partner with Siemens, a global leader in sustainability, smart infrastructure, healthcare, and digital enterprise
- Millions of installed process instruments in the field
- 170+ years of Siemens' innovative engineering, with a complete suite of process automation, including weighing technology

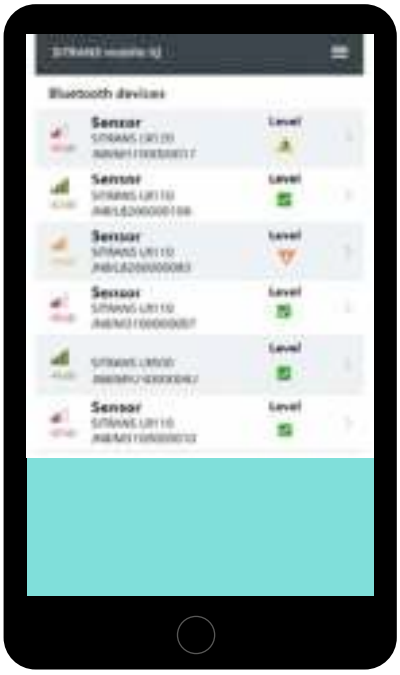


Level up your sustainability

- Siemens' most accurate radar level sensor helps optimize your inventory management
- Low energy usage reduces product footprint over entire lifecycle
- Backed with an Environmental Product Declaration for transparent reporting
- Up to 50% reduction in CO_2 compared with previous products considering manufacturing, distribution, and end of life contributions
- Manufactured by Siemens – with a company-wide commitment to sustainable practices and operations

Level up your confidence with SITRANS IQ Guard

When your level device includes SITRANS IQ Guard, you have the assurance that you have a healthy measurement system complete with diagnostics, monitoring, verification, and Process Intelligence.



Health

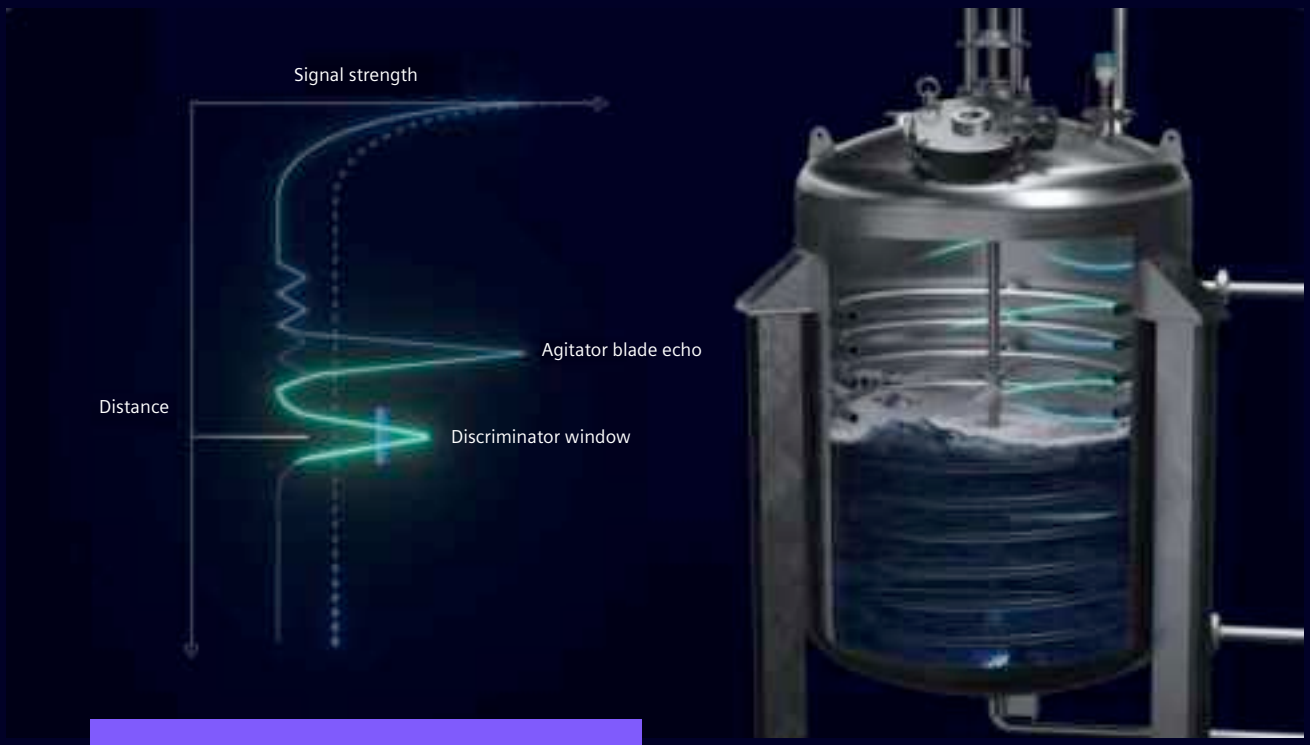
Health check status is immediately confirmed on the HMI or SITRANS mobile IQ App.

Device diagnostic status messages according to Namur NE107

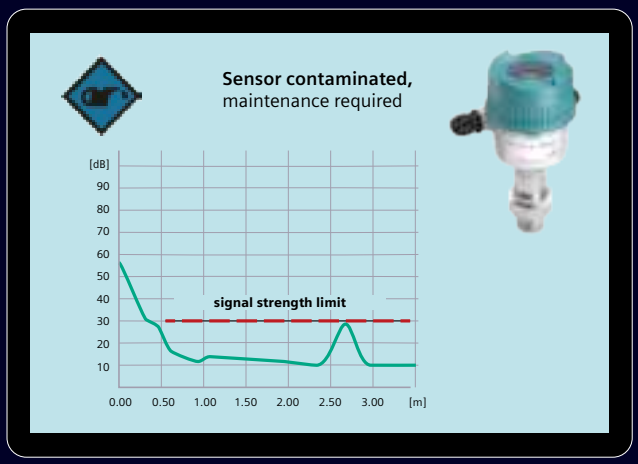
	Device status
	Failure
	Out of specification
	Function test
	Maintenance required

Verification

Support your QA system requirements with the verification report from SITRANS mobile IQ, which delivers the health status report directly from the App to your email.



Expert advice – monitoring
Use the secondary HART variable for predictive maintenance planning, lowering your maintenance costs!



Advanced Diagnostics

Providing advanced features such as limit monitoring, multi-variable trending, multiple output variables, parameter change logbook, and fault log book deliver complete process control analysis and optimization.

Process Intelligence

With advanced echo processing for unparalleled performance, Process Intelligence is the field-proven firmware built into every Siemens radar transmitter, based on more than a million installed applications. Continually monitoring signals received from the application and adapting to changing conditions, Process Intelligence gives you reliability through:

- Easy Quick Start Wizards that optimize the device for your application
- Dynamic TVT threshold curve that adapts to process conditions
- Field-proven Area Largest First algorithms for correct echo selection
- Near Range Suppression feature for reduced or elimination of costly maintenance

Find out more by visiting the website: siemens.com/sitransIQguard

Level up your **performance**

Performance is more than just getting a measurement of your material: it's about having the confidence that the measurements are accurate—every time. It's about how a device operates, how to integrate data into a comprehensive control system—and most importantly, about having a worry-free system so you can focus on other aspects of your operations. Because it #makessense.

The optional SITRANS AW050 and SITRANS mobile IQ app uses Bluetooth to provide an intuitive and easy-to-use interface for diagnostics and setup.

Advanced radar

This short phrase is packed-full of information that can only be explained by listing all the features that come standard in SITRANS LR500. What do these all mean? It means you have the most up-to-date and best performing transmitter you can get from Siemens.

High accuracy – 1 mm accuracy for precise inventory measurement, improved process control or better quality control in process applications

Fast response – up to 3 measurements per second

Long range – up to 120 m

A**dvanced diagnostics support** – up to 100,000 points of logged variables data

Custom radar microchip technology – delivers the extreme sensitivity to measure practically any solid or liquid material, and variable frequency design to meet local radio compliance

Our most advanced signal processing ever – Near Range Suppression feature takes Plug & Play performance to the next level

Wider process conditions compatibility – a solution for extreme temperature, vacuum or high pressure

Wide variety of process connections – Siemens has them all, including very small ¾" threaded to 8" size flange process connections

Intuitive Quick Start Wizard – gets you operational in minutes

The right fit for your application

Advanced radar portfolio for solids, liquids, and extreme conditions

	SITRANS LR510	**SITRANS LR530**	**SITRANS LR550**	**SITRANS LR580**
Order No.	7ML751	7ML753	7ML755	7ML758
	Threaded lens antenna for liquids	Flanged encapsulated antenna for extreme conditions	Polymeric horn antenna for solids and liquids	Lens antenna with integrated aiming flange for solids
Wetted materials	316L or C22 Alloy, FKM or FFKM seal, Peek lens	PTFE lens with integral gasket	PP with FKM or EPDM sealing	316L with FKM or FFKM seal, Peek lens
Measuring range	¾" : 10 m 1" : 20 m 1½": 30 m	1"/DN25: 20 m 2"/DN50: 30 m 3"/DN80 or larger: 120 m	120 m	120 m
Process connections	Threaded, ¾", 1", or 1½"	Flange, 1"/DN25 to 8"/DN200	Open air or flanges 3"/DN80 to 8"/DN200	3"/DN80 to 6"/DN150
Process pressure	Max 40 bar, depending on temperature	Max 25 bar, depending on temperature	Max 2 bar	Max 3 bar
Process temperature	-40 °C to 250 °C depending on seal type	-196 °C to 200 °C, depending on seal type	-40 °C to 80 °C	-40 °C to 250 °C depending on seal type
Second Line of Defense	Available	Available	N/A	Available
Beam angle	¾": 14° 1": 10° 1½": 7 / 10°	1"/DN25: 10° 2"/DN50: 6° 3"/DN80 or larger: 3°	3°	3°
Air purge connection	N/A	N/A	Optional accessory	Integrated

Level up your **application**

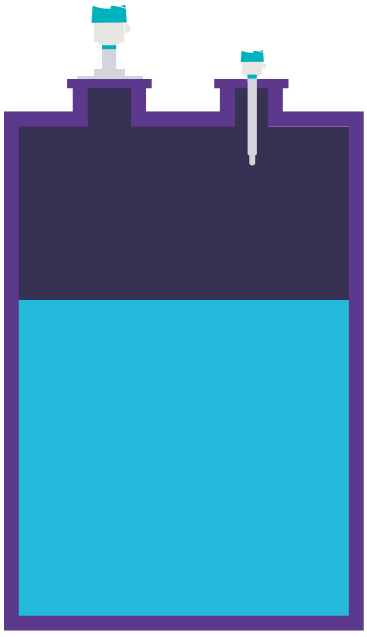
What is your application? With SITRANS LR500 series, there is a level measurement solution to fit your liquids or solids application. A sampling of popular use cases inspires a world of level measurement possibilities.

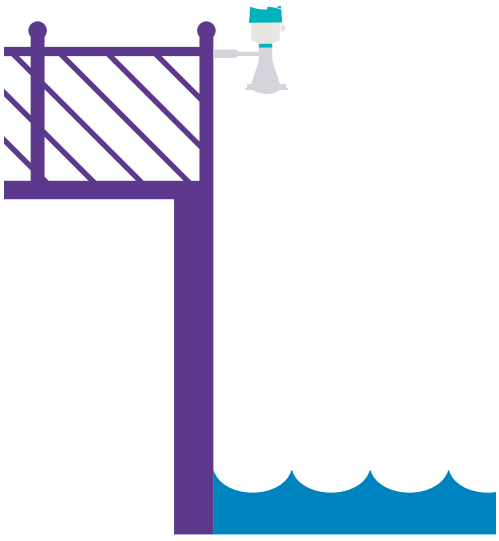
Liquids Acids, caustics, hydrocarbon-based liquids, edible oils, asphalt cement, paper pulp, slurries, molten metals, liquified gases, and more...

Solids Grain, lime, cement, sand, plastic pellets, plastic powder, fly ash, sugar, flour, animal feed, wood pellets/powders, ores, hot mix asphalt, and more...

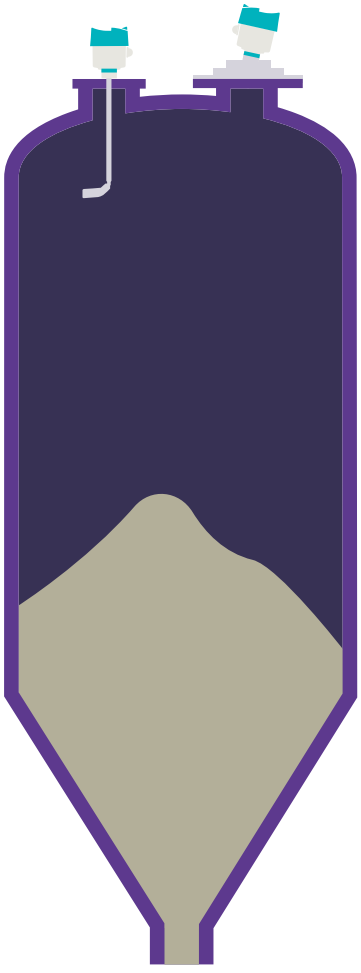
Expert advice:
Add a point level switch for backup security.

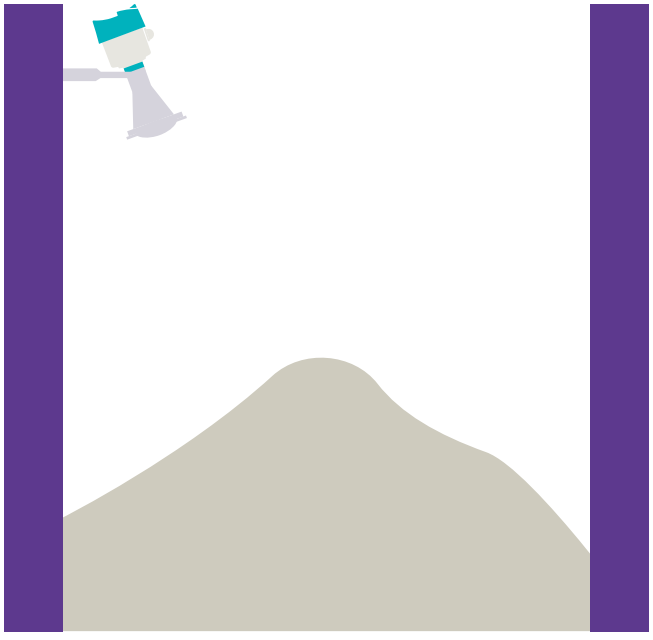
Liquids





Solids





Added **value**

Information at your fingertips and accessories for installation ease—that little bit extra to make your life easier. What could be better?

Device-specific information at your fingertips
QR code on the transmitter provides instantaneous access to key information:

- user manual
- certificates
- serial numbers
- installation drawings

Point level switches for added security
Siemens offers a complete selection of point level switches with the right technology, probes, connections, and approvals to match your application:

- vibratory, capacitance, or rotary paddle, technologies
- IO-Link options

siemens.com/pointlevel

SITRANS Library
Optimize your process: SITRANS Library function blocks and faceplates for SITRANS field devices enhance SIMATIC automation and TIA Portal systems experience. They are an easy and effective interface between your field devices and operating system.

siemens.com/sitransLibrary

Mounting bracket
Make installation even easier on solids applications by ordering the optional mounting bracket to help position the transmitter exactly where you want it.

siemens.com/sitransLR500

From out-of-the-box to **fully integrated**

Simple setup means readings via Bluetooth directly to the SITRANS mobile IQ app on your device or connection to SITRANS RD150 remote display for the lowest cost of ownership.

Need further access and analysis? SITRANS LR500 series can also be fully integrated into your plant's control system, monitoring into your plant's control system directly or through a SITRANS level controller. Monitoring data and real-time process optimization is easily managed from the comfort of your control room.

Or integrate these digitalization-ready transmitters into the cloud and capture what advantages intelligent automation brings.

SITRANS RD150 and SITRANS level controllers
SITRANS RD150 not only displays readings from your HART instruments, it can also configure and display diagnostic data. SITRANS LT500 adds advanced display, data-logging, alarming, local control, and a gateway to many industrial communications.

siemens.com/sitransRD150
siemens.com/sitransLT500

SITRANS AW050
SITRANS AW050 optional adapter for wireless technology can easily be added to SITRANS LR500 transmitters for Bluetooth wireless technology.

siemens.com/mobileIQ

SITRANS mobile IQ App
SITRANS mobile IQ is a Bluetooth app that provides an intuitive interface to quickly configure, set up, and monitor SITRANS LR500 series (available for Android, Apple and Windows devices).

siemens.com/mobileIQ

SIMATIC PDM (Process Device Manager)
Easy device integration and flexible tool for operation of more than 4,000 different field devices and other automation components over the lifecycle of your plant.

siemens.com/simaticPDM

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