Rosemount™ Bulk Solids Level Measurement

The full portfolio of solids level measurement products.
**Solids Level and Volume Measurement**

Take the guesswork out of measuring solids with reliable, accurate, and safe level measurement, and manage bulk solids inventory with the Rosemount portfolio of solids transmitters and switches.

**Point Measurement Applications**
- Wide variety of silo types
- Risk of overflow/overspill or run-dry
- Flexible automation solutions needed

Protecting your process from risk of overfill or run-dry prevents costly and potentially hazardous clean up and repairs. Make your process safer and more efficient with a choice of easy-to-install solids switch technologies.

**Process and Level Control Applications**
- Different sized silos
- Rapid level changes
- Internal obstructions

Process conditions can vary widely: silos may be small or narrow and internal structures can prove challenging. Rapid, repeatable measurement is needed to keep processes under control. Our portfolio of point and continuous level devices suit all types of installation.

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**Rosemount 5408 Non-Contacting Radar**
- Robust design for tough environments
- Air purging antenna for dusty environments
- Unique diagnostics: Signal Quality Metrics enables preventive maintenance

**Applications**
Small- to medium-sized vessels and internal obstructions. Suitable for all types of installation.

**Rosemount 5303 Guided Wave Radar**
- Ideal solution for smaller silos with rapid level changes
- Unaffected by dust or other disturbing process conditions
- Achieve robust measurement despite presence of internal obstacles

**Applications**
Small vessels and long distances. Suitable for point level detection and interface measurement.

**Rosemount 2555 Capacitance Switches**
- Universal sensor for most bulk materials, independent of particle size
- Measurement of low dielectric values (from 1.5)

**Applications**
Most bulk solids applications, including high temperature and hazardous/explosive environments. Ideal for food and beverage, plastics, and chemical applications.

**Rosemount 2535 Vibrating Rod Switches**
- Robust sensor ideal for media demanding high mechanical resistance
- Designed for point level detection and interface measurement

**Applications**
Small vessels and long distances. Suitable for food and beverage, plastics, and chemical applications.

**Rosemount 2511/2521 Vibrating Fork Switches**
- Ideal for use in fine-grained and powdered materials
- Reliable, simple, and maintenance-free measurement principle

**Applications**
Materials with low dielectric constant.

**Rosemount 2501 Rotating Paddle Switches**
- Particularly suitable for small process vessels and bulk solids
- Robust paddle design able to withstand heavy loads and extreme temperatures

**Applications**
Most bulk solids applications, including high temperature and hazardous/explosive environments. Ideal for food and beverage, plastics, and chemical applications.

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**Advanced Surface Housing**
Durable metal housing with IP66 protection. Suitable for a wide range of silo media.

**Active Shield Technology**
Protects against material build-up.

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**Long Lifetime**
Mechanically stable shaft/housing design. Able to withstand high mechanical loads due to short extension length.

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**Direct Switch Technology**
For reliable measurement over long ranges and low DC.

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**Probe End Projection**
For reliable measurement over long ranges and low DC.

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**Stable Shaft**
Able to withstand heavy loads and extreme temperatures.

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**Technology**
Direct Switch Technology for better signal strength.

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**Advanced Surface Tracking**
Wide-range of antennas to suit most applications.

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**Probe Anchoring for Stability**
Probe anchoring for stability.

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**Signal Quality Metrics**
For preventive maintenance.

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**Built-in Data Historian**
Go back seven days to check past events.

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**Stainless Steel**
Made from stainless steel.

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**Stable Shaft**
Able to withstand heavy loads and extreme temperatures.

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**Robust Die-cast Housing**
For reliable measurement over long ranges and low DC.

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**Protection Class IP67**
Made of die-cast aluminium, suitable for all gras-sized materials.

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**Easy Installation**
Rotatable, robust housing for easy installation.

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**Universal Power**
Universal power supply.

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**Specifications**
All wetted parts made from stainless steel.

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**Further Reading**
For more information on Rosemount solids transmitters and switches, visit [Rosemount’s website](https://www.rosemount.com).
### Specification and selection guide: Continuous

<table>
<thead>
<tr>
<th>Measurement</th>
<th>5303</th>
<th>5408</th>
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</thead>
<tbody>
<tr>
<td>Guided wave continuous level measurement</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>Non-contact continuous level measurement</td>
<td>–</td>
<td>+</td>
</tr>
<tr>
<td>Unaffected by dust generation</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Single point measurement</td>
<td>+</td>
<td>+</td>
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<tr>
<td>Beam angle</td>
<td>NA</td>
<td>4.5-18°</td>
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<table>
<thead>
<tr>
<th>Output</th>
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<tbody>
<tr>
<td>4-20 mA</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>4-20 mA with HART™</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>FOUNDATION™ Fieldbus</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>RS485/Modbus®</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>WirelessHART™ with Emerson Wireless 775 THUM™ Adapter</td>
<td>+</td>
<td>+</td>
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<table>
<thead>
<tr>
<th>Performance</th>
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<tbody>
<tr>
<td>Maximum measuring range</td>
<td>164 ft/50 m</td>
<td>131 ft/40 m</td>
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<tr>
<td>Reference accuracy</td>
<td>±0.1 in./3 mm</td>
<td>±0.08 in./2 mm</td>
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<table>
<thead>
<tr>
<th>Features</th>
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<tbody>
<tr>
<td>Air-purging</td>
<td>–</td>
<td>+</td>
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<tr>
<td>Probe End Projection</td>
<td>+</td>
<td>–</td>
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<table>
<thead>
<tr>
<th>Process temperature</th>
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<th></th>
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</thead>
<tbody>
<tr>
<td>-40 to 302°F (-40 to 150°C)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>-76 to 482°F (-60 to 250°C)</td>
<td>–</td>
<td>+</td>
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### Specification and selection guide: Point

<table>
<thead>
<tr>
<th>Output</th>
<th>2501</th>
<th>2511</th>
<th>2521</th>
<th>2535</th>
<th>2555</th>
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<tbody>
<tr>
<td>Relay DPDT</td>
<td>+</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Relay SPDT</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>–</td>
</tr>
<tr>
<td>3-wire PNP</td>
<td>–</td>
<td>+</td>
<td>–</td>
<td>+</td>
<td>–</td>
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</table>

<table>
<thead>
<tr>
<th>Process Temperature</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>-40 to 302°F (-40 to 150°C)</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>-40 to 932°F (-40 to 500°C)</td>
<td>+</td>
<td>–</td>
</tr>
<tr>
<td>-40 to 2012°F (-40 to 1100°C)</td>
<td>+</td>
<td>–</td>
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</tbody>
</table>

### Key

- Available
- Not available
- High sensitivity model

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