# Proof-Testing Solutions for Safety Instrumented Systems in Process Applications

*Save time and money with simple, **easy-to-use** proof-testing solutions that provide **longer time** between proof-tests, and **reduced downtime**.*
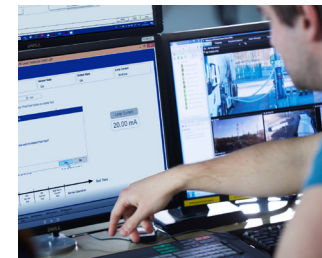
## Easy, proven proof-testing

- Carry out proof-testing efficiently with minimal process interruption, avoiding the need to climb tanks
- No need to take the process offline
  - Perform proof-tests more easily
- Test multiple devices simultaneously
- Easy to install proven proof-testing
- Third party assessed and approved

## Engineered for ease-of-use

- Increase safety though proven digital transformation using the latest technology
- Advanced diagnostics alert you to any abnormal conditions, allowing for increased uptime and process safety
- Simple verification

## Increased speed and efficiency

- Save time and cost
  - Proof-testing is easy and safe to accomplish without requiring removal of the unit, disconnection of wiring, or changes in level
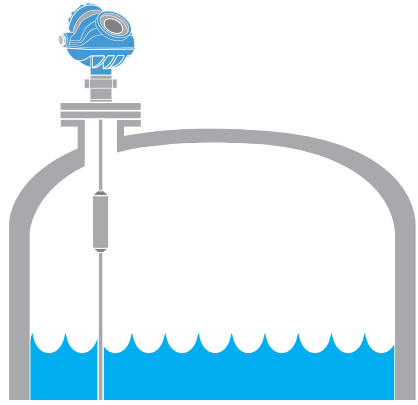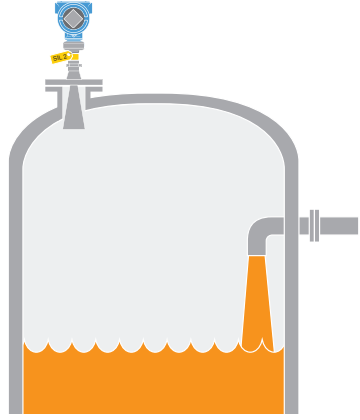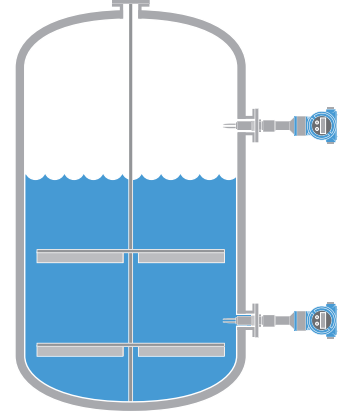- Longer times between proof-test intervals means reduced downtime

## Key Benefits

+ Meet your efficiency and safety goals by proof-testing your instrumentation from the safety of the control room
+ Reduce the number of technicians in the field
+ Increase speed and safety
+ Comply with legislation

## Learn more

+ Proof-testing how to videos
+ Proof-testing web

**EMERSON**

| | Guided Wave Radar | Non-Contacting Radar | Point Level Detectors |
|---|---|---|---|
| |  |  |  |
| **Process Challenges and solutions** | • Remote comprehensive proof-testing through 'high-level supervision' utilizing a reference reflector<br>  - Quick and safe remote transmitter integrity checks<br>  - Verifies the transmitter in situ and remotely from the safety of the control room<br>  - No need to climb the tank or manually raise product level<br>• Continuous supervision<br>  - Alerts if any issues are identified with transmitter health<br>  - Ensures safe operation between tests<br>• SIL 2 certified | • Very low number of dangerous undetected failures (DUs) results in longer intervals between proof-tests<br>• Built-in response time calculator<br>• Built-in test port for easy analog output verification<br>• Excellent signal-to-noise-ratio with FMCW technology<br>• Advanced diagnostics<br>• SIL 2 certified | • Remote proof-testing integrated into the switch enables an operator to issue a command from the control room<br>• No need to uninstall the device<br>• Operators can verify device integrity in between proof-tests with advanced diagnostics<br>• By performing a remote partial proof-test, operators can confirm their switch is functional without shutting down the process<br>• Complete maintenance procedures in minutes<br>• SIL 2 certified |

| | | Rosemount 5300 Guided Wave Radar Level Transmitter | Rosemount 5408:SIS Non-Contacting Radar Level Transmitter | Rosemount 2140:SIS Vibrating Fork Level Detector |
|---|---|---|---|---|
| **Specifications** | **Communication protocol** | Loop-powered 4-20 mA/HART® | Loop-powered 4-20mA HART | Loop-powered 4-20mA HART |
| | **Pressure rating** | 580 psi (40 bar) | 1450 psi (100 bar) | 1450 psig at 122 °F (100 barg at 50 °C) |
| | **Temperature rating** | -40 to +302 °F (-40 to +150 °C) | -76 to +482 °F (-60 to +250 °C) | -40 to 302 °F (-40 to 150 °C) |
| | **Power supply** | 12-42.4 Vdc (12-30 Vdc in IS installations) | 12-42.4 Vdc (12-30 Vdc in IS installations) | 12-42.4 Vdc (12-30 Vdc in IS installations) |
| | **Hazardous area approval** | ATEX, IECEx, FM, CSA, Overfill protection (DIBt/TÜV WHG) | ATEX, IECEx, FM, CSA, Overfill protection (DIBt/TÜV WHG) | ATEX, IECEx, CSA, Overfill protection (DIBt/TÜV WHG) |
| | **Accuracy** | ± 0.1 in. (3 mm)  (application dependent) | 0.08 in. (2 mm) (application dependent) | |
| | **Max. measuring range** | Max. 164 ft. (50 m) | Max. 82 ft. (25 m) | |

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