

Proven Overfill Prevention Solutions for Bulk Liquid Storage Tanks

Meet the never ending **challenge** of fulfilling the latest **safety regulations** with overfill prevention solutions you can **trust**.



Rosemount 5900S 2-in-1 Radar Level Gauge

Independent Protection Layers

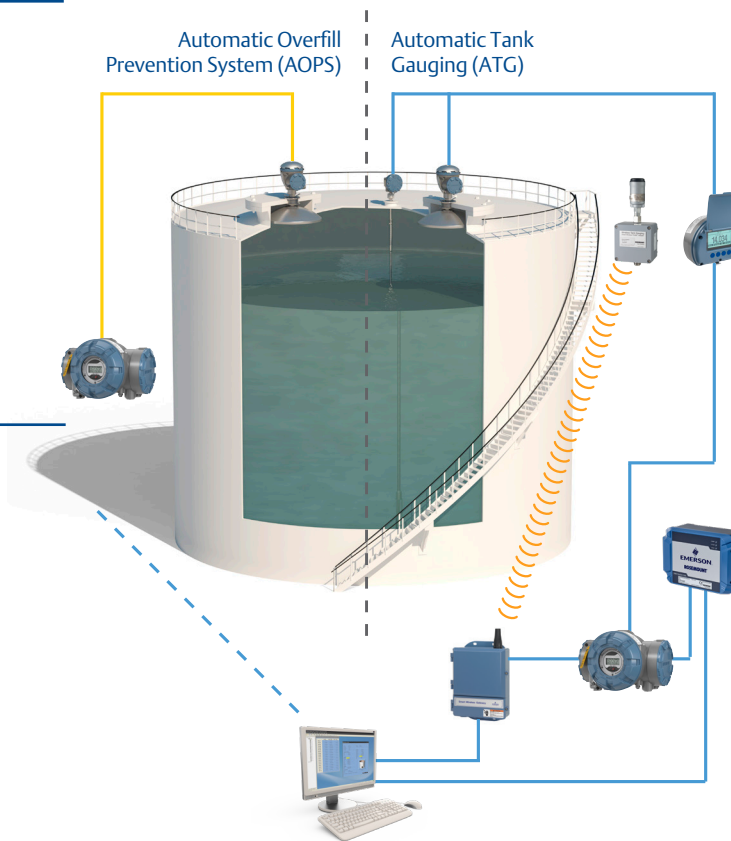
The first and most important line of defense against overfills is the basic process control system which secures continuous surveillance of tank fills.

The overfill prevention system serves as a second defense layer against overfills should the first layer fail.

2-in-1 Functionality

The Rosemount™ 5900S with 2-in-1 technology provides dual level data in two independent layers of protection, using only one housing and a single tank nozzle.

Installation time is reduced, not least in tanks with only one opening, including floating roof tanks with still-pipes and LPG tanks.



Comply with Regulations

The Rosemount Tank Gauging system is API 2350 and IEC 61511 compliant for automatic and manual overfill prevention systems.

The system is open and scalable to ensure that you can comply with updated standards, today and in the future.

Remote Proof-Testing

There is now another option to help you stay on top of your PFD_{avg}, safe and fully integrated remote partial proof-tests.

Test the integrity of your devices from the comfort of your control room and spend less time in hazardous areas.

“One **overflow** occurs statistically every **3300** filling operations.”

Marsh and McLennan 2015.

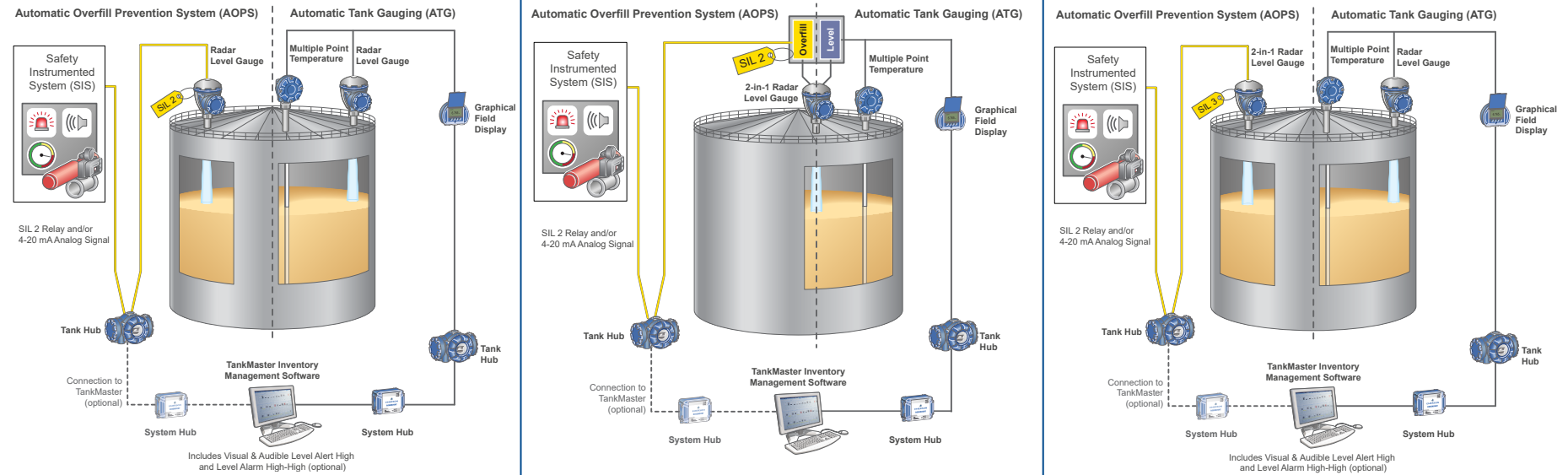
This equals **one overflow** every **10 years** for a group of 10 tanks where each tank is filled three times per month.



Achieve SIL 2 or SIL 3 Overfill Safety

The Rosemount Tank Gauging system provides both Automatic Tank Gauging and Overfill Prevention in the same system. It is IEC 61511 certified as a system solution, with the same products meeting specifications for both process control and safety applications.

Yet every tank, operation, and site is different. Therefore, the Rosemount Tank Gauging system offers three different recommended configurations for combining tank gauging and overfill prevention. Thus they provide the flexibility to help you optimize your operation while simultaneously staying safe.



| Features | SIL2 configuration | | | SIL2 and ATG combined configuration | | | SIL3 configuration | | | |
|------------------------------|---|-----------------------|-----------------------|--|----------------|-----------------------|--|---------------------------|----------------|-----------------------|
| Safety level | SIL 2 | | | SIL 2 | | | SIL 3 | | | |
| Sensor | Rosemount 5900S / 5900C Radar Level Gauge | | | Rosemount 5900S 2-in-1 Radar Level Gauge | | | Rosemount 5900S 2-in-1 Radar Level Gauge | | | |
| Output | 4-20 mA and/or relay | | | 4-20 mA and/or relay | | | Relay | | | |
| Proof-test | Remote proof-test | | | Remote proof-test | | | Remote proof-test | | | |
| Coverage factor | 99% | | | 99% | | | 99% | | | |
| IEC 61508 certificate | ROS 1312032 C004 | | | ROS 1312032 C005 | | | ROS 1312032 C001 | | | |
| | | 4-20mA | Relay | 4-20mA & relay | | 4-20mA | Relay | 4-20mA & relay | | |
| | λ_{DU} | 218 | 193 | 254 | λ_{DU} | 218 | 193 | 254 | λ_{DU} | 16 |
| | SFF | 91.9% | 91.6% | 90.9% | SFF | 91.9% | 91.6% | 90.9% | SFF | 99% |
| | PFDavg | $1,089 \cdot 10^{-3}$ | $9,692 \cdot 10^{-4}$ | $1,260 \cdot 10^{-3}$ | PFDavg | $1,089 \cdot 10^{-3}$ | $9,692 \cdot 10^{-4}$ | $1,260 \cdot 10^{-3}$ | PFDavg | $8,116 \cdot 10^{-5}$ |