



**Gain the process insight  
to optimize every point.**

## **Rosemount™ 3051S Series of Instrumentation**

Achieve unparalleled productivity with industry-leading pressure, flow and level solutions.





## You face more than your share of obstacles when it comes to optimizing your operations.

Your job is a balancing act. Downtime and off-spec product reduce your throughput, while challenges like energy inefficiencies, regulatory compliance and facility safety eat into your bottom line. At the same time, an aging workforce is retiring and taking its industry experience with it, leaving you with increasingly less-experienced personnel who must tackle new challenges and ever-changing regulations. To stay competitive, you have to address these constantly fluctuating priorities.

"Every hour a 120,000 BPD refinery is down costs \$40,000 to \$50,000. That works out to about \$1 million per day."

- ARC Advisory Group



"Refineries spend typically 50% of cash operating costs on energy."

- ENERGY STAR



"42% of abnormal situations or upsets in processing facilities are caused by people or their work context."

- Abnormal Situation Management Consortium



"One estimate is that 30% of the existing workforce will retire in the next 5 years, and take a large slice of the operating and commissioning experience into retirement."

- Kolmetz.com







Instead of being distracted by frequent emergencies and problems, what if you could improve productivity, hit the right quality every time, at the lowest energy costs, while still protecting your people and the environment?

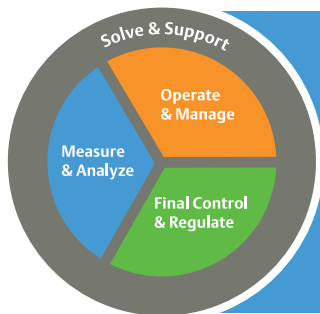


## The Rosemount 3051S delivers insight for truly informed process decisions.



The Rosemount 3051S Series of Instrumentation lets you optimize your operation in four critical areas: production, quality, energy efficiency, safety and environment. With its scalable design working for you across all points of the operation, you'll minimize process variability, gain greater process insight, reduce maintenance and downtime, and meet regulatory demands. Its intuitive features make it easy for your people to use so that you can realize the full potential of this measurement investment.

# ROSEMOUNT™



To perform at your best, you need deep insight and absolute clarity of real-world process performance. Emerson provides our customers the most innovative technologies to measure and analyze their process. The Rosemount 3051S Series of measurement instrumentation provides unprecedented visibility into your process that leads to the most informed decisions for improved productivity, quality, energy management and safety.

Pressure · Flow · Level · Temperature · Analytical  
Safety & Reliability Monitoring · Tank Gauging · Fiscal Metering





“The Rosemount 3051S is the most important piece of equipment that we can turn to at any time — knowing that we can get the accuracy, reliability and continued performance for any process measurement.”  
– Yoga Anand, Instrument & Controls Engineer, BP

## Don't let your facility hold back your productivity.

“This technology has opened up new possibilities for us. We plan to continue utilizing the Rosemount 3051S Wireless technology to improve our oil production, improve our cost position, and make our people more productive.” – Michael Fischback, PXP (Plains Exploration and Production Company)

[Productivity > p5](#)

## Get the right quality, each time, every time.

A biotech facility was getting inconsistent batch quality on a fermenter application due to unreliable level measurements. After upgrading the installation with a Rosemount 3051S Electronic Remote Sensors System, the fermenter is now the first choice for production depending on the quality of product needed.

[Quality > p7](#)

## Find the energy savings within your operations.

A processing facility in Alabama was able to maintain their cottonseed output of 18,000 tons per year while still reducing their feedstock usage by 45%. The result? Over \$60,000 in annual savings.

[Energy Efficiency > p9](#)

## Protect your people by reducing unnecessary field checks.

“We've used the Rosemount 3051S technology to reduce failures and the time technicians spend addressing issues.” – Masakazu Kadokura, Instrumentation Group, Maintenance & Engineering Department, Mitsubishi Chemical

[Safety & Environment > p11](#)





## Be more **PRODUCTIVE**, more often.

To achieve your goals, your facility must consistently produce at optimal throughput levels. Excessive maintenance, unscheduled outages and process variability all impact production throughput. The Rosemount 3051S Series of Instrumentation provides accurate and reliable measurements every time so you can reduce maintenance, outages, process variability, and achieve faster startups. The Rosemount 3051S also helps reduce maintenance and anticipate problems that might cause an unscheduled shutdown or slowdown by providing added process and equipment insight. It is easy to install and maintain correctly so your people can install it right the first time, and in less time, so it stays right over time.



### What's your challenge?

"Every hour a 120,000 BPD refinery is down costs \$40,000 to \$50,000. That works out to about \$1 million per day."

– ARC Advisory Group

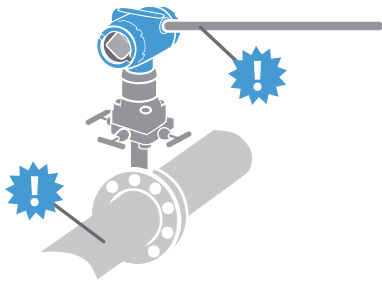


### What's your opportunity?

A pulp and paper mill reduced unscheduled downtime by 95% on a vacuum tank over a two-year period, resulting in savings of \$2,000 on one tank alone. The solution: a Rosemount 3051S ERS™ System that provides digital, maintenance-free level measurements.

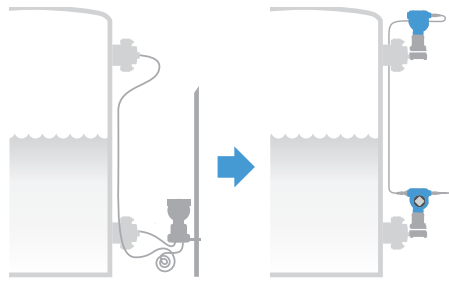


## Reduce maintenance and downtime



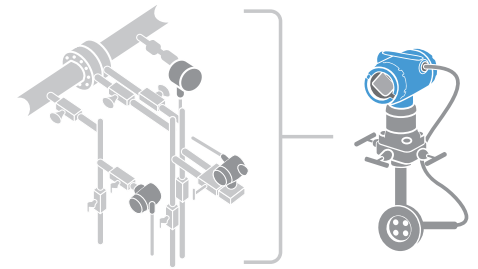
**Advanced Diagnostics** proactively monitor process health and electrical loop integrity, detecting problems before they can impact production.

> p19



**Electronic Remote Sensors (ERS)** improve level reliability by replacing mechanical components with a digital architecture.

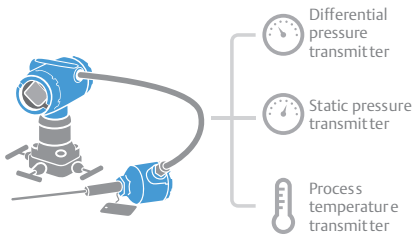
> p21



**Integrated Flowmeters** reduce the need for maintenance by combining up to 10 components in a single fully assemble instrument.

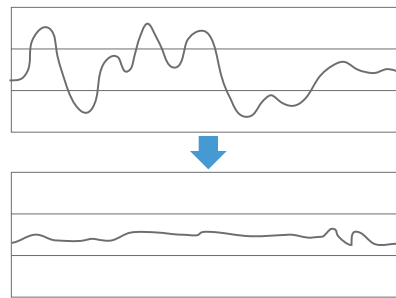
> p18

## Eliminate process variability



**MultiVariable™ Transmitters** combine three measurements in a single device to calculate fully compensated mass or energy flow.

> p18



**Ultra and Ultra for Flow** more accurately measure pressure, level and flow, controlling closer to set point.

> p13

*“It only took three hours to install all the instruments. We have eliminated the excess steam usage and now have a reliable steam injection measurement at eight stations.”*

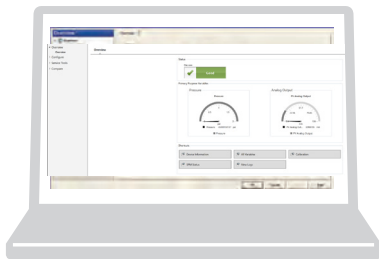
– Paul Kinne, Head Operator



**Wireless Transmitters** install in almost any location for additional measurement points quickly and economically.

> p15

## Help your people be more effective



**Device Dashboards** allow your less experienced, maintenance personnel to work like seasoned pros.

> p14



**MultiVariable Transmitters & Engineering Assistant** take care of all the engineering in two easy steps.

> p18



**AMS™ Wireless SNAP-ON** makes network design and validation easy, ensuring proper setup and operation each time, every time.

> p15





## Produce the right QUALITY, each time, every time.

Hitting your production goals requires that quality is on-spec. Operating below specifications means you can't meet your customers' requirements which can render product unusable. Operating above specifications means you're wasting money. The Rosemount 3051S Series of Instrumentation provides accurate and repeatable pressure, flow and level measurements so you can hit quality targets consistently and confidently. You'll be able to maintain repeatability, operate closer to set point and ensure the integrity of your process. By leveraging the advanced diagnostic capabilities of the Rosemount 3051S, you'll have the additional insight to identify hidden issues before they affect your operation.



### What's your challenge?

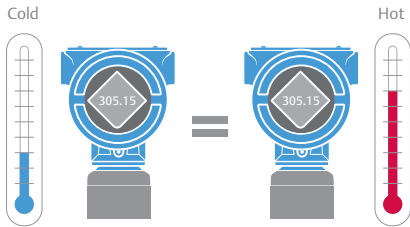
"42% of abnormal situations or upsets in processing facilities are caused by people or their work context." – Abnormal Situation Management Consortium



### What's your opportunity?

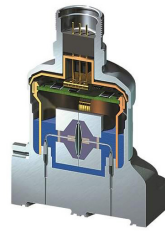
Predict abnormal situations before they impact production and eliminate unnecessary maintenance routines with Rosemount 3051S Advanced Diagnostics.

## Ensure accurate and consistent measurements



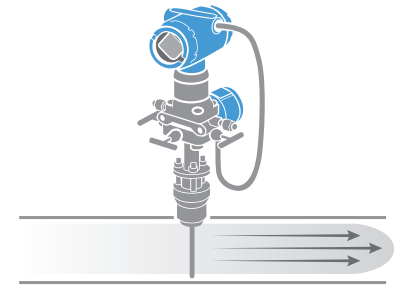
Ultra and Ultra for Flow performance options allow for accurate measurements in all environments.

> p13



SuperModule™ Platform's robust nature resists process effects such as overpressure and line pressure to maintain unmatched performance and measurement repeatability, ensuring product quality.

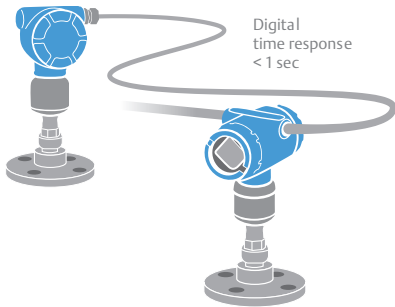
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MultiVariable Transmitter dynamically corrects for more than 25 different parameters to ensure accurate and repeatable flow measurements.

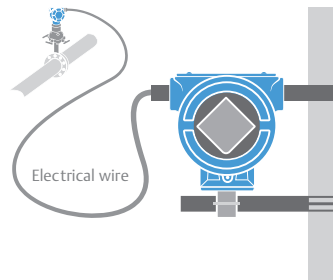
> p17

## Improve performance with better installation practices



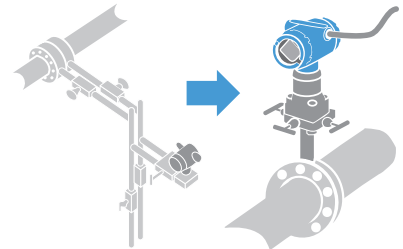
Electronic Remote Sensor System connects directly to the process on taller vessels and distillation towers for a 90% reduction in response time.

> p22



Remote Display and Interface enables at-grade transmitter access so you can direct mount to the pipe and eliminate troublesome impulse lines.

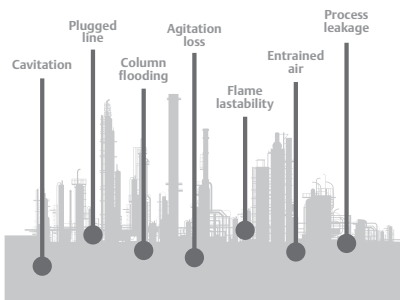
> p14



DP Flowmeters optimize performance by eliminating impulse lines to improve the accuracy and repeatability of your flow measurement, ensuring consistent product quality.

> p18

## Uncover the hidden issues affecting quality



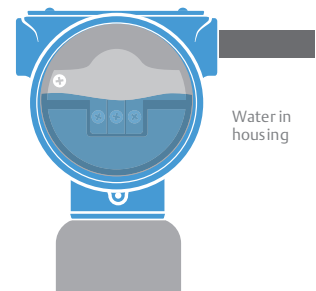
Advanced Diagnostics with Process Intelligence provide additional visibility into your dynamic processes to uncover abnormal situations before quality is affected.

> p20



Wireless Transmitters monitor more points throughout your facility at 40-60% cost savings over wired installations.

> p16



Advanced Diagnostics with Loop Integrity alert you to electrical loop problems that could impact measurement quality if left undetected.

> p20





## Increase ENERGY EFFICIENCY across the entire facility.

As energy costs fluctuate, the pressure to reduce fuel bills increases by the day. While you know there are inefficiencies in your facility's energy production, distribution and consumption, you don't always know where they're occurring. The Rosemount 3051S Series of Instrumentation gives you unprecedented insight into your process, so you can precisely measure critical energy points, gain visibility into energy use and prevent anomalies that lead to energy loss. With the Rosemount 3051S, you'll further lower energy usage by reducing permanent pressure loss in flow installations and eliminating mechanical components that require heat tracing or other costly practices.



### What's your challenge?

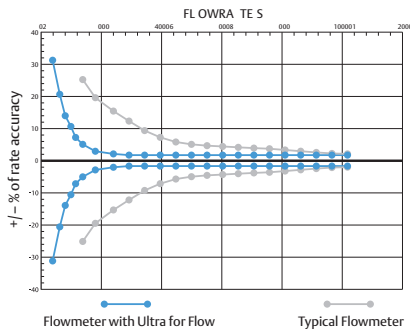
"Refineries spend typically 50% of cash operating costs on energy."  
- ENERGY STAR



### What's your opportunity?

Looking for ways to be more energy efficient? Start by monitoring where all of it is going with the Rosemount 3051S MultiVariable Transmitter which calculates accurate and repeatable energy flow measurements.

## Save money with efficient energy production



**Ultra for Flow performance class** more accurately measures fuel and air flows, so you can operate over a wider flow turndown.

> p18

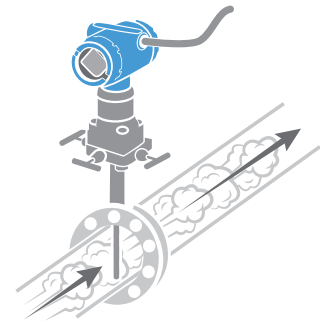
$$Q_{mass} = NC_D Y_1 E d^2 \sqrt{DP(\rho)}$$

Coefficients vary with all three measurements

$\begin{matrix} \uparrow & \uparrow & \uparrow & \uparrow & \uparrow \\ DP & DP & P & DP & P \\ T & T & T & T & T \end{matrix}$

**MultiVariable Transmitter** flow calculations can be used to precisely control air and fuel flow rates to optimize combustion in boilers and furnaces for better energy production.

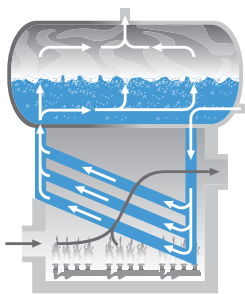
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**Annubar® Flowmeter** accurately measures mass and energy flow with minimal restriction so that you can deliver more steam to your operation.

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## Expand visibility into your energy usage



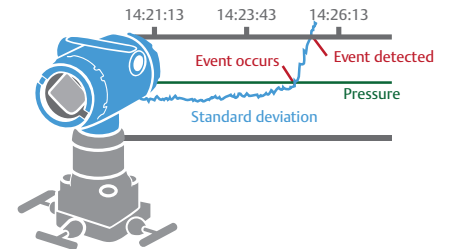
**MultiVariable Transmitters** effectively track energy production, demand and total usage for steam and natural gas with accurate, repeatable energy measurement.

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“A chemical manufacturer installed six wireless DP flowmeters on steam distribution lines, saving \$40K in wiring costs and improving overall energy efficiency.”

**Wireless Flowmeters** add more monitoring points for greater visibility into energy use in a cost-effective manner.

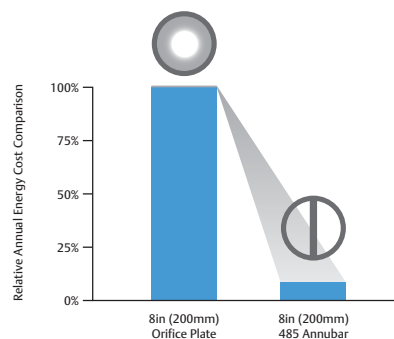
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**Advanced Diagnostics with Process Intelligence** provide unmatched visibility, revealing unstable furnace and boiler flames, entrained air or condensate in steam lines.

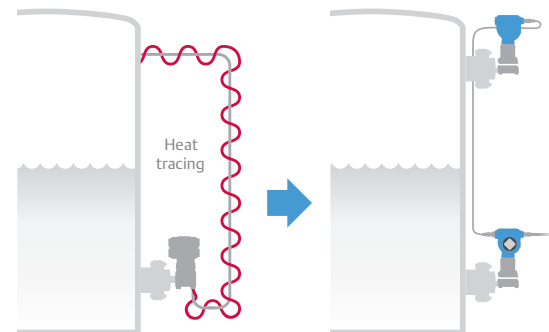
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## Upgrade your legacy instrument installations



**Annubar Flowmeter** creates less blockage in the pipe, so you can reduce energy loss up to 96%.

> p18



**Electronic Remote Sensor (ERS) Systems** eliminate the need for steam or electrical heat tracing, including associated maintenance headaches and energy costs.

> p22





## Protect the **SAFETY** of your people, your facility and the environment.

Facilities contain hazardous materials and have many dangerous areas. Keeping people safe, the environment clean and the plant running is mission critical, but it's difficult to stay on top of everything that could go wrong. Operators conducting manual rounds and maintenance technicians in the field are exposed to potential risks. There are too many emission points to practically monitor, and when there is an incident, you often don't know when it started and how much was released. The Rosemount 3051S Series of Instrumentation delivers advanced capabilities so you can anticipate problems and take corrective actions, reduce the need for manual intervention and eliminate fugitive emission points. With it, you can keep personnel out of harm's way and still be confident that you are operating your facility in a safe and environmentally responsible manner.



### What's your challenge?

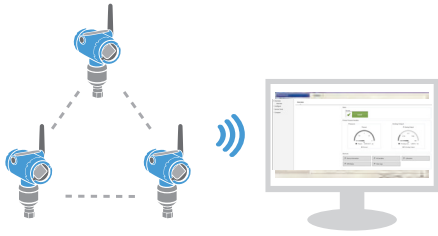
"One estimate is that 30% of the existing workforce will retire in the next 5 years, and take a large slice of the operating and commissioning experience into retirement." – Kolmetz.com



### What's your opportunity?

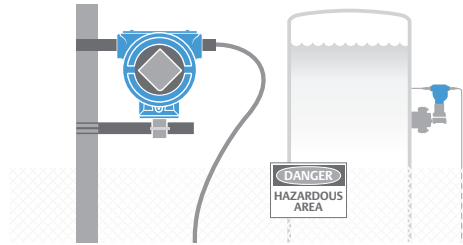
Eliminate manual operator rounds, get more done with fewer people and keep your workforce safe inside the control room by using Rosemount 3051S Wireless Transmitters.

## Keep personnel out of hazardous areas



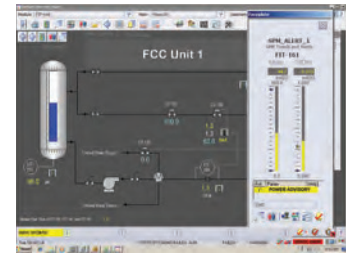
**Wireless devices** provide an easy way for you to quickly and cost-effectively add new points while keeping your personnel safe by viewing the data online.

> p16



**Remote Display and Interface** allows an instrument to be installed in a hazardous location while providing safe access to the display and device information.

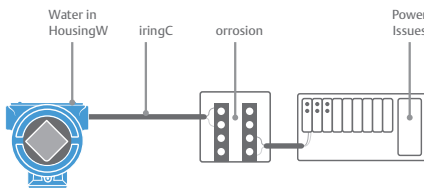
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**Advanced Diagnostics** detect both electrical loop and process issues, remotely arming your facility personnel with knowledge to make fewer and more productive trips to the field.

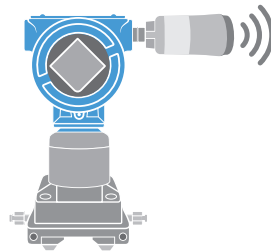
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## Diagnose problems before they impair facility safety

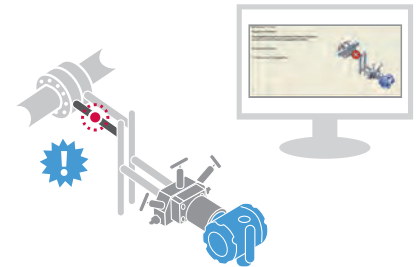


**Advanced Diagnostics for Safety Instrumented Systems (SIS)** detect external failures that occur in the electrical loop and process that may otherwise go undetected such as insufficient power and plugged impulse lines.

> p20



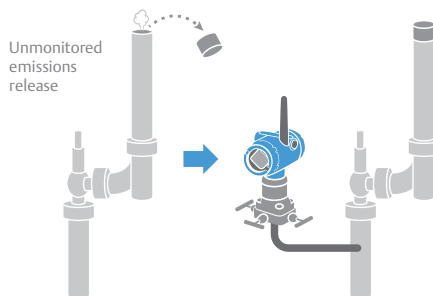
**Wireless THUM adapter** unlocks valuable process, electrical loop and device diagnostics that alert you to potentially dangerous undetected failures before they impact your safety system.



**Device Dashboards** empower you to diagnose problems with safety system transmitters, take corrective action and reduce the risk of an unnecessary shutdown.

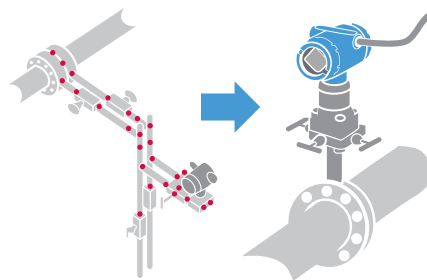
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## Reduce the risk of fugitive emissions



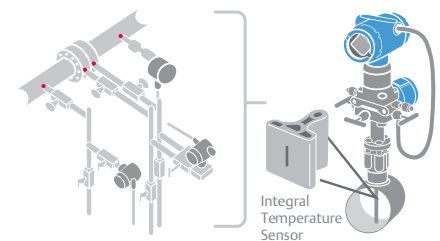
**Wireless Transmitters** provide true visibility to emission flows, reducing your risk of fines and penalties — at 40-60% cost savings over wired installations.

> p16



**Flowmeters** are fully integrated instruments that eliminate impulse lines and reduce your number of potential leak points by 70%.

> p18

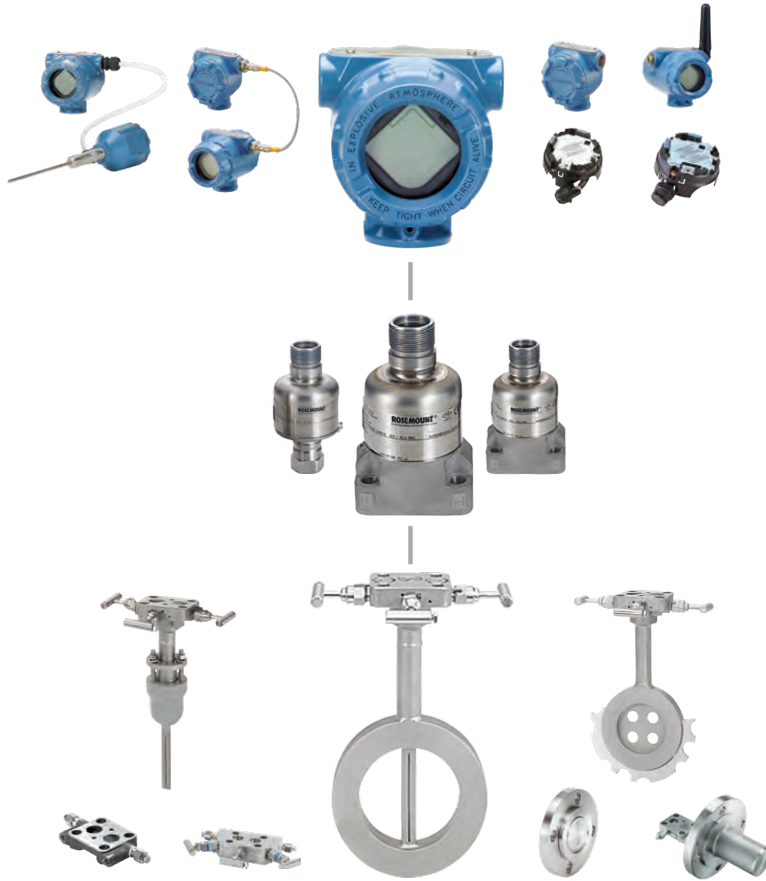


**MultiVariable Annubar Flowmeter** eliminates separate pressure and temperature measurements to reduce the number of penetrations into your process.

> p18



# The Rosemount 3051S: Innovation reaching across your operation.



## Connectivity and functionality

- Improve ease of use and accessibility with device displays
- Allow seamless system integration with HART,™ WirelessHART® and FOUNDATION™ fieldbus
- Increase competitiveness with advanced capabilities unique to the Rosemount 3051S

## SuperModule platform

- MultiVariable, differential, gage or absolute pressure measurements
- All-welded hermetic SST design ensures highest field reliability
- Ultra and Ultra for Flow provide the highest performance with 15-year stability and 15-year limited warranty
- SIL 2/3 Safety Certified to IEC 61508

## Coplanar™ process connections

- Installation ready out-of-the-box
- Reduce weight by 30% with compact design
- Direct-mount capability eliminates hardware
- Improve safety with 50% reduction in leak points

## Rosemount 3051S overview

With over one million units installed and 10 billion hours of operation, the Rosemount 3051S is the industry's premier transmitter for pressure, flow and level applications. For over a decade, the Rosemount 3051S and its scalable platform have evolved with new innovations, levels of performance, capabilities and diagnostics.

The heart of the Rosemount 3051S begins with the SuperModule platform, which is the foundation of industry-leading performance and reliability. Scalable process connections enable integrated pressure, flow and level assemblies. Scalable functionality delivers intuitive interfaces, improved accessibility and advanced functionality. The bottom line: with the Rosemount 3051S you can be more profitable by using its advanced capabilities to maximize productivity, quality, energy efficiency and safety.

## Scalable functionality expands capabilities

### Advanced capabilities



- Wireless
- MultiVariable
- Advanced Diagnostics
- Electronic Remote Sensors

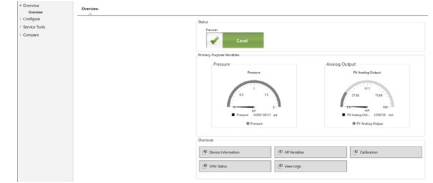
Improve operational performance with device electronics that are customized for your application

### Remote display



Eliminate problematic impulse lines and obtain easy access to process and device information with Remote Display & Interface

### Intuitive interface



Simplify commissioning and troubleshooting with task-based Device Dashboard navigation

## The SuperModule platform is the foundation of industry-leading performance and reliability

### 0.025% accuracy



Ensure the highest reliability with all-welded hermetic SST design

### 15-year stability and 15-year limited warranty

CALIBRATION LOG - ROSEMOUNT 3051S	
5-1-2011	In spec, no cal required
5-1-2012	In spec, no cal required
5-1-2013	In spec, no cal required
5-1-2014	In spec, no cal required

Extend calibration intervals with Ultra and Ultra for Flow performance, backed by a 15-year limited warranty

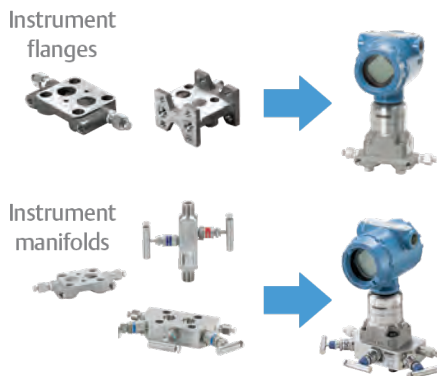
### Safety certified



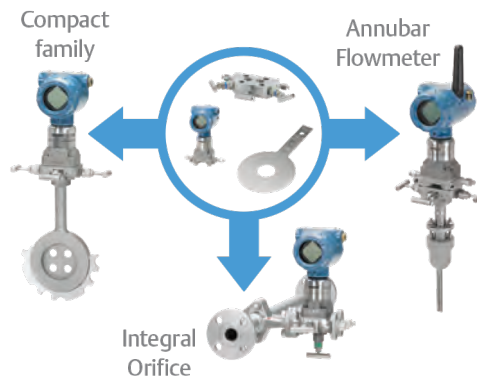
Simplify safety compliance with SIL 2/3 Capable transmitters certified to IEC 61508

## Coplanar™ platform enables integrated pressure, flow and level solutions

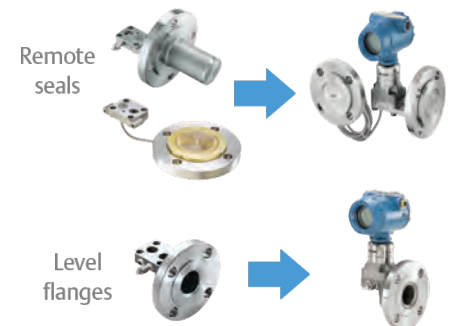
### Pressure



### Flow



### Level



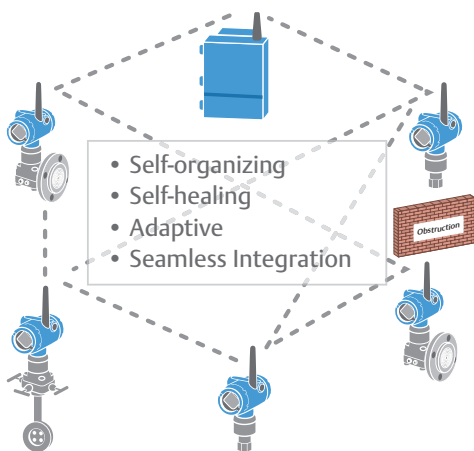


# Rosemount 3051S WIRELESS Pressure and Level Transmitters and Flowmeters.



## Product overview

The Rosemount 3051S Series of Instrumentation includes a full portfolio of wireless pressure, level and flow measurement solutions. The Rosemount 3051S is available with over a decade of maintenance-free performance with 15-year stability and 10-year power module life, making it the fastest and most cost-effective and reliable way to add new measurement points. MultiVariable wireless capabilities make it even easier to get more info with less risk and fewer process penetrations.



## Benefits of WirelessHART

Count on faster installation, easier maintenance and increased insight into your operation with Emerson's Smart Wireless technology.

**Easy and intuitive:** Smart Wireless networks are up and running in minutes and are easily expandable.

**Self-organizing:** devices automatically organize, so there is no need for a site survey or continued maintenance.

**Reliable and secure:** standards based IEC 62591 *WirelessHART* with industry-leading reliability.

## Industry-leading wireless capabilities

### Performance you can count on



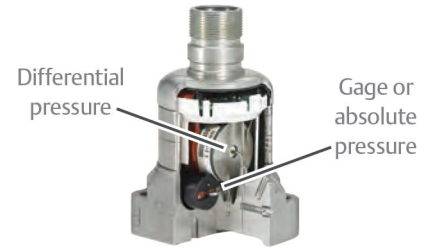
- 0.025% reference accuracy
- 15-year stability
- 15-year limited warranty
- 10-year power module life
- Achieve over a decade of maintenance-free measurements

### Expand and increase your communication range



- Expanded integral and remote antenna options enable wireless communication of up to 1 km (2/3 mile) between devices

### Wireless MultiVariable measurement



- Reduce pipe penetrations and impulse piping with 2-in-1 sensor technology
- Simplify calibration with a true gage static pressure sensor

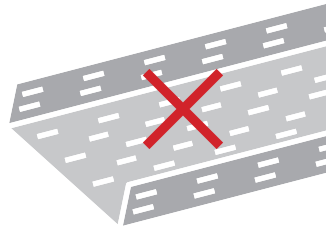
## Add new measurement points at 40-60% of the cost

### Eliminate wiring



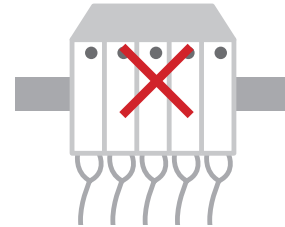
- Eliminate the cost and complexity of running wire to a new or remote location
- Automate moving or rotating equipment where wired instrumentation is not feasible

### No cable trays & infrastructure



- Eliminate costly and heavy cable trays and other required infrastructure
- No conduit
- No trenching

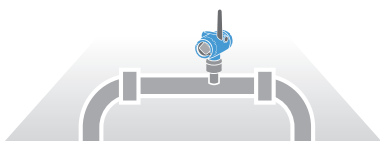
### No additional I/O required



- Don't limit your automation needs based on I/O scarcity
- Add new wireless measurement points without stressing your budget

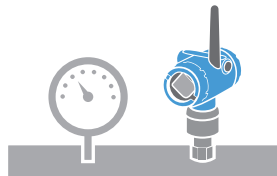
## Minimize process, safety and asset risks

### Gain process insight into remote and difficult locations



- Optimize your operations by getting information when you need it most
- Easily add data points across your operation, reducing maintenance costs and the number of safety, health and environmental incidents

### Supplement and automate manual processes



- Achieve better process insight by getting info once a minute vs. once a shift
- Improve safety of plant personnel by minimizing non-essential operating rounds

### Extend the life of critical equipment



- Add pressure monitoring points easily and cost effectively to extend the life of your assets and reduce equipment failure
- Common applications include: pumps, heat exchangers, cooling towers, blowers and compressors



# Rosemount 3051S MULTIVARIABLE Transmitters and Flowmeters.

## Product overview

The Rosemount 3051S MultiVariable transmitter delivers unprecedented performance and capabilities by providing superior flow calculations including fully compensated mass or volume, energy and totalized flow.

## Key applications

- Gas and Natural Gas Measurements
- Saturated Steam and Superheated Steam Measurements
- Liquid Measurements

## Key specifications

- 0.65% Flow accuracy over 14:1 Flow Turndown
- Variables: mass, volumetric and energy flow, totalized flow, differential pressure, static pressure (gage and absolute), process temperature
- 4-20 mA HART output
- 22 flow updates per second
- Complies with industry standards: API, ISO 5167, AGA Report #3 & #8 and ASME MFC-3M
- Joule-Thompson correction



### ROSEMOUNT 3051SMV MEASURES

Differential pressure  
Static pressure  
Temperature



### YOU ENTER

Process fluid  
Primary element  
Line size

$$Q_{\text{mass}} = C_D E Y_1 d^2 \sqrt{DP(p)}$$

### ROSEMOUNT 3051SMV CALCULATES

Density  
Velocity  
Viscosity  
Beta ratio

Gas expansion  
Discharge coefficient  
Velocity vs Approach  
Reynolds number

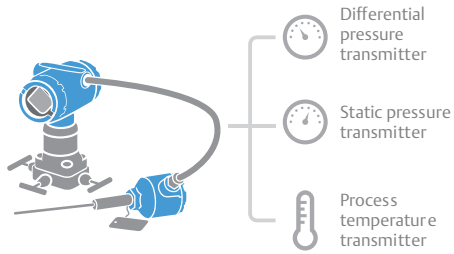
### YOU RECEIVE

Mass flow  
Energy flow  
Totalized flow

Differential pressure  
Static pressure  
Temperature

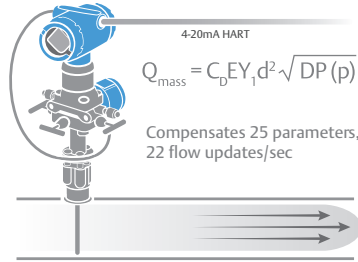
# Key capabilities of 3051S MultiVariable Mass Flow technology

## 3-in-1 measurement capabilities



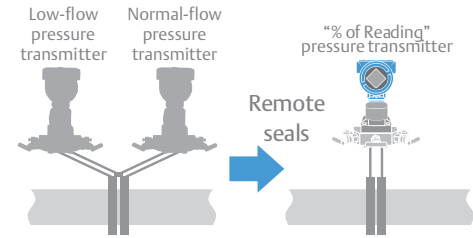
- Save 55% on installation costs and reduce risk with fewer pipe penetrations

## Fully compensated flow



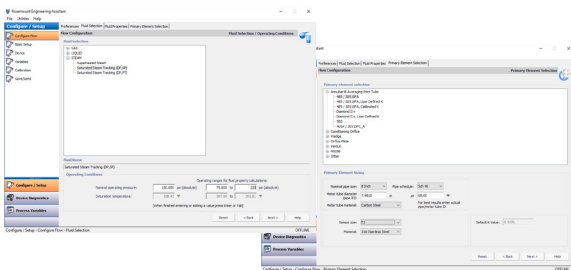
- Optimize energy mass balancing and improve billing accuracy

## Ultra for Flow



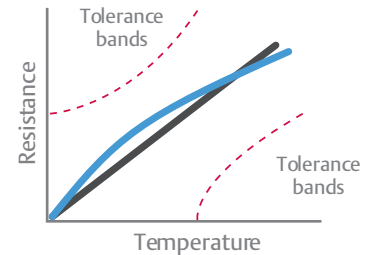
- Tighten control over wide-varying flow rates and eliminate transmitter stacking

## Engineering Assistant software



- Configure in 2 easy steps

## Enhanced temperature measurement



- Reduce temperature uncertainty by 75% with Sensor Matching

## Rosemount 3051S MultiVariable portfolio

### MultiVariable Transmitter



- DP/P/T
- DP/P
- DP
- P/T

- Scalable architecture allows for an array of different combinations to meet any application

### Annubar Flowmeter



- Realize energy savings through minimal permanent pressure loss
- Annubar flowmeters require less material which reduces the cost and weight of installation in large line sizes

### Integral Orifice Flowmeter



- Improved accuracy in small line sizes with a self-centering orifice plate and precisionhoned pipe sections

### Compact Flowmeter



- Standardize installation practices across annubar and orifice technologies
- Minimize straight-run requirements with Conditioning Orifice technology



# Rosemount 3051S with ADVANCED DIAGNOSTICS.



## Product overview

Predict and prevent trouble before it happens with the Rosemount 3051S Advanced Diagnostics transmitter — the industry's only field device to provide comprehensive diagnostics that go beyond the transmitter itself to cover both the process and the electrical loop.

- Stay on top of the health of your process and spot problems before they impact production with Process Intelligence and Plugged Impulse Line diagnostics
- Detect degraded electrical loop issues that can cause dangerous on-scale failures with Loop Integrity Diagnostic
- Expand your safety coverage, and simplify your proof tests with SIL 2/3 certified diagnostics

## Key applications

- Transmitter installations with impulse lines
- 4-20 mA HART based control loops
- SIS applications
- Dynamic and critical process issues including furnace flameout, pump cavitation, column flooding and entrained air

## Detect electrical loop issues that cause on-scale failures

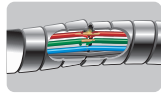
### Monitor electrical loop



Water in Housing



### Prevent on-scale failures

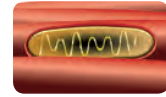


Wiring



Corrosion

### Detect hidden brownouts



Power Issues

- Monitor transmitter terminal voltage and receive alerts to unwanted changes on the electrical loop

- Prevent on-scale failures before they can jeopardize your operations

- Proactively detect issues that can limit the power to your device and result in unsafe brownout conditions

## Ensure your transmitters are running safely and efficiently

### Enhanced SIS coverage



- SIL 2/3 capable
- 10-year proof test intervals
- 96.7% Safe Failure Fraction
- Enhance your SIS coverage with the most extensive diagnostics available in any field device

### Diagnostic and event status logs

Category	Sub-category	Event Name	Event Date
Calibration	Calibration	Calibration	2013-12-13 10:22 AM
Diagnostic	Diagnostic	Diagnostic	2013-12-13 10:22 AM
Event	Event	Event	2013-12-13 10:22 AM
Warning	Warning	Warning	2013-12-13 10:22 AM
Failure	Failure	Failure	2013-12-13 10:22 AM
Reset	Reset	Reset	2013-12-13 10:22 AM
Shutdown	Shutdown	Shutdown	2013-12-13 10:22 AM
Startup	Startup	Startup	2013-12-13 10:22 AM
Test	Test	Test	2013-12-13 10:22 AM
Update	Update	Update	2013-12-13 10:22 AM
Version	Version	Version	2013-12-13 10:22 AM
Warning	Warning	Warning	2013-12-13 10:22 AM
Failure	Failure	Failure	2013-12-13 10:22 AM
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Test	Test	Test	2013-12-13 10:22 AM
Update	Update	Update	2013-12-13 10:22 AM
Version	Version	Version	2013-12-13 10:22 AM

- Know what happened to your device and when with diagnostic and event logging

### Customizable service alerts

Service Alerts

Service Alert Message

Configure a custom service message and when the message should appear.

Message:

Alert Mode:

Service Alert Time

Set the amount of time in which service alert should activate. This time is represented in Year, Days and Hours from the present time.

Year:

Days:

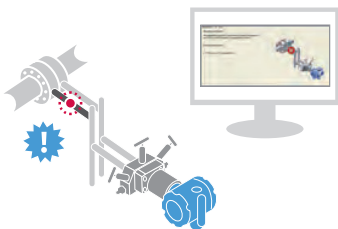
Hours:

Finish Cancel

- With customizable service alerts, you can be more proactive with your maintenance practices

## Detect and diagnose process problems before they impact production

### Plugged impulse lines



- Detect plugged impulse lines that can leave you vulnerable and blind to what is truly going on in your process

### Process changes



- Flame instability
- Column flooding
- Pump cavitation
- Entrained air
- Process leaks
- Tank agitation loss

- Detect undesirable changes in your process that can impact the throughput, quality and safety of your operation

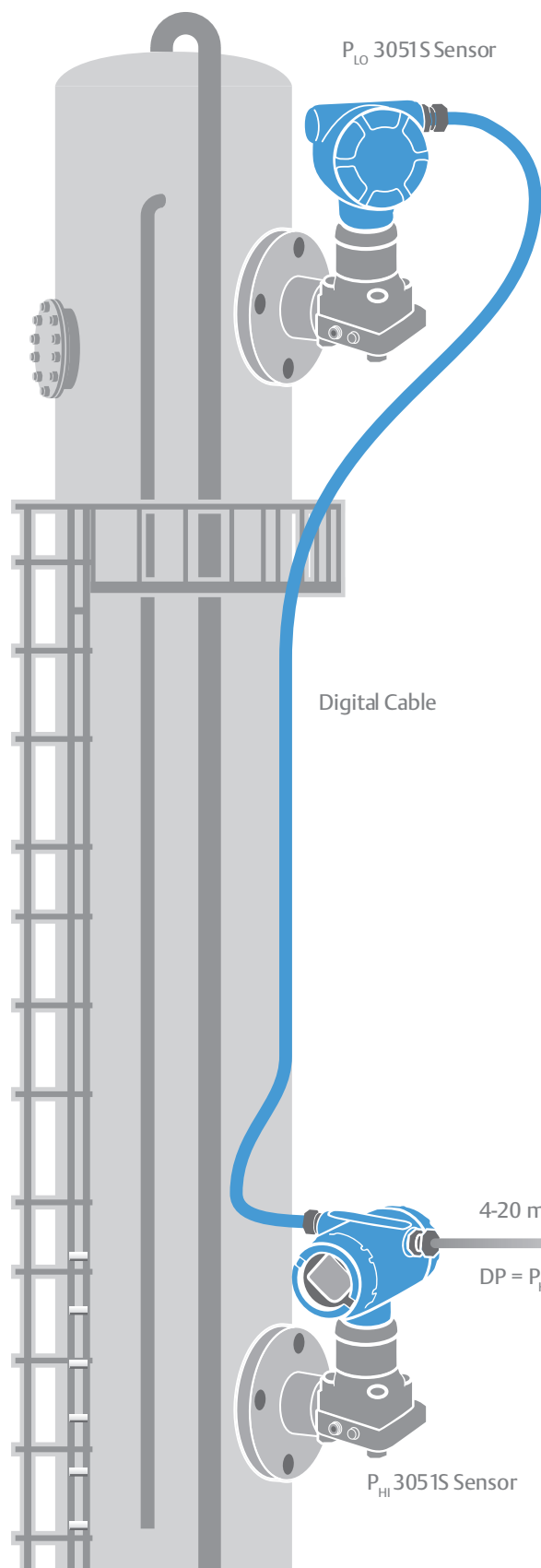
### Process transients



- Know when and where process transients occurred with data logging capabilities



# Rosemount 3051S ELECTRONIC REMOTE SENSORS (ERS) System.



## Product overview

The Rosemount 3051S Electronic Remote Sensors System is a flexible, 2-wire, 4-20 mA HART architecture that calculates Differential Pressure (DP) using two pressure sensors that are linked together digitally.

## Key applications

Ideal applications for the Rosemount 3051S ERS System include tall vessels and distillation columns that have traditionally required excessive lengths of impulse piping or capillary.

## Key specifications

- Reference accuracy = 0.025% span
- Measured variables = DP, P-Hi, P-Lo, Scaled Variable (Level or Volume)
- 4-20 mA HART output
- Max cable length = 150 feet (45 meters)
- Can be engineered for more cable length if required

## Improve performance on tall vessels and columns

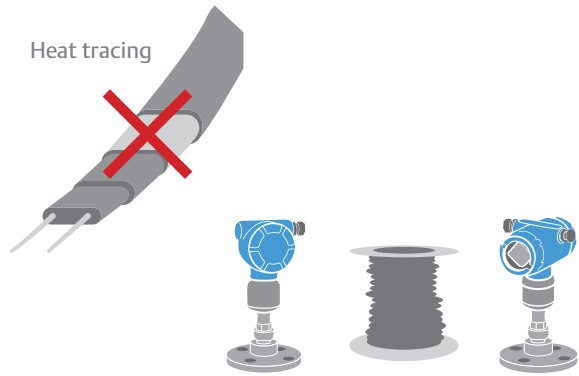
Resistant to ambient temperature changes



Time response < 1 sec

- Improve responsiveness to dynamic process conditions
- Increase repeatability in extreme ambient conditions
- Reliably monitor and control column throughput

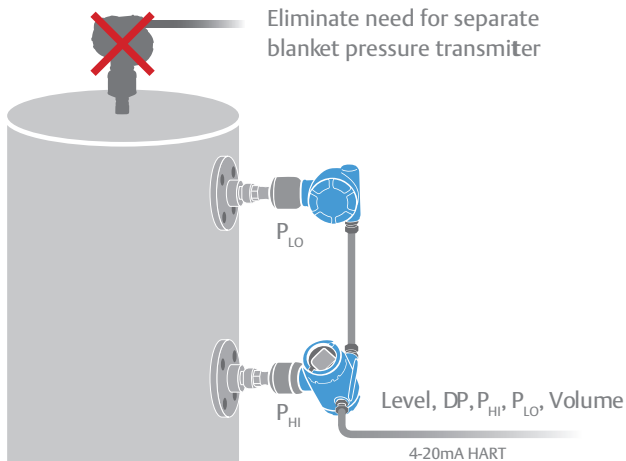
## Simplify installations and reduce maintenance routines



Sensors and cable

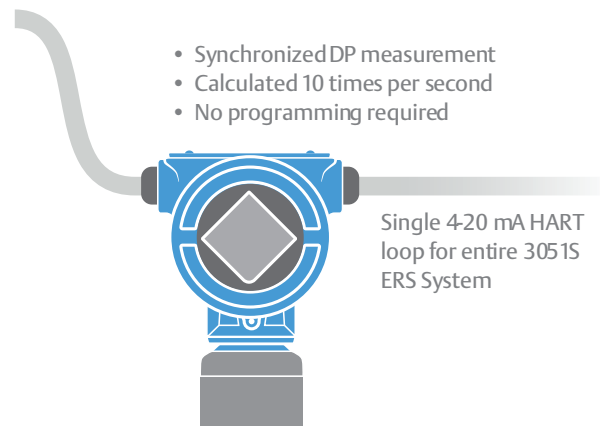
- Replace heat tracing and impulse piping
- Install and maintain each sensor independently, reducing maintenance routines

## Gain additional insight with multiple measurements



- Expand insight into your tank operation beyond just level
- Eliminate the need to buy a separate pressure transmitter to monitor and control the blanket pressure
- Drive proactive maintenance practices through sensor diagnostics and alerts

## Streamline commissioning and system integration



- Synchronized DP measurement
- Calculated 10 times per second
- No programming required

- Ease commissioning with Device Dashboard graphical interface
- Eliminate the need for zero elevation calculations
- Minimize I/O requirements with a drop-in-ready solution on a single 4-20mA HART loop



**Optimize every point for improved productivity, quality, energy efficiency and safety.**



With its unmatched scalability, accuracy and robustness, the Rosemount 3051S is perfectly designed to help you realize the full potential of your measurement investment

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