Rosemount Instrumentation for Life Sciences

Delivering consistent results through better instrumentation
Every day, you’re expected to deliver more with less. Keep the process running reliably and efficiently, with fewer resources. Emerson Process Management understands. We’ve taken our historically reliable Rosemount measurement technologies and packaged them specifically for the Life Sciences industry, making them easy to configure, support and operate. What’s more, we design our pressure, temperature, flow, and level instruments to enable best practices that give you results you can measure.

Delivering consistent, measurable results through innovative instrumentation and hygienic best practices

Reduced Risk
Rosemount products enable new best practices that allow you to minimize the risk of a non-compliant batch. For example, Rosemount hygienic products withstand hundreds of CIP/SIP cycles without drifting outside your specification limit. This industry-leading “batch-to-batch” repeatability assures process measurements within specification, reducing the risk of a non-compliant product.

Decreased Cost
The long-term stability of Rosemount products reduces the frequency of calibration, decreasing operational costs. When incorporated with Emerson’s PlantWeb digital plant architecture, PlantWeb Alerts can further increase savings by detecting process issues before they occur, communicating Advisories and Alerts and recommending a course of action to avoid process disruption.

Improved Start-Up
Emerson provides special packaging and calibration documentation with your Rosemount Instrumentation that can expedite installation qualification. What’s more, our field-intelligent Rosemount devices provide early warning of potential process and performance discrepancies, allowing you to get your process started sooner.
Hygienic Instrumentation is fit for purpose in the Life Sciences Industry. Designed by Clear Springs, Emerson’s hygienic instrumentation and process solutions ensure a clean environment for your production processes. Compliance to Standards: Rosemount instrumentation is in accordance with USP Class VI, FDA, and other standards. Hygienic instrumentation is fit for purpose in the Life Sciences Industry.

Engineered for Specific Applications

Whether your application requires a biopharmaceutical measurement or a control point, Emerson has an instrumentation system that is designed to meet your needs. Our Rosemount Hygienic Instrumentation provides a full line of products designed specifically for Life Sciences applications. Best Practices for a Better Bottom Line: Emerson offers recommendations and guidelines for implementing standards and ensuring regulatory compliance. Designed for Cleanliness: All Rosemount Hygienic Instrumentation products are designed to meet the needs of the Life Sciences industry. Rosemount Hygienic Instrumentation provides a full line of hygienic instrumentation designed for the needs of the Life Sciences industry.

Field Intelligence and Diagnostics

Intelligent field devices in combination with AMS™ Device Manager software provide a full line of diagnostics and troubleshooting tools to help operators implement best measurement practices to improve product consistency and integrity. Audit Trail Functionality: Every excursion in Rosemount instrumentation is documented for how it affects the production process. This allows for full traceability and auditable recordkeeping. Process through PlantWeb® Alerts enable the full power of diagnostics and device communication to become part of your control system. PlantWeb® Alerts enable the full power of diagnostics and device communication to become part of your control system. From expected failures to unexpected downtime and its impact on throughput, every device can alert you to abnormal conditions.

Process through PlantWeb® Alerts

Innovative design and engineering coupled with embedded diagnostics help to ensure that your product’s critical measurements are within specification, reducing non-compliance risks. We’ve termed this type of stability “batch-to-batch consistency.” Every innovation in Rosemount instrumentation is focused on how it better serves the customer’s needs. It’s this focus that ensures every improvement in Rosemount instrumentation is in alignment with your business needs. The quality and stability of Rosemount instrumentation allows extended calibration intervals, reducing the risk of calibration errors and improving the overall efficiency of the calibration process.

Increase Process Availability through PlantWeb® Alerts

Typical transmitter drift at control points can result in increased maintenance costs, increased downtime, and reduced process availability. To reduce the risk of measurement errors caused by transmitter drift, Emerson provides Rosemount 4500 transmitters. This technology is available in Rosemount magnetic flowmeters and vortex DP flow devices while clean room measurements can use vortex or DP flow devices.Typical transmitter drift at control points can result in increased maintenance costs, increased downtime, and reduced process availability. To reduce the risk of measurement errors caused by transmitter drift, Emerson provides Rosemount 4500 transmitters. This technology is available in Rosemount magnetic flowmeters and vortex DP flow devices while clean room measurements can use vortex or DP flow devices.

Protect Your Product by Using Advanced Diagnostics

A fundamental issue in modern instrumentation is allowing users to look beyond their initial specifications and understand how their equipment is helping or hindering their process. Rosemount Hygienic Instrumentation provides a full line of diagnostics and troubleshooting tools to help operators implement best measurement practices to improve product consistency and integrity. Every excursion in Rosemount instrumentation is documented for how it affects the production process. This allows for full traceability and auditable recordkeeping. Process through PlantWeb® Alerts enable the full power of diagnostics and device communication to become part of your control system. PlantWeb® Alerts enable the full power of diagnostics and device communication to become part of your control system. From expected failures to unexpected downtime and its impact on throughput, every device can alert you to abnormal conditions.

Process through PlantWeb® Alerts
Delivering consistent results through better instrumentation

1. **Control & Safety Temperature Transmitters**
   - The critical measurements in your hygienic applications demand an accurate temperature solution to maximize valuable yields. These transmitters are ideal where safety, high accuracy, redundancy, diagnostics, and long-term stability are important measurement attributes.
   - **Rosemount 3144**
     - The ultimate transmitter for critical, control and safety applications
     - Multi-input capability provides highest reliability with Hot Backup®, Sensor Drift Alert, and dual-compartiment housing
     - Best-in-class accuracy with Transmitter-Sensor Matching
     - Head and rail mount styles for flexible mounting
   - **Rosemount 644**
     - Polished SST enclosure designed specifically for hygienic installations
     - Head and rail mount styles for flexible mounting
     - Best-in-class accuracy with Transmitter-Sensor Matching
     - LCD provides local indication of readings and diagnostics

2. **Monitoring Temperature Transmitters**
   - Monitoring applications such as media storage tanks and pipe monitoring require cost-effective solutions. Whether you have single point or high-density applications, there’s a Rosemount product to fit your need.
   - **Rosemount 848T**
     - Low installed cost – communicates up to 128 measurements on two series
     - Individually configurable inputs – RTD, thermocouple, 4-20 mA
     - Mounts anywhere – field hardened, intrinsically safe, 2-wire powered, available in a SST housing
     - Interface into legacy systems with Rosemount 3420 Fieldbus Interface Module
   - **Rosemount 248**
     - Polished SST enclosure designed specifically for hygienic temperature monitoring installations
     - Fits any connection (DN Form B)
     - NAMUR compliant: NE21, 43, 80

3. **Hygienic Temperature Complete Point Solutions**
   - A wide range of process interfaces such as weld-in or tri-clamps are available to suit your application
   - Fractional-Line Size RTDs provide the ideal solution for small-scale applications such as seed reactors and pilot plants
   - Replaceable measuring inserts ensure process integrity

4. **Hygienic In-Line Temperature Sensors**
   - Designed to meet the stringent hygienic requirements of EHEDG for inline (pipe) measurements
   - Compact dead-pocket free sensor design is easy to install and allows sensor removal without process shutdown
   - All components made of SST for easy cleaning in CIP/SIP applications
   - Ideal solution for smaller line sizes (DN10 to DN60)
   - Available with SST connection head or as a cable sensor

5. **PlantWeb® Capabilities**
   - Rosemount products power PlantWeb architecture with advanced diagnostics and improved process control that can ensure process health, improve operational efficiency, and deliver consistent results, for example:
   - Inform operator immediately of abnormal conditions that may affect process operational efficiency, and deliver consistent results, for example:
   - Integrate equipment performance and process information for audit trail and record keeping

6. **Rosemount 4500 Hygienic Pressure Transmitter**
   - The Rosemount 4500 hygienic pressure transmitter leverages the industry leading technology of the 3051S to provide a tailored solution for Life Sciences applications. Features important to this industry have been enhanced making the 4500 your best choice.
   - Smooth, cGMP-free SST design minimizes cleaning and wipe-down time
   - Performs reliably after hundreds of CIP/SIP cycles
   - Tri-clamp or fractional line fitting process connections conform to industry standards
   - Best-in-class long-term stability reduces maintenance costs

7. **Rosemount 3051S-L DP Liquid Level Transmitter**
   - The 3051S-L is a high performance pressure transmitter for liquid level applications offering:
   - Broad array of engineered hygienic process connections
   - Best-in-class seal design improves performance and reliability
   - Tuned systems reduce cost by 20% and improve performance by 15%

8. **Rosemount 8721 Sanitary Magmeter Flowtube**
   - The 8721 provides the reliability and accuracy you demand for your most critical hygienic flow applications.
   - Full diameter design for less product shear
   - Smooth cGMP-free design for CIP/SIP service
   - Electroplished process connections for sensitive applications
   - 25% accuracy available for 3.5 to 4500 liters per minute flows
   - 15-100 mm sizes (1/2-4 inch) in a variety of process connections
   - The easiest to use local operator interfaces
   - High performance compact, integral and remote configurations
   - Software and hardware security for validated processes

To improve your bottom line with Rosemount products, contact your local Emerson Process Management representative or visit www.rosemount.com/lifesciences
Additional information about specific Rosemount Life Sciences products can be found in these documents on rosemount.com

Rosemount 4500
Product Data Sheet
00813-0100-4027

Rosemount 951
Product Data Sheet
00813-0100-4362

Rosemount 3051S
Product Data Sheet
00813-0100-4801

Rosemount 3144P
Product Data Sheet
00813-0100-4801

Rosemount 644
Product Data Sheet
00813-0100-4728

Rosemount 848
Product Data Sheet
00813-0100-4697

Rosemount 248
Product Data Sheet
00803-0100-4825

Rosemount Volume 1
Product Data Sheets
U.S. 00803-0100-2654
Metric 00803-0200-2654

Rosemount 8721
Product Data Sheet
00803-0100-4901