Automate Your Hard-to-Reach Valves with the Fisher™ 4320 Position Monitor

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Spare your personnel from hazardous locations without sacrificing valve insight.

Wiring your valves can be more costly—and leave workers more vulnerable—than taking a wireless approach.

The average total cost to automate a valve is $10,000 USD(1). And the majority of that investment often goes to traditional I/O, engineering, labor, and wires—not the valve itself.

Nearly 90% of plants have experienced problems with non-automated valves within the past year(2). Manual actuation takes time away from process operation and opens the door for costly valve alignment mistakes that could result in environmental leakages, lost productivity, and safety hazards.

Emerson has a wireless solution to help optimize valve visibility and simplify accessibility.

A controlled process means you can check the status of your valves from the safety of your control room. Wirelessly-automated valves don't require ladders, concern for stairs, or care when the weather changes.

With predictive diagnostics, you can constantly keep track of your valves' behavior. Monitoring both the cycle count and stroke time can make it easier to predict when valve maintenance will be required—something solenoids and limit switches simply cannot do.

Emerson's WirelessHART™ technology systems, including the Fisher 4320 wireless position monitor, can help you achieve more reliable communication within your process environment, without the added expense and time that wired systems demand. And, the less time technicians spend manually moving valves, the more time your process has to actually produce.

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(1) (2) Vernon Research Group, Wireless Valve Solutions, March 2011

The Fisher 4320 position monitor can help in a variety of critical valve applications.

Application	Application Challenges	Benefits of Implementing Position Feedback
Isolation Valves/ Safety Instrumented Systems/ Manual Valves	• Current control can be affected by leaking isolation valves that, in turn, can affect product quality. • Lack of valve position insight can cause production issues and requires personnel to visit the valve in the field. • Reporting a sequence of events into safety system historians can be difficult and time-consuming.	• Improved visibility in the control room means trips to the field are no longer necessary, streamlining your process. • Using superior Fisher valve technology can help ensure tight valve shutoff, resulting in improved process reliability. • Knowing exactly when an event starts and ends makes it easier to report accurate valve position data.
Pressure Relief Valves	• Traditional emissions estimates that are based on personnel shift timing can be inaccurate and overages can result in costly fines. • Making assumptions about a valve's position based on its last manual inspection is unreliable and precision is difficult. • Improper monitoring or lack of specific valve data can result in unexpected issues or downtime, costing valuable time and money.	• Reduce costs associated with VOC emissions, ranging from supplemental projects to correcting facility mistakes, by automating the operating environment. • Improve overall design and output of your process with data that pinpoints exactly when and where a relief event occurs. • Timestamped trending and reporting of all data can help you take a more proactive approach to maintenance, produce more efficiently, and avoided over-reporting.
Automated On/Off Valves	• Off-specification products often have a greater potential to waste feedstock or increase costs due to rework. • Manual valve operating procedures can be unreliable and are susceptible to human error. • The control room must radio the field operator to confirm the valve is in the correct position, reducing process efficiency.	• Access to real-time monitoring and reporting to eliminate doubt regarding a valve's specific position and improve process reliability. • Integrated valve state into control logic automates process calibration and diagnostics and gets the accuracy you require. • Use automated checklist procedures to minimize costly mistakes and save your plant time and money.
Heat Exchangers	• Harsh process conditions can affect the amount of energy required to operate heat exchangers effectively, costing you more in maintenance and general upkeep each year. • Corrosion can occur from insufficient desalting or neutralizing and can eventually lead to complete unit failure. • The inability to monitor a valve's status as it is changing positions forces reactive measures to be taken, often when issues are beyond correction.	• Inadequate manual inspections are replaced with frequent and reliable data reports, allowing for precise process control. • Track exactly how many cycles the exchanger has been through and receive updates about desalting or neutralizing sequences to maximize the service life of your assets. • Continuous, accurate feedback can help uncover issues before they take your unit down.

Fisher 4320 Position Monitor on a Crosby™ Pressure Relief Valve

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