

Complete valve solutions for your critical safety applications.

Fisher™ Digital Isolation™ Solutions

Uncomplicate your safety instrumented systems.

EMERSON

Safety instrumented systems (SIS) can be the most critical—and difficult—aspects of ensuring successful operation.

Designing the final element for a safety system is more than just selecting a valve. SIS design involves measuring statistics, running calculations, and meeting SIL budgets. SIS projects require meeting with third-party consultants and buying valves, actuators, and control accessories—each from a different vendor—to get all of the items on your list.

Not to mention, most consultants see a project through to first production, depart soon after, and take their experience and stake in the success with them. Yet, more likely than not, you are responsible for the entire lifecycle. That means you have to meet the SIL budget and safety requirement specification (SRS), stay on track with start dates, manage time and cost of maintenance, oversee turnarounds, and ensure your safety system doesn't interfere with production. That's a lot of pressure on you and the safety system—and we haven't even talked about the moral weight of being responsible for the safety of lives and the environment.



"Working through the entire safety lifecycle is a major undertaking, but it is a process critical to the safety of people, property, and environment."
–Robert Williams, Control Engineering



In a recent study, 37% of employers in the oil and gas industry reported difficulty hiring health, safety, and environment (HSE) specialists.
–OilandGasPeople.com



The most common risks to control system failures are operating procedures (37%) and plant design (32%).
–Health and Safety Executive Study





What if you could eliminate the complicated approach of buying each component separately, so that the reliability and profitably of your safety instrumented system increases but costs and risks don't?



Design, implement, and maintain your safety system more efficiently and effectively.



By choosing a Fisher Digital Isolation solution, you have access to on-demand expertise and resources to increase your knowledge so you can move past the complicated and confusing place of not knowing exactly what you need.

With our single, complete offering that is designed, tested, and 3rd party certified to function as one, you can reduce integration conflicts and more easily meet your start dates. You can also give your operators greater confidence in their ability to operate and maintain the system. This is possible with a safety system that has inherent functionality to stand up against spurious trips and stay online, even during testing. Emerson's rigorous engineering and testing specifications and procedures create an assembly with improved failure rates over the traditional integrator component approach. These lower failure rates may allow you to meet your SIL targets with longer proof test intervals. To sum it up, you'll increase your reliability and safety—which go hand in hand—while improving your internal rate of return by not deferring production.

FISHER™



With complete solutions and on-demand expertise, you'll be able to overcome the complexity of your safety systems today and in the future, even if resource constraints tighten.

Ensure total SIS expertise throughout the entire safety lifecycle.

Rather than relying on a short-term, third-party consultant, you can easily determine what you need by leveraging the wide expertise of Emerson's safety consultants.

Access complete support ▶ p5

Clear the confusion of multiple vendors.

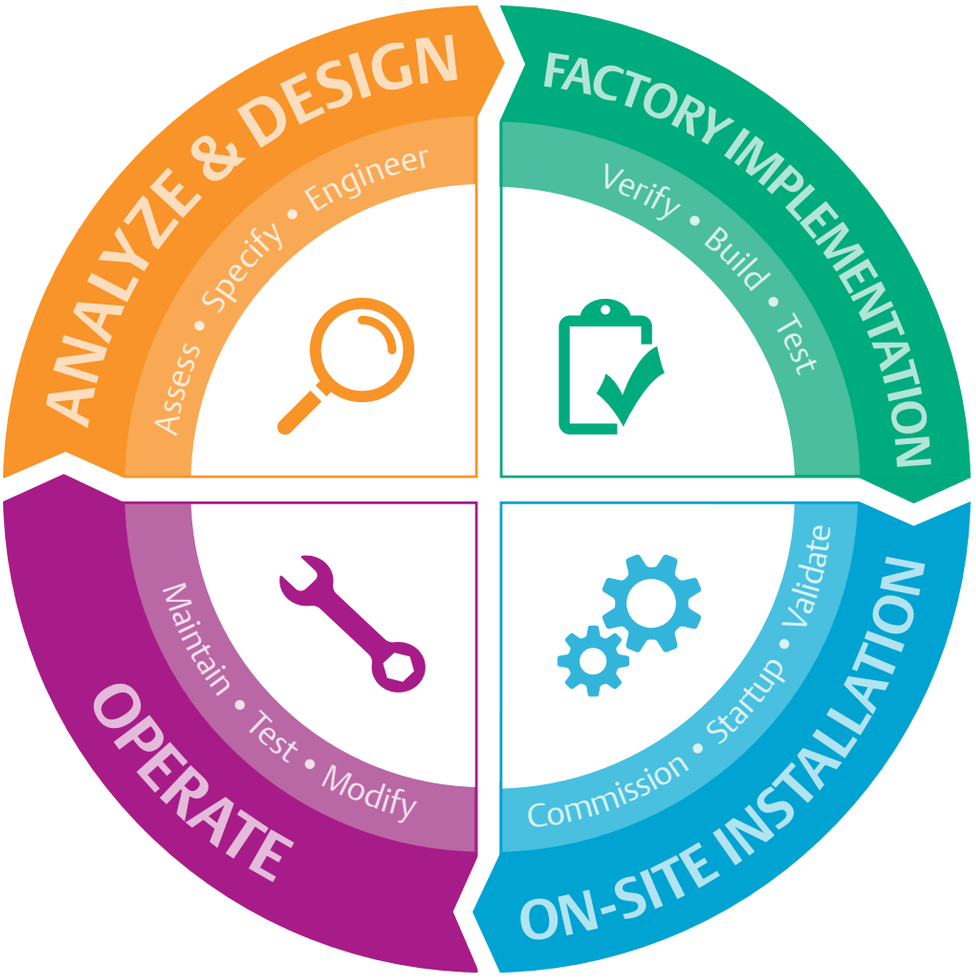
Reduce integration uncertainty and achieve the ultimate competitive advantage of a faster time to market with a single solution and a coordinated team of experts.

Eliminate vendor complexity ▶ p7

Stop unnecessary downtime and spurious trips.

Boost your safety system's resistance to unpredictable process changes and achieve more consistent control to reduce the likelihood of spurious trips with built-in features embedded in Emerson's complete SIS offering.

Avoid downtime ▶ p9



Ensure total SIS expertise throughout the entire safety lifecycle.

An expertise shortage may be part of normal operations, but it doesn't have to keep you from excelling in all phases of the safety lifecycle. By partnering with Emerson, you can simplify the implementation and operation of your SIS projects, all within regulatory requirements. You can accomplish this by implementing industry best practices, streamlining your SIS decisions, and choosing an integrated offering that is designed and tested to work together with a focus on reducing systematic failures through verified engineering procedures.

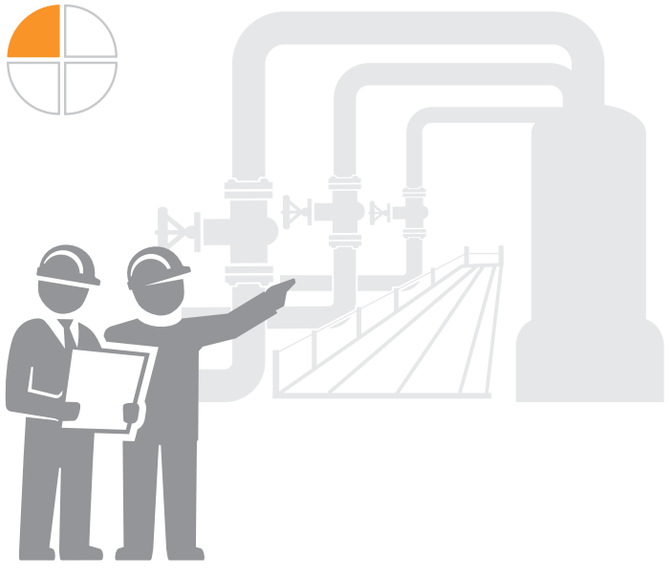
What's your challenge?

"Working through the entire safety lifecycle is a major undertaking, but it is a process critical to the safety of people, property, and environment."
–Robert Williams, Control Engineering

What's your opportunity?

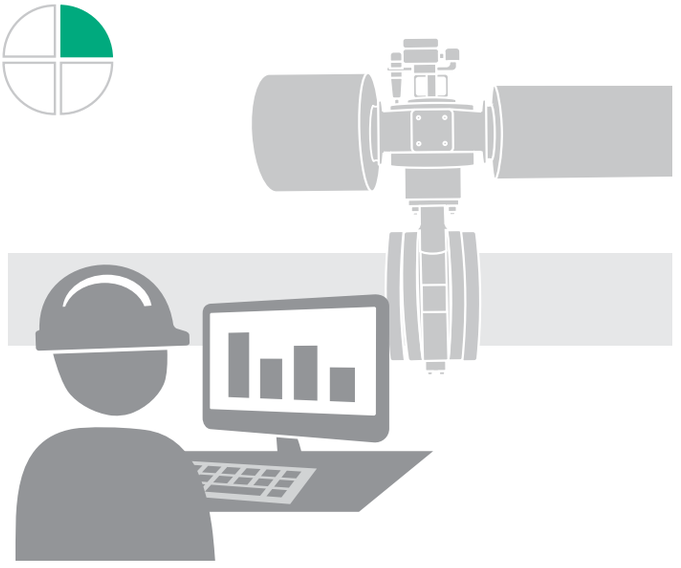
By choosing Emerson, you can leverage our existing expertise to reduce the cost of an expensive in-house safety team. We'll be on hand as you make key decisions, well beyond initial installation.

Analyze & Design



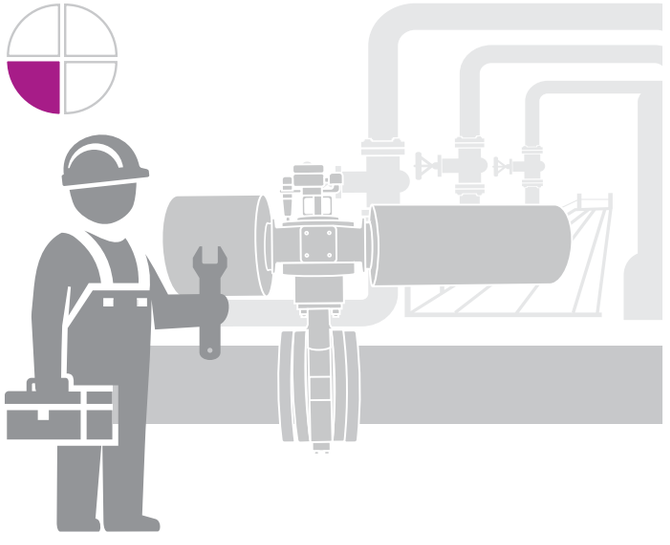
Assess, Specify, and Engineer
In-house safety and technology expertise helps to ensure process requirements are met while maximizing diagnostic coverage. Receive the best combination of safety and technology in the industry for your specific process and application needs.

Factory Implementation



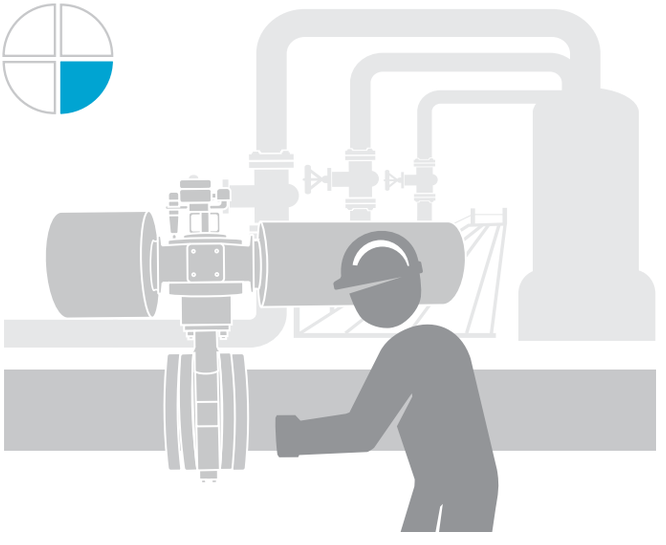
Verify, Build, and Test
SIL 3-capable solutions are built, fully documented, and factory tested at an Emerson facility, so you receive pre-configured assemblies, serialization, factory acceptance testing options, benchmark diagnostics, and a single SIL certificate for a consistently reliable solution that meets the applicable standards.

Operate



Maintain, Test, and Modify
Increase your confidence that the SIS valve assembly will operate as expected when an unsafe condition exists with full documentation that supports SIL compliance throughout the lifetime of the solution. Assemblies enabled with FIELDVUE™ technology can leverage the benefits of the Plantweb™ digital ecosystem. Skilled field service technicians can also provide on-site assistance with partial stroke and proof testing, and decommissioning plans.

On-Site Installation



Commission, Start-up, and Validate
Modular solutions simplify installation, testing, diagnostics and maintenance across your facility. On-site field support for commissioning and startup is also available to ensure your projects start up on time and meet operational targets.

To learn more about Fisher Digital Isolation Solutions, visit **Emerson.com.**



Clear the confusion of multiple vendors.

Challenges implementing the safety system may cause you to miss key project deadlines. Each missed project deadline costs time and defers production.

By partnering with Emerson as your preferred supplier, you can reduce the complications of meeting your SIL budget and implementing your SIS and validating that the selection meets your safety requirement specification. By choosing Emerson, you simplify your choices—without limiting your opportunities—and get a supplier that takes a holistic approach to understanding you and your processes.

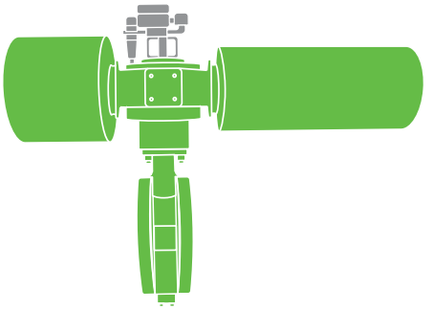
What's your challenge?

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What's your opportunity?

Turn to a single, trusted source to meet your safety system budget and timeline. You'll be able to reduce time spent iterating designs, avoid startup delays, and have support performing tests and interpreting diagnostic data.

Benefit from a single valve assembly



Complete SIS Product Offering

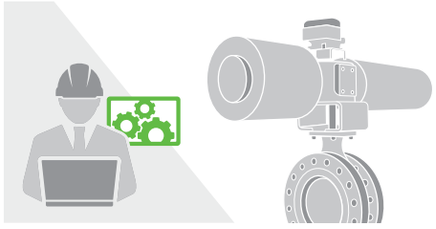
Emerson offers each piece of the SIS final element as an engineered, tested, and validated solution to optimize the assembly and remove failures caused by component integration issues.



SIL-Certified as a Full Assembly

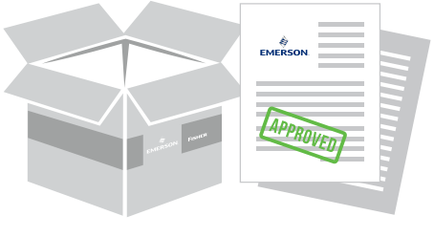
A single SIL certificate helps relieve the burden of regulatory reporting requirements made difficult by separate components. Digital Isolation solutions are assessed and certified by exida, ensuring specifications and procedures meet the needs of SIS.

Achieve more seamless, less worrisome startups



Pre-Tested Final Control Hookup

A pre-configured and pre-tested final control setup that is tested to ensure proper function prior to installation.



Consistent Packaging and Procedures

With Emerson's integrated documentation and consistent packaging, customers receive one set of documentation for implementation and maintenance scheduling.



Single Point of Contact

Leverage Emerson expertise to turn multiple decisions into one well-informed decision ensuring proper support during startup activities.

Leverage on-demand safety expertise

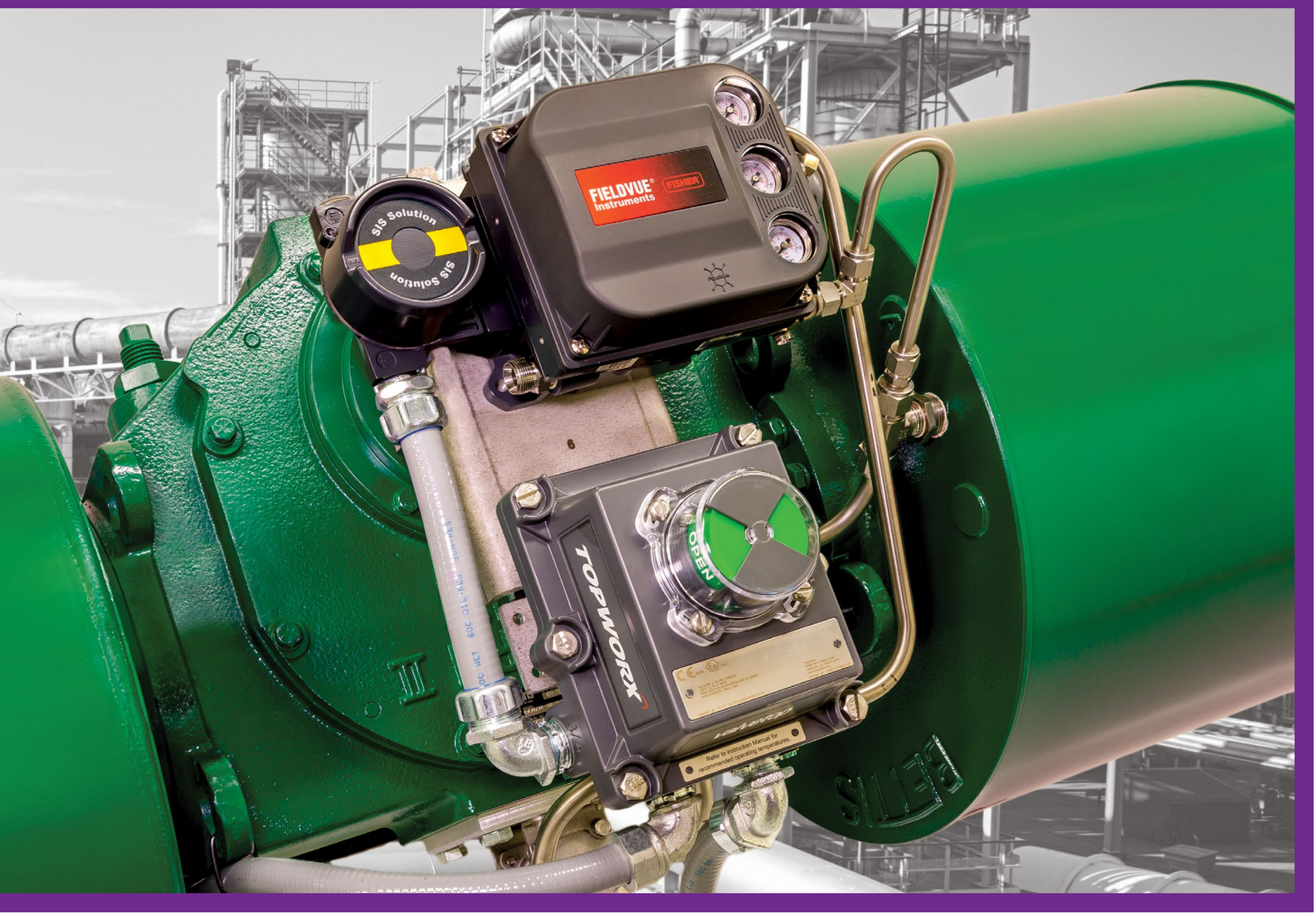


Total Safety Function Expertise

Emerson has consultants all around the world that have a full understanding of safety systems, regulations, SIL ratings, and best practices.

▶ Contact an Emerson sales office in your area.

To learn more about Fisher Digital Isolation Solutions, visit **Emerson.com**.



Stop unnecessary downtime and spurious trips.

Safety systems are not just complex and difficult to implement, they can also be difficult to operate and maintain. A mistake during testing or maintenance can cause a shutdown, upset, or a reportable incident. The complexity and risk make operators reluctant to even test the system.

The final control element of the safety system shouldn't be so difficult to operate that people are afraid to touch it. You can increase your availability and decrease your maintenance time by choosing Emerson.

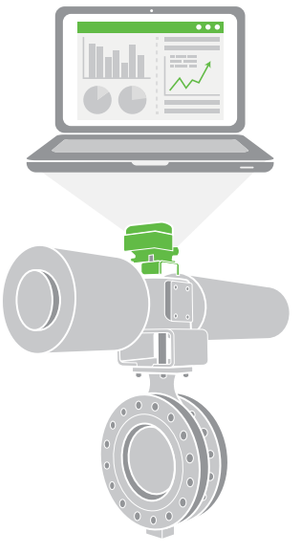
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What's your opportunity?

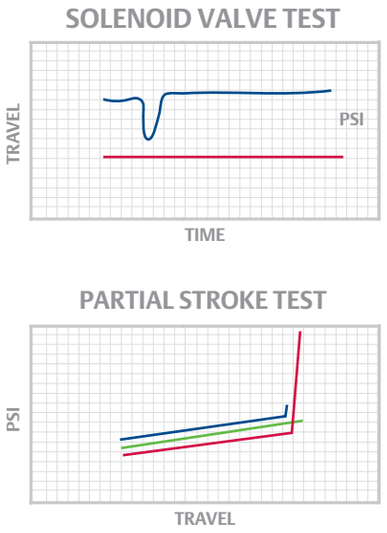
Reduce the risk of spurious trips–even upon loss of instrument electrical power–with technology that is built in to Emerson's safety solution.

Spend less time performing, recording, and reporting proof tests



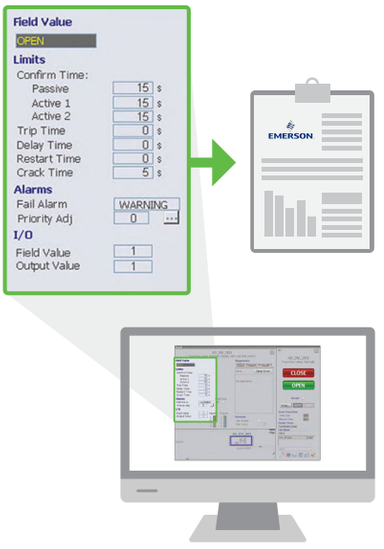
Smart SIS Diagnostics

By accessing self-diagnostic capabilities built into your valves, your operators can identify stuck valves, pressure droop, friction changes, air leaks, or other common valve issues without taking the valve and your process offline.



Solenoid Valve and Partial Stroke Testing

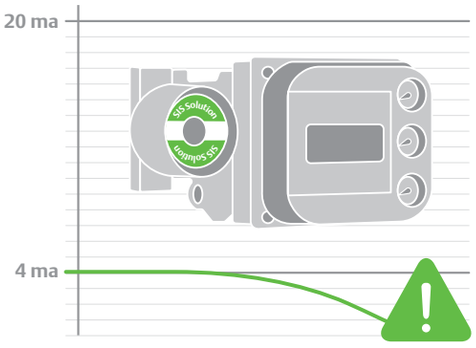
Solenoid valve health can be tested and recorded while the process is online, without moving the valve assembly. With partial-stroke testing, you can extend the time between full proof tests with a diagnostic that can test the complete valve assembly while online.



Automated Documentation

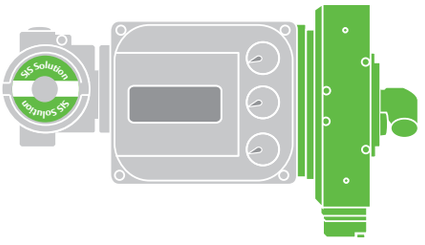
Automatically generate reports from the most recent stroke tests, including date, time, and result, to easily verify and track performance.

Reduce spurious trips without additional hardware



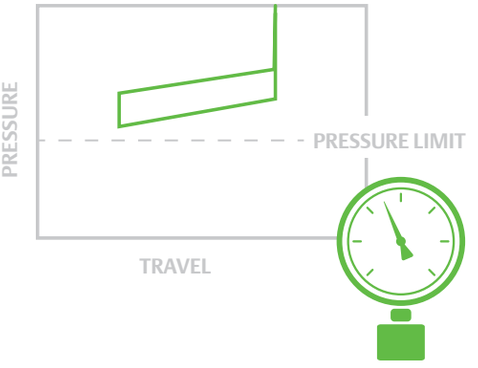
Reverse B Relay

With the option to utilize the partial stroke test instrument in a way that does not trip the valve upon loss of instrument electrical power, you can further protect against interruptions.



High Cv Construction

Eliminate points of potential failure with the DVC6200 SIS High Cv construction, which utilizes increased internal air capacity to replace volume boosters and quick exhausts in valve assemblies.



PST Pressure Limit

On-board pressure sensors monitor the air pressure delivered to the valve during partial stroke testing and cancels the test if the pressure limit is exceeded, preventing process interruption.

Fisher Digital Isolation solutions help simplify your safety systems.



Fisher Digital Isolation Triple Offset Valve (TOV) Solution

- Valve meets the requirements of ASME B16.34, API 609, EN12516, EN593
- NPS 3 - 36 CL150
- NPS 3 - 24 CL300
- NPS 6 - 24 CL600
- DN80–600 PN16, PN25, PN40
- Double-flanged and lugged end connections
- Available in A216-grade WCC, A351 LCC, and dual-certified CF3M/CF8M
- Cryogenic option
- Shaft side (reverse flow) only
- Disc side and bi-directional non standard
- Scotch-yoke, pneumatic actuation
- Pre-configured valve accessory hookups
- FIELDVUE enabled, Connected Services ready
- Safety Integrity Level Certified, up to SIL 3 capable
- Factory acceptance tested (FAT)

▶ Visit the TOV product webpage to see our complete list of available options and to learn more.



Fisher Digital Isolation DSV1000 Full-Bore Ball Valve Solution

- Valve meets the requirements of ASME B16.34, API 6D
- NPS 6 - 24 CL150, 300, 600
- DN80–600 PN16, PN25, PN40
- Flanged end connections
- Available in LF2 Steel
- Unidirectional or bidirectional flow
- Scotch-yoke, pneumatic actuation
- Pre-configured valve accessory hookups
- FIELDVUE enabled, Connected Services ready
- Safety Integrity Level Certified, up to SIL 3 capable
- Factory acceptance tested (FAT)

▶ Visit the DSV1000 product webpage to see our complete list of available options and to learn more.

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