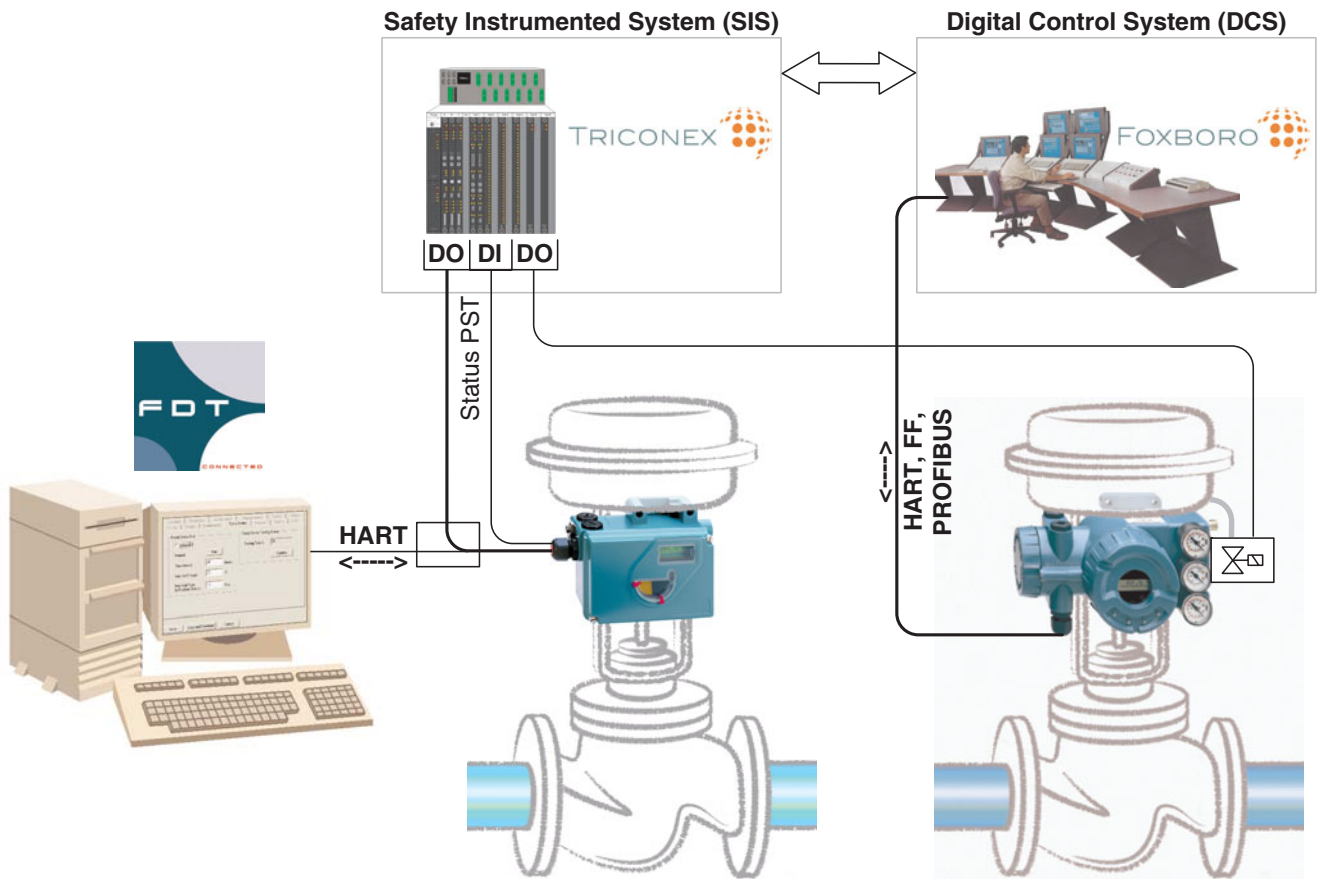


Partial Stroke Testing Solutions with SRD991 and SRD960 Positioners



Intelligent Valve Solutions for Safety Systems and Emergency Shutdown (ESD) Applications.

- SRD991 for intrinsically safe and SRD960 for Explosion proof areas
- Positioners certified SIL 3 for Shutdown
- PST Activation:
 - Automatically
 - Manually
 - By means of LCP960 Local Control Panel
 - By means of a separate Binary Input for SIS Logic Solver
- PST Status through Communication, LCD Display and Binary Output
- Extended diagnostic through certified DTM in HART/PROFIBUS PA/FF
- Break Pressure and Re-inflate time trends for predictive maintenance
- LCP960 Local Control Panel for monitoring of PST
 - LCP960 with Ex d (Explosion Proof) certification
 - One push button to launch PST
 - Backlighted LCD with clear messages
 - Timer for last PST done



PST running



PST good



PST failed or stuck valve



IPS Partial Stroke Testing Solution

Final control elements in Emergency Shutdown (ESD) applications such as ON-OFF-, Blow Down and Venting-Valves remain in one position over a long time without any mechanical movement. These valves can show the tendency to get stuck and as a result may not operate upon demand. This can have a severe impact on the func-

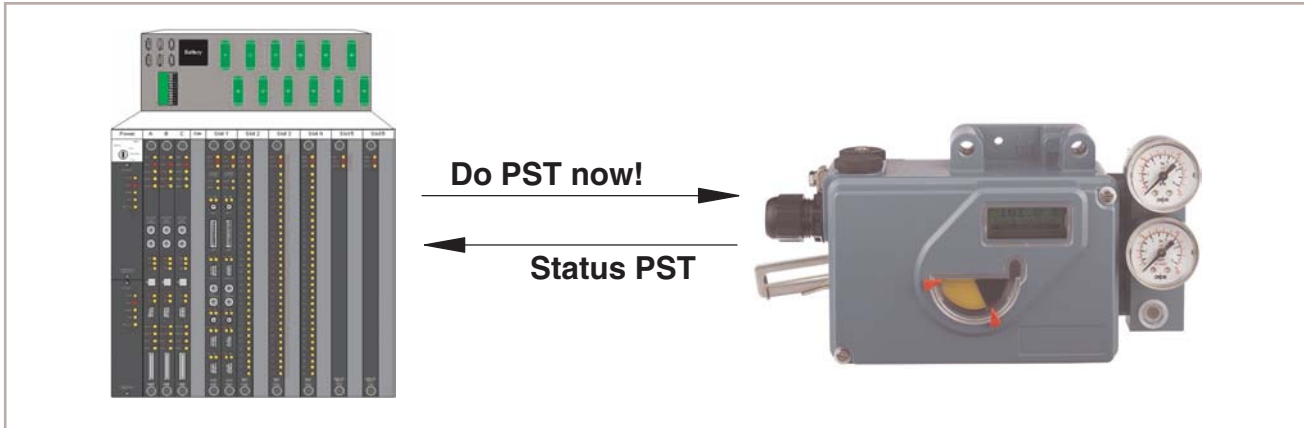
tionality of a Safety System and could result in adverse conditions to operating personnel, plant equipment and the environment.

Partial Stroke Test (PST) offers operators a tool to identify the troubleshooting function of ESD valves. The test can be easily executed via the FDT-DTM based configuration and diagnostic

tools **VALcare™** and **Valve Monitor**.

The test can also be requested by an SIS Logic Solver and the result of the test can be read by the Logic Solver.

This architecture has been developed in conjunction with Triconex and eliminates the possibility of human error while reaching the high level of safety as described by IEC 61508 and IEC 61511.



Sequence of events inside the Triconex memory, for a safe tracability of all done tests

Triconex Sequence of Events Recorder - [SOE Retrieve: PST.SED]					
Date	Time	Alias	TagName	Variable State	Node
12/07/2006	11:58:13.805	10003	PST_LAUNCH	TRUE	01 - trinode01
12/07/2006	11:58:26.456	10003	PST_LAUNCH	FALSE	01 - trinode01
12/07/2006	11:58:26.856	10001	PST_STATUS	TRUE	01 - trinode01
12/07/2006	11:58:26.856	15001	PST_COMPLETED	TRUE	01 - trinode01
12/07/2006	11:58:33.906	15001	PST_COMPLETED	FALSE	01 - trinode01



LCP960 Local Control Panel for PST

Features of Partial Stroke Test

PST Activation	Manually
	Automatically
	By means of separate Binary Input for SIS Logic Solver
Configuration	Test Interval
	Setpoint Change
	Maximum Wait Time
	Minimum Pressure
	Soft PST
	PST Setpoint Change • Fixed • Random
Action	PST for single or double acting actuator
Audit trail	In DCS by means of communication
	In SOE of Triconex by means of a digital output
Alarms	Minimum Pressure
	Time to perform PST
Trends	Break Pressure
	Time to re-inflate
Local Control Panel LCP960	with push button to launch PST
	LCD with PST Status
	Timer for last PST done

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