Configuring the FIELDVUE[™] DVC6200 SIS for Throttling Control Using ValveLink[™] Software

A WARNING

This instruction manual supplement is not intended to be used as a stand-alone document. It must be used in conjunction with the following documents:

- Safety manual for DVC6200 SIS Digital Valve Controller (<u>D103601X012</u>), sections pertaining to the Position Monitor
- Fisher FIELDVUE DVC6200 SIS Instruction Manual (<u>D103557X012</u>)

Failure to use this instruction manual supplement in conjunction with the above referenced manuals could result in personal injury or property damage. If you have any questions regarding these instructions or need assistance in obtaining either of these documents, contact your <u>Emerson sales office</u> or Local Business Partner.

This instruction manual supplement is intended to assist in the use of the DVC6200 SIS as a SIL capable position monitor AND as a non-SIL capable throttling digital valve controller.

WARNING

The DVC6200 SIS failure rates for the digital valve controller safety function, as listed in the FMEDA and SIL certificate, are not valid in this configuration (with 4-20 mA operation).





Configuration

When using natural gas as the supply medium:

- Remove electrical power before removing the housing cap. Personal injury or property damage from fire or explosion may result if power is not disconnected before removing the cap.
- Ensure that the cover is correctly installed before putting this unit back into service. Failure to do so could result in personal injury or property damage from fire or explosion.
- 1. Remove the Printed Wiring Board from the DVC6200 SIS.

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- 2. Ensure that the Hardware Shutdown DIP Switch is configured to disabled, as shown in figure 1.
- 3. Confirm that the Output DIP Switch is in the desired position for use as either a Position Transmitter or Switch.



- 4. Reassemble the DVC6200 SIS.
- 5. Connect the DVC6200 SIS to ValveLink software.
- 6. Run a PST Calibration, if not done earlier.
- 7. Under Detailed Setup, select Travel/Pressure Control, see figure 3 for tab location.
 - a. Set the Low Limit/Cutoff Point to 0.5-1% more than the Travel Low Low Alert Point in the Travel Alerts tab (refer to figure 2 for Travel Alerts tab).

b. Set the HighLimit/Cutoff Point to 0.5-1% less than the Travel High High Alert Point in the Travel Alerts tab (refer to figure 2 for Travel Alerts tab).

Figure 2. Travel Alerts Tab

Alert Record Burst Travel/Pressure Control Informational Bratus Sectronic Alerts	Sensor Alerts Instrument Valve Trim Actuator Accessories Notes
Initial Setup Outputs Travel History Alerts Pressure Alerts Device Identification Travel Alerts pput Characterization	Tuning SIS / Partial Stroke SIS / Partial Stroke Alerts PST Alert Behavior Local Control Panel Solenoid Valve Test
\smile	
Parameter Instrument	Download/Upload Database Dataset:
Set Point (%)	
Travel (%)	
Deadband for All Travel Alerts (%)	<u>←</u> <u>→</u> 5
Travel Deviation	
Travel Deviation Alert	Enabled T
Travel Deviation Alert Point (%)	5
Travel Deviation Alert Time (sec)	
Travel High High	
Travel High Alert	← → Disabled ·
Travel High High Alert Point (%)	98.97
Travel Low Low	
Travel Low Low Alert	← → Disabled ·
Travel Low Low Alert Point (%)	

- 8. Once the Cutoff Points are set, download to the DVC6200 SIS.
- 9. When the DVC6200 SIS is placed in service it will throttle between whatever cutoffs are set in step 7.

In the example shown in figure 3, it will be able to throttle between 5 and 95% valve travel.

Figure 3. Detailed Setup > Travel/Pressure Control

Informational Status	Electronic Alerts Dynamic R	Response Spec Sheet Units	Valve	Trim	Actuator	Accessories	Notes
Initial Setup Inputs Outp	uts Travel History Alerts Deviation & Other Alerts	General Self Test Shutdown Travel Alerts	Input Characterization	Pressure Tuning	SIS / Partial Stroke	Alert Record and Commands	Travel/Pressure Control
Parameter	Instrument		Download/Upload Data	base Dataset:			
Travel/Pressure Control							
Travel / Pressure Select	Travel		Trav	zel			~
Low Limit/Cutoff Select	Cutoff		Cuto	off			~
Low Limit/Cutoff Point	5		← → 5				
High Limit/Cutoff Select	Cutoff			off			
High Limit/Eutoff Point	95		← → 95				
End Point Press. Control	,						
End Point Control Enable	Disabled			blad			
Control End	Net Conformat			10100			
	Not Configured						
Pressure Set Point	0.0 bar			psi			
Pressure Saturation Time (sec)	45		← → 45				

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