

Supplement to Fisher® FIELDVUE™ DVC6000 SIS Digital Valve Controllers for Safety Instrumented System (SIS) Solutions Instruction Manual

Partial Stroke Test using 475/375 Field Communicator

The Partial Stroke Test procedure contained in this Instruction Manual Supplement is to be considered as a guideline only and should be modified to address site-specific requirements. Use this procedure in conjunction with the appropriate Safety Manual for FIELDVUE DVC6000 SIS Digital Valve Controllers for Safety Instrumented System (SIS) Solutions (0-20 mA or 0-24 VDC [D103035X012] or 4-20 mA [D103294X012]) and the Fisher FIELDVUE DVC6000 SIS Series Digital Valve Controllers for Safety Instrumented System (SIS) Solutions Instruction Manual (D103230X012). In addition, exercise good engineering practices and abide by specific plant safety guidelines for safe operation.

Note

This procedure requires the use of the 475 or the 375 Field Communicator, device description (DD) rev. 1.

This procedure should be done with the digital valve controller's Instrument Mode set to "In Service". There is nothing in the scope of this procedure that requires the digital valve controller's Instrument Mode be set to "Out of Service".

Partial Stroke Test Procedure

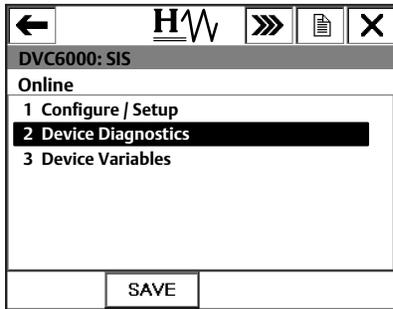
The Partial Stroke Test allows a DVC6000 SIS digital valve controller to move a valve from its current position to a specified travel target, and then return it to its original position, while the instrument is in service and operational. In an SIS application, it is important to be able to exercise and test the shut down valve to verify that it will operate when commanded. This feature allows you to partially stroke the valve while continually monitoring the shut down signal. If a demand arises, the test is aborted and the valve moves to its commanded position. The purpose of this test is to ensure that the valve assembly moves upon demand.

1. Physically inspect the valve and positioner assembly in the field for any loose screws, loose mounting bracket, loose feedback linkage, loose or broken tubing/conduit or the other mechanically loose conditions. Check air filter regulators to ensure they are operating properly. Inspect gauges and verify that they are reading correctly.



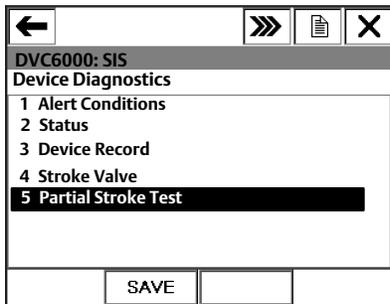
2. Connect the Field Communicator to the DVC6000 SIS digital valve controller. Select “Device Diagnostics” from the Online menu as shown in figure 1.

1. Online Menu



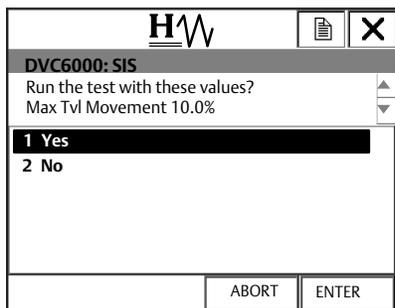
3. Select Partial Stroke Test (figure 2) in the Device Diagnostics Menu.

Figure 2. Device Diagnostics Menu



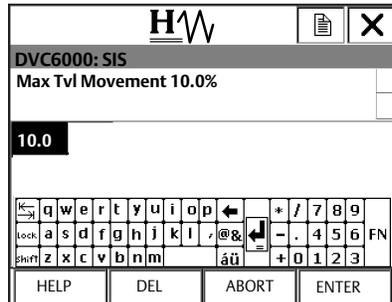
4. After selecting Partial Stroke Test you will be asked if you want to run the test using the Max Tvl Movement, as shown in figure 3. If you select No, go to step 5. If you select Yes, go to step 8.

Figure 3. Max Tvl Movement



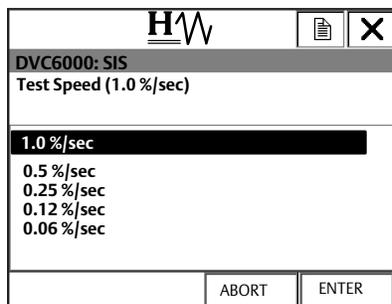
5. Enter the maximum travel movement (figure 4) desired and select ENTER.

Figure 4. Enter Max Tvl Movement



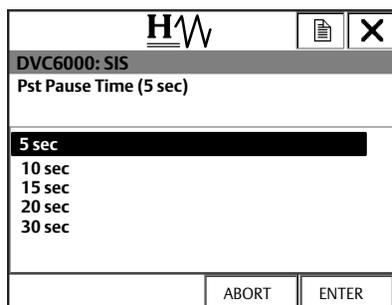
6. Choose the desired test speed for the Partial Stroke Test, as shown in figure 5, and select ENTER

Figure 5. Select the PST Test Speed



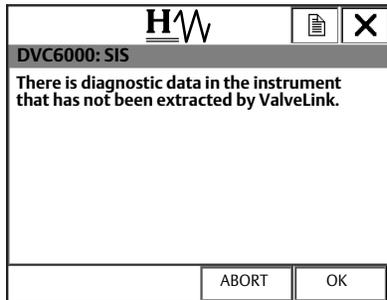
7. Choose the desired test pause time, as shown in figure 6, and select ENTER.

Figure 6. Select the PST Pause Time



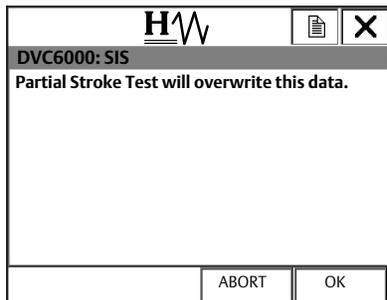
8. If there is already Partial Stroke Test data in the DVC6000 SIS, you will see the message shown in figure 7. Select OK and go to step 9 to continue running the Partial Stroke test using the 375 Field Communicator. Select ABORT if you want to extract the existing data using ValveLink™ Software.

Figure 7. Data not Extracted by ValveLink Software



9. Select OK to confirm that you want the current Partial Stroke Test to overwrite the existing data (see figure 8) and go to step 10. Select ABORT if you want to extract the existing data using ValveLink Software.

Figure 8. Partial Stroke Test will Overwrite Data



10. Choose Yes, as shown in figure 9, and select ENTER to overwrite the existing diagnostic data in the DVC6000 SIS digital valve controller and to start the Partial Stroke Test, as shown in figure 10.

Figure 9. Overwrite Existing Data

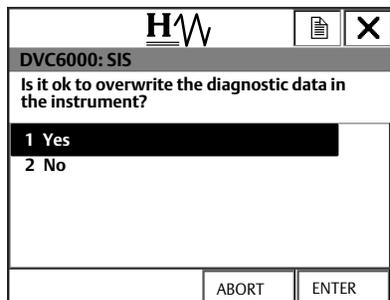
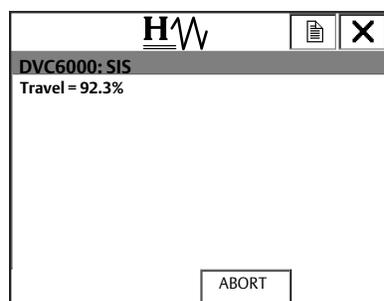
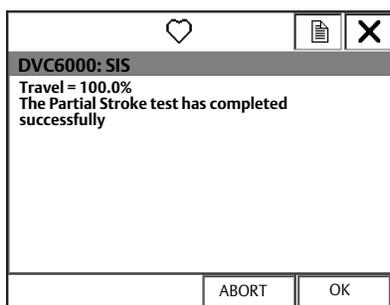


Figure 10. Partial Stroke Test Initiated



11. Once the Partial Stroke test has completed successfully, as shown in figure 11, select OK to return to the Device Diagnostics Menu (figure 2). Select HOME to return to the Online Menu (figure 1).

Figure 11. Partial Stroke has Completed Successfully



Related Documents

- Bulletin 62.1:DVC6000 SIS - Fisher FIELDVUE DVC6000 SIS Digital Valve Controllers for Safety Instrumented System (SIS) Solutions (D102784X012)
- Fisher FIELDVUE DVC6000 SIS Digital Valve Controllers for Safety Instrumented System (SIS) Solutions Instruction Manual (D103230X012)
- Fisher FIELDVUE DVC6000 SIS Digital Valve Controllers for Safety Instrumented System (SIS) Solutions Quick Start Guide (D103307X012)
- Safety Manual for FIELDVUE DVC6000 Digital Valve Controllers for Safety Instrumented System (SIS) Solutions 0-20 mA or 0-24 VDC (D103035X012) or
- Safety Manual for FIELDVUE DVC6000 Digital Valve Controllers for Safety Instrumented System (SIS) Solutions 4-20 mA (D103294X012)
- Pre-Commissioning Installation / Setup Guidelines using ValveLink Software—Supplement to Fisher FIELDVUE DVC6000 SIS Digital Valve Controllers for Safety Instrumented System (SIS) Solutions Instruction Manual
- ValveLink Software Help or Documentation
- Getting Started—475 Field Communicator (available at www.fieldcommunicator.com)
- Getting Started—375 Field Communicator (Rosemount Document 00825-0100-4276)

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