

Fisher® FIELDVUE™ DVC6200 Digital Valve Controller

Contents

| | |
|--|----|
| Installation | 3 |
| Mounting Guidelines | 8 |
| Pneumatic Connections | 18 |
| Wiring and Electrical Connections | 21 |
| Basic Setup | 24 |
| Loop Schematics and Nameplates | 32 |
| Specifications | 43 |



| This guide applies to the DVC6200 digital valve controller | | |
|--|------------|--------|
| Instrument Level | HC, AD, PD | AC |
| Device Type | 03 | 07 |
| Device Revision | 2 | 2 |
| Hardware Revision | 1 | 1 |
| Firmware Revision | 9 & 10 | 9 & 10 |
| DD Revision | 3 | 1 |



This quick start guide provides installation and initial setup and calibration information for the DVC6200 digital valve controller using the 475 Field Communicator.



✓ Installation Check List

Mounting

- ☐ Magnet assembly properly installed. See installation instructions provided with the mounting kit.
- ☐ DVC6200 digital valve controller correctly mounted on the actuator. See installation instructions provided with the mounting kit.

Pneumatic Connections and Air Supply

- ☐ Regulator correctly mounted. Perform one of the regulator mounting procedures on page 17.
- ☐ Air supply connected and at proper pressure. Connect supply as described on page 19. Also see specification on page 43.
- ☐ Instrument output connected to the actuator. Connect instrument output as described on page 20.

Wiring and Electrical Connections

- ☐ The conduit, if needed, properly installed. Refer to local and national electric codes.
- ☐ Loop wiring connected to the LOOP + and - terminals in the terminal box. Connect loop wiring as described on page 21.
- ☐ The HART® filter, if required, installed on your system. To determine if a HART filter is necessary, contact your Emerson Process Management sales office. For HART filter installation information, refer to the appropriate HART filter instruction manual.



The FIELDVUE DVC6200 digital valve controller is a core component of the PlantWeb™ digital plant architecture. The digital valve controller powers PlantWeb by capturing and delivering valve diagnostic data. Coupled with ValveLink™ software, the DVC6200 provides users with an accurate picture of valve performance, including actual stem position, instrument input signal and pneumatic pressure to the actuator. Using this information, the digital valve controller diagnoses not only itself, but also the valve and actuator to which it is mounted.

Note

Do not install, operate, or maintain a DVC6200 digital valve controller without being fully trained and qualified in valve, actuator, and accessory installation, operation, and maintenance. To avoid personal injury or property damage, it is important to carefully read, understand, and follow all contents of this quick start guide, including all safety cautions and warnings. If you have any questions about these instructions, contact your Emerson Process Management sales office before proceeding.

Installation

⚠ WARNING

Avoid personal injury or property damage from sudden release of process pressure or bursting of parts. Before proceeding with any Installation procedures:

- Always wear protective clothing, gloves, and eyewear to prevent personal injury or property damage.
- Do not remove the actuator from the valve while the valve is still pressurized.
- Disconnect any operating lines providing air pressure, electric power, or a control signal to the actuator. Be sure the actuator cannot suddenly open or close the valve.
- Use bypass valves or completely shut off the process to isolate the valve from process pressure. Relieve process pressure from both sides of the valve.
- Vent the pneumatic actuator loading pressure and relieve any actuator spring precompression.
- Use lock-out procedures to be sure that the above measures stay in effect while you work on the equipment.
- Check with your process or safety engineer for any additional measures that must be taken to protect against process media.

Figure 1. FIELDVUE DVC6200 Digital Valve Controller Mounted on a Fisher Sliding-Stem Valve Actuator



W9643

⚠ WARNING

To avoid static discharge from the plastic cover, do not rub or clean the cover with solvents. To do so could result in an explosion. Clean with a mild detergent and water only.

Special Instructions for “Safe Use” and Installations in Hazardous Locations

Certain nameplates may carry more than one approval, and each approval may have unique installation/wiring requirements and/or conditions of “safe use”. These special instructions for “safe use” are in addition to, and may override, the standard installation procedures. Special instructions are listed by approval type.

⚠ WARNING

Failure to follow these conditions of “safe use” could result in personal injury or property damage from fire or explosion, or area re-classification.

⚠ WARNING

The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Avoid impact and friction during installation and use to prevent risk of ignition.

CSA

Special Conditions of Safe Use

Intrinsically Safe, Explosion-proof, Division 2, Dust Ignition-proof

No special conditions for safe use.

Refer to table 1 for approval information, figure 23 for the CSA loop schematic, and figure 24 for the CSA nameplate.

Table 1. Hazardous Area Classifications—CSA (Canada)

| Certification Body | Certification Obtained | Entity Rating | Temperature Code | Enclosure Rating |
|--------------------|---|---|-----------------------------|-------------------------------------|
| CSA | Ex ia Intrinsically Safe Class I,II,III Division 1 GP A,B,C,D,E, F,G per drawing GE42818 T5 Natural Gas Approved | V _{max} = 30 VDC I _{max} = 226 mA C _i = 5 nF L _i = 0.55 mH P _i = 1.4 W | T5(T _{amb} ≤ 80°C) | Type 4X, IP66 Single Seal Device |
| | Explosion-proof Class I Division 1 GP B,C,D T6 Natural Gas Approved | --- | T6(T _{amb} ≤ 80°C) | Type 4X, IP66 Single Seal Device |
| | Class I Division 2 GP A,B,C,D T6 Class II Division 1 GP E,F,G T6 Class II Division 2 GP F,G T6 Class III Natural Gas Approved | --- | T6(T _{amb} ≤ 80°C) | Type 4X, IP66 Single Seal Device |

FM

Special Conditions of Safe Use

Intrinsically Safe. Explosion-proof. Non-incendive. Dust Ignition-proof

1. When product is used with natural gas as the pneumatic medium, the maximum working pressure of the natural gas supply shall be limited to 145 psi.
2. When product is used with natural gas as the pneumatic medium the product shall not be permitted in a Class I, Division 2, Group A, B, C, D location without the proper venting installation per the manufacturer's instruction manual.
3. The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.
4. Part of the enclosure is constructed from plastic. To prevent the risk of electrostatic sparking the plastic surface should only be cleaned with a damp cloth.

Refer to table 2 for approval information, figure 25 for the FM loop schematic, and figure 26 for the FM nameplate.

Table 2. Hazardous Area Classifications—FM (United States)

| Certification Body | Certification Obtained | Entity Rating | Temperature Code | Enclosure Rating |
|--------------------|---|---|-----------------------------|------------------|
| FM | Intrinsically Safe Class I,II,III Division 1 GP A,B,C,D,E,F,G per drawing GE42819 T5 Natural Gas Approved | V _{max} = 30 VDC I _{max} = 226 mA C _i = 5 nF L _i = 0.55 mH P _i = 1.4 W | T5(T _{amb} ≤ 80°C) | NEMA 4X |
| | Explosion-proof Class I Division 1 GP B,C,D T6 Natural Gas Approved | --- | T6(T _{amb} ≤ 80°C) | NEMA 4X |
| | Class I Division 2 GP A,B,C,D T6 Class II Division 1 GP E,F,G T6 Class II Division 2 GP F,G T6 Class III Natural Gas Approved | --- | T6(T _{amb} ≤ 80°C) | NEMA 4X |

ATEX

Special Conditions for Safe Use

Intrinsically Safe. Dust

1. This apparatus can only be connected to an intrinsically safe certified equipment and this combination must be compatible as regards the intrinsically safe rules.
2. The electrical parameters of this equipment must not exceed any following values:
U₀ ≤ 30 V; I₀ ≤ 226 mA; P₀ ≤ 1.4 W
3. Operating ambient temperature: -52°C or -40°C to + 80°C
4. For the model with aluminum body: the apparatus must not be submitted to frictions or mechanical impacts.

Refer to table 3 for additional approval information, and figure 27 for the the ATEX Intrinsically Safe, Dust nameplate.

Flameproof, Dust

Operating ambient temperature: -52°C or -40°C to + 85°C

Refer to table 3 for additional approval information, and figure 28 for the ATEX Flameproof, Dust nameplate.

Type n, Dust

Operating ambient temperature: -52°C or -40°C to + 80°C

Refer to table 3 for additional approval information, and figure 29 for the ATEX Type n, Dust nameplate.

Table 3. Hazardous Area Classifications—ATEX

| Certificate | Certification Obtained | Entity Rating | Temperature Code | Enclosure Rating |
|-------------|--|---|------------------------------------|------------------|
| ATEX | Ⓢ II 1 G & D Intrinsically Safe Gas Ex ia IIC T5/T6 Ga Dust Da Ex iaD 20 T100°C(Tamb ≤ 80°C) Da Ex iaD 20 T85°C(Tamb ≤ 75°C) Natural Gas Approved | Ui = 30 V li = 226 mA Ci = 5 nF Li = 0.55 mH Pi = 1.4 W | T5(Tamb ≤ 80°C) T6(Tamb ≤ 75°C) | IP66 |
| | Ⓢ II 2 G & D Flameproof Ex d IIC T5/T6 Dust Ex tD A21 IP66 T90°C(Tamb ≤ 85°C) Ex tD A21 IP66 T80°C(Tamb ≤ 75°C) Natural Gas Approved | --- | T5(Tamb ≤ 85°C) T6(Tamb ≤ 75°C) | IP66 |
| | Ⓢ II 3 G & D Type n Ex nCnL T5/T6 Dust Ex tD A22 IP66 T85°C(Tamb ≤ 80°C) Ex tD A22 IP66 T80°C(Tamb ≤ 75°C) Natural Gas Approved | --- | T5(Tamb ≤ 80°C) T6(Tamb ≤ 75°C) | IP66 |

IECEx**Conditions of Certification****Intrinsically Safe, Flameproof, Type n***Ex ia*

- Warning:** Electrostatic charge hazard. Do not rub or clean with solvents. To do so could result in an explosion.
-52°C/-40°C ≤ Ta ≤ +80°C; T6 (Ta ≤ 75°C); T5 (Ta ≤ 80°C)

Electrical parameters for protection type “i”: Ui ≤ 30V, li ≤ 226 mA, Pi ≤ 1.4W, Ci ≤ 5 nF, Li ≤ 0.55 mH

EX d / Ex nC

- Do not open while energized.
- Warning:** Electrostatic charge hazard. Do not rub or clean with solvents. To do so could result in an explosion.
52°C/-40°C ≤ Ta ≤ +80°C; T6 (Ta ≤ 75°C); T5 (Ta ≤ 80°C)

Refer to table 4 for additional approval information, figure 31 for the IECEx loop schematic, and figure 32 for the IECEx nameplate.

Table 4. Hazardous Area Classifications—IECEX

| Certificate | Certification Obtained | Entity Rating | Temperature Code | Enclosure Rating |
|-------------|--|---|------------------------------------|------------------|
| IECEX | Intrinsically Safe Gas Ex ia IIC T5/T6 per drawing GE42990 Natural Gas Approved | Ui = 30 VDC Ii = 226 mA Ci = 5 nF Li = 0.55 mH Pi = 1.4 W | T5(Tamb ≤ 80°C) T6(Tamb ≤ 75°C) | IP66 |
| | Flameproof Gas Ex d IIC T5/T6 Natural Gas Approved | --- | T5(Tamb ≤ 80°C) T6(Tamb ≤ 75°C) | IP66 |
| | Type n Gas Ex nC IIC T5/T6 Natural Gas Approved | --- | T5(Tamb ≤ 80°C) T6(Tamb ≤ 75°C) | IP66 |

INMETRO

Standards used for Certification

IEC 60079.0:2007
IEC 60079.1:2001
IEC 60079-11:1999
IEC60079-15:2001

Special Conditions of Safe Use

Intrinsically Safe, Flameproof, Type n

No special conditions of safe use.

Refer to table 5 for approval information and figure 30 for the INMETRO approvals nameplate.

Table 5. Hazardous Area Classifications—INMETRO

| Certificate | Certification Obtained | Entity Rating | Temperature Code | Enclosure Rating |
|-------------|--|---|------------------------------------|------------------|
| INMETRO | Intrinsically Safe Gas BR-Ex ia IIC T5/T6 Gb Natural Gas Approved | Ui = 30 VDC Ii = 226 mA Ci = 5 nF Li = 0.55 mH Pi = 1.4 W | T5(Tamb ≤ 80°C) T6(Tamb ≤ 75°C) | IP66W |
| | Flameproof Gas BR-Ex d IIC T5/T6 Gb Natural Gas Approved | --- | T5(Tamb ≤ 80°C) T6(Tamb ≤ 75°C) | IP66W |
| | Type n Gas BR-Ex nC IIC T5/T6 Gc Natural Gas Approved | --- | T5(Tamb ≤ 80°C) T6(Tamb ≤ 75°C) | IP66W |

Mounting Guidelines

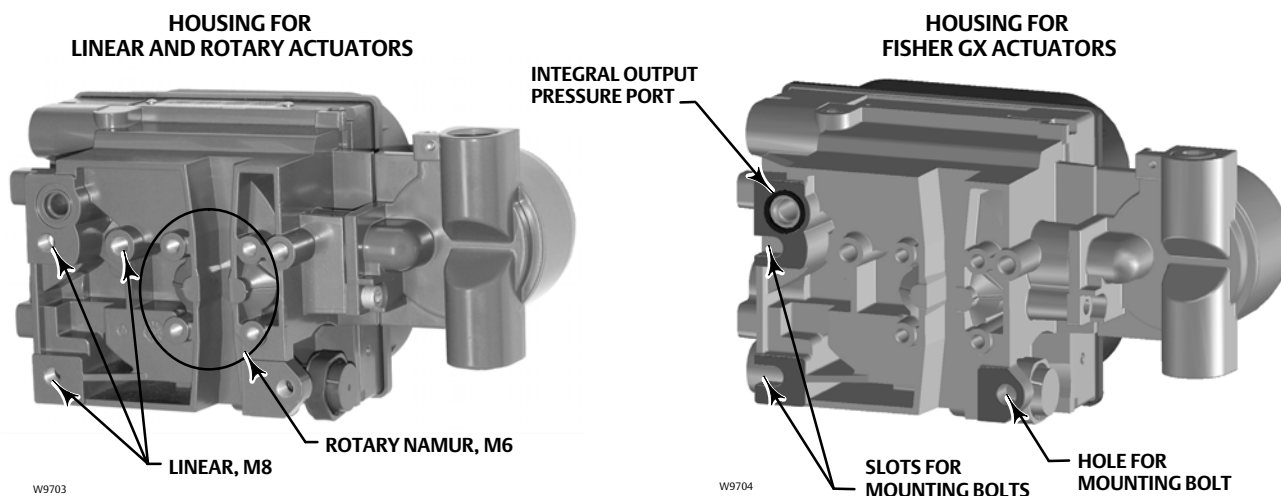
If ordered as part of a control valve assembly, the factory will mount the digital valve controller on the actuator and calibrate the instrument. If you purchased the digital valve controller separately, you will need a mounting kit to mount the digital valve controller on the actuator. The following procedures are general guidelines that you should consider when mounting the digital valve controller. See the instructions that come with the mounting kit for detailed information on mounting the digital valve controller to a specific actuator model.

The DVC6200 housing is available in two different configurations, depending on the actuator mounting method. Figure 2 shows the available configurations. The feedback system for the DVC6200 digital valve controller utilizes a magnetic assembly for true linkage-less, non-contacting position measurement. In order to prevent inadvertent stem movement while the instrument is in operation, magnetic tools (such as a magnetic-tipped screwdriver) should not be used.

Note

The magnet assembly may be referred to as a magnetic array in user interface tools.

Figure 2. Housing Configurations



CAUTION

The magnet assembly material has been specifically chosen to provide a long-term stable magnetic field.

However, as with any magnet, care must be taken when handling the magnet assembly. Another high powered magnet placed in close proximity (less than 25 mm) can cause permanent damage. Potential sources of damaging equipment include, but are not limited to: transformers, DC motors, stacking magnet assemblies.

CAUTION

General Guidelines for use of High Power Magnets with Positioners

Use of high power magnets in close proximity to any positioner which is operating a process should be avoided. Regardless of the positioner model, high power magnets can affect the positioner's ability to control the valve. Technicians should avoid the use of high power magnets in close proximity with any positioner.

Use of Magnetic Tools with the DVC6200

- **Magnetic Tip Screw Drivers** – Magnetic tip screw drivers can be used to work on the DVC6200. However, they should not be brought in close proximity to the magnet assembly (located at the back of the instrument) during process operations.
- **Calibrator Strap Magnets** – These are high power magnets used to hold 4-20 ma calibrators. Normally, these calibrators would not be used while an instrument is controlling the process. High power magnets should be kept at least 15 cm (6 inches) from the DVC6200.

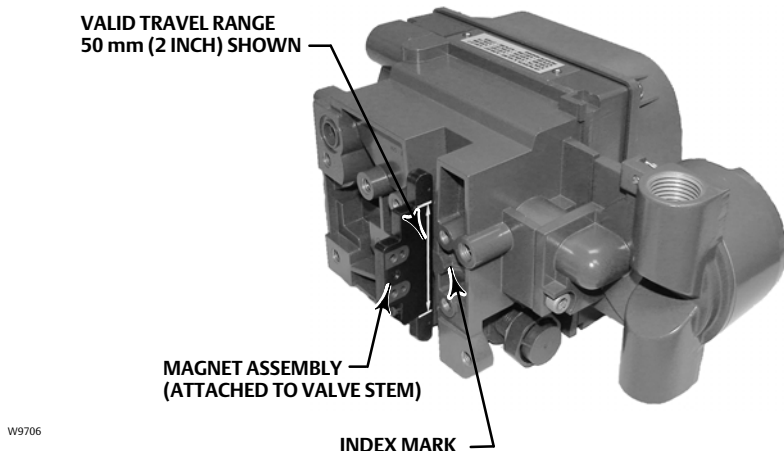


Note

As a general rule, do not use less than 60% of the magnet assembly travel range for full travel measurement. Performance will decrease as the assembly is increasingly subranged.

The linear magnet assemblies have a valid travel range indicated by arrows molded into the piece. This means that the hall sensor (on the back of the DVC6200 housing) has to remain within this range throughout the entire valve travel. See figure 3. The linear magnet assemblies are symmetrical. Either end may be up.

Figure 3. Travel Range

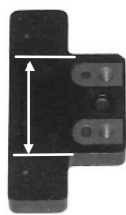


There are a variety of mounting brackets and kits that are used to mount the DVC6200 to different actuators. However, despite subtle differences in fasteners, brackets, and connecting linkages, the procedures for mounting can be categorized as follows:

- Sliding-stem linear actuators
- Fisher rotary actuators
- GX actuator
- Quarter-turn actuators

See figure 4 for examples of the different travel feedback magnet assemblies.

Figure 4. Magnet Assemblies



AVAILABLE CONSTRUCTIONS:
 SSTEM #19 ASSEMBLY (19 mm / 3/4 INCH)
 SSTEM #25 ASSEMBLY (25 mm / 1 INCH)



AVAILABLE CONSTRUCTIONS:
 SSTEM #38 ASSEMBLY (38 mm / 1-1/2 INCH)
 SSTEM #50 ASSEMBLY (50 mm / 2 INCH)
 SSTEM #100 ASSEMBLY (100 mm / 4 INCH)
 SSTEM #210 ASSEMBLY (210 mm / 8-1/4 INCH)



**RSHAFT END
 ASSEMBLY 90 DEG**

AVAILABLE CONSTRUCTIONS:
 SSTEM #1 ROLLER ASSEMBLY
 RSHAFT #1 WINDOW ASSEMBLY
 (FISHER 2052 SIZE 2 & 3, 1051/1052
 SIZE 40-70, 1061 SIZE 30-100,
 SLIDING-STEM > 210 mm (8.25 INCHES)
 RSHAFT #2 WINDOW ASSEMBLY
 (2052 SIZE 1, 1051/1052 SIZE 20-33)

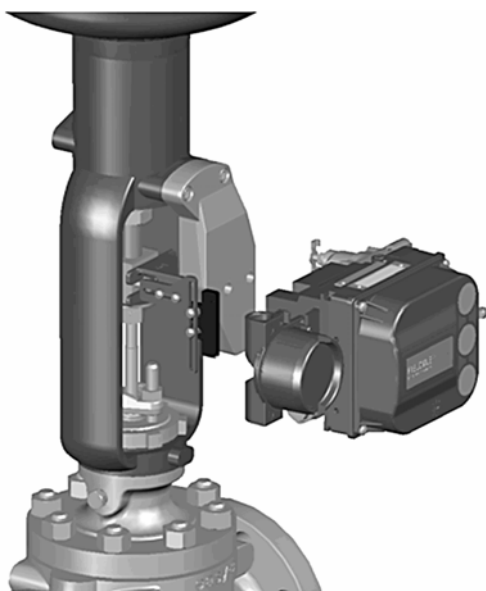
Note

Mounting the instrument vertically, with the vent at the bottom of the assembly, or horizontally, with the vent pointing down, is recommended to allow drainage of moisture that may be introduced via the instrument air supply.

Sliding-Stem Linear Actuators up to 210 mm (8.25 Inches) of Travel

The DVC6200 digital valve controller has linkage-less, non-contact feedback on sliding-stem actuators with up to 210 mm (8.25 inches) travel. Figure 5 shows a typical mounting on a sliding-stem actuator. For actuators with greater than 210 mm (8.25 inches) travel, see the guidelines on page 14.

Figure 5. Mounting Parts for Sliding-Stem Actuator with up to 210 mm (8.25 inches) Travel



1. Isolate the control valve from the process line pressure and release pressure from both sides of the valve body. Shut off all pressure lines to the actuator, releasing all pressure from the actuator. Use lock-out procedures to be sure that the above measures stay in effect while you work on the equipment.
2. Attach the mounting bracket to the actuator.
3. Loosely attach the feedback pieces and magnet assembly to the valve stem connector. Do not tighten the fasteners because fine adjustment is required.

CAUTION

Do not install a magnet assembly that is shorter than the physical travel of the actuator. Loss of control will result from the magnet assembly moving outside the range of the index mark in the feedback slot of the DVC6200 housing.

4. Using the alignment template (supplied with the mounting kit), position the magnet assembly inside the retaining slot.
5. Align the magnet assembly as follows:
 - For air-to-open actuators (e.g. Fisher 667) vertically align the magnet assembly so that the center line of the alignment template is lined up as close as possible with the upper extreme of the valid travel range on the magnet assembly. The magnet assembly should be positioned so that the index mark in the feedback slot of the DVC6200 housing is within the valid range on the magnet assembly throughout the range of travel. See figure 6.
 - For air-to-close actuators (e.g. Fisher 657) vertically align the magnet assembly so that the center line of the alignment template is lined up as close as possible with the lower extreme of the valid travel range on the magnet assembly. The magnet assembly should be positioned so that the index mark in the feedback slot of the DVC6200 housing is within the valid range on the magnet assembly throughout the range of travel. See figure 7.

Figure 6. Air-to-Open Magnet Assembly Alignment

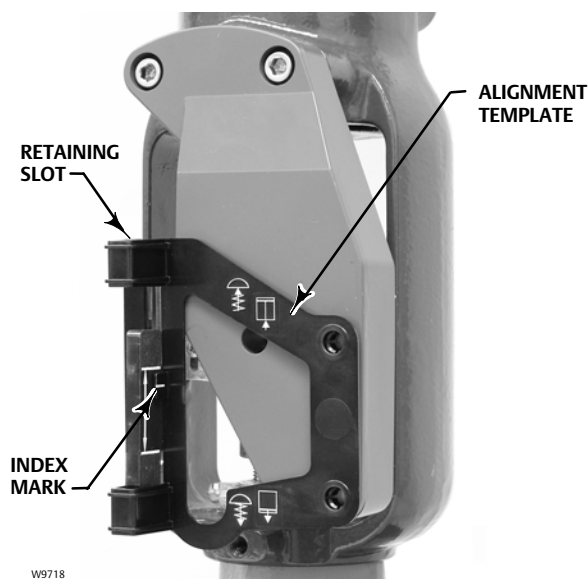
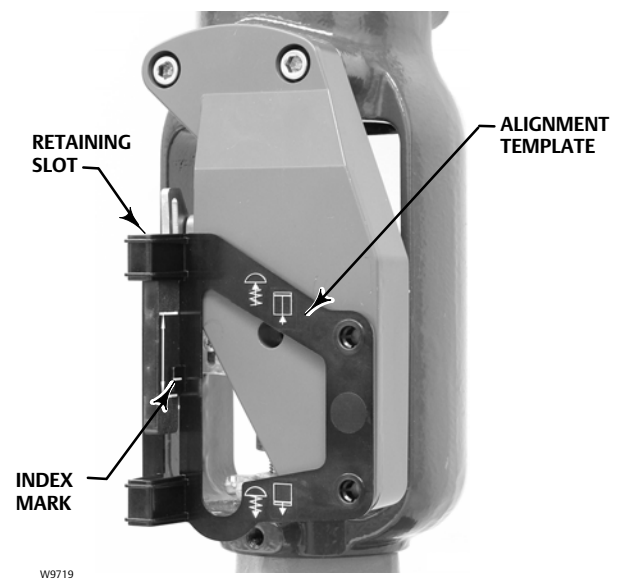


Figure 7. Air-to-Close Magnet Assembly Alignment



6. Tighten the fasteners and remove the alignment template.

7. Mount the digital valve controller to the mounting bracket, using the mounting bolts.
8. Check for clearance between the magnet assembly and the DVC6200 feedback slot.

Note

Ensure that there is clearance between the magnet assembly and the DVC6200 housing slot throughout the full range of travel.

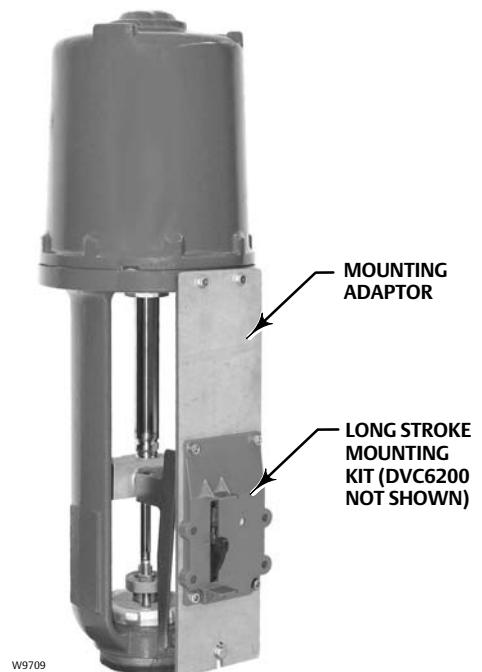
Fisher Rotary Actuators and Sliding-Stem Linear Actuators over 210 mm (8.25 Inches) Travel

The DVC6200 digital valve controller uses a cam (designed for linear response) and roller as the feedback mechanism. See figures 8 and 9.

Figure 8. Mounting on Rotary Actuators



Figure 9. Mounting on Sliding-Stem (Linear) Actuators over 210 mm (8.25 Inches) Travel

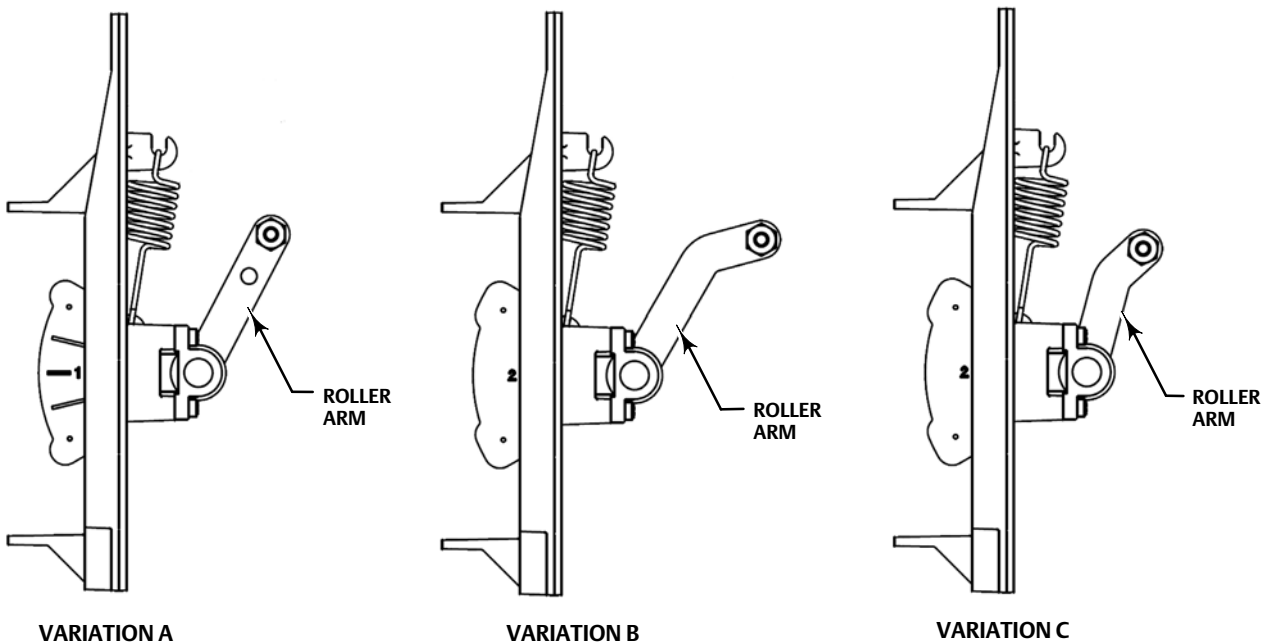


Note

All cams supplied with FIELDVUE mounting kits are characterized to provide a linear response.

There are three different mounting adaptations, based on the actuator design (see figure 10).

Figure 10. Mounting Variations



| VARIATION | ACTUATOR |
|-----------|-------------------------------------|
| A | 2052 Size 2 and 3 |
| | 1051/1052 size 40-70 |
| | 1061 Size 30-100 |
| | Sliding-Stem > 210 mm (8.25 inches) |
| B | 2052 Size 1 |
| C | 1052 Size 20-33 |
| | 1051 Size 33 |

NOTE THE DIFFERENCE IN THE SHAPE AND LENGTH OF THE ROLLER ARM

E1229

Fisher Rotary Actuators

Refer to the following guidelines when mounting on rotary actuators.

1. Isolate the control valve from the process line pressure and release pressure from both sides of the valve body. Shut off all pressure lines to the pneumatic actuator, releasing all pressure from the actuator. Use lock-out procedures to be sure that the above measures stay in effect while working on the equipment.
2. Verify that the appropriate cam is installed on the actuator as described in the instructions included with the mounting kit.
3. Mount the DVC6200 on the actuator as follows:
 - If required, a mounting adaptor is included in the mounting kit. Attach the adaptor to the digital valve controller, then attach the digital valve controller assembly to the actuator. The roller on the digital valve controller feedback arm will contact the actuator cam as it is being attached.
 - If no mounting adaptor is required, attach the digital valve controller and mounting kit assembly to the actuator. The roller on the digital valve controller feedback arm will contact the actuator cam as it is being attached.

Sliding-Stem Linear Actuators over 210 mm (8.25 Inches) Travel

Refer to the following guidelines when mounting on sliding-stem linear actuators over 210 mm (8.25 inches) travel (see figure 9).

1. Isolate the control valve from the process line pressure and release pressure from both sides of the valve body. Shut off all pressure lines to the pneumatic actuator, releasing all pressure from the actuator. Use lock-out procedures to be sure that the above measures stay in effect while working on the equipment.
2. Install the cam to the valve stem connector as described in the instructions included with the mounting kit.
3. Install the mounting adaptor to the actuator.
4. Attach the digital valve controller and mounting kit assembly to the mounting adaptor. The roller on the digital valve controller feedback arm will contact the actuator cam as it is being attached.

GX Actuators

The DVC6200 digital valve controller mounts directly on the GX actuator without the need for a mounting bracket.

Identify the yoke side to mount the DVC6200 digital valve controller based on the actuator fail mode. Refer to the GX Control Valve and Actuator System instruction manual (D103175X012).

1. Isolate the control valve from the process line pressure and release pressure from both sides of the valve body. Shut off all pressure lines to the actuator, releasing all pressure from the actuator. Use lock-out procedures to be sure that the above measures stay in effect while you work on the equipment.
2. Loosely attach the feedback pieces and magnet assembly to the valve stem connector. Do not tighten the fasteners because fine adjustment is required.

CAUTION

Do not install a magnet assembly that is shorter than the physical travel of the actuator. Loss of control will result from the magnet assembly moving outside the range of the index mark in the feedback slot of the DVC6200 housing.

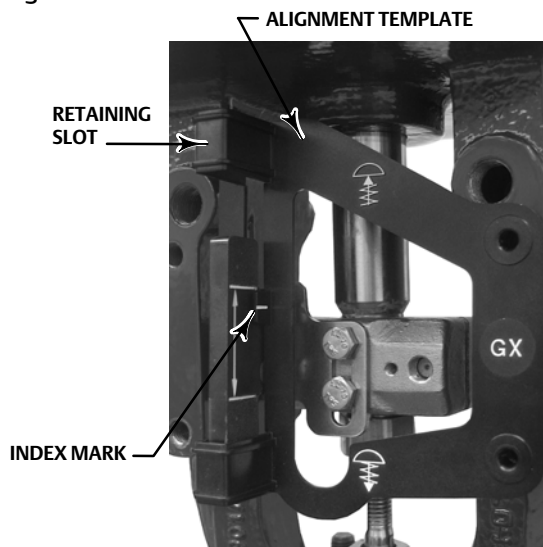
3. Using the alignment template (supplied with the mounting kit), position the feedback assembly inside the retaining slot.
4. Align the magnet assembly as follows:

For air-to-open GX actuators vertically align the magnet assembly so that the center line of the alignment template is lined up as close as possible with the upper extreme of the valid travel range on the magnet assembly. The magnet assembly should be positioned so that the index mark in the feedback slot of the DVC6200 housing is within the valid range on the magnet assembly throughout the range of travel. See figure 11.

For air-to-close GX actuators vertically align the magnet assembly so that the center line of the alignment template is lined up as close as possible with the lower extreme of the valid travel range on the magnet assembly. The magnet assembly should be positioned so that the index mark on the pole pieces (back of the DVC6200 housing) is within the valid range on the magnet assembly throughout the range of travel. See figure 12.

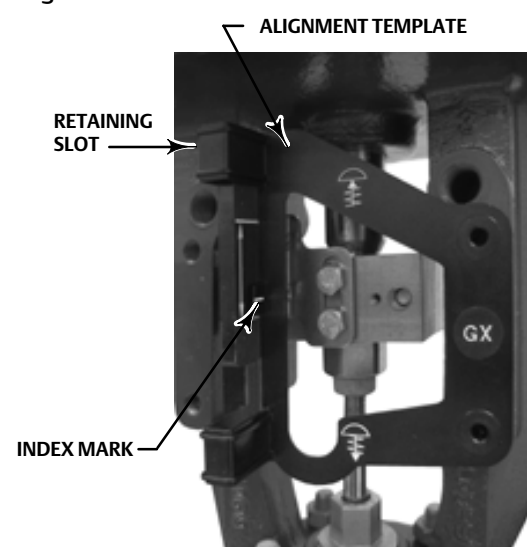
5. Tighten the fasteners and remove the alignment template. Continue on with the appropriate step 6 below.

Figure 11. Air-to-Open Fisher GX Magnet Assembly Alignment



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Figure 12. Air-to-Close Fisher GX Magnet Assembly Alignment

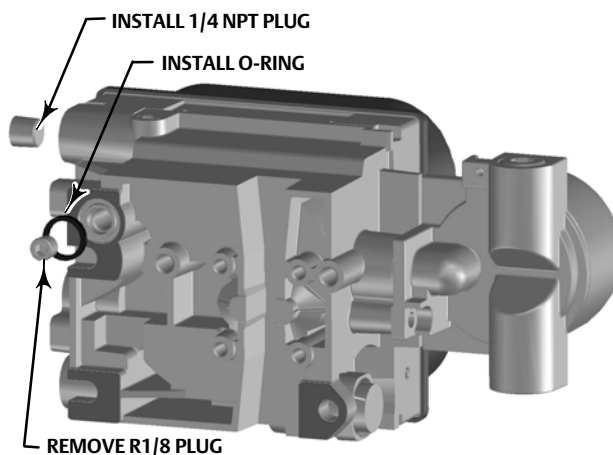


W9219

Air-to-Open GX Actuators

6. Remove the plug (R1/8) from the back of the DVC6200 housing. This pneumatic output port on the DVC6200 lines up with the integral GX actuator pneumatic port. See figure 13.

Figure 13. Modifications for Fisher GX Actuator; Air-to-Open Construction Only



W9707

7. Install the plug (1/4 NPT, included in the mounting kit) to the external output pneumatic port A.
8. Using a 5 mm hex wrench, attach the digital valve controller to the GX actuator mounting pad on the side that has the open pneumatic port. Be sure to place the O-ring between the digital valve controller's pneumatic output and the actuator mounting pad. Pneumatic tubing is not required because the air passages are internal to the actuator.
9. Check for clearance between the magnet assembly and the DVC6200 feedback slot.

10. If not already installed, install a vent in the port on the upper diaphragm casing's air supply connection on the actuator yoke leg.

Air-to-Close GX Actuators

6. Using a 5 mm hex wrench, attach the digital valve controller to the GX actuator mounting pad.
7. Check for clearance between the magnet assembly and the DVC6200 feedback slot.
8. Install tubing between the actuator casing and the appropriate DVC6200 pneumatic output port.
9. If not already installed, install a vent in the port on the lower diaphragm casing.

Note

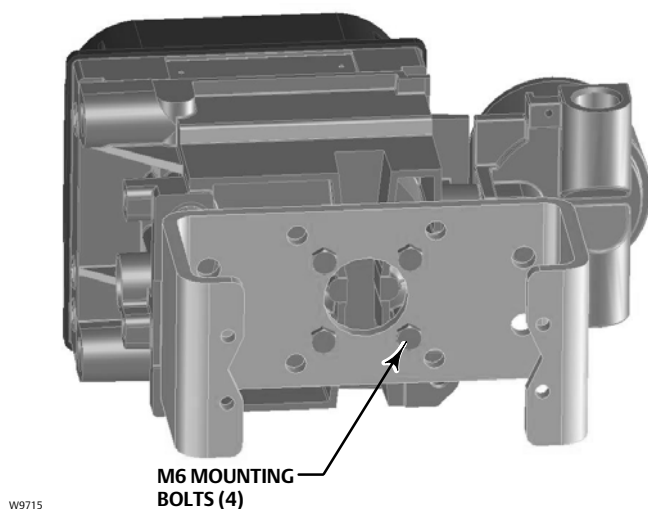
When field converting a GX actuator from air-to-close to air-to-open (or vice-versa), you will need to change the plugs for the pneumatic passages in the DVC6200 housing.

- To convert to air-to-open, remove the R1/8 pneumatic plug on the back of the DVC6200 housing and install an O-ring. Plug the external pneumatic output with a 1/4 NPT plug. Refer to figure 13.
 - To convert to air-to-close, remove the external pneumatic plug. Install an R1/8 plug on the back of the DVC6200 housing. Install tubing between the pneumatic output connection of the DVC6200 to the pneumatic port on top of the actuator casing.
-

Quarter-Turn Rotary Actuators

The DVC6200 digital valve controller can be mounted to any quarter-turn rotary actuator, as well as those that comply with the NAMUR guidelines. A mounting bracket and associated hardware are required. Refer to figure 14.

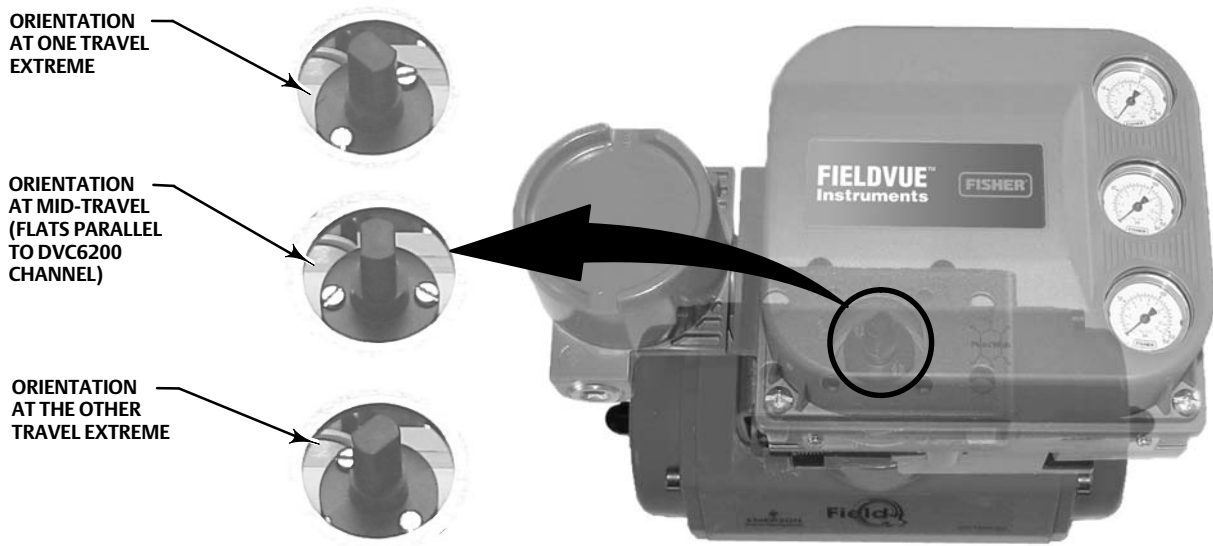
Figure 14. Mounting on Quarter-Turn Actuators



1. Isolate the control valve from the process line pressure and release pressure from both sides of the valve body. Shut off all pressure lines to the actuator, releasing all pressure from the actuator. Use lock-out procedures to be sure that the above measures stay in effect while you work on the equipment.

2. Attach the magnet assembly to the actuator shaft. At mid-travel, the flats on the magnet assembly must be parallel to the channel on the back of the DVC6200 housing, as shown in figure 15.
3. Install the mounting bracket on the actuator.
4. Attach the digital valve controller to the mounting bracket using the 4 mounting bolts, as shown in figure 14.
5. Check for clearance between the magnet assembly and the DVC6200 feedback slot.
6. Install tubing between the actuator casing and the appropriate DVC6200 pneumatic output port.

Figure 15. Magnet Assembly Orientation on Quarter-Turn Actuators



W9700

Remote Mount DVC6200 Instruments

Refer to the DVC6200 digital valve controller instruction manual (D103409X012), available from your Emerson Process Management sales office or www.FIELDVUE.com, for information on mounting the DVC6205 base unit and DVC6215 feedback unit.

Fisher 67CFR Filter Regulator

A 67CFR filter regulator, when used with a DVC6200 digital valve controller, can be mounted one of three ways.

Integral-Mounted Regulator

Refer to figure 16. Lubricate an O-ring and insert it in the recess around the SUPPLY connection on the digital valve controller. Attach the 67CFR filter regulator to the side of the digital valve controller. Thread a 1/4-inch socket-head pipe plug into the unused outlet on the filter regulator. This is the standard method of mounting the filter regulator.

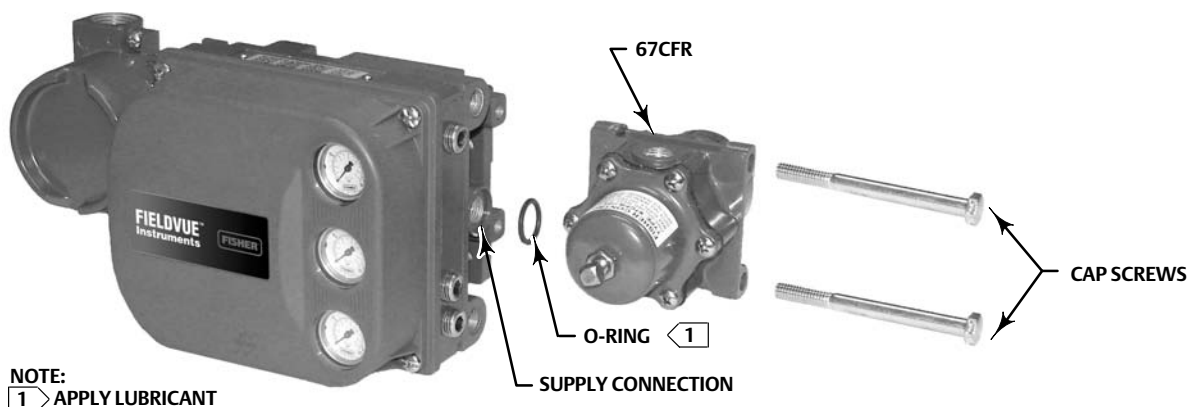
Yoke-Mounted Regulator

Mount the filter regulator with two cap screws to the pre-drilled and tapped holes in the actuator yoke. Thread a 1/4-inch socket-head pipe plug into the unused outlet on the filter regulator. No O-ring is required.

Casing-Mounted Regulator

Use the separate 67CFR filter regulator casing mounting bracket provided with the filter regulator. Attach the mounting bracket to the 67CFR and then attach this assembly to the actuator casing. Thread a 1/4-inch socket-head pipe plug into the unused outlet on the filter regulator. No O-ring is required.

Figure 16. Mounting the Fisher 67CFR Regulator on a FIELDVUE DVC6200 Digital Valve Controller



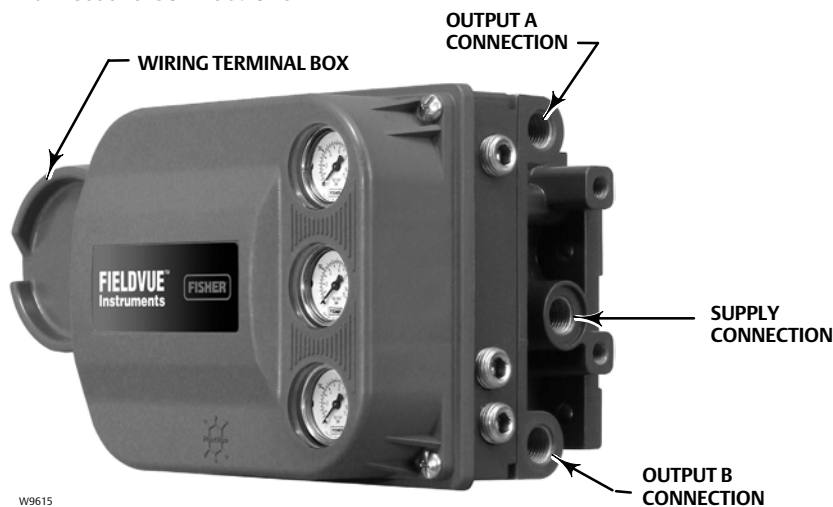
W9702

Pneumatic Connections

Pressure

Pressure connections are shown in figure 17. All pressure connections on the digital valve controller are 1/4 NPT internal connections. Use at least 10 mm (3/8-inch) tubing for all pressure connections. If remote venting is required, refer to the vent subsection.

Figure 17. Pressure Connections



W9615

Note

Make pressure connections to the digital valve controller using tubing with at least 10 mm (3/8-inch) diameter.

Supply

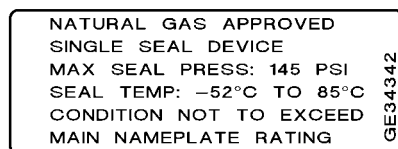
The DVC6200 can be used with air as the supply medium. In addition, Gas Certified DVC6200 constructions can be used with natural gas as the supply medium. If using natural gas as the pneumatic supply medium, natural gas will be used in the pneumatic output connections of the DVC6200 to any connected equipment. In normal operation the unit will vent the supply medium into the surrounding atmosphere unless it is remotely vented.

⚠ WARNING

Not all DVC6200 digital valve controllers are suitable for use with natural gas as the supply medium. If using natural gas as the supply medium, the DVC6200 must be Gas Certified. Using natural gas as the supply medium in a non-certified instrument can result in personal injury or property damage.

Gas Certified instruments can be identified by the natural gas approval label shown in figure 18. Contact your Emerson Process Management sales office for information on obtaining a Gas Certified DVC6200 digital valve controller.

Figure 18. Gas Certified Label



⚠ WARNING

To avoid personal injury or property damage resulting from bursting or parts, do not exceed maximum supply pressure.

Personal injury or property damage may result from fire or explosion if natural gas is used as the supply medium and appropriate preventive measures are not taken. Preventive measures may include, but are not limited to, one or more of the following: Remote venting of the unit, re-evaluating the hazardous area classification, ensuring adequate ventilation, and the removal of any ignition sources. For information on remote venting of this controller, refer to page 20.

Severe personal injury or property damage may occur from an uncontrolled process if the instrument supply medium is not clean, dry, oil-free, and noncorrosive. While use and regular maintenance of a filter that removes particles larger than 40 micrometers in diameter will suffice in most applications, check with an Emerson Process Management field office and industry instrument air quality standards for use with corrosive air or if you are unsure about the amount of air filtration or filter maintenance.

Supply pressure must be clean, dry air that meets the requirements of ISA Standard 7.0.01. A maximum 40 micrometer particle size in the air system is acceptable. Further filtration down to 5 micrometer particle size is recommended. Lubricant content is not to exceed 1 ppm weight (w/w) or volume (v/v) basis. Condensation in the air supply should be minimized.

Alternatively, natural gas may be used as the supply pressure medium in Gas Certified DVC6200 digital valve controllers. Gas must be clean, dry, oil-free, and noncorrosive. H₂S content should not exceed 20 ppm.

If you are using a 67CFR filter regulator with standard 5 micrometer filter, connect the supply line to the 1/4 NPT IN connection and attach tubing from the output connection on the filter regulator to the SUPPLY connection on the instrument. If you are using an integral mounted 67CFR filter regulator, connect the supply to the IN connection on the regulator.

Output Connection

A factory mounted digital valve controller has its output piped to the supply connection on the actuator. If mounting the digital valve controller in the field, connect the 1/4 NPT digital valve controller output connection to the pneumatic actuator input connection.

Single-Acting Actuators

When using a single-acting direct digital valve controller (relay A or C) on a single-acting actuator, connect OUTPUT A to the actuator pneumatic input. When using a single-acting reverse digital valve controller (relay B) on a single-acting actuator, connect OUTPUT B to the actuator diaphragm casing.

Double-Acting Actuators

DVC6200 digital valve controllers on double-acting actuators always use relay A. With no input current, OUTPUT A is at 0 pressure and OUTPUT B is at full supply pressure when the relay is properly adjusted. To have the actuator stem extend from the cylinder with increasing input signal, connect OUTPUT A to the upper actuator cylinder connection. Connect OUTPUT B to the lower cylinder connection. To have the actuator stem retract into the cylinder with increasing input signal, connect OUTPUT A to the lower actuator cylinder connection. Connect OUTPUT B to the upper cylinder connection.

Vent

WARNING

Personal injury or property damage can occur from cover failure due to overpressure. Ensure that the housing vent opening is open and free of debris to prevent pressure buildup under the cover.

This unit vents the supply medium into the surrounding atmosphere. When installing this unit in a non-hazardous (non-classified) location in a confined area, with natural gas as the supply medium, you must remotely vent this unit to a safe location. Failure to do so could result in personal injury or property damage from fire or explosion, and area re-classification.

When installing this unit in a hazardous (classified) location remote venting of the unit may be required, depending upon the area classification, and as specified by the requirements of local, regional, and federal codes, rules and regulations. Failure to do so when necessary could result in personal injury or property damage from fire or explosion, and area re-classification.

Vent line piping should comply with local and regional codes, should be as short as possible with a minimum inside diameter of 12.7 mm (1/2-inch), and few bends to reduce case pressure buildup.

In addition to remote venting of the unit, ensure that all caps and covers are correctly installed. Failure to do so could result in personal injury or property damage from fire or explosion, and area re-classification.

The relay constantly bleeds a small amount of supply medium into the area under the cover. The vent opening, located below the wiring terminal box on the side of the housing, should be left open to prevent pressure buildup under the cover. If a remote vent is required, the vent lines must be as short as possible with a minimum number of bends and elbows.

To connect a remote vent, remove the plastic vent. The vent connection is 3/8 NPT. At a minimum, 12.7 mm (1/2-inch) tubing should be used when installing a remote vent to prevent excessive pressure from building up under the cover.

Wiring and Electrical Connections

⚠ WARNING

Select wiring and/or cable glands that are rated for the environment of use (such as hazardous area, ingress protection and temperature). Failure to use properly rated wiring and/or cable glands can result in personal injury or property damage from fire or explosion.

Wiring connections must be in accordance with local, regional, and national codes for any given hazardous area approval. Failure to follow the local, regional, and national codes could result in personal injury or property damage from fire or explosion.

⚠ WARNING

To avoid personal injury resulting from electrical shock, do not exceed maximum input voltage specified in table 9 of this quick start guide, or on the product nameplate. If the input voltage specified differs, do not exceed the lowest specified maximum input voltage.

Personal injury or property damage caused by fire or explosion may occur if this connection is attempted in a potentially explosive atmosphere or in an area that has been classified as hazardous. Confirm that area classification and atmosphere conditions permit the safe removal of the terminal box cover before proceeding.

4-20 mA Loop Connections

The digital valve controller is normally powered by a control system output channel. The use of shielded cable will ensure proper operation in electrically noisy environments.

Note

Connect the digital valve controller to a 4-20 mA current source for operation in the point-to-point wiring mode. In the point-to-point wiring mode, the digital valve controller will not operate when connected to a voltage source.

Wire the digital valve controller as follows, refer to figure 19:

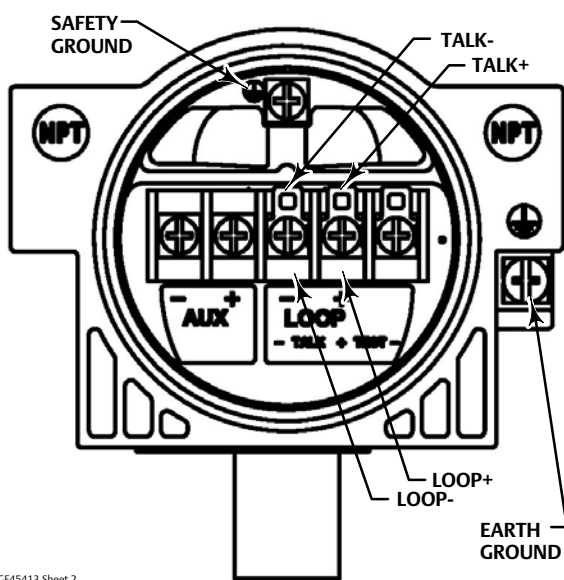
1. Remove the wiring terminal box cap (refer to figure 17).
2. Bring the field wiring into the terminal box. When applicable, install conduit using local and national electrical codes which apply to the application.
3. Connect the control system output channel positive wire "current output" to the LOOP + screw terminal in the terminal box. Connect the control system output channel negative (or return) wire to the LOOP - screw terminal in the terminal box.

⚠ WARNING

Personal injury or property damage, caused by fire or explosion, can result from the discharge of static electricity. Connect a 14 AWG (2.08 mm²) ground strap between the digital valve controller and earth ground when flammable or hazardous gases are present. Refer to national and local codes and standards for grounding requirements.

- As shown in figure 19, two ground terminals are available for connecting a safety ground, earth ground, or drain wire. The safety ground is electrically identical to the earth ground. Make connections to these terminals following national and local codes and plant standards.

Figure 19. Loop Connections Terminal Box

**⚠ WARNING**

To avoid static discharge from the plastic cover, do not rub or clean the cover with solvents. Clean with a mild detergent and water only.

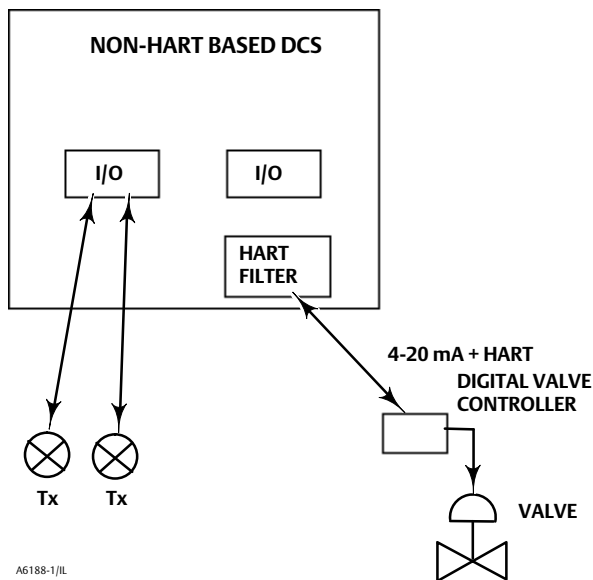
- Replace and hand tighten the terminal box cap. To secure the terminal box cap engage the lock screw. When the loop is ready for startup, apply power to the control system output channel.

HART Filter

Depending on the control system you are using, a HART filter may be needed to allow HART communication. The HART filter is a passive device that is inserted in field wiring from the HART loop. The filter is normally installed near the field wiring terminals of the control system I/O (see figure 20). Its purpose is to effectively isolate the control system output from modulated HART communication signals and raise the impedance of the control system to allow HART communication. For more information on the description and use of the HART filter, refer to the appropriate separate HART filter instruction manual.

To determine if your system requires a filter contact your Emerson Process Management sales office.

Figure 20. HART Filter Application



✓ Basic Setup and Calibration Check List

- ☐ Complete Basic Setup
- ☐ Ensure that the final control element correctly responds to a setpoint change and is stable. Run Performance Tuner or Stabilize/Optimize (found on page 31) if necessary.

Final control element is ready to be placed on line.

Accessing Basic Setup and Calibration Procedures

Navigation paths and fast-key sequences for Basic Setup and Calibration procedures are included for the Field Communicator.

For example, to access Basic Setup:

| | |
|--------------------|-------------------------------------|
| Field Communicator | Configure/Setup > Basic Setup (1-1) |
|--------------------|-------------------------------------|

Fast-key sequences and the Field Communicator menu start on page 36.

Basic Setup

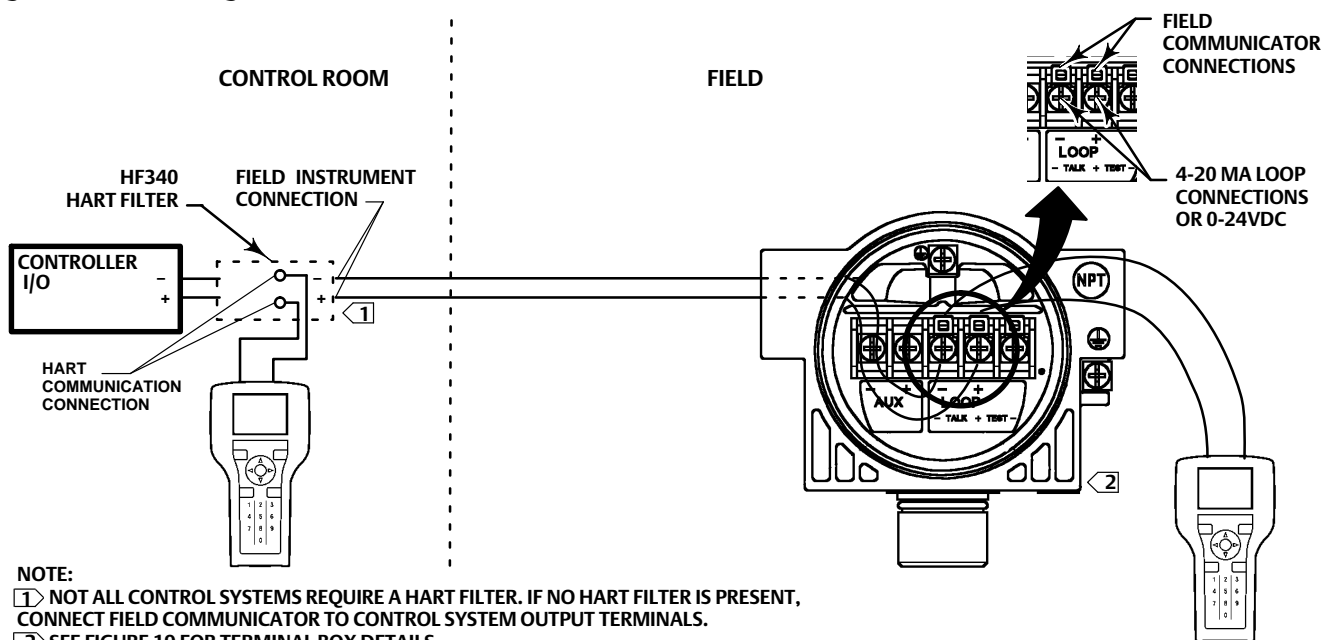
Field Communicator Configure/Setup > Basic Setup (1-1)

Before beginning Basic Setup, be sure the instrument is correctly mounted. Refer to the installation instructions supplied with the mounting kit.

Connecting the Field Communicator to the Digital Valve Controller

The Field Communicator may be connected to the 4-20 mA loop wiring or directly to the digital valve controller (see figure 21).

Figure 21. Connecting the Field Communicator to a FIELDVUE Instrument



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If the Field Communicator is connected directly to the digital valve controller, attach the clip-on wires provided with the Field Communicator to the TALK / LOOP + and - terminals in the digital valve controller terminal box (see figure 19).

⚠ WARNING

Changes to the instrument setup may cause changes in the output pressure or valve travel. Depending on the application, these changes may upset process control, which may result in personal injury or property damage.

If not using system power, connect a 4-20 mA current source to the instrument. Connect the Field Communicator to the instrument and turn it on.

Displaying the Field Communicator Device Description Revision Number

Device Description (DD) revision identifies the version of the Fisher Device Description that resides in the Field Communicator. The device description defines how the Field Communicator interacts with the user and instrument. You can display the DD revision from the Offline or Online menu.

Offline Menu

| | |
|--------------------|--|
| Field Communicator | Utility > Simulation > Fisher Controls > DVC6200 |
|--------------------|--|

Online Menu

| | |
|--------------------|---|
| Field Communicator | Device Variables > DD Information (3-8) |
|--------------------|---|

To see the Field Communicator device description revision number from the Online menu, connect the Field Communicator to an instrument connected to a source supplying a 4-20 mA signal.

Displaying the FIELDVUE Instrument Firmware Revision Number

| | |
|--------------------|--|
| Field Communicator | Device Variables > Device Information > Firmware Rev (3-7-6) |
|--------------------|--|

To view the instrument firmware revision, connect the Field Communicator to an instrument connected to a source supplying a 4-20 mA signal.

Setup Wizard

| | |
|--------------------|--|
| Field Communicator | Configure/Setup > Basic Setup > Setup Wizard (1-1-1) |
|--------------------|--|

Typical Actuators

The Setup Wizard determines the required setup information based upon the actuator manufacturer and model specified. Follow the prompts on the Field Communicator display to setup the instrument. If the actuator on which the instrument is mounted is not listed by the Setup Wizard, specify OTHER as the actuator manufacturer or actuator type and refer to Non-Typical Actuators.

WARNING

During calibration the valve will move full stroke. To avoid personal injury and property damage caused by the release of process fluid or pressure, isolate the valve from the process and equalize pressure on both sides of the valve or bleed off the process fluid.

After completing the setup information, travel is automatically calibrated. Follow the prompts on the Field Communicator display. The calibration procedure uses the valve and actuator stops as the 0% and 100% calibration points. For additional information, refer to Auto Calibrate Travel in this section.

When travel calibration is complete, you are asked if you wish to adjust the relay (double-acting only). Select yes to adjust the relay. For additional information, refer to Relay Adjustment in this section.

Non-Typical Actuators

If the actuator on which the instrument is mounted is not listed by the Setup Wizard, specify OTHER as the actuator manufacturer or actuator type. You are then prompted for setup parameters such as:

- **Actuator Style** spring & diaphragm, piston double-acting without spring, piston single-acting with spring, piston double-acting with spring
- **Valve Style** rotary or sliding-stem
- **Zero Power Condition** this identifies whether the valve is fully open or fully closed when the input is 0%. If you are unsure how to set this parameter, disconnect the current source to the instrument. (With double-acting and single-acting direct digital valve controllers, disconnecting the current source is the same as setting the output A pressure to zero. For single-acting reverse digital valve controllers, disconnecting the current source is the same as setting the output B pressure to supply.)

WARNING

If you answer YES to the prompt for permission to move the valve when determining travel sensor motion, the instrument will move the valve through a significant portion of its travel range. To avoid personal injury and property damage caused by the release of process fluid or pressure, isolate the valve from the process and equalize pressure on both sides of the valve or bleed off the process fluid.

- **Travel Sensor Motion** the Setup Wizard asks if it can move the valve to determine travel sensor motion. If you answer Yes, the instrument will stroke the valve the full travel span to determine travel sensor motion. If you answer No, then you must specify the direction of travel movement. For quarter-turn actuators determine rotation direction by viewing the rotation of the magnet assembly from the back of the instrument.

For instruments with relay A or C if increasing air pressure at output A causes the magnet assembly to move down or the rotary shaft to turn clockwise, enter CW/To Bottom Inst. If it causes the magnet assembly to move up, or the rotary shaft to turn counterclockwise, enter CCW/To Top Inst.

For instruments with relay B if decreasing air pressure at output B causes the magnet assembly to move down, or the rotary shaft to turn clockwise, enter CW/To Bottom Inst. If it causes the magnet assembly to move up, or the rotary shaft to turn counterclockwise, enter CCW/To Top Inst.

Note

Relay A adjustment may be required before the Setup Wizard can determine travel sensor motion. Follow the prompts on the Field Communicator display if relay adjustment is necessary.

- **Volume Booster** the Setup Wizard asks if a volume booster or quick release valve is present.

WARNING

Changes to the tuning set may cause the valve/actuator assembly to stroke. To avoid personal injury and property damage caused by moving parts, keep hands, tools, and other objects away from the valve/actuator assembly.

- **Tuning Set** there are twelve tuning sets to choose from. Each tuning set provides preselected values for the digital valve controller gain and rate settings. Typically, tuning set C provides the slowest response and M provides the fastest response. For smaller actuators, use tuning set C or D. For larger actuators, use tuning set F or G.

Note

Tuning set B is only available in Pressure Control Mode.

In addition, you can select User Adjusted or Expert, which allows you to modify tuning of the digital valve controller. With User Adjusted you can specify the proportional gain. An algorithm in the Field Communicator calculates the other gains. With Expert you can specify not only the proportional gain but the velocity and minor loop feedback gain as well.

Note

Use Expert tuning only if standard tuning has not achieved the desired results.

Stabilize/Optimize or Performance Tuner may be used to achieve the desired results more rapidly than Expert tuning.

The tuning sets suggested by the Setup Wizard are only recommended starting points. After you finish setting up and calibrating the instrument use Stabilize/Optimize to obtain optimum tuning.

Factory Defaults

During Basic Setup, the Setup Wizard asks if you want to use factory defaults. If you select YES the Setup Wizard sets the setup parameters to the values listed in table 6. (Yes is recommended for initial setup). If you select NO, the setup parameters listed in the table remain at their previous settings.

Table 6. Factory Default Settings

| Setup Parameter | Default Setting |
|-------------------------|------------------------------|
| Analog Input Units | mA |
| Analog In Range High | 20.0 mA |
| Analog In Range Low | 4.0 mA |
| Control Mode | Analog |
| Restart Control Mode | Resume Last |
| Self-Test Shutdown | All Failures Disabled |
| Set Point Filter Time | Filter Off |
| Input Characteristic | Linear |
| Travel Limit High | 125% |
| Travel Limit Low | -25% |
| Travel Cutoff High | 99.5% |
| Travel Cutoff Low | 0.5% |
| Minimum Opening Time | 0 secs |
| Minimum Closing Time | 0 secs |
| Polling Address | 0 |
| Command 3 Pressure | |
| Double-acting actuators | differential output pressure |
| Single-acting actuators | actuator pressure |

Relay Adjustment

The double-acting relay can be adjusted as part of the Setup Wizard. The following is a brief description of relay adjustment.

Note

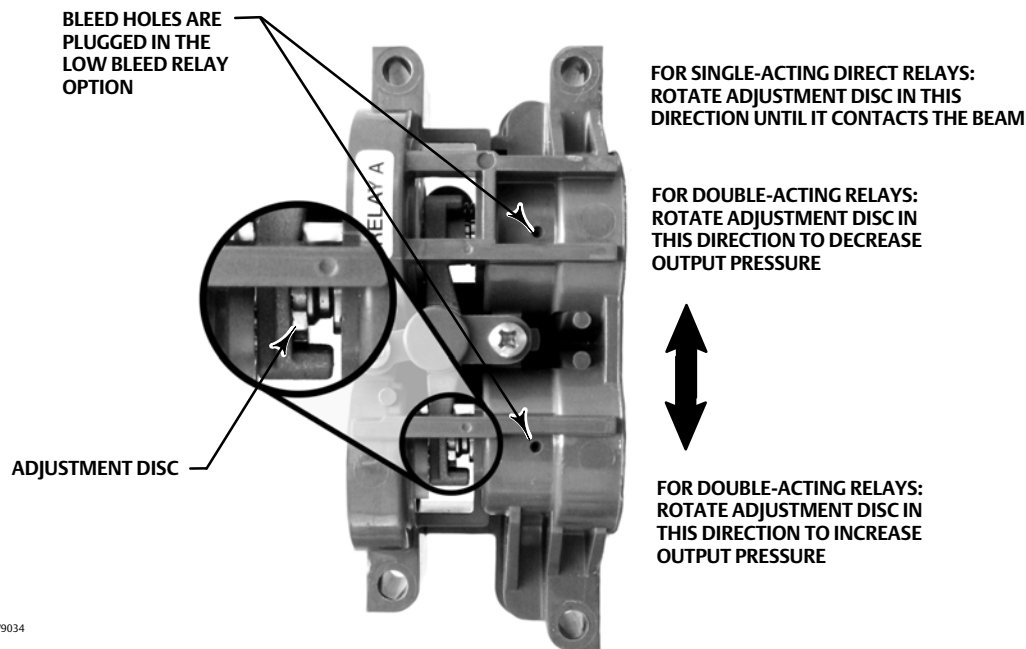
Relay B and C are not user-adjustable.

Double-Acting Relay (Relay A)

The double-acting relay is designated relay A. For double-acting actuators, the valve must be near mid-travel to properly adjust the relay. The Field Communicator will automatically position the valve when *Relay Adjust* is selected.

Rotate the adjustment disc, shown in figure 22, until the value displayed on the Field Communicator is between 50 and 70% of supply pressure. This adjustment is very sensitive. Be sure to allow the pressure reading to stabilize before making another adjustment (stabilization may take up to 30 seconds or more for larger actuators).

Figure 22. Relay A Adjustment (Shroud Removed for Clarity)



If the low bleed relay option has been ordered stabilization may take approximately two minutes longer than the standard relay.

Relay A may also be adjusted for use in single-acting direct applications. Rotate the adjustment disc as shown in figure 22 for single-acting direct operation.

CAUTION

Care should be taken during relay adjustment as the adjustment disc may disengage if rotated too far.

Single-Acting Direct Relay (Relay C)

The single-acting direct relay is designated relay C, and requires no adjustment.

Single-Acting Reverse Relay (Relay B)

The single-acting reverse relay is designated relay B. Relay B is calibrated at the factory and requires no further adjustment.

Auto Travel Calibration

⚠ WARNING

During calibration the valve will move full stroke. To avoid personal injury and property damage caused by the release of process fluid or pressure, isolate the valve from the process and equalize pressure on both sides of the valve or bleed off the process fluid.

The instrument is calibrated during the Setup Wizard. Follow the prompts on the Field Communicator display to automatically calibrate instrument travel. The calibration procedure uses the valve and actuator stops as the 0% and 100% calibration points.

After completing auto calibration, the Field Communicator prompts you to place the instrument In Service and verify that the travel properly tracks the current source.

If the unit does not calibrate, refer to table 7 for error messages and possible remedies.

If after completing setup and calibration the valve cycles or overshoots (unstable), or is unresponsive (sluggish), you can improve operation by selecting either *Performance Tuner* or *Stabilize/Optimize*.

Table 7. Auto Calibrate Travel Error Messages

| Error Message | Possible Problem and Remedy |
|---|---|
| Power failure occurred during Auto Calib | The analog input signal to the instrument must be greater than 3.8 mA. Adjust the current output from the control system or the current source to provide at least 4.0 mA. |
| Auto Calib did not complete within the time limit | The problem may be one or the other of the following: 1. The tuning set selected is too low and the valve does not reach an end point in the allotted time. Select <i>Hot Key > Stabilize/Optimize > Increase Response</i> (selects next higher tuning set). 2. The tuning set selected is too high, valve operation is unstable and does not stay at an end point for the allotted time. Select <i>Hot Key > Stabilize/Optimize > Decrease Response</i> (selects next lower tuning set). |
| Insufficient travel | Prior to receiving this message, did the instrument output go from zero to full supply? If not, verify instrument supply pressure by referring to the specifications in the appropriate actuator instruction manual. If supply pressure is correct, check instrument pneumatic components (I/P converter and relay). If the instrument output did go from zero to full supply prior to receiving this message, then verify proper mounting by referring to the appropriate mounting procedure in the Installation section. |
| Drive signal exceed low limit; check supply pressure | 1. Check supply pressure (reverse-acting relay) 2. Friction is too high. |
| Drive signal exceed high limit; check supply pressure | 1. Check supply pressure (direct-acting relay) 2. Friction is too high |

Performance Tuner

| | |
|--------------------|--|
| Field Communicator | Configure/Setup > Basic Setup > Performance Tuner (1-1-2) |
| | Configure/Setup > Detailed Setup > Response Control > Tuning > Travel Tuning > Performance Tuner (1-2-2-1-1-5) |

Note

Performance Tuner is available for instrument level AD, PD, and ODV.

WARNING

During performance tuning the valve may move, causing process fluid or pressure to be released. To avoid personal injury and property damage caused by the release of process fluid or pressure, isolate the valve from the process and equalize pressure on both sides of the valve or bleed off the process fluid.

The Performance Tuner is used to determine digital valve controller tuning. It will move the valve slightly and monitor the effects of small tuning changes until an optimum control response is achieved. Because the Performance Tuner can detect internal instabilities before they become apparent in the travel response, it can generally optimize tuning more effectively than manual tuning. Typically, the Performance Tuner takes 3 to 5 minutes to tune an instrument, although tuning instruments mounted on larger actuators may take longer.

Stabilize/Optimize

| | |
|--------------------|---|
| Field Communicator | Hot Key > Stabilize/Optimize (Hot Key-4) |
| | Instrument level HC only Configure/Setup > Basic Setup > Stabilize/Optimize (1-1-2) |
| | Configure/Setup > Detailed Setup > Response Control > Tuning > Travel Tuning > Stabilize/Optimize (1-2-2-1-1-4) |

Note

Stabilize/Optimize is available for instrument level HC, AD, PD, and ODV.

WARNING

During Stabilize/Optimize the valve may move, causing process fluid or pressure to be released. To avoid personal injury and property damage caused by the release of process fluid or pressure, isolate the valve from the process and equalize pressure on both sides of the valve or bleed off.

If after completing setup and calibration the valve seems slightly unstable or unresponsive, you can improve operation by stabilizing or optimizing the valve response.

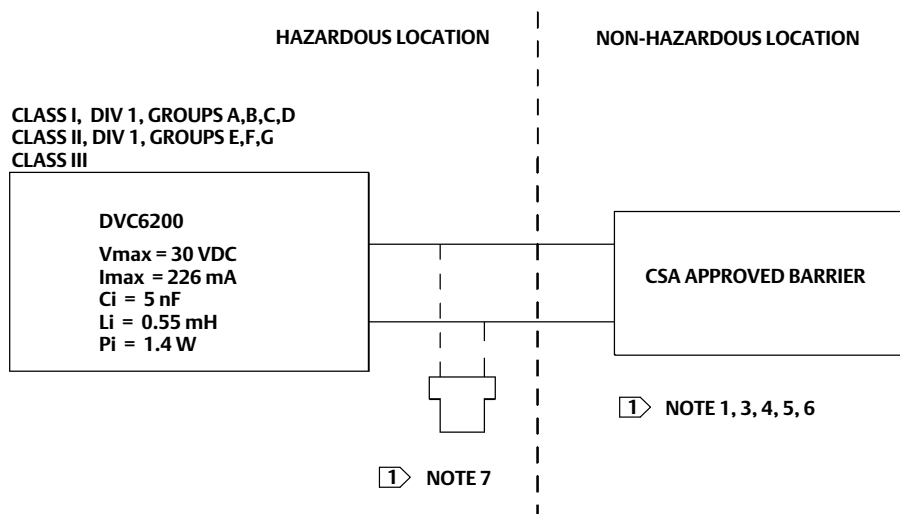
Stabilize/Optimize permits you to adjust valve response by changing the digital valve controller tuning. If the valve is unstable, select *Decrease Response* to stabilize valve operation. This selects the next lower tuning set (e.g., F to E). If the valve response is sluggish, select *Increase Response* to make the valve more responsive. This selects the next higher tuning set (e.g., F to G).

If after selecting *Decrease Response* or *Increase Response* the valve travel overshoot is excessive you can adjust the damping by selecting *Decrease Damping* or *Increase Damping*. Select *Decrease Damping* to select a damping value that allows more overshoot. Select *Increase Damping* to select a damping value that will decrease the overshoot. When finished, select *done*.

Loop Schematics and Nameplates

This section includes the loop schematics required for wiring of intrinsically safe installation and approvals nameplates. If you have questions contact your Emerson Process Management sales office.

Figure 23. CSA Schematic



1 THE ENTITY CONCEPT ALLOWS INTERCONNECTION OF INTRINSICALLY SAFE APPARATUS TO ASSOCIATED APPARATUS NOT SPECIFICALLY EXAMINED IN SUCH COMBINATION. THE CRITERIA FOR INTERCONNECTION IS THAT THE VOLTAGE (V_{max} or U_i), THE CURRENT (I_{max} or I_i), AND THE POWER (P_{max} or P_i) OF THE INTRINSICALLY SAFE APPARATUS MUST BE EQUAL TO OR GREATER THAN THE VOLTAGE (V_{oc} or U_o), AND THE CURRENT (I_{sc} or I_o), AND THE POWER (P_o) DEFINED BY THE ASSOCIATED APPARATUS.

IN ADDITION, THE SUM OF THE MAX UNPROTECTED CAPACITANCE (C_i) AND MAX UNPROTECTED INDUCTANCE (L_i), INCLUDING THE INTERCONNECTING CABLING CAPACITANCE (C_{cable}) AND CABLING INDUCTANCE (L_{cable}) MUST BE LESS THAN THE ALLOWABLE CAPACITANCE (C_a) AND INDUCTANCE (L_a) DEFINED BY THE ASSOCIATED APPARATUS. IF THE ABOVE CRITERIA IS MET, THEN THE COMBINATION MAY BE CONNECTED.

$$V_{max} \text{ or } U_i \geq V_{oc} \text{ or } U_o \quad I_{max} \text{ or } I_i \geq I_{sc} \text{ or } I_o \quad P_{max} \text{ or } P_i \geq P_o \quad C_i + C_{cable} \leq C_a \quad L_i + L_{cable} \leq L_a$$

3 INSTALLATION MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) PART 1 AND ANSI/ISA RP12.6

4 MAXIMUM SAFE AREA VOLTAGE SHOULD NOT EXCEED 250 V_{rms}

5 RESISTANCE BETWEEN INTRINSICALLY SAFE GROUND AND EARTH GROUND MUST BE LESS THAN ONE OHM

6 LOOPS MUST BE CONNECTED ACCORDING TO THE BARRIER MANUFACTURER'S INSTRUCTIONS.

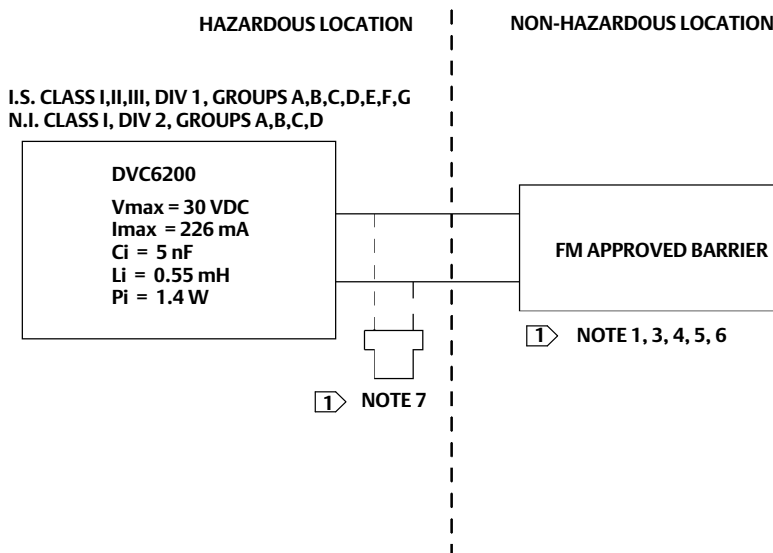
7 IF HAND-HELD COMMUNICATOR OR MULTIPLEXER IS USED IT MUST BE CSA APPROVED WITH ENTITY PARAMETERS AND INSTALLED PER THE MANUFACTURER'S CONTROL DRAWING

GE42818 sheets 2 and 8

Figure 24. CSA Nameplate

| | | | | | |
|--|--|---|--|--|--|
| AMB TEMP: <input type="text"/> TO 80°C MAX VOLTAGE: 30 VDC --- MAX SUPPLY PRESSURE: 145 PSI ENCLOSURE: TYPE 4X, IP66 SEAL NOT REQUIRED | | CL I DIV 1 GP BCD T6; CL I DIV 2 GP ABCD T6 CL II DIV 1 GP EFG T6; CL II DIV 2 GP FG T6; CL III Ex ia INTRINSICALLY SAFE CL I,II,III DIV 1 GP ABCDEFG PER DWG GE42818 T5 | | FISHER CONTROLS INTL LLC MARSHALLTOWN, IOWA, USA MFG LOCATION: 088 | |
| SERIAL NO <input type="text"/> | | INPUT DC --- <input type="text"/> | | TYPE <input type="text"/> | |
| CAUTION/WARNINGS: • KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE • SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY • REFER TO MANUAL FOR ADDITIONAL CAUTIONS/WARNINGS | | | | | |

Figure 25. FM Schematic



1 THE ENTITY CONCEPT ALLOWS INTERCONNECTION OF INTRINSICALLY SAFE APPARATUS TO ASSOCIATED APPARATUS NOT SPECIFICALLY EXAMINED IN SUCH COMBINATION. THE CRITERIA FOR INTERCONNECTION IS THAT THE VOLTAGE (V_{max} or U_i), THE CURRENT (I_{max} or I_i), AND THE POWER (P_{max} or P_i) OF THE INTRINSICALLY SAFE APPARATUS MUST BE EQUAL TO OR GREATER THAN THE VOLTAGE (V_{oc} or U_o), AND THE CURRENT (I_{sc} or I_o), AND THE POWER (P_o) DEFINED BY THE ASSOCIATED APPARATUS. IN ADDITION, THE SUM OF THE MAX UNPROTECTED CAPACITANCE (C_i) AND MAX UNPROTECTED INDUCTANCE (L_i), INCLUDING THE INTERCONNECTING CABLING CAPACITANCE (C_{cable}) AND CABLING INDUCTANCE (L_{cable}) MUST BE LESS THAN THE ALLOWABLE CAPACITANCE (C_a) AND INDUCTANCE (L_a) DEFINED BY THE ASSOCIATED APPARATUS. IF THE ABOVE CRITERIA IS MET, THEN THE COMBINATION MAY BE CONNECTED.

$$V_{max} \text{ or } U_i \geq V_{oc} \text{ or } U_o \quad I_{max} \text{ or } I_i \geq I_{sc} \text{ or } I_o \quad P_{max} \text{ or } P_i \geq P_o \quad C_i + C_{cable} \leq C_a \quad L_i + L_{cable} \leq L_a$$

3 INSTALLATION MUST BE IN ACCORDANCE WITH THE NATIONAL ELECTRICAL CODE (NEC) NFPA70 AND ANSI/ISA RP12.6.01

4 MAXIMUM SAFE AREA VOLTAGE SHOULD NOT EXCEED 250 Vrms.

5 RESISTANCE BETWEEN INTRINSICALLY SAFE GROUND AND EARTH GROUND MUST BE LESS THE ONE OHM

6 LOOPS MUST BE CONNECTED ACCORDING TO THE BARRIER MANUFACTURER'S INSTRUCTION

7 IF HAND-HELD COMMUNICATOR OR MULTIPLEXER IS USED IT MUST BE FM APPROVED WITH ENTITY PARAMETERS AND INSTALLED PER THE MANUFACTURER'S CONTROL DRAWING

GE42819 sheets 2 and 8

Figure 26. FM Nameplate

| | | | | | |
|--|--|---|--|--|--|
| AMB TEMP: <input type="text"/> TO 80°C MAX VOLTAGE: 30 VDC --- MAX SUPPLY PRESSURE: 145 PSI ENCLOSURE: NEMA 4X FACTORY SEALED | | CL I DIV 1 GP BCD T6; CL I DIV 2 GP ABCD T6 CL II DIV 1 GP EFG T6; CL II DIV 2 GP FG T6; CL III INTRINSICALLY SAFE CL I,II,III DIV 1 GP ABCDEFG PER DWG GE42819 T5 | | FISHER CONTROLS INTL LLC MARSHALLTOWN, IOWA, USA MFG LOCATION: 088 HART COMMUNICATION PROTOCOL FISHER | |
| SERIAL NO <input type="text"/> | | INPUT DC --- <input type="text"/> | | TYPE <input type="text"/> | |
| CAUTION/WARNINGS: • KEEP COVER TIGHT WHILE CIRCUITS ARE ALIVE • SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY • REFER TO MANUAL FOR ADDITIONAL CAUTIONS/WARNINGS | | FM APPROVED | | GE05622 | |

Figure 27. ATEX Intrinsically Safe, Dust Nameplate

| | | | | | | | |
|--|--|--|--|--|--|---|--|
| FISHER® | | IP66; 30VDC --- MAX; 145 PSI MAX | | LCIE 02 ATEX 6002X | | FISHER CONTROLS INTL LLC MARSHALLTOWN, IOWA, USA MFG LOCATION | |
| AMB TEMP: <input type="text"/> TO 80°C | | | | Ex ia IIC T5(Tamb ≤ 80°C), T6(Tamb ≤ 75°C) Ga | | <input type="checkbox"/> II 1 G & D | |
| <input type="text"/> | | | | Ex iaD 20 T100°C(Tamb ≤ 80°C) Da Ex iaD 20 T85°C(Tamb ≤ 75°C) Da Ui=30V, Ii=226mA, Pi=1.4W, Ci=5nF, Li=0.55mH; Uo=9.6V, Io=3.5mA, Po=8.4mW, Co=3.6uF, Lo=100mH; (FOR TYPE DVC6005 ONLY) | | <input type="text"/> | |
| SERIAL NO <input type="text"/> | | 1180 INPUT DC --- <input type="text"/> | | TYPE <input type="text"/> | | <input type="text"/> | |

Figure 28. ATEX Flameproof, Dust Nameplate

| | | | | | | | |
|--|--|--|--|---|--|--|--|
| FISHER® | | IP66; 32VDC --- MAX; 145 PSI MAX | | LCIE 02 ATEX 6001X | | FISHER CONTROLS INTL LLC MARSHALLTOWN, IOWA, USA MFG LOCATION: 433 | |
| AMB TEMP: <input type="text"/> TO 85°C | | | | Ex d IIC T5(Tamb ≤ 85°C), T6(Tamb ≤ 75°C) | | <input type="checkbox"/> II 2 G & D | |
| II 2 G & D | | | | Ex ID A21 IP66 T90°C(Tamb ≤ 85°C) Ex ID A21 IP66 T80°C(Tamb ≤ 75°C) DISCONNECT POWER BEFORE OPENING | | <input type="checkbox"/> | |
| SERIAL NO <input type="text"/> | | 1180 INPUT DC --- <input type="text"/> | | TYPE <input type="text"/> | | <input type="text"/> | |

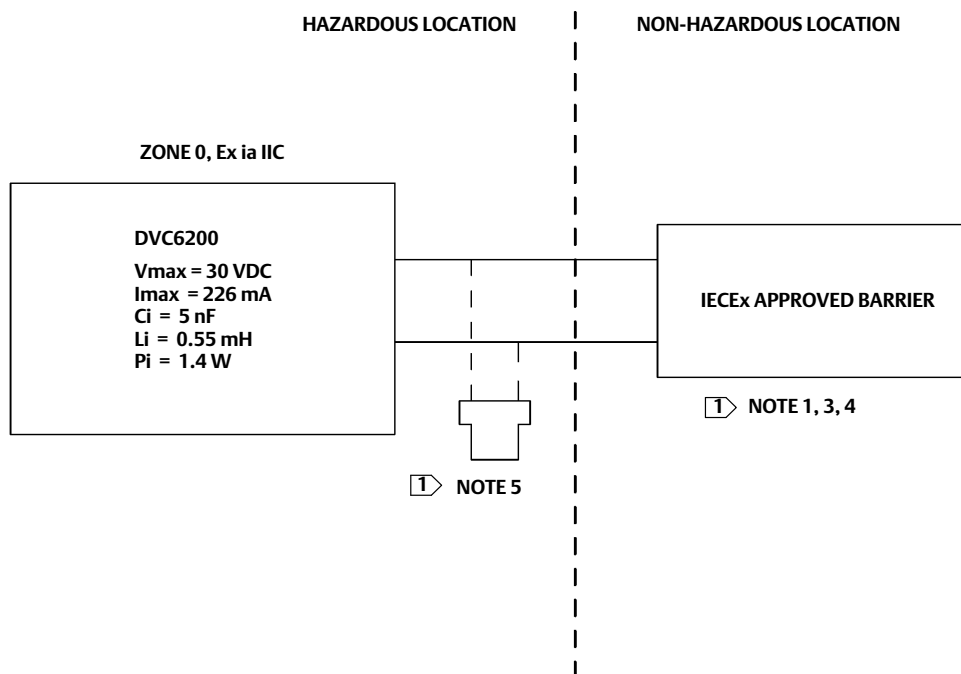
Figure 29. ATEX Type n, Dust Nameplate

| | | | | | | | |
|--|--|--------------------------------------|--|---|--|--|--|
| FISHER® | | IP66; 32VDC --- MAX; 145 PSI MAX | | LCIE 02 ATEX 6003X | | FISHER CONTROLS INTL LLC MARSHALLTOWN, IOWA, USA MFG LOCATION: 433 | |
| AMB TEMP: <input type="text"/> TO 80°C | | | | Ex nCnL IIC T5(Tamb ≤ 80°C), T6(Tamb ≤ 75°C) | | <input type="checkbox"/> II 3 G & D | |
| II 3 G & D | | | | Ex ID A22 IP66 T85°C(Tamb ≤ 80°C) Ex ID A22 IP66 T80°C(Tamb ≤ 75°C) DISCONNECT POWER BEFORE OPENING | | <input type="checkbox"/> | |
| SERIAL NO <input type="text"/> | | INPUT DC --- <input type="text"/> | | TYPE <input type="text"/> | | <input type="text"/> | |

Figure 30. INMETRO Nameplate

| | | | | | | | |
|--|--|---|--|--|--|----------------------|--|
| FISHER® | | CERT NO. 10-IE-0021X | | FISHER CONTROLS INTL LLC MARSHALLTOWN, IOWA, USA MFG LOCATION: 433 | | | |
| AMB TEMP/TEMPERATURA DE OPERAÇÃO: <input type="text"/> TO/A 80°C | | BR-Ex ia IIC T5/T6 Gb, BR-Ex d IIC T5/T6 Gb, BR-Ex nC IIC T5/T6 Gc | | para T5: (-52°C ≤ Tamb ≤ 80°C), para T6: (-52°C ≤ Tamb ≤ 75°C) Ui ≤ 30V Ii ≤ 226mA Pi ≤ 1.4W Ci ≤ 5nF Li ≤ 0.55mH | | Segurança | |
| MAX VOLTAGE/ MÁXIMA VOLTAGEM: 30 VDC --- MAX SUPPLY PRESSURE/ MÁXIMA PRESSÃO DE ENTRADA: 145 PSI ENCLOSURE/INVÓLUCRO: TYPE 4X, IP66W | | CAUTION/ATENÇÃO: DO NOT OPEN WHEN ENERGIZED NÃO ABRA QUANDO ENERGIZADO AFTER DE-ENERGIZING DELAY 12 SECONDS BEFORE OPENING APÓS DESENERGIZAÇÃO, AGUARDE 12 SEGUNDOS ANTES DA ABERTURA | | TYPE TIPO <input type="text"/> | | <input type="text"/> | |
| SERIAL NO. NÚMERO DE SÉRIE <input type="text"/> | | INPUT ENTRADA DC --- <input type="text"/> | | | | <input type="text"/> | |

Figure 31. IECEx Schematic



1 THE ENTITY CONCEPT ALLOWS INTERCONNECTION OF INTRINSICALLY SAFE APPARATUS TO ASSOCIATED APPARATUS NOT SPECIFICALLY EXAMINED IN SUCH COMBINATION. THE CRITERIA FOR INTERCONNECTION IS THAT THE VOLTAGE (V_{max} or U_i), THE CURRENT (I_{max} or I_i), AND THE POWER (P_{max} or P_i) OF THE INTRINSICALLY SAFE APPARATUS MUST BE EQUAL TO OR GREATER THAN THE VOLTAGE (V_{oc} OR U_o), AND THE CURRENT (I_{sc} or I_o), AND THE POWER (P_o) DEFINED BY THE ASSOCIATED APPARATUS. IN ADDITION, THE SUM OF THE MAX UNPROTECTED CAPACITANCE (C_i) AND MAX UNPROTECTED INDUCTANCE (L_i), INCLUDING THE INTERCONNECTING CABLING CAPACITANCE (C_{cable}) AND CABLING INDUCTANCE (L_{cable}) MUST BE LESS THAN THE ALLOWABLE CAPACITANCE (C_a) AND INDUCTANCE (L_a) DEFINED BY THE ASSOCIATED APPARATUS. IF THE ABOVE CRITERIA IS MET, THEN THE COMBINATION MAY BE CONNECTED.

V_{max} or $U_i \geq V_{oc}$ or U_o I_{max} or $I_i \geq I_{sc}$ or I_o P_{max} or $P_i \geq P_o$ $C_i + C_{cable} \leq C_a$ $L_i + L_{cable} \leq L_a$

3 INSTALLATION MUST BE IN ACCORDANCE WITH THE NATIONAL WIRING PRACTICES OF THE COUNTRY IN USE

4 LOOPS MUST BE CONNECTED ACCORDING TO THE BARRIER MANUFACTURER'S INSTRUCTIONS

5 IF HAND-HELD COMMUNICATOR OR MULTIPLEXER IS USED IT MUST BE IECEx APPROVED WITH ENTITY PARAMETERS AND INSTALLED PER THE MANUFACTURERS CONTROL DRAWING

GE42990 Sheet 2 and 8 of 8

Figure 32. IECEx Nameplate

| | | | | |
|--|-----------------------------------|--|--|---------|
| FISHER® | | CERT NO. IECEx CSA 04.0004X Ex ia IIC HART: T5(Ta ≤ 80°C), T6(Ta ≤ 75°C) PER DWG GE42990 FIELD BUS/FISCO/PROFIBUS: T4(Ta ≤ 80°C), T5(Ta ≤ 77°C), T6(Ta ≤ 62°C) PER DWG GE42990 Ex d IIC T5(Ta ≤ 80°C), T6(Ta ≤ 75°C) Ex nC IIC T5(Ta ≤ 80°C), T6(Ta ≤ 75°C) | FISHER CONTROLS INTL LLC MARSHALLTOWN, IOWA, USA MFG LOCATION: 433 | |
| AMB TEMP: <input type="text"/> TO 80°C MAX VOLTAGE: 32 VDC --- IP66, 145 PSI MAX | | | | |
| SERIAL NO <input type="text"/> | INPUT DC --- <input type="text"/> | TYPE <input type="text"/> | | GE48451 |

Field Communicator Fast-Key Sequence and Menu Trees

Instrument Level HC, AD, PD, and ODV

| Function/Variable | Fast-Key Sequence | Coordinates(1) |
|--|----------------------------|----------------|
| Actuator Style | 1-2-6-4 | 3-D |
| Alert Conditions | 2-1 | 2-F |
| Alert Record Full Enable | 1-2-3-6-2 | 10-H |
| | 1-2-3-7-2 | |
| Alert Record Not Empty Alert Enable | 1-2-3-6-1 | 10-H |
| | 1-2-3-7-1 | |
| Analog Input | 3-1 | 2-G |
| Analog Input Calibration | 1-3-2-2 | 4-E |
| Analog Input Range Hi | 1-2-5-3-1 | 6-H |
| Analog Input Range Lo | 1-2-5-3-2 | 6-H |
| Analog Input Units | 1-2-5-2-3 | 6-G |
| Auto Calibration | 1-3-1-1 | 4-E |
| Autocalibration in Progress Enable | 1-2-4-2-2 | 8-H |
| Auxiliary Input | 3-6-1 | 4-H |
| | 1-2-3-3-2-2 ⁽²⁾ | 12-D |
| | 1-2-3-3-1-2 ⁽⁵⁾ | |
| Auxiliary Terminal Alert Enable | 1-2-3-3-2-1 ⁽²⁾ | 12-E |
| | 1-2-3-3-1-1 ⁽⁵⁾ | |
| Auxiliary Terminal Mode | 1-2-3-3-2-3 ⁽²⁾ | 12-E |
| | 1-2-3-3-1-3 ⁽⁵⁾ | |
| | 1-2-5-7 | 4-G |
| Burst Command | 1-2-1-4-2 | 6-B |
| Burst Enable | 1-2-1-4-1 | 6-B |
| Calibration in Progress Enab | 1-2-4-2-1 | 8-I |
| Calibration Location | 1-2-5-9-2 | 6-H |
| Clear Record | 1-2-3-6-4 | 10-H |
| | 1-2-3-7-4 | |
| Command 3 (Trending) Pressure | 1-2-1-4-3 | 5-A |
| Control Mode | Hot Key-2 | 1-A |
| | 1-2-1-2 | 4-B |
| Critical NVM Shutdown | 1-2-3-1-3-4 | 12-C |
| Cycle Count | 1-2-3-5-1-2 | 12-H |
| | 3-6-5 | 4-H |
| Cycle Count Alert Enable | 1-2-3-5-1-1 | 12-H |
| Cycle Count Alert Point | 1-2-3-5-1-3 | 12-H |
| Date | 1-2-5-1-4 | 6-G |
| Dead Band (Cycle Count / Travel Accum) | 1-2-3-5-2-1 | 12-H |
| Define Custom Characteristic | 1-2-2-4 | 4-C |
| Descriptor | 1-2-5-1-3 | 6-F |
| Device Description Information | 3-8 | 2-G |
| Device ID | 3-7-2 | 2-H |
| Device Revision | 3-7-5 | 2-H |
| Diagnostic Data Available Enable | 1-2-4-2-4 | 8-H |
| Diagnostic in Progress Enable | 1-2-4-2-3 | 8-H |
| Display Record | 1-2-3-6-3 | 10-H |
| | 1-2-3-7-3 | |
| Drive Current Shutdown | 1-2-3-1-1 | 8-D |

| Function/Variable | Fast-Key Sequence | Coordinates(1) |
|---|-------------------|----------------|
| Drive Signal Alert Enable | 1-2-3-1-2-1 | 10-D |
| Drive Signal | 3-4 | 2-G |
| | 1-2-3-1-2-2 | 10-D |
| Edit Feedback Connection | 1-2-6-6 | 3-E |
| End Point Control Enable ⁽³⁾ | 1-2-2-2-5-1 | 8-D |
| Failure Group Enable | 1-2-3-6-5-1 | 10-I |
| | 1-2-3-7-5-1 | |
| Firmware Revision | 3-7-6 | 2-H |
| Flash ROM Shutdown | 1-2-3-1-3-5 | 12-C |
| Hardware Revision | 3-7-7 | 2-H |
| HART Tag | 1-2-5-1-1 | 6-F |
| | 3-7-1 | 2-H |
| HART Universal Revision | 3-7-9 | 2-H |
| Input Characterization | 1-2-2-3 | 4-C |
| Instrument Date and Time | 1-2-4-1-2 | 8-G |
| | 1-2-5-8 | 4-G |
| Instrument Level | 3-7-8 | 2-H |
| Instrument Mode | Hot Key-1 | 1-A |
| | 1-2-1-1 | 4-B |
| Instrument Serial Number | 1-2-5-1-6 | 6-G |
| Instrument Time Invalid Enable | 1-2-4-1-1 | 8-G |
| Integral Dead Zone | 1-2-4-4-4 | 8-I |
| | 1-2-2-1-2-1 | 8-B |
| Integral Limit | 1-2-4-4-3 | 8-I |
| | 1-2-2-1-2-2 | 8-B |
| Integrator Saturated Hi Enable | 1-2-4-4-1 | 8-I |
| Integrator Saturated Lo Enable | 1-2-4-4-2 | 8-I |
| Lag Time ⁽⁴⁾ | 1-2-2-5-3 | 5-D |
| Last Calibration Status | 1-2-5-9-1 | 6-H |
| Lead/Lag ⁽³⁾ | 1-2-2-5-3 | 5-D |
| Loop Current Validation Enable ⁽²⁾ | 1-2-3-3-3 | 9-E |
| Low Power Write Fail Enable | 1-2-3-1-3-2 | 12-B |
| Manual Calibration | 1-3-1-2 | 4-E |
| Manufacturer - Instrument | 3-7-3 | 2-H |
| Manufacturer - Actuator | 1-2-6-1 | 3-D |
| Maximum Supply Pressure | 1-2-5-6 | 4-G |
| Message | 1-2-5-1-2 | 6-F |
| Miscellaneous Group Enable | 1-2-3-6-5-3 | 10-I |
| | 1-2-3-7-5-3 | |
| Model | 3-7-4 | 2-H |
| Multi-Drop Alert Enable | 1-2-4-3-2 | 8-H |
| No Free Time Shutdown | 1-2-3-1-3-6 | 12-C |
| Non-Critical NVM Alert Enable | 1-2-3-1-3-3 | 12-C |
| Number of Power Ups | 2-3-4 | 4-G |
| | 3-6-9 | 4-H |
| Offline/Failed Alert Enable | 1-2-3-1-3-1 | 12-B |
| Partial Stroke Test ⁽³⁾ | 2-5 | 2-F |
| Partial Stroke Test Enable ⁽³⁾ | 1-2-7-1 | 3-D |

NOTE: *Italicized Fast-Key Sequence* indicates fast-key sequence is applicable only for instrument level ODV.

1. Coordinates are to help locate the item on the menu tree on page 38 and 39.

2. Instrument level AD, PD, and ODV only.

3. Instrument level ODV only.

4. Instrument level HC, AD, and PD only.

5. Instrument level HC only.

Continued on next page

Quick Start Guide

D103410X012

DVC6200 Digital Valve Controller

November 2011

| Function/Variable | Fast-Key Sequence | Coordinates ⁽¹⁾ |
|--|----------------------|----------------------------|
| Partial Stroke Test Pressure Limit ⁽³⁾ | 1-2-3-6-1 | 10-G |
| Partial Stroke Test Start Point ⁽³⁾ | 1-2-2-2-5-2 | 8-D |
| Partial Stroke Test Variables View/Edit ⁽³⁾ | 1-2-7-2 | 3-D |
| Performance Tuner ⁽²⁾ | 1-1-2 | 2-B |
| | 1-2-2-1-1-5 | 8-A |
| Polling Address | 1-2-5-1-7 | 6-G |
| Pressure A | 3-5-1 | 4-G |
| Pressure B | 3-5-2 | 4-G |
| Pressure Control Active Enable | 1-2-4-3-1 | 8-H |
| Pressure Deviation Alert Enable ⁽³⁾ | 1-2-3-6-2 | 10-G |
| Pressure Deviation Alert Point ⁽³⁾ | 1-2-3-6-3 | 10-G |
| Pressure Deviation Time ⁽³⁾ | 1-2-3-6-4 | 10-G |
| Pressure Differential | 3-5-3 | 4-G |
| Pressure Integral Control Enable | 1-2-2-1-3-2 | 8-C |
| Pressure Integral Gain | 1-2-2-1-3-3 | 8-C |
| Pressure MLFB Gain | 1-2-2-1-3-1-3 | 10-B |
| Pressure Proportional Gain | 1-2-2-1-3-1-2 | 10-B |
| Pressure Range Hi | 1-2-2-2-4-1 | 10-D |
| Pressure Range Lo | 1-2-2-2-4-2 | 10-D |
| Pressure Sat Time ⁽³⁾ | 1-2-2-2-5-4 | 8-D |
| Pressure Sensor Shutdown ⁽²⁾ | 1-2-3-2-3 | 12-C |
| Pressure Sensors—Calibration | 1-3-2-1 | 4-E |
| Pressure Set Point ⁽³⁾ | 1-2-2-2-5-3 | 8-D |
| Pressure Tuning Set | 1-2-2-1-3-1-1 | 10-B |
| Pressure Units | 1-2-5-2-1 | 6-G |
| Protection | Hot Key-3 | 1-A |
| | 1-2-1-5 | 4-B |
| Raw Travel Input | 3-6-7 | 4-H |
| Reference Voltage Shutdown | 1-2-3-1-3-7 | 12-C |
| Relay Adjust | 1-3-3 | 3-E |
| Relay Type | 1-2-5-4 | 4-F |
| Restart Control Mode | 1-2-1-3 | 4-B |
| Restore Factory Settings | 1-3-4 | 3-E |
| Run Time | 2-3-3 | 3-F |
| | 3-6-8 | 4-H |
| Set Point Rate Close | 1-2-2-5-2 | 5-D |
| Set Point Rate Open | 1-2-2-5-1 | 5-D |
| Setup Wizard | 1-1-1 | 2-B |
| Stabilize/Optimize | Hot Key-4 | 1-A |
| | 1-1-2 ⁽⁵⁾ | 2-B |
| | 1-2-2-1-1-4 | 8-A |
| Status | 2-2 | 2-F |
| Stroke Valve | 2-4 | 2-F |
| Supply Pressure ⁽²⁾ | 3-5-4 | 4-G |
| | 1-2-3-3-1-2 | 12-D |
| Supply Pressure Lo Alert Enable ⁽²⁾ | 1-2-3-3-1-1 | 12-D |
| Supply Pressure Lo Alert Point ⁽²⁾ | 1-2-3-3-1-3 | 12-D |
| Temperature | 3-6-2 | 4-H |
| Temperature Maximum | 3-6-3 | 4-H |
| | 2-3-1 | 3-F |

| Function/Variable | Fast-Key Sequence | Coordinates ⁽¹⁾ |
|---------------------------------------|-------------------|----------------------------|
| Temperature Minimum | 2-3-2 | 3-F |
| | 3-6-4 | 4-H |
| Temperature Sensor Shutdown | 1-2-3-2-2 | 12-C |
| Temperature Units | 1-2-5-2-2 | 6-G |
| Travel | 3-3 | 2-G |
| | 1-2-3-4-1 | 9-E |
| Travel / Pressure Cutoff Hi | 1-2-3-4-7-3 | 12-F |
| | 1-2-2-2-2-1 | 10-B |
| Travel / Pressure Cutoff Lo | 1-2-3-4-7-4 | 10-F |
| | 1-2-2-2-2-2 | 10-B |
| Travel / Pressure Select | 1-2-2-2-1 | 5-C |
| Travel Accumulator | 3-6-6 | 4-H |
| | 1-2-3-5-3-2 | 12-H |
| Travel Accumulator Alert Enable | 1-2-3-5-3-1 | 12-H |
| Travel Accumulator Alert Point | 1-2-3-5-3-3 | 12-I |
| Travel Alert Dead Band | 1-2-3-4-3 | 9-E |
| Travel Alert Hi Enable | 1-2-3-4-6-1 | 10-F |
| Travel Alert Hi Hi Enable | 1-2-3-4-5-1 | 12-E |
| Travel Alert Hi Hi Point | 1-2-3-4-5-3 | 12-F |
| Travel Alert Hi Point | 1-2-3-4-6-3 | 10-F |
| Travel Alert Lo Enable | 1-2-3-4-6-2 | 10-F |
| Travel Alert Lo Lo Enable | 1-2-3-4-5-2 | 12-E |
| Travel Alert Lo Lo Point | 1-2-3-4-5-4 | 12-F |
| Travel Alert Lo Point | 1-2-3-4-6-4 | 10-F |
| Travel Deviation Alert Enable | 1-2-3-4-4-1 | 10-E |
| Travel Deviation Alert Point | 1-2-3-4-4-2 | 10-E |
| Travel Deviation Time | 1-2-3-4-4-3 | 10-E |
| Travel Integral Control Enable | 1-2-2-1-1-2 | 8-A |
| Travel Integral Gain | 1-2-2-1-1-3 | 8-A |
| Travel Limit / Cutoff Hi Alert Enable | 1-2-3-4-7-1 | 12-F |
| Travel Limit / Cutoff Lo Alert Enable | 1-2-3-4-7-2 | 12-F |
| Travel Limit Hi | 1-2-3-4-7-5 | 12-G |
| | 1-2-2-2-3-1 | 10-C |
| Travel Limit Lo | 1-2-3-4-7-6 | 12-G |
| | 1-2-2-2-3-2 | 10-C |
| Travel MLFB Gain | 1-2-2-1-1-1-4 | 10-A |
| Travel Proportional Gain | 1-2-2-1-1-1-2 | 10-A |
| Travel Sensor Motion | 1-2-6-5 | 3-E |
| Travel Sensor Shutdown | 1-2-3-2-1 | 12-C |
| Travel Set Point | 1-2-3-4-2 | 9-E |
| | 3-2 | 2-G |
| Travel Tuning Set | 1-2-2-1-1-1-1 | 10-A |
| Travel Velocity Gain | 1-2-2-1-1-1-3 | 10-A |
| Valve Group Enable | 1-2-3-6-5-2 | 10-I |
| | 1-2-3-7-5-2 | |
| Valve Serial Number | 1-2-5-1-5 | 6-F |
| | 1-2-6-2 | 3-D |
| Valve Style | 1-2-6-3 | 3-D |
| Zero Power Condition | 1-2-5-5 | 4-G |

NOTE: *Italicized Fast-Key Sequence* indicates fast-key sequence is applicable only for instrument level ODV.

1. Coordinates are to help locate the item on the menu tree on page 38 and 39.

2. Instrument level AD, PD, and ODV only.

3. Instrument level ODV only.

4. Instrument level HC, AD, and PD only.

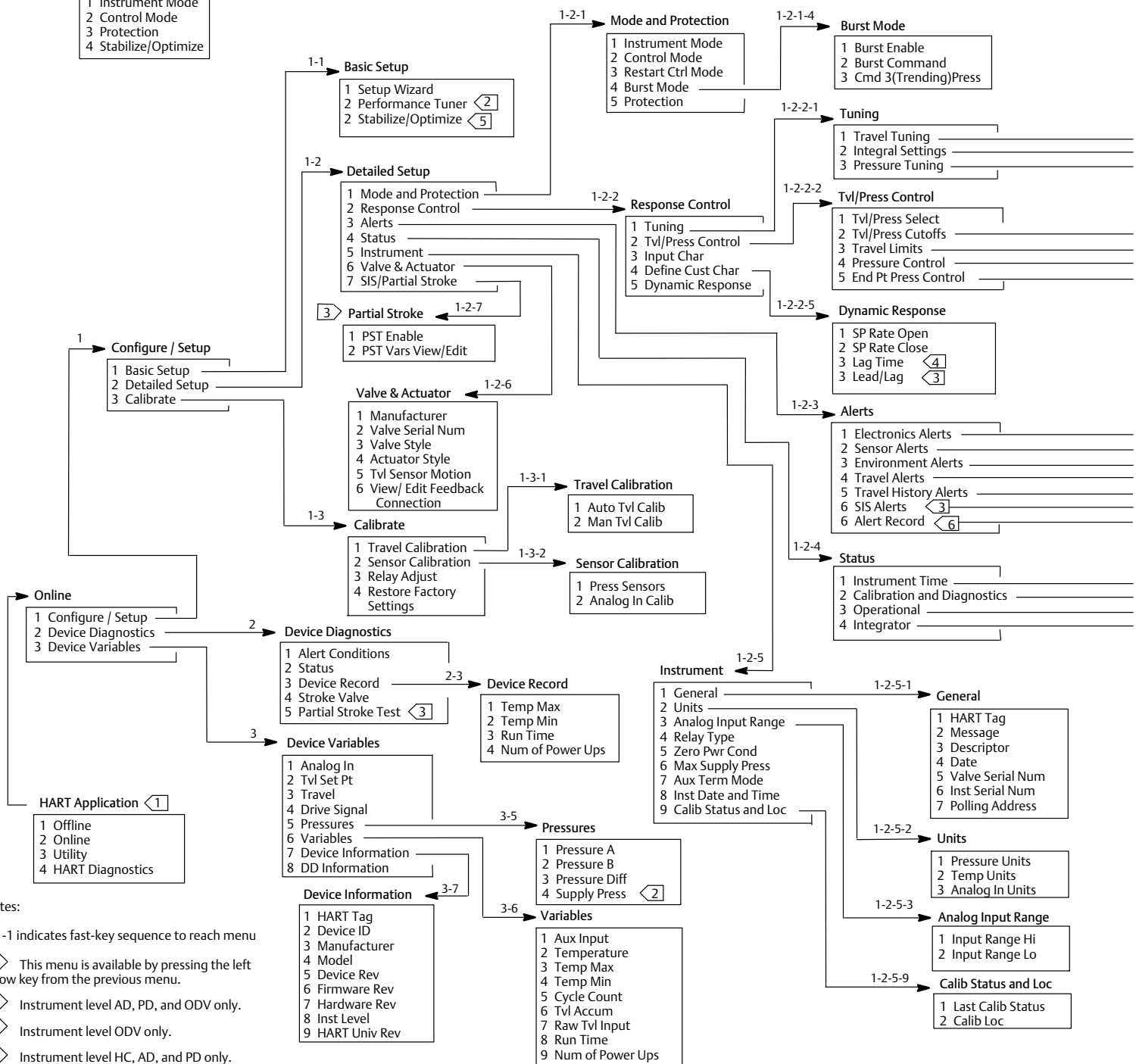
5. Instrument level HC only.

Field Communicator Menu Tree for Instrument Level HC, AD, PD, and ODV



Hot Key

- 1 Instrument Mode
- 2 Control Mode
- 3 Protection
- 4 Stabilize/Optimize



Notes:

1-1-1 indicates fast-key sequence to reach menu

1 This menu is available by pressing the left arrow key from the previous menu.

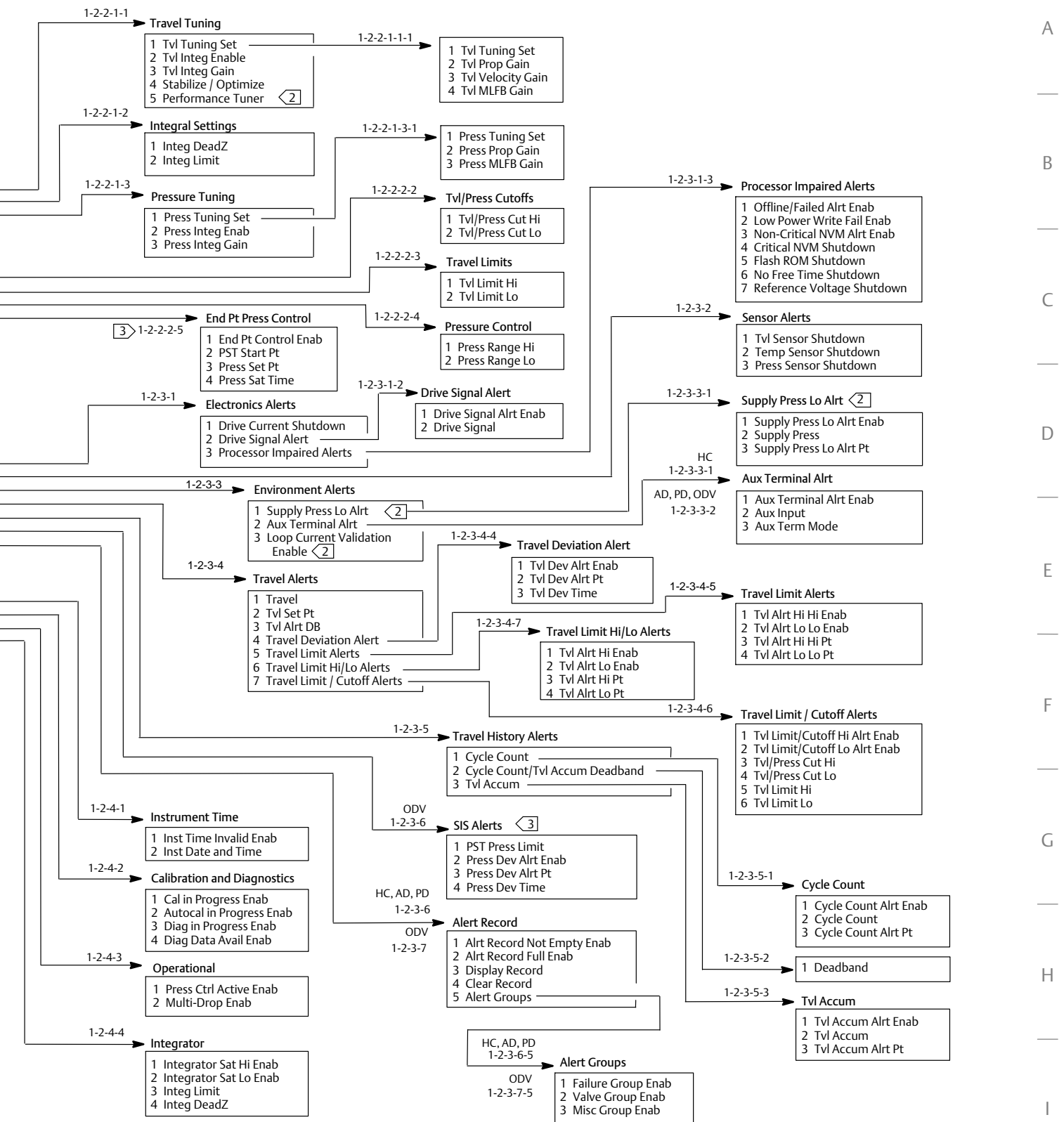
2 Instrument level AD, PD, and ODV only.

3 Instrument level ODV only.

4 Instrument level HC, AD, and PD only.

5 Instrument level HC only.

6 Fast key sequence for Alert Record with instrument level ODV is 1-2-3-7.



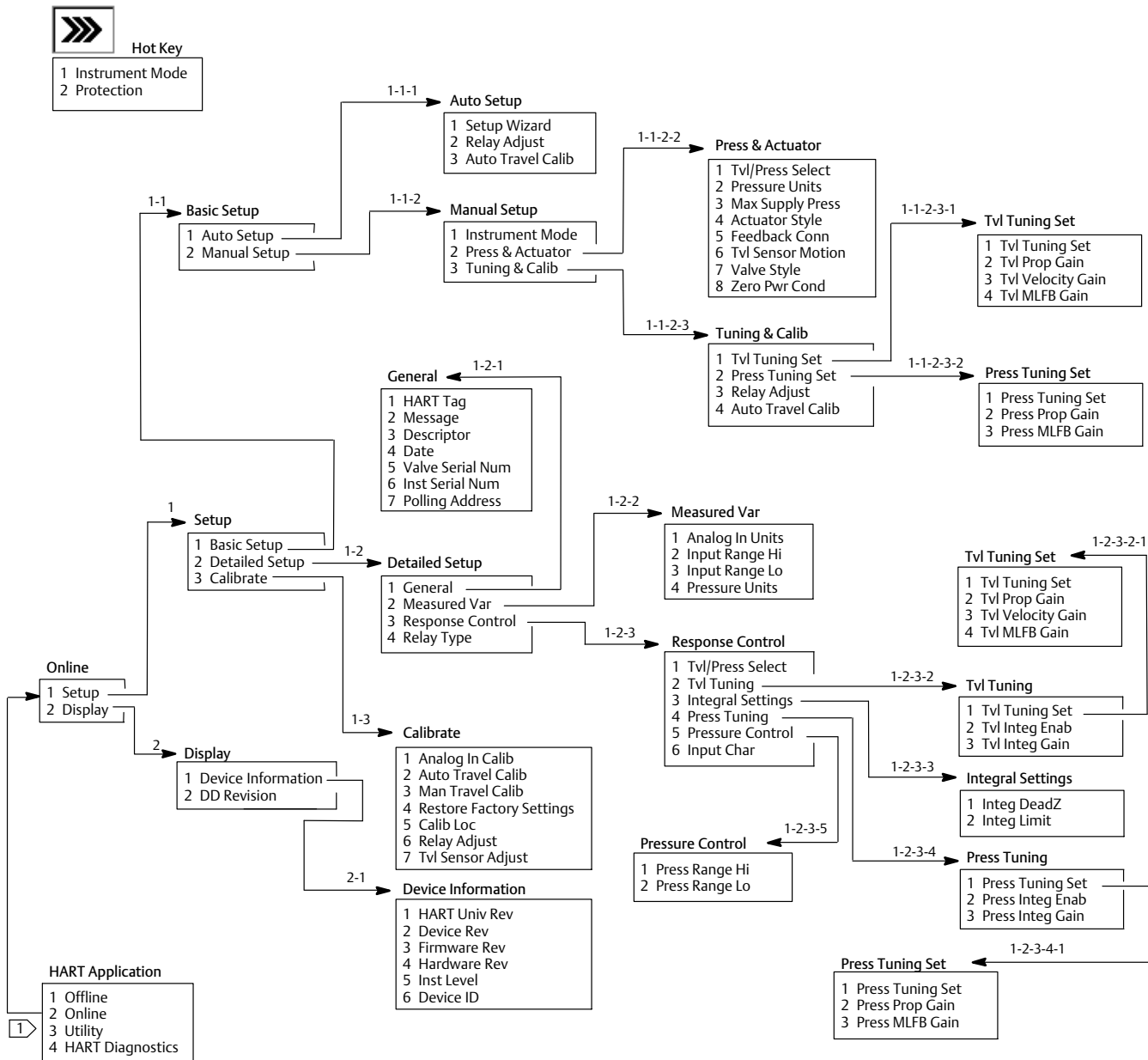
Instrument Level AC

| Function/Variable | Fast-Key Sequence | Coordinates ⁽¹⁾ |
|----------------------------------|-------------------|----------------------------|
| Actuator Style | 1-1-2-2-4 | 4-C |
| Analog Input Calibration | 1-3-1 | 3-F |
| Analog Input Range Hi | 1-2-2-2 | 4-E |
| Analog Input Range Lo | 1-2-2-3 | 4-E |
| Analog Input Units | 1-2-2-1 | 4-E |
| Auto Travel Calibration | 1-1-2-3-4 | 4-D |
| | 1-3-2 | 3-F |
| | 1-1-1-3 | 3-C |
| Calibration Location | 1-3-5 | 3-G |
| Date | 1-2-1-4 | 3-D |
| Descriptor | 1-2-1-3 | 3-D |
| Device Description Revision | 2-2 | 2-F |
| Device Identification | 2-1-6 | 3-H |
| Device Revision | 2-1-2 | 3-G |
| Feedback Connection | 1-1-2-2-5 | 4-C |
| Firmware Revision | 2-1-3 | 3-G |
| Hardware Revision | 2-1-4 | 3-G |
| HART Tag | 1-2-1-1 | 3-D |
| HART Universal Revision | 2-1-1 | 3-G |
| Input Characterization | 1-2-3-6 | 4-F |
| Instrument Level | 2-1-5 | 3-H |
| Instrument Mode | Hot Key-1 | 1-B |
| | 1-1-2-1 | 3-C |
| Instrument Serial Number | 1-2-1-6 | 3-D |
| Integral Dead Zone | 1-2-3-3-1 | 6-F |
| Integral Limit | 1-2-3-3-2 | 6-F |
| Manual Travel Calibration | 1-3-3 | 3-F |
| Maximum Supply Pressure | 1-1-2-2-3 | 4-C |
| Message | 1-2-1-2 | 3-D |
| Polling Address | 1-2-1-7 | 3-E |
| Pressure Integral Control Enable | 1-2-3-4-2 | 6-G |
| Pressure Integral Gain | 1-2-3-4-3 | 6-G |
| Pressure MLFB Gain | 1-1-2-3-2-3 | 6-D |
| | 1-2-3-4-1-3 | 5-H |

| Function/Variable | Fast-Key Sequence | Coordinates ⁽¹⁾ |
|----------------------------|-------------------|----------------------------|
| Pressure Proportional Gain | 1-1-2-3-2-2 | 6-D |
| | 1-2-3-4-1-2 | 5-H |
| Pressure Range Hi | 1-2-3-5-1 | 4-G |
| Pressure Range Lo | 1-2-3-5-2 | 4-G |
| Pressure Tuning Set | 1-1-2-3-2-1 | 6-D |
| | 1-2-3-4-1-1 | 6-G |
| Pressure Units | 1-1-2-2-2 | 4-C |
| | 1-2-2-4 | 4-E |
| Protection | Hot Key-2 | 1-B |
| Relay Adjust | 1-1-1-2 | 3-B |
| | 1-1-2-3-3 | 4-D |
| | 1-3-6 | 3-G |
| Relay Type | 1-2-4 | 3-E |
| Restore Factory Settings | 1-3-4 | 3-F |
| Setup Wizard | 1-1-1-1 | 3-D |
| Travel Integral Gain | 1-2-3-2-3 | 6-F |
| Travel Integral Enable | 1-2-3-2-2 | 6-F |
| Travel MLFB Gain | 1-1-2-3-1-4 | 6-C |
| | 1-2-3-2-1-4 | 6-E |
| Travel / Pressure Select | 1-1-2-2-1 | 4-C |
| | 1-2-3-1 | 4-F |
| Travel Proportional Gain | 1-1-2-3-1-2 | 6-C |
| | 1-2-3-2-1-2 | 6-E |
| Travel Sensor Adjust | 1-3-7 | 3-G |
| Travel Sensor Motion | 1-1-2-2-6 | 4-C |
| Travel Tuning Set | 1-1-2-3-1-1 | 6-C |
| | 1-2-3-2-1-1 | 6-E |
| Travel Velocity Gain | 1-1-2-3-1-3 | 6-C |
| | 1-2-3-2-1-3 | 6-E |
| Valve Serial Number | 1-2-1-5 | 3-D |
| Valve Style | 1-1-2-2-7 | 4-C |
| Zero Power Condition | 1-1-2-2-8 | 4-C |

1. Coordinates are to help locate the item on the menu tree on page 41.

Field Communicator Menu Tree for Instrument Level AC



Notes:

1-1-1 indicates fast-key sequence to reach menu

1 This menu is available by pressing the left arrow key from the previous menu.

Table 8. Instrument Level Capabilities

| Capability | Diagnostic Level | | | | |
|---|------------------|----|----|----|-----|
| | AC | HC | AD | PD | ODV |
| Auto Calibration | X | X | X | X | X |
| Custom Characterization | X | X | X | X | X |
| Burst Communication | | X | X | X | X |
| Alerts | | X | X | X | X |
| Step Response, Drive Signal Test & Dynamic Error Band | | | X | X | X |
| Advanced Diagnostics (Valve Signature) | | | X | X | X |
| Performance Tuner | | | X | X | X |
| Travel Control - Pressure Fallback | | | X | X | X |
| Supply Pressure Sensor | | | X | X | X |
| Performance Diagnostics | | | | X | X |
| Solenoid Valve Testing | | | | X | X |
| Lead/Lag Input Filter ⁽¹⁾ | | | | | X |

1. Refer to brochure part # D351146X012/D351146X412 for information on Fisher optimized digital valves for compressor antisurge applications.

Specifications

Refer to table 8 for details on the capabilities of each diagnostic level and table 9 for product specifications.

Product Description

The DVC6200 digital valve controller (figure 33) is a communicating, microprocessor-based current-to-pneumatic instrument. In addition to the traditional function of converting an input current signal to a pneumatic output pressure, the DVC6200 digital valve controller communicates via HART protocol.

The DVC6200 digital valve controller is designed to directly replace standard pneumatic and electro-pneumatic valve mounted positioners.

The DVC6200 digital valve controller can be setup and calibrated using the Field Communicator, as described in this guide, or a personal computer and ValveLink software version 10.2 or later or AMS Suite: Intelligent Device Manager. For information on using ValveLink software or AMS Device Manager with a FIELDVUE instrument, refer to the appropriate documentation or online help.

Figure 33. FIELDVUE DVC6200 Digital Valve Controller Integrally Mounted to a Fisher GX Control Valve



W9616

Table 9. Specifications**Available Mounting**

DVC6200 digital valve controller or DVC6215 feedback unit: ■ Integral mounting to the Fisher GX Control Valve and Actuator System ■ Integral mounting to Fisher rotary actuators ■ Sliding-stem linear applications ■ Quarter-turn rotary applications

DVC6205 base unit for 2 inch pipestand or wall mounting (for remote-mount)

The DVC6200 digital valve controller or DVC6215 feedback unit can also be mounted on other actuators that comply with IEC 60534-6-1, IEC 60534-6-2, VDI/VDE 3845 and NAMUR mounting standards.

Input Signal**Point-to-Point:**

Analog Input Signal: 4-20 mA DC, nominal; split ranging available
Minimum Voltage Available at Instrument Terminals must be 10.5 VDC for analog control, 11 VDC for HART communication

Minimum Control Current: 4.0 mA

Minimum Current w/o Microprocessor Restart: 3.5 mA

Maximum Voltage: 30 VDC

Overcurrent protected

Reverse Polarity protected

Multi-drop:

Instrument Power: 11 to 30 VDC at 8 mA

Reverse Polarity protected

Supply Pressure⁽¹⁾

Minimum Recommended: 0.3 bar (5 psig) higher than maximum actuator requirements

Maximum: 10.0 bar (145 psig) or maximum pressure rating of the actuator, whichever is lower

Supply Medium

Air or natural gas

Air: Supply pressure must be clean, dry air that meets the requirements of ISA Standard 7.0.01. A maximum 40 micrometer particle size in the air system is acceptable. Further filtration down to 5 micrometer particle size is recommended.

Natural Gas: Natural gas must be clean, dry, oil-free, and noncorrosive. H₂S content should not exceed 20 ppm.

Output Signal

Pneumatic signal, up to 95% of supply pressure

Minimum Span: 0.4 bar (6 psig)

Maximum Span: 9.5 bar (140 psig)

Action: ■ Double, ■ Single Direct or ■ Reverse

Steady-State Air Consumption⁽²⁾⁽³⁾**Standard Relay:**

At 1.4 bar (20 psig) supply pressure: Less than 0.38 normal m³/hr (14 scfh)

At 5.5 bar (80 psig) supply pressure: Less than 1.3 normal m³/hr (49 scfh)

Low Bleed Relay:

At 1.4 bar (20 psig) supply pressure: Average value 0.056 normal m³/hr (2.1 scfh)

At 5.5 bar (80 psig) supply pressure: Average value 0.184 normal m³/hr (6.9 scfh)

Maximum Output Capacity⁽²⁾⁽³⁾

At 1.4 bar (20 psig) supply pressure: 10.0 normal m³/hr (375 scfh)

At 5.5 bar (80 psig) supply pressure: 29.5 normal m³/hr (1100 scfh)

Operating Ambient Temperature Limits⁽¹⁾⁽⁴⁾

-40 to 85°C (-40 to 185°F)

-52 to 85°C (-62 to 185°F) for instruments utilizing the Extreme Temperature option (fluorosilicone elastomers)

-52 to 125°C (-62 to 257°F) for remote-mount feedback unit

Failure Modes

Refer to figure 34

Independent Linearity⁽⁵⁾

Typical Value: ±0.50% of output span

Electromagnetic Compatibility

Meets EN 61326-1 (First Edition)

Immunity—Industrial locations per Table 2 of the EN 61326-1 standard. Performance is shown in table 10 below.

Emissions—Class A

ISM equipment rating: Group 1, Class A

Lightning and Surge Protection—The degree of immunity to lightning is specified as Surge immunity in table 10. For additional surge protection commercially available transient protection devices can be used.

Vibration Testing Method

Tested per ANSI/ISA-S75.13.01 Section 5.3.5. A resonant frequency search is performed on all three axes. The instrument is subjected to the ISA specified 1/2 hour endurance test at each major resonance.

-continued-

Table 9. Specifications (continued)**Input Impedance**

An equivalent impedance of 550 ohms may be used.
This value corresponds to 11V @ 20 mA.

Humidity Testing Method

Tested per IEC 61514-2

Electrical Classification**Hazardous Area Approvals**

CSA— Intrinsically Safe, Explosion-proof, Division 2,
Dust Ignition-proof
FM— Intrinsically Safe, Explosion-proof,
Non-incendive, Dust Ignition-proof
ATEX— Intrinsically Safe and Dust, Flameproof and
Dust, Type n and Dust
IECEX— Intrinsically Safe, Flameproof, Type n
INMETRO— Intrinsically Safe, Flameproof, Type n

Electrical Housing

CSA— Type 4X, IP66 IECEX— IP66
FM— NEMA 4X INMETRO— IP66W
ATEX— IP66

Refer to Special Instructions for “Safe Use” and
Installation in Hazardous Locations, starting on page
4, for specific approval information

The Gas Certified DVC6200 is CSA, FM, ATEX, IECEX,
and INMETRO approved for use with natural gas as
the supply medium

Other Classifications/Certifications

NEPSI— China
KGS— Korea
TIIS— Japan

Contact your Emerson Process Management sales
office for classification/certification specific
information

Connections

Supply Pressure: 1/4 NPT internal and integral pad for
mounting 67CFR regulator

Output Pressure: 1/4 NPT internal

Tubing: 3/8-inch recommended

Vent: 3/8 NPT internal

Electrical: 1/2 NPT internal, M20 adapter optional

Actuator Compatibility

Stem Travel (Sliding-Stem Linear)

Minimum: 11 mm (0.45 inch)⁽⁶⁾

Maximum: 606 mm (23.875 inches)

Shaft Rotation (Quarter-Turn Rotary)

Minimum: 45°

Maximum: 90°

Weight

DVC6200: 3.5 kg (7.7 lbs)

DVC6205: 4.1kg (9 lbs)

DVC6215: 1.4kg (3.1 lbs)

Construction Materials

Housing, module base and terminal box: ASTM B85
A03600 low copper aluminum alloy

Cover: Thermoplastic polyester

Elastomers: Nitrile (standard)

Options

■ Supply and output pressure gauges or ■ Tire
valves ■ Integral mounted filter regulator
■ Low-Bleed Relay ■ Extreme Temperature
■ Natural Gas Certified ■ Remote Mount⁽⁷⁾

Contact your Emerson Process Management sales
office, or go to www.FIELDVUE.com for additional
information.

Declaration of SEP

Fisher Controls International LLC declares this
product to be in compliance with Article 3 paragraph
3 of the Pressure Equipment Directive (PED) 97 / 23 /
EC. It was designed and manufactured in accordance
with Sound Engineering Practice (SEP) and cannot
bear the CE marking related to PED compliance.

However, the product *may* bear the CE marking to
indicate compliance with *other* applicable European
Community Directives.

NOTE: Specialized instrument terms are defined in ANSI/ISA Standard 51.1 - Process Instrument Terminology.

1. The pressure/temperature limits in this document and any other applicable code or standard should not be exceeded.

2. Normal m³/hour - Normal cubic meters per hour at 0°C and 1.01325 bar, absolute. Scfh - Standard cubic feet per hour at 60°F and 14.7 psia.

3. Values at 1.4 bar (20 psig) based on a single-acting direct relay; values at 5.5 bar (80 psig) based on double-acting relay.

4. Temperature limits vary based on hazardous area approval.

5. Not applicable for travels less than 19 mm (0.75 inch) or for shaft rotation less than 60 degrees. Also not applicable for digital valve controllers in long-stroke applications.

6. For travel less than 11 mm (0.45 inch) contact your Emerson Process Management sales office.

7. 4-conductor shielded cable, 18 to 22 AWG minimum wire size, in rigid or flexible metal conduit, is required for connection between base unit and feedback unit.

Figure 34. Failure Modes



| Relay Type | Loss of Power | Loss of Pneumatic Supply |
|---------------------------------|---|---|
| Single-Acting Direct (Relay C) | Instrument goes to zero air output at port A. | Failure direction per actuator fail mode. |
| Double-Acting (Relay A) | Instrument goes to full supply air output at port B. A goes to zero air output. | Failure direction cannot be determined. |
| Single-Acting Reverse (Relay B) | Instrument goes to full supply air output at port B. | Failure direction per actuator fail mode. |

Table 10. EMC Summary Results—Immunity

| Port | Phenomenon | Basic Standard | Test Level | Performance Criteria ⁽¹⁾ | |
|--------------------|--------------------------------------|----------------|---|-------------------------------------|------------|
| | | | | Point-to-Point | Multi-drop |
| Enclosure | Electrostatic discharge (ESD) | IEC 61000-4-2 | 4 kV contact 8 kV air | A ⁽²⁾ | A |
| | Radiated EM field | IEC 61000-4-3 | 80 to 1000 MHz @ 10V/m with 1 kHz AM at 80% 1400 to 2000 MHz @ 3V/m with 1 kHz AM at 80% 2000 to 2700 MHz @ 1V/m with 1 kHz AM at 80% | A | A |
| | Rated power frequency magnetic field | IEC 61000-4-8 | 30 A/m at 50/60 Hz | A | A |
| I/O signal/control | Burst | IEC 61000-4-4 | 1 kV | A ⁽²⁾ | A |
| | Surge | IEC 61000-4-5 | 1 kV | B | B |
| | Conducted RF | IEC 61000-4-6 | 150 kHz to 80 MHz at 3 Vrms | A | A |

Performance criteria: +/- 1% effect.
1. A = No degradation during testing. B = Temporary degradation during testing, but is self-recovering.
2. Excluding auxiliary switch function, which meets Performance Criteria B.

Related Documents

This section lists other documents containing information related to the DVC6200 digital valve controller. These documents include:

- Bulletin 62.1:DVC6200 - Fisher FIELDVUE DVC6200 Digital Valve Controller (D103415X012)
- Bulletin 62.1:DVC6200 HC - Fisher FIELDVUE DVC6200 Digital Valve Controller (D103423X012)
- Bulletin 62.1:DVC6200(S1) - Fisher FIELDVUE DVC6200 Digital Valve Controller Dimensions (D103543X012)
- FIELDVUE Digital Valve Controller Split Ranging - Supplement to HART Communicating Fisher FIELDVUE Digital Valve Controller Instruction Manuals (D103262X012)
- Using FIELDVUE Instruments with the Smart HART Loop Interface and Monitor (HIM) - Supplement to HART Communicating Fisher FIELDVUE Instrument Instruction Manuals (D103263X012)
- Using FIELDVUE Instruments with the Smart Wireless THUM™ Adapter and a HART Interface Module (HIM) - Supplement to HART Communicating Fisher FIELDVUE Instrument Instruction Manuals
- Audio Monitor for HART Communications - Supplement to HART Communicating Fisher FIELDVUE Instrument Instruction Manuals (D103265X012)

- HART Field Device Specification - Supplement to HART Communicating FIELDVUE Instrument Instruction Manuals (D103266X012)
- Using the HART Tri-Loop™ HART-to-Analog Signal Converter with FIELDVUE Digital Valve Controllers - Supplement to HART Communicating FIELDVUE Instrument Instruction Manuals (D103267X012)
- Lock-in-Last Strategy - Supplement to Fisher FIELDVUE DVC6000 or DVC6200 Digital Valve Controller Instruction Manual (D103261X012)
- Fisher HF340 Filter Instruction Manual (D102796X012)
- 475 Field Communicator User's Manual

ValveLink Software Help or Documentation

All documents are available from your Emerson Process Management sales office. Also visit our website at www.FIELDVUE.com.

Educational Services

For information on available courses for the DVC6200 digital valve controller, as well as a variety of other products, contact:

Emerson Process Management
Educational Services, Registration
P.O. Box 190; 301 S. 1st Ave.
Marshalltown, IA 50158-2823
Phone: 800-338-8158 or
Phone: 641-754-3771
FAX: 641-754-3431
e-mail: education@emerson.com

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Emerson Process Management
Marshalltown, Iowa 50158 USA
Sorocaba, 18087 Brazil
Chatham, Kent ME4 4QZ UK
Dubai, United Arab Emirates
Singapore 128461 Singapore

www.Fisher.com