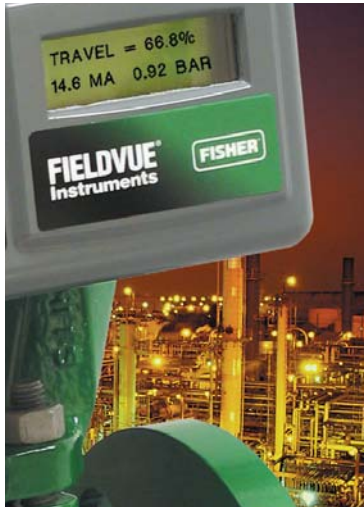


FIELDVUE® DVC2000 Digital Valve Controller



DVC2000 Digital Valve Controller

Everything about the DVC2000 is designed for ease of use

- Compact size
- Local user interface (pushbuttons & liquid crystal display)
- Multilingual liquid crystal display
- Optional integrated position switch & position transmitter
- Linkage-less, non-contact position feedback
- Valve diagnostics
- In-service Performance Diagnostics tests
- Autotuner
- Integration via HART

Customer needs were taken directly to the drawing board when engineers developed the DVC2000 Digital Valve Controller. It incorporates the powerful diagnostic capabilities of FIELDVUE instruments in an easy-to-use package with automatic calibration and tuning capabilities. Pushbutton configuration and a multi language local interface make the DVC2000 instrument simple to apply, operate and maintain. At the same time it provides unrivaled benefits to control valve users.

Simple to Apply

The DVC2000 instrument has been designed in accordance with global standards. It is compact and can be mounted to any actuator with NAMUR mounting capabilities, IEC60534-6-1 and IEC 60534-6-2. Its high performance, linkage-less travel feedback system means a reduction in the number of mounting parts and mounting complexity.

The DVC2000 instrument can be used as a direct replacement for older analog instruments, or it can be used within a digital environment, communicating via HART® protocol. Digital communication allows a user to extract more value from the DVC2000 instrument. Critical information such as alerts, alarms and diagnostic data can be easily integrated with the control system to provide a view into the field device from the safety of the control room.

Designed to meet your needs, the DVC2000 instrument is available with an integrally mounted position transmitter and two integral limit switches. The transmitter provides a 4-20mA signal for position verification, and the switches can be configured to indicate open and closed positions at any point within the calibrated travel.

The DVC2000 instrument includes diagnostic capabilities that can be used to monitor control valve condition in order to predict failure. Diagnostic tests can be performed on-line, with no interruption to the process, or off-line when the process is shut down or the valve bypassed. If used on a HART network, the tests can be performed remotely and scheduled to run automatically.

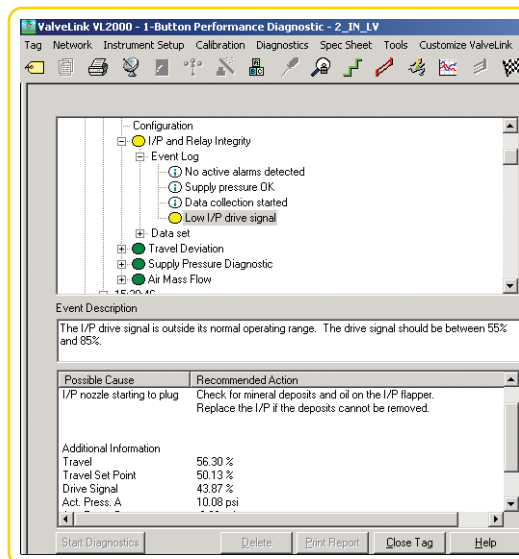


Mounts Directly to Design GX Valve

When fitted to the Fisher Design GX valve, the DVC2000 mounts directly to an interface pad on the actuator yoke leg, eliminating the need for mounting brackets. Internal passages route the pneumatic output to the actuator casing, eliminating the need for external tubing (air-to-open configuration only).

Valve Diagnostics


You can instruct AMS ValveLink software to run Performance Diagnostics tests automatically. When a sweep is complete, the software will show problems, possible causes and recommended actions all while the valve is on-line and in service.



Simple to Operate

The DVC2000 instrument has a local user interface that includes a liquid crystal display and four pushbuttons. The display is protected from the environment by a NEMA 4X / IP66 enclosure and supports multiple languages, including German, French, Italian, Spanish, Chinese, Japanese and English.

The local interface can be used to initiate a quick setup routine that calibrates and tunes the instrument specifically for the actuator on which it has been installed. This helps provide accurate and consistent performance.

 The DVC2000 instrument is a core component of Emerson's PlantWeb® digital plant architecture. PlantWeb integrates intelligent field devices and modular software such as AMS™ Suite: Intelligent Device Manager or the DeltaV™ digital automation system. All are linked by the information-rich HART communication protocol.

The DVC2000 instrument powers PlantWeb by capturing and delivering critical operating information about the valve and the process, enabling plant personnel to make better-informed decisions leading to increased availability, reduced variability, process optimization, increased throughput and enhanced product quality.

Simple to Maintain

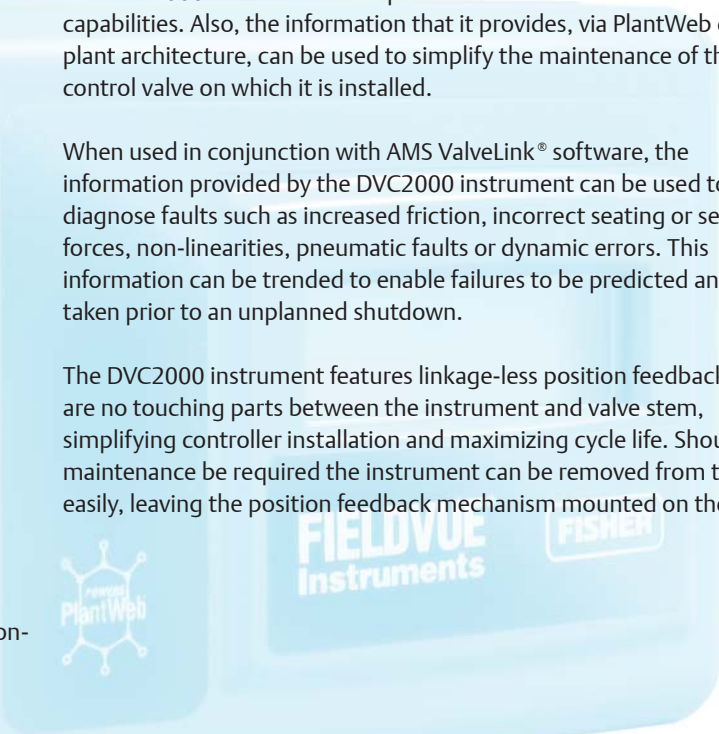
The DVC2000 instrument is simple to maintain due to its self-diagnostic capabilities. Also, the information that it provides, via PlantWeb digital plant architecture, can be used to simplify the maintenance of the control valve on which it is installed.

When used in conjunction with AMS ValveLink® software, the information provided by the DVC2000 instrument can be used to diagnose faults such as increased friction, incorrect seating or sealing forces, non-linearities, pneumatic faults or dynamic errors. This information can be trended to enable failures to be predicted and action taken prior to an unplanned shutdown.

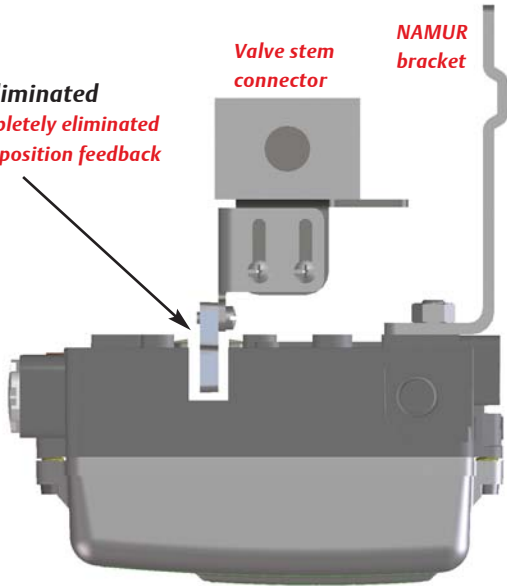
The DVC2000 instrument features linkage-less position feedback. There are no touching parts between the instrument and valve stem, simplifying controller installation and maximizing cycle life. Should maintenance be required the instrument can be removed from the valve easily, leaving the position feedback mechanism mounted on the valve.



Local User Interface
With pushbuttons for menu navigation and a liquid crystal display, the local user interface allows you to configure and calibrate the DVC2000 instrument in any one of seven different languages. (Shown with cover removed on a Baumann™ control valve)



Linkages Are Eliminated
Linkages are completely eliminated with non-contact position feedback (patent pending)



Top view of DVC2000 instrument

DVC2000 Specifications

Available configurations	Linear (sliding-stem), rotary or integrally mounted to the Design GX control valve
Electrical classification	Intrinsically safe and protection type "n" according to CENELEC standard. Intrinsically safe and non-incendive according to CSA, FM, SAA and JIS standards. Also satisfies the requirements of the European ATEX directive. Certifications pending.
Input signal	4-20mA dc nominal, split ranging available. Minimum 8.5 Volts available at the instrument (9.0 Volts for HART communication)
Output signal	Up to 95% of supply pressure, max 100 psi (7 bar)
Transmitter	4-20mA dc output, isolated
Limit switches	1 or 4 mA dc output, isolated; independently configurable throughout full travel range
Enclosure	Meets NEMA 4X, CSA Type 4X, IEC 60529



Commission the FIELDVUE DVC2000 instrument as well as run Performance Diagnostics from a personal computer using AMS ValveLink software. (DVC2000 instrument shown mounted on a Fisher POSI-SEAL® butterfly control valve)

The Next Step

Contact your local Emerson Process Management sales office or sales representative location for more information or to make a purchase. Their highly skilled and experienced applications personnel are ready to help you take advantage of the many benefits of the DVC2000.

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