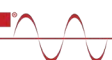


# Fisher™ FIELDVUE™ DVC7K-H

Digital Valve Controller



**HART**   
COMMUNICATION PROTOCOL

The FIELDVUE DVC7K digital valve controller is reliable and intuitive, featuring diagnostics that enable you to optimize your plant's performance. It converts a 4 to 20 mA input signal into a pneumatic output signal that controls the actuator on the valve. Perform setup and configuration procedures, check the valve health and get Advice at the Device™ using the simple-to-use Local User Interface (LUI). The interface can be configured to support multiple languages with a few button pushes.

## Features

### Reliability

- **Linkage-Less Non-Contact Position Feedback** — The high performance, linkage-less feedback system, shown in Figure 1, eliminates physical contact between the valve stem and the instrument. There is no wearing of parts so cycle life is maximized. Additionally, the elimination of levers and linkages reduces the number of mounting parts and mounting complexity. Instrument replacement and maintenance is simplified because the feedback parts stay connected to the actuator stem.
- **Built to Survive** — The DVC7K's field-proven conformal coated electronics resist the effects of vibration, temperature and corrosive atmospheres per the ISA.75.13 standard. A weather-tight housing construction protects the wiring terminal box and critical components from harsh environmental conditions.

### Performance

- **Accurate and Responsive** — The two-stage instrument design provides quick response to large step changes and precise control for small setpoint changes.
- **Ramped Cutoff** provides smooth transition from throttling control to shutoff

### Ease of Use

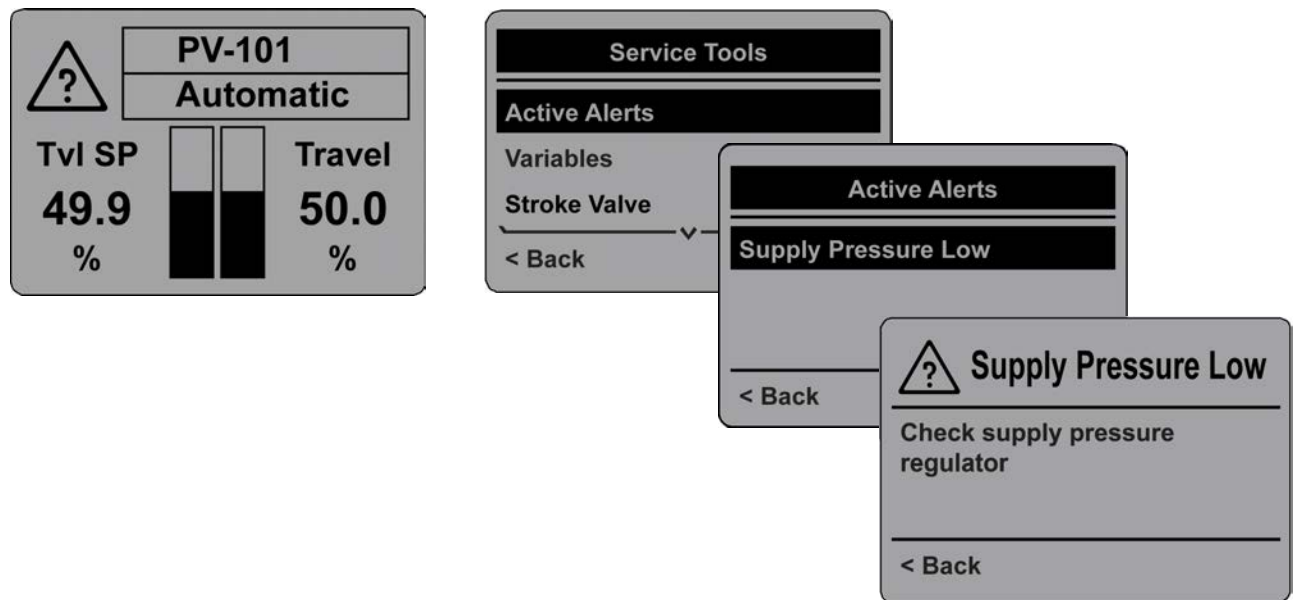
- **Enhanced Safety** — The DVC7K is a HART® communicating device; information can be accessed anywhere along the loop. This flexibility can reduce exposure to hazardous environments and make it easier to evaluate valves in hard-to-reach locations.

**Figure 1. Linkage-Less Non-Contact Feedback System**



- **Local User Interface (LUI)** — The full text display in the local interface is easy to navigate due to the six button LUI (Figure 2). Each unit can be configured to display Arabic, Chinese, Czech, English, French, German, Italian, Japanese, Korean, Polish, Portuguese, Russian or Spanish. View the Travel vs. Travel Setpoint, Instrument Mode and Valve Health instantly from the home screen.
- **Valve Health** — Identify the health status of the valve assembly at a distance with the NE 107 LED indicator. Quickly troubleshoot issues and identify recommended actions with Advice at the Device. Additionally, use the LUI to view primary variables like supply pressure and input current.
- **Faster Commissioning** — HART communications allow the user to quickly commission loops with a variety of tools from a remote location or locally at the valve assembly with the LUI.
- **Flexible Connectivity** — Emerson's secure Bluetooth® wireless technology implementation (future release) enables ability to see health across multiple valves.
- **Easy Maintenance** — The DVC7K is modular in design. Critical working components can be replaced without removing field wiring or pneumatic tubing.

Figure 2. Local User Interface



## Value

- **Hardware Savings** — When installed in an integrated control system, significant hardware and installation cost savings can be achieved. Valve accessories such as limit switches and position transmitters can be eliminated due to the integrated position transmitter and switch option.
- **Increased Uptime** — The self-diagnostic capability of the DVC7K provides valve performance and health evaluation without shutting down the process or pulling the valve assembly from the line.
- **Improved Maintenance Decisions** — Digital communication provides easy access to the condition of the valve. Sound decisions can be made by analysis of valve information through any HART communicating asset management software.

## Valve Diagnostics

With its enhanced memory, the DVC7K digital valve controller supports a comprehensive library of valve diagnostic alerts, as shown in Figure 3. These diagnostics and recommended actions are easily accessed with an Emerson handheld communicator or from the LUI. When installed as part of a HART communicating system, the DVC7K delivers prompt notification of current or potential equipment issues directly to the asset management system and supports NAMUR NE107 alert categorization.

Alerts assist in identification and notification of the following situations:

- Valve travel deviation due to excessive valve friction or galling
- High cycle due to dither or improper tuning
- Total travel movement accumulation beyond a specified point resulting in packing wear
- Valve travel deviating from the specified setpoint
- Various instrument mechanical and electrical issues
- Low supply pressure

The instrument Event Log stores alerts in memory on board the DVC7K which can be accessed by the HART asset management software.

Figure 3. Remote Interface Examples [via DD (Device Description) and FDI (Field Device Integration) Package]

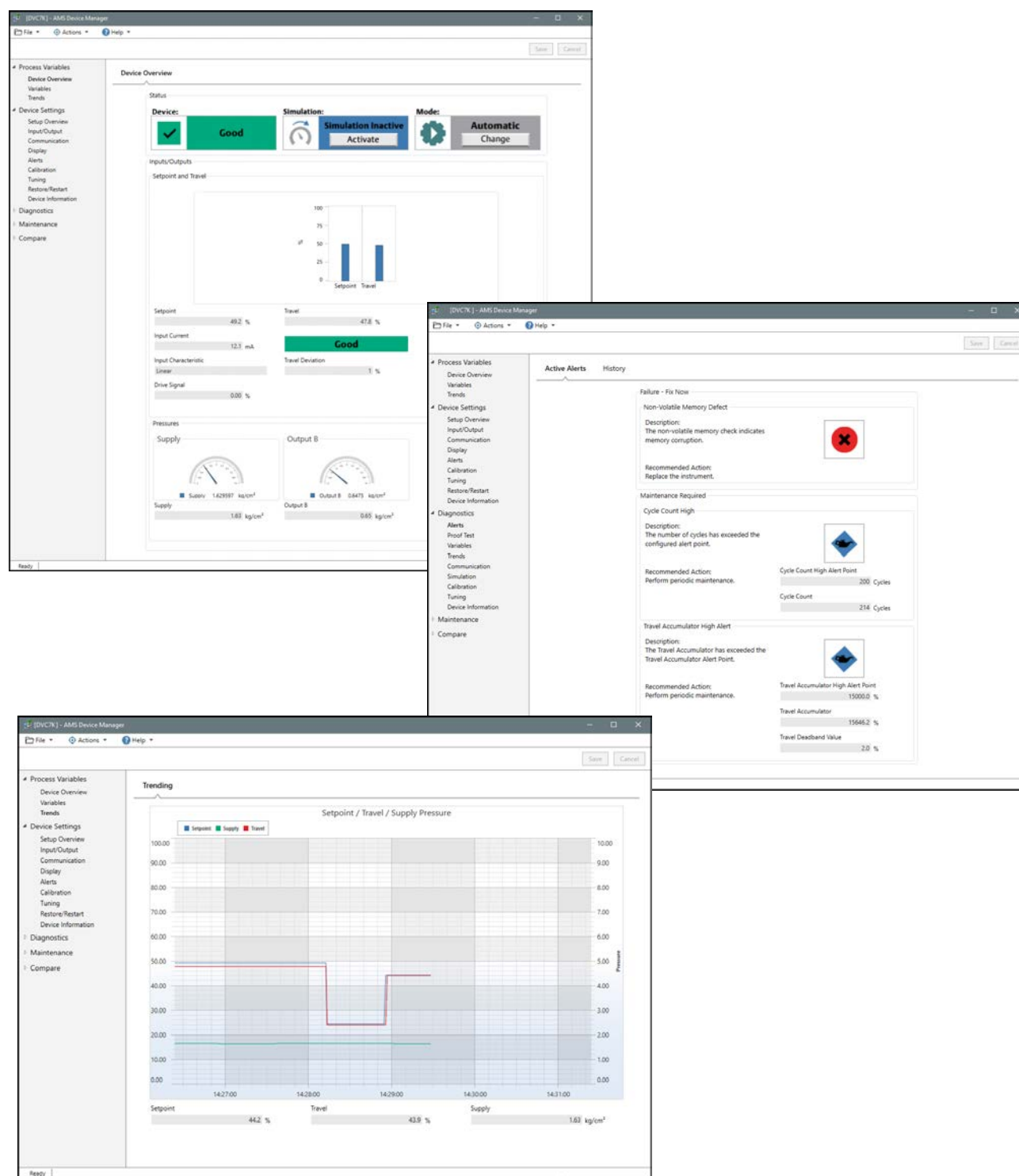


Table 1. Specifications

| Available Mounting                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Output Signal                                                                                                                                                                                                                                                                                                                     |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <ul style="list-style-type: none"> <li>■ Direct actuator mounting to Fisher 657i/667i or GX actuators</li> <li>■ Integral mounting to Fisher sliding-stem and rotary actuators</li> <li>■ Quarter-turn rotary actuators</li> </ul> <p>DVC7K digital valve controllers 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</p>                                                                                                                                                                                                                                                                                                                                                                                      | <p>Pneumatic signal, up to full supply pressure<br/>Maximum Span: 9.5 bar / 140 psig<br/>Action: ■ Double ■ Single Direct or ■ Reverse</p>                                                                                                                                                                                        |
| Communication Protocol                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Steady-State Air Consumption <sup>(2)(3)</sup>                                                                                                                                                                                                                                                                                    |
| HART 7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <p>At 1.4 bar / 20 psig supply pressure:<br/>Less than 0.38 normal m<sup>3</sup>/hr / 14 scfh<br/>At 5.5 bar / 80 psig supply pressure:<br/>Less than 1.3 normal m<sup>3</sup>/hr / 49 scfh</p>                                                                                                                                   |
| Input Signal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Maximum Output Capacity <sup>(2)(3)</sup>                                                                                                                                                                                                                                                                                         |
| <p><b>Point-to-Point</b><br/>Analog Input Signal: 4 to 20 mA DC, nominal; split-ranging available<br/>Minimum voltage available at instrument terminals must be 10.2 V DC for analog control, 10.7 V DC for HART communication<br/>Minimum Control Current: 4.0 mA<br/>Minimum Current without Microprocessor Restart: 3.8 mA<br/>Maximum Voltage: 30 V DC<br/>Overcurrent protected<br/>Reverse Polarity protected</p> <p><b>24 V DC (On/Off only)</b><br/>Instrument Power: 11 to 30 V DC at 10 mA<br/>Reverse Polarity protected</p>                                                                                                                                                                                                                                                        | <p>At 1.4 bar / 20 psig supply pressure:<br/>10.0 normal m<sup>3</sup>/hr / 375 scfh<br/>At 5.5 bar / 80 psig supply pressure:<br/>29.5 normal m<sup>3</sup>/hr / 1100 scfh</p>                                                                                                                                                   |
| Supply Pressure <sup>(1)</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Operating Ambient Temperature Limits <sup>(1)(4)</sup>                                                                                                                                                                                                                                                                            |
| <p>Minimum Recommended: 0.3 bar / 5 psig higher than maximum actuator requirements<br/>Maximum: 10.0 bar / 145 psig or maximum pressure rating of the actuator, whichever is lower<br/>Supply medium must be clean, dry and noncorrosive</p> <p><b>Per ISA Standard 7.0.01</b><br/>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.<br/>Pressure dew point: At least 10 °C less than the lowest ambient temperature expected</p> <p><b>Per ISO 8573-1</b><br/>Maximum particle density size: Class 7<br/>Oil content: Class 3<br/>Pressure dew point: Class 3</p> | <p>Standard: -40 to +85 °C / -40 to +185 °F includes nitrile elastomers<br/>Extreme Temperature Option: -45 to +85 °C / -49 to +185 °F includes fluorosilicone elastomers<br/>High Temperature Option: -40 to +85 °C / -40 to +185 °F includes fluorosilicone elastomers<br/>Note: LUI may not be readable below -20°C / -4°F</p> |
| Independent Linearity <sup>(5)</sup>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Electromagnetic Compatibility                                                                                                                                                                                                                                                                                                     |
| <p>Typical Value: ±0.5% of output span</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | <p>Meets EN IEC 61326-1:2021<br/>Immunity—Industrial locations per Table 2 of the EN 61326-1 standard.<br/>Emissions—Class A<br/>ISM equipment rating: Group 1, Class A</p>                                                                                                                                                       |

- continued -

**Table 1. Specifications (continued)**

| General Electrical Safety - Environmental Conditions                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Electrical Housing                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Use: Indoor and Outdoor<br>Altitude: Up to 2000 m<br>Temperature: See operating ambient temperature limits<br>Relative Humidity: Max. R.H 90 % non-condensing<br>Supply Voltage Fluctuations: N/A, not connected to Mains<br>Transient Overvoltage: Category I<br>Wet Locations: Yes                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | cCSAus - Type 4X, IP66<br>ATEX - IP66<br>IECEX - IP66                                                                                                                                                                                          |
| Vibration Testing Method                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Connections                                                                                                                                                                                                                                    |
| Tested per ANSI/ISA-S75.13.01 Section 5.3.5.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Supply Pressure: 1/4 NPT internal or G1/4 and integral pad for mounting 67CFR regulator<br>Output Pressure: 1/4 NPT internal or G1/4<br>Tubing: 3/8-in. recommended<br>Vent: 1/2 NPT internal<br>Electrical: 1/2 NPT internal or M20           |
| Input Impedance                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                                                                                                                                                                                                                                                |
| An equivalent impedance of 550 ohms may be used. This value corresponds to 11 V at 20 mA.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                |
| Hazardous Area Approvals and Other Classifications                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Actuator Compatibility                                                                                                                                                                                                                         |
| cCSAus - Explosion-proof/Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety, Class/Div/Zone<br>ATEX - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety<br>IECEX - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety<br>CML - Certification Management Limited (Japan)<br>CUTR - Customs Union Technical Regulations<br>ECAS - Emirates Conformity Assessment Scheme (UAE)<br>INMETRO - National Institute of Metrology, Quality and Technology (Brazil)<br>KTL - Korea Testing Laboratory (South Korea)<br>CCC - China Compulsory Certification<br>NEPSI - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety (China)<br>PESO - Petroleum and Explosives Safety Organisation (India)<br>SANS - South Africa National Standards<br>UKEx - United Kingdom Explosive Atmospheres. Intrinsically Safe and Dust, Flameproof, Protection by Enclosure, Increased Safety (United Kingdom)<br>Not all certifications apply to all constructions. Contact your <a href="#">Emerson sales office</a> or refer to the DVC7K product page at <a href="#">Fisher.com</a> for approval specific information. | Stem Travel (Sliding-Stem Linear):<br>Linear actuators with rated travel between 6.35 mm / 0.25 in. and 606 mm / 23.375 in.<br>Shaft Rotation (Quarter-Turn Rotary):<br>Rotary actuators with rated travel between 45° and 180° <sup>(6)</sup> |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Weight                                                                                                                                                                                                                                         |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | Aluminum: 4.2 kg / 9.3 lbs                                                                                                                                                                                                                     |

- continued -

**Table 1. Specifications (continued)**

| Construction Materials                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Bluetooth Tier                                                                                                                                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Housing and Front Cover: EN AC-43400/EN AC-ALSi10Mg(Fe) copper free die cast aluminum (standard)<br>LUI Cover: Polycarbonate<br>Elastomers: Silicone Environmental / Nitrile Internal (standard temperature), Silicone Environmental / Fluorosilicone Internal (extreme temperature)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <ul style="list-style-type: none"> <li>■ Bluetooth Enabled (BLE)</li> <li>■ Bluetooth Ready (BLR)</li> <li>■ Bluetooth Disabled (BLD)</li> </ul>                                                                                                                                                                                                    |
| Control Tier                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Options                                                                                                                                                                                                                                                                                                                                             |
| <ul style="list-style-type: none"> <li>■ Throttling Control (TC): Supports Throttling and On/Off Application Modes</li> <li>■ Discrete Control (DC): Supports On/Off Application Mode only</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | <ul style="list-style-type: none"> <li>■ Integral mounted filter regulator</li> <li>■ Low-Bleed Relay<sup>(7)</sup></li> <li>■ Extreme Temperature</li> <li>■ High Temperature</li> <li>■ Integral 4 to 20 mA Position Transmitter<sup>(8)(9)</sup></li> <li>■ Integral Switches<sup>(10)(11)</sup></li> <li>■ Pipe-away Vent Connection</li> </ul> |
| Diagnostic Tier                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                                                                                                                                                                                                                                     |
| <ul style="list-style-type: none"> <li>■ HART Alert Diagnostics (HC)</li> <li>■ Offline Advanced Diagnostics (AD)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                                                                                                                     |
| <p><b>NOTE:</b> Specialized instrument terms are defined in ANSI/ISA Standard 51.1 - Process Instrument Terminology.</p> <ol style="list-style-type: none"> <li>1. The pressure/temperature limits in this document and any other applicable code or standard should not be exceeded.</li> <li>2. Normal m<sup>3</sup>/hr - 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.</li> <li>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.</li> <li>4. Temperature limits vary based on hazardous area approval.</li> <li>5. Not applicable for travels less than 19 mm / 0.75 in. or for shaft rotation less than 60°. Also not applicable for digital valve controllers in long-stroke applications.</li> <li>6. Rotary actuators with 180° rated travel require a special mounting kit; contact your Emerson sales office for kit availability.</li> <li>7. The Quad O steady-state consumption requirement of 6 scfh can be met by a DVC7K with low bleed relay A option, when used with up to 4.8 bar / 70 psi supply of Natural Gas at 16 °C / 60 °F. The 6 scfh requirement can be met by low bleed relay B and C when used with up to 5.2 bar / 75 psi supply of Natural Gas at 16 °C / 60 °F.</li> <li>8. 4 to 20 mA output, isolated; Supply Voltage: 11 to 30 V DC; Reference Accuracy: 1% of travel span.</li> <li>9. Position transmitter meets the requirements of NAMUR NE43; selectable to show failure low (&lt; 3.6 mA) or failure high (&gt; 22.5 mA). Fail high available only when the instrument is powered.</li> <li>10. Two isolated switches, configurable throughout the calibrated travel range or actuated from a device alert; Off State: 0 mA (nominal); On State: up to 1 A; Supply Voltage: 30 V DC maximum; Reference Accuracy: 2% of travel span.</li> <li>11. Switch 1 is a normally open circuit and Switch 2 is a normally closed circuit.</li> </ol> |                                                                                                                                                                                                                                                                                                                                                     |

**Table 2. DVC7K Product Selection Matrix**

| Base Instrument Model                                        |                                                                                                                                                                                                                                                                                           |
|--------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| DVC7K                                                        | Electro-Pneumatic Digital Valve Controller                                                                                                                                                                                                                                                |
| 1. Hardware Construction                                     |                                                                                                                                                                                                                                                                                           |
| 1H                                                           | HART 7 Communication                                                                                                                                                                                                                                                                      |
| 2. Hazardous Area Approval Agency/Protection Method/Location |                                                                                                                                                                                                                                                                                           |
| 2A                                                           | None - EMC Compliance to CE, IEC 61010 and IEC 61000-4                                                                                                                                                                                                                                    |
| 2B                                                           | cCSAus - Explosion-proof/Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety, Class/Div/Zone (Canada and United States)                                                                                                                                                 |
| 2C                                                           | IECEEx - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety (Includes Certified Blanking Element)                                                                                                                                                                      |
| 2D                                                           | ATEX - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety (Includes Certified Blanking Element) (also applicable for UKEx - United Kingdom Explosive Atmospheres. Intrinsically Safe and Dust, Flameproof, Protection by Enclosure, Increased Safety [United Kingdom]) |
| 2E                                                           | NEPSI - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety (China)                                                                                                                                                                                                     |
| 2F                                                           | cCSA - Explosion-proof/Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety, Class/Div/Zone (Canada)                                                                                                                                                                     |
| 2G                                                           | CSAus - Explosion-proof/Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety, Class/Div/Zone (United States)                                                                                                                                                             |
| 2H                                                           | ATEX/IECEEx - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety (Includes Certified Blanking Element)                                                                                                                                                                 |
| 2I                                                           | INMETRO - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety (Brazil)                                                                                                                                                                                                  |
| 2J                                                           | PESO - Flameproof, Intrinsically Safe, Increased Safety (India)                                                                                                                                                                                                                           |
| 2K                                                           | CU-TR - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety                                                                                                                                                                                                             |
| 2L                                                           | CML - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety (Japan)                                                                                                                                                                                                       |
| 2M                                                           | SANS - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety (South Africa)                                                                                                                                                                                               |
| 2N                                                           | KTL - Flameproof, Intrinsically Safe, Dust-Ignition-proof, Increased Safety (South Korea)                                                                                                                                                                                                 |
| 3. Housing Material                                          |                                                                                                                                                                                                                                                                                           |
| 3A                                                           | VOC Free Powder Coated Copper-Free Aluminum                                                                                                                                                                                                                                               |

- continued -

**Table 2. DVC7K Product Selection Matrix (continued)**

| <b>4. Temperature Range</b>                |                                                                                                                |
|--------------------------------------------|----------------------------------------------------------------------------------------------------------------|
| 4A                                         | Standard -40 to +85 °C (see specific Ex markings for deratings); Clock Battery Backup included                 |
| 4B                                         | Extreme Temperature -45 to +85 °C (see specific Ex markings for deratings); Clock Battery Backup not supported |
| 4C                                         | High Temperature -40 to +85 °C (see specific Ex markings for deratings); Clock Battery Backup included         |
| <b>5. Electrical/Pneumatic Connections</b> |                                                                                                                |
| 5A                                         | Imperial - 1/2 NPT Electrical / 1/4 NPT Pneumatic                                                              |
| 5B                                         | Metric - M20 Electrical / G1/4 Pneumatic                                                                       |
| 5C                                         | Metric/Imperial - M20 Electrical / 1/4 NPT Pneumatic                                                           |
| <b>6. I/O Functions</b>                    |                                                                                                                |
| 6A                                         | None (I/O Electronics not included)                                                                            |
| 6B                                         | I/O Options: (Qty 1) 4 to 20 mA Position Transmitter, (Qty 2) Solid State Dry Contact Switches                 |
| <b>7. Local User Interface</b>             |                                                                                                                |
| 7B                                         | Local User Interface (LED, LCD, Buttons)                                                                       |
| <b>8. Pneumatic Action</b>                 |                                                                                                                |
| 8A                                         | DOUBLE-Acting Operation (Relay A)                                                                              |
| 8B                                         | Single-Acting REVERSE Operation (Relay B)                                                                      |
| 8C                                         | Single-Acting DIRECT Operation (Relay C)                                                                       |
| 8D                                         | Single-Acting DIRECT Operation (Relay A)                                                                       |
| 8E                                         | DOUBLE-Acting Low Bleed Operation (Relay A Low Bleed)                                                          |
| 8F                                         | Single-Acting REVERSE Low Bleed Operation (Relay B Low Bleed)                                                  |
| 8G                                         | Single-Acting DIRECT Low Bleed Operation (Relay C Low Bleed)                                                   |
| 8H                                         | Single-Acting DIRECT Low Bleed Operation (Relay A Low Bleed)                                                   |

- continued -

**Table 2. DVC7K Product Selection Matrix (continued)**

| <b>9. Pneumatic Block (Imperial or Metric Pneumatic Connections per Housing Construction)</b> |                                                                                                     |
|-----------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| 9A                                                                                            | None                                                                                                |
| 9B                                                                                            | Gauge Block with Pipe Plugs                                                                         |
| 9C                                                                                            | Gauge Block with Tire Valve Connections                                                             |
| 9D                                                                                            | Gauge Block with Supply and Output Gauges, dual scaled 0 to 60 psig, 0 to 4 bar                     |
| 9E                                                                                            | Gauge Block with Supply and Output Gauges, dual scaled 0 to 60 psig, 0 to 0.4 MPa                   |
| 9F                                                                                            | Gauge Block with Supply and Output Gauges, dual scaled 0 to 60 psig, 0 to 4 kg/cm <sup>2</sup>      |
| 9G                                                                                            | Gauge Block with Supply and Output Gauges, dual scaled 0 to 160 psig, 0 to 11 bar                   |
| 9H                                                                                            | Gauge Block with Supply and Output Gauges, dual scaled 0 to 160 psig, 0 to 1.1 MPa                  |
| 9I                                                                                            | Gauge Block with Supply and Output Gauges, dual scaled 0 to 160 psig, 0 to 11 kg/cm <sup>2</sup>    |
| <b>10. Wireless Interface Tier</b>                                                            |                                                                                                     |
| BLE                                                                                           | Bluetooth Enabled                                                                                   |
| BLR                                                                                           | Bluetooth Ready (field upgradable to BLE)                                                           |
| BLD                                                                                           | Bluetooth Disabled PERMANENTLY from the factory                                                     |
| <b>11. Control Tier</b>                                                                       |                                                                                                     |
| TC                                                                                            | Throttling Control (Field configurable to Throttling or End Point Open/Close with Application Mode) |
| DC                                                                                            | On/Off Control (End Point Open/Close Only)                                                          |
| <b>12. Instrument Tier</b>                                                                    |                                                                                                     |
| HC                                                                                            | HART Alert Diagnostics (HC)                                                                         |
| AD                                                                                            | Offline Advanced Diagnostics (AD)                                                                   |
| <b>13. Power Source<sup>(1)</sup></b>                                                         |                                                                                                     |
| CS                                                                                            | 4 to 20 mA                                                                                          |
| VS                                                                                            | 24 V DC (only available without the I/O options)                                                    |

- continued -

**Table 2. DVC7K Product Selection Matrix (continued)**

| <b>14. Local User Interface Language<sup>(1)</sup></b>   |                                                              |
|----------------------------------------------------------|--------------------------------------------------------------|
| AR                                                       | Arabic                                                       |
| CH                                                       | Chinese                                                      |
| CZ                                                       | Czech                                                        |
| EN                                                       | English                                                      |
| FR                                                       | French                                                       |
| DE                                                       | German                                                       |
| IT                                                       | Italian                                                      |
| JA                                                       | Japanese                                                     |
| KO                                                       | Korean                                                       |
| PO                                                       | Polish                                                       |
| PT                                                       | Portuguese                                                   |
| RU                                                       | Russian                                                      |
| ES                                                       | Spanish                                                      |
| <b>15. Electrical Conduit Connection 1 (Left Side)</b>   |                                                              |
| XX                                                       | None                                                         |
| SBE                                                      | Standard Blanking Element                                    |
| CBE                                                      | Certified Blanking Element <sup>(2)</sup>                    |
| CG1                                                      | Cable Gland: Intrinsically Safe, blue plastic                |
| CG2                                                      | Cable Gland: Flameproof, ENC Brass                           |
| TPP                                                      | Protective Plastic Pipe Plugs for electrical conduit opening |
| <b>16. Electrical Conduit Connection 2 (Left Bottom)</b> |                                                              |
| XX                                                       | None <sup>(3)</sup>                                          |
| SBE                                                      | Standard Blanking Element                                    |
| CBE                                                      | Certified Blanking Element                                   |
| CG1                                                      | Cable Gland: Intrinsically Safe, blue plastic                |
| CG2                                                      | Cable Gland: Flameproof, ENC Brass                           |
| TPP                                                      | Protective Plastic Pipe Plugs for electrical conduit opening |

- continued -

**Table 2. DVC7K Product Selection Matrix (continued)**

| <b>17. Electrical Conduit Connection 3 (Right Bottom)</b>                                                                                                                                                                                                                                        |                                                                                                                                                                     |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| XX                                                                                                                                                                                                                                                                                               | None                                                                                                                                                                |
| SBE                                                                                                                                                                                                                                                                                              | Standard Blanking Element                                                                                                                                           |
| CBE                                                                                                                                                                                                                                                                                              | Certified Blanking Element <sup>(2)</sup>                                                                                                                           |
| CG1                                                                                                                                                                                                                                                                                              | Cable Gland: Intrinsically Safe, blue plastic                                                                                                                       |
| CG2                                                                                                                                                                                                                                                                                              | Cable Gland: Flameproof, ENC Brass                                                                                                                                  |
| TPP                                                                                                                                                                                                                                                                                              | Protective Plastic Pipe Plugs for electrical conduit opening                                                                                                        |
| <b>18. Additional Options<sup>(4)</sup></b>                                                                                                                                                                                                                                                      |                                                                                                                                                                     |
| XX                                                                                                                                                                                                                                                                                               | None                                                                                                                                                                |
| LCD                                                                                                                                                                                                                                                                                              | LCD Protective Cover - Plastic                                                                                                                                      |
| PP                                                                                                                                                                                                                                                                                               | Protective plastic pipe plugs for pneumatic or conduit openings                                                                                                     |
| PI                                                                                                                                                                                                                                                                                               | Pipeaway vent connection for 1/2 in. pipe                                                                                                                           |
| VD                                                                                                                                                                                                                                                                                               | Configured for Direct Mount (adaptor included) to Pneumatic Module per VDI/VDE 3847-1 and VDI/VDE 3847-2, Single-Acting Direct without Rebreather and Double-Acting |
| VDR                                                                                                                                                                                                                                                                                              | Configured for Direct Mount (adaptor included) to Pneumatic Module per VDI/VDE 3847-1 and VDI/VDE 3847-2, Single-Acting Direct with Rebreather <sup>(5)</sup>       |
| HF                                                                                                                                                                                                                                                                                               | HART Filter (DIN rail-mounted to support HART communications with HART incompatible hosts)                                                                          |
| LC                                                                                                                                                                                                                                                                                               | LC340 Line Conditioner <sup>(6)</sup>                                                                                                                               |
| CC                                                                                                                                                                                                                                                                                               | Custom configuration - detail requirements separately                                                                                                               |
| 1. Option is field configurable.<br>2. Standard for ATEX and IECEx approved devices on Electrical Conduit Connection 1 and 3.<br>3. Default for all orders.<br>4. Select more than one option, if required.<br>5. European Sourcing Only.<br>6. Use 24 V DC, Multi-Drop for HART communications. |                                                                                                                                                                     |

Typical model number:

|       | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  | 9  | 10  | 11 | 12 | 13 | 14 | 15  | 16 | 17  | 18 |
|-------|----|----|----|----|----|----|----|----|----|-----|----|----|----|----|-----|----|-----|----|
| DVC7K | 1H | 2G | 3A | 4A | 5A | 6A | 7B | 8C | 9A | BLR | TC | HC | CS | EN | SBE | XX | SBE | XX |

Enter your choices to start the selection process:

|       | 1  | 2 | 3  | 4 | 5 | 6 | 7  | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 |
|-------|----|---|----|---|---|---|----|---|---|----|----|----|----|----|----|----|----|----|
| DVC7K | 1H |   | 3A |   |   |   | 7B |   |   |    |    |    |    |    |    |    |    |    |



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