

EVPD Proportional Valve Driver

Plug-and-Play Control for Proportional Valves

The NEW EVPD Proportional Valve Driver fast-tracks valve-control applications. This product is ideal for laboratories and OEM product development, and can be customized to fit OEM applications, including control parameters. The EVPD produces driver current for Clippard's EVP series valves proportional to input control signals.



Proportional Control Made Easy & Affordable

- > Unbeatable value in two-way proportional control.
- > Ideal for analytical instruments, medical, pressure and flow control, and more.
- > Consistent gain provides outstanding controllability.
- > Fast response, low hysteresis.
- > Long life, reliable, single moving part.
- > Choice of five orifice sizes.
- > Proportional flow up to 22 slpm @ 100 psig.

Provides

- Plug-and-play interface between Clippard's DVP or EVP series valves and PLCs or other controls.
- Linearized valve response right "out of the box".
- "Daughter-Board" solution - Allows the design engineer to focus on system control solutions instead of simple valve control.
- Three selectable valve output ranges.
- Five signal inputs to choose from.
- Easy integration with existing machine controls.
- User adjustable parameters.
- Automatic temperature compensation to maintain constant current.
- Two configuration options: stand-alone PCB or enclosed in housing.
- Compact size.



Principle of Operation

The tuning adjustments on the EVPD allow the user to: (1) adjust the command signal needed to start opening the valve (Command Threshold adjustment), (2) adjust the opening current to the valve, and (3) limit the maximum current to the valve to restrict the valve maximum opening and prevent current beyond the valve solenoid's rating. The settings are used by the valve management software in the micro-controller, along with driver current feedback, to calculate command instructions to the digital PWM controller.

The resulting change to valve performance is shown in Figure 1 for a typical EVP valve (10 VDC coil, 0.06" orifice, 25 psig max). The **brown** lines show the flow response to an increasing and then decreasing command to the valve in its "native" state as a customer would operate with their own drive electronics. The **blue** lines show the same valve's flow response when operated by the EPVD and adjusted to start flow immediately upon a positive command ("rising" flow).

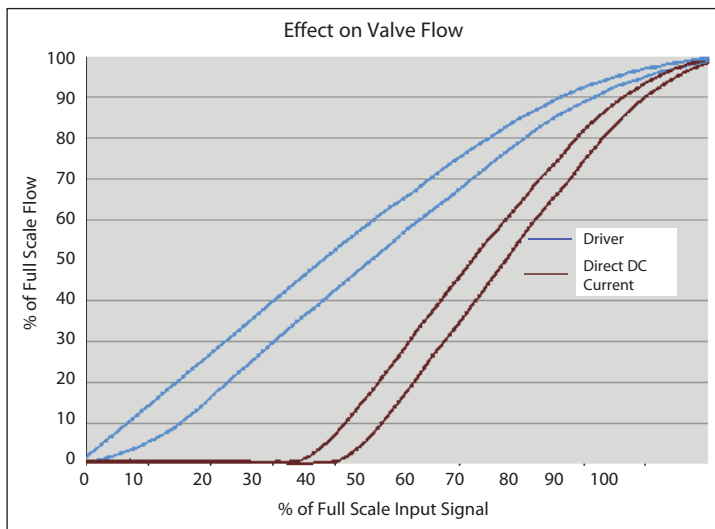
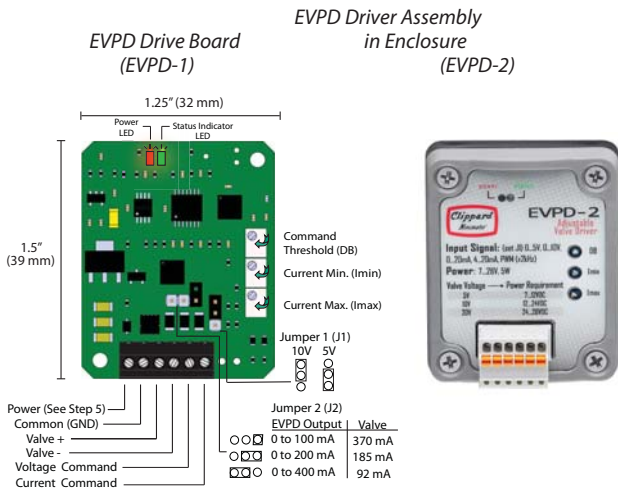


Figure 1: Effect of Driver Output on DVP/EVP Flow

Power Requirement: 7 to 28 VDC @ 5 Watt (see chart below)
Input Impedance: 200 k Ω
Command Set-Point Signal Type: Selectable: 0 to 5 VDC, 0 to 10 VDC, 0 to 20 mA, 4 to 20 mA, PWM @ ≥ 2 kHz duty cycle
Adjustments: Minimum Drive Current, Maximum Drive Current, Command Threshold
LED Indicators: Power; Activity Status & Faults
Output: 0 to 0.4 A (selectable range)
Temperature Range: 0 to 155°F (-18 to 68°C)
Size: Open card: 1.5" x 1.3" x 0.4" unmounted; Enclosed: 2.2" x 1.8" x 0.7" excluding DIN clip
RoHS Compliant

Power Requirements

Power input requirements are specified as supply voltage ranges for each EVP valve. Supplying voltages outside of these ranges may result in valve malfunctioning. Power requirements are determined by the valve voltage specification.

EVP Valve Type	Drive Supply Voltage Range	EVPD Max. Output*
0 to 5 VDC	7 to 12 VDC	400 mA
0 to 10 VDC	12 to 28 VDC	200 mA
0 to 20 VDC	24 to 28 VDC	100 mA

* See catalog for EVP Valve Current requirements

Order Information

Order No.

EVPD-2 EVPD Driver Assembly in Enclosure
 EVPD-1 EVPD Driver Board
 EVPD-2DIN DIN Rail Mounting Clip with Screws

Limited Warranty Visit www.clippard.com/warranty.

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