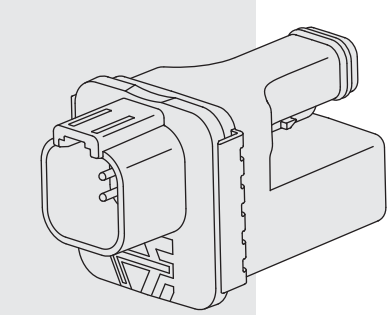
EVDR1 Dual/Single Valve Driver, Plug-In Style



DESCRIPTION

A convenient, plug-mounted microprocessor-based controller for use on a hydraulic proportional valve coil. The input signal to the controller can be configured as voltage, current, resistive, or PWM.

OPERATION

The EVDR1 can be configured for a **SINGLE or DUAL OUTPUT** control based on a single input signal. A single output would be used to control a single solenoid proportional valve coil for flow or pressure control. It could be configured to increase or decrease the output current as the input increases. All input and output endpoints and breakpoints can be adjusted via a PC interface and configuration software.

A dual output would be used to control a dual solenoid proportional valve. For a dual control the input would be a joystick that is spring loaded to the center position where both outputs would be OFF. As the joystick is stroked in one direction the corresponding output would increase to adjust the valve and the other output would remain OFF. When the joystick is stroked the opposite direction the other output will respond. Again all input and output endpoints and breakpoints are adjustable and the dual slope will have a center deadband width that is also adjustable.

RATINGS

Operating Temperature: –40°C to +85°C (–40°C to +185°F)

Molded Enclosure Dimensions: 35.1mm(W) x 72.9mm(H) x 42.67mm (D);
1.38 in.(W) x 2.87 in. (H) x 1.68 in. (D)

Mating Connectors: Deutsch DT06-6S and DT04-2P

Solenoid Connector: Integral HF DR 2-Pin

Power Requirements: 9 to 32 VDC

Control Inputs: Voltage: 0 to 5 or 0 to 10 VDC
Current: 0 to 20 or 4 to 20 mA
Resistive: 0 to 5K ohms
PWM: 5 to 95% Duty Cycle, Low<1.5V to High>3.5V (50V max.), 100 Hz to 10 KHz min.

Control Outputs: 50 to 2000 mA

Dither: 50 to 400 Hz; 0 to 50% of I-Max

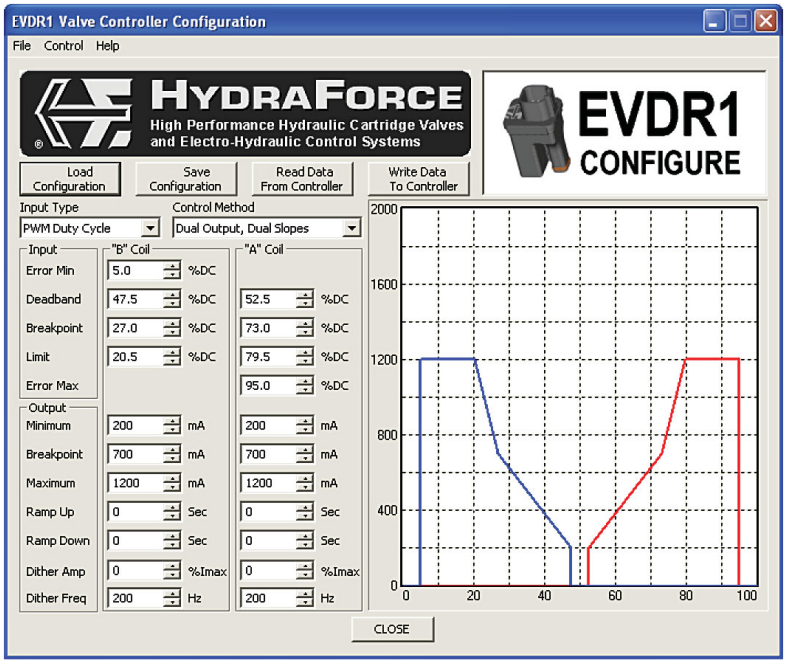
Ramp Time: 0.0 to 10.0 seconds; I-Min to I-Max

Sealing: IP67 rated; **Materials:** Polyester, 15% glass with silicone seals

DIAGNOSTIC FEATURES

- Any input below 9 VDC or above 32 VDC for a duration of 100mS will cause the controller to default to safe mode of "valve off."
- Any absence of an input signal caused by an open or short will cause the controller to default to safe mode of "valve off."
- Any no-current (open) output condition or over-current (short) will cause the controller to default to safe mode of "valve off."
- When a fault is corrected the controller will return to a proper operating mode.

CONFIGURATION EXAMPLE



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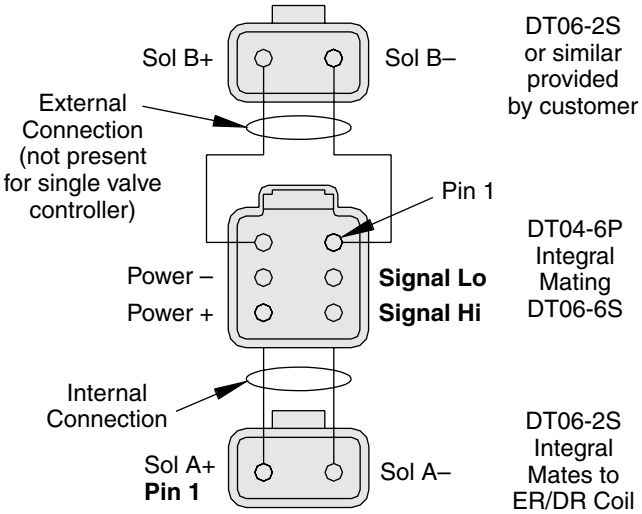
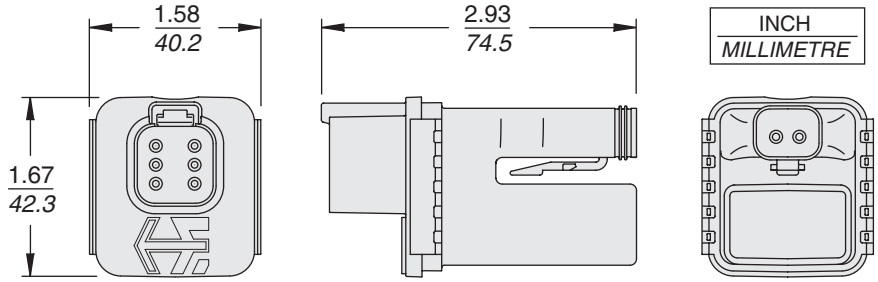
CONNECTIONS & WIRING

Description	Interface	I/O	Pin	Connector
Battery	Power+ Power–	A/0 Pgnd	4 5	DT04-6P
Voltage Control Signal	Voltage in Gnd	A/1 Agnd	3 2	
Current Control Signal	0 to 20 mA in 4 to 20 mA in Gnd	A/1 A/1 Agnd	3 3 2	
Resistive Control Signal	Radj in Gnd	A/1 Agnd	3 2	
PWM Control Signal	PWM in Gnd	A/1 Agnd	3 2	
External Solenoid	Sol B+ Sol B–	AO2 AO3	6 1	
Integral Solenoid	Sol A+ Sol A–	AO1 Pgnd	1 2	DT06-2S



Plug-In Valve Driver Wiring

DIMENSIONS & MOUNTING



MOUNTING CONSIDERATIONS

When installing the coil on a horizontal plane, the controller should be orientated as closely as possible to verticle alignment with the coil, as shown in Fig 1. When mounted in this position, the controller will withstand the vibration test profile described on HydraForce catalog page 3.400.3 (Test No. 4).

Avoid mounting the controller on a horizontal axis with the coil, as shown in Fig. 2.

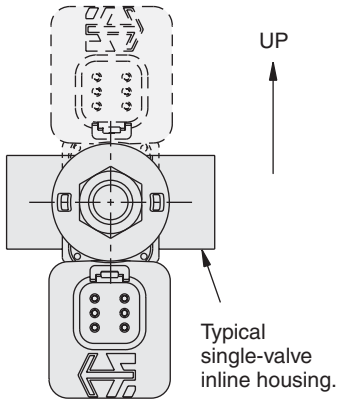


FIG. 1: CORRECT INSTALLATION

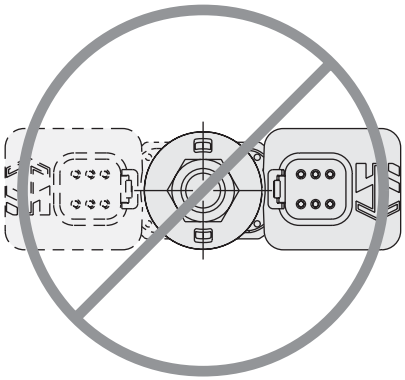


FIG. 2: INCORRECT INSTALLATION

TO ORDER

Dual/Single Valve Driver Model EVDR1 — Part No. **4204030**
Configuration Cable for ExDR1 — Part No. **4001605**
Configuration Software for EVDR1 — Part No. **4001618**