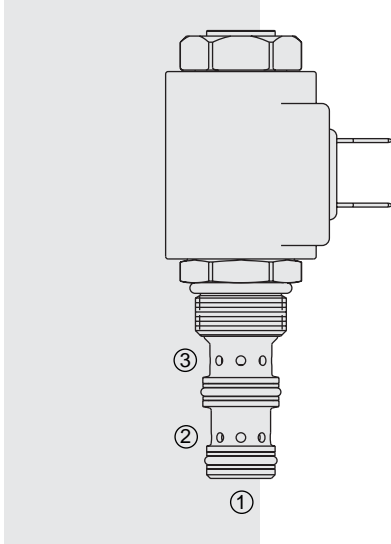


# ELECTRO-PROPORTIONAL VALVES—FLOW CONTROLS

## PV08-31 Proportional Flow Control Cartridge,



### DESCRIPTION

A solenoid-operated, electrically-variable, three-port, pressure-compensated, spool-type, normally open when de-energized, proportional flow control valve. It can be used as a priority-type flow regulator with pressure-compensated, regulated and bypass flow. It can also be used as a restrictive-type 2-way, pressure-compensated flow regulator when the bypass line (port ②) is blocked.

### OPERATION

The PV08-31 will regulate flow out of port ③ regardless of system working pressure. With increasing current applied to the solenoid, the PV08-31 will decrease output flow.

**Note:** When used as a bypass flow control in applications where the priority flow port will be blocked by external valving (dead-headed), a small bleed orifice is required at the priority port (port ③). Consult factory.

### FEATURES

- Excellent linearity and hysteresis characteristics.
- Hardened spool and cage for long life.
- Optional coil voltages and terminations.
- Efficient wet armature construction.

### RATINGS

**Operating Pressure:** Inlet: 240 bar (3500 psi); Ports ② and ③: 207 bar (3000 psi)

**Regulated Flow Rate:** Bypass Blocked, Range A: 11.4 lpm (3.0 gpm)  
 Bypass Blocked, Range B: 5.7 lpm (1.5 gpm)  
 Bypass Open, Range A: 11.4 lpm (3.0 gpm)  
 Bypass Open, Range B: 5.7 lpm (1.5 gpm)

**Nominal Input Flow:** Bypass Open, Range A: 15.2 lpm (4.0 gpm)  
 Bypass Open, Range B: 7.6 lpm (2.0 gpm)

**Maximum Input Flow:** Bypass Open, Range A: 22.8 lpm (6.0 gpm)  
 Bypass Open, Range B: 22.8 lpm (6.0 gpm)

**Internal Leakage:** 100 cc/min. (6 cu. in./min.) fully closed at 207 bar (3000 psi)

**Electrical:** 2 standard voltage ratings (Uses EHPR Series Coil; See page 3.200.8)

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	250 ± 150 mA	1350 ± 150 mA
24 VDC	125 ± 75 mA	700 ± 75 mA

**Filtration:** See page 9.010.1

**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1

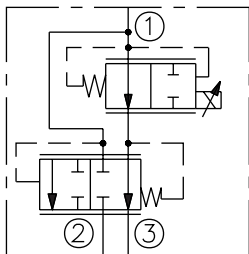
**Installation:** No restrictions; See page 9.020.1.

**Cavity:** VC08-3; See page 9.108.1; **Cavity Tool:** CT08-3X-XX; See page 8.600.1

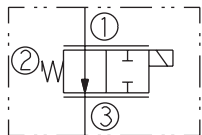
**Seal Kit:** SK08-3X-MM; See page 8.650.1 for seal kit options and appropriate seals based on application temperature range.

### SYMBOLS

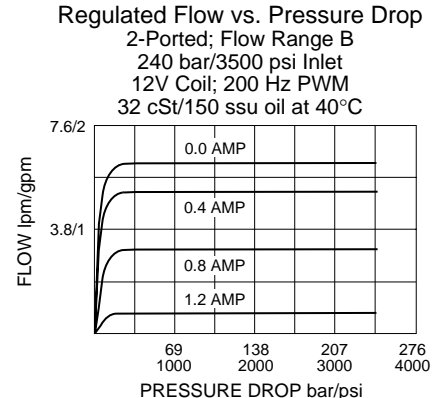
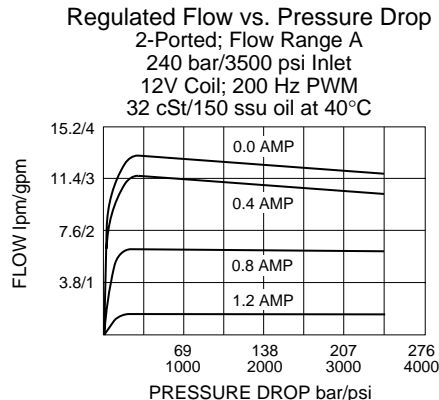
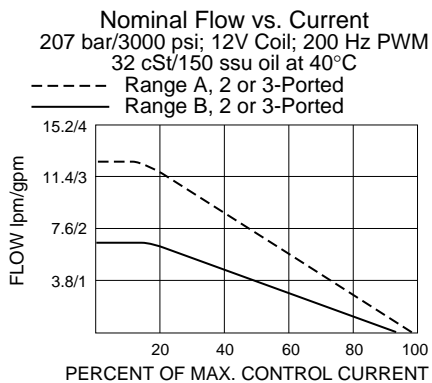
#### USASI/ISO:



#### 2-Ported:



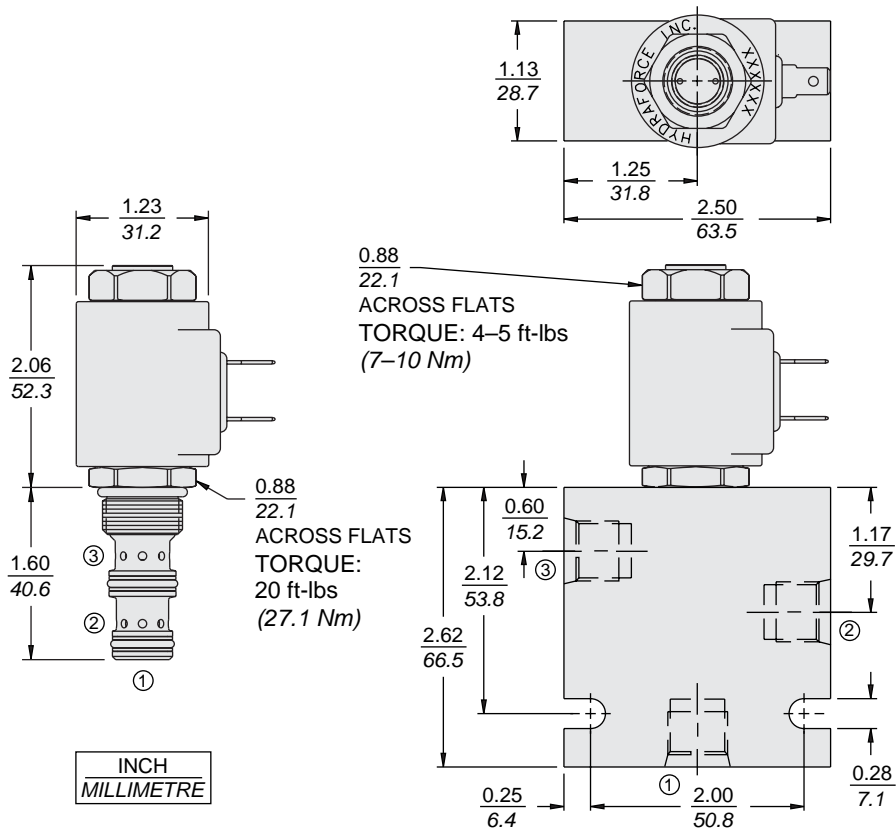
### PERFORMANCE



# Normally Open

PV08-31

## DIMENSIONS



### Recommended Electronic Controllers:

See page 2.001.1 or our Electronics catalog.

## MATERIALS

**Cartridge:** Weight: 0.13 kg. (0.28 lbs.)  
Steel with hardened work surfaces.  
Zinc-plated exposed surfaces. Buna  
N O-rings and polyester elastomer  
back-ups standard.

**Standard Ported Body:** Weight:  
0.27 kg. (0.60 lbs.) Anodized high-  
strength 6061 T6 aluminum alloy,  
rated to 207 bar (3000 psi). Ductile  
iron bodies available; dimensions  
may differ. See page 8.008.1

**EHPR Series Coil:** Weight: 0.32 kg.  
(0.7 lbs.) Unitized thermoplastic  
encapsulated, Class H high  
temperature magnet-wire.  
See page 3.200.8.

## TO ORDER

