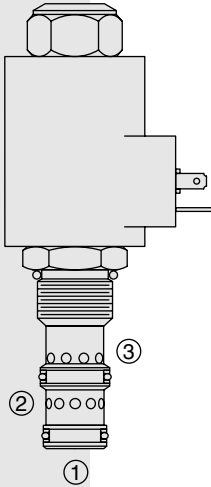


# ELECTRO-PROPORTIONAL VALVES—FLOW CONTROLS

## PV72-30 Proportional Flow Control Cartridge,



### DESCRIPTION

A solenoid-operated, electrically-variable, three-port, pressure-compensated, spool-type, normally closed 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 PV72-30 will regulate flow out of port ③ regardless of system working pressure. With increasing current applied to the solenoid, the PV72-30 will increase output flow.

**Note:** When used as a bypass flow control in applications where the priority flow port will be blocked by external valving, bypass pressure drop will increase unless a small amount of leakage is provided for the priority port. Consult factory.

### Operation of Manual Override:

To Engage: Turn clockwise approximately 1 turn to reach start point. Continue another approximately 5 turns to full shift.

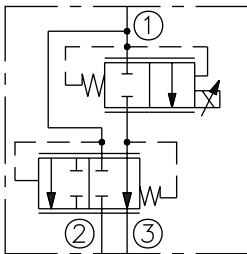
To Disengage: Turn counterclockwise approximately 6 turns to positive stop.

### FEATURES

- Excellent linearity and hysteresis .
- Hardened spool and cage for long life.
- Efficient wet armature construction.
- Optional coil voltages and terminations.
- Cartridges voltage interchangeable.
- Unitized, molded coil design.
- Coil waterproofing standard.
- Manual override option.

### SYMBOLS

#### USASI/ISO:



### RATINGS

**Operating Pressure:** Port ①: 240 bar (3500 psi); Ports ② and ③: 207 bar (3000 psi)

**Regulated Flow Rate in 3-Port Mode:** Range A: 57 lpm (15 gpm)  
Range B: 38 lpm (10 gpm)

**Maximum Input Flow in 3-Port Mode:** Range A and B: 114 lpm (30 gpm)

**Maximum Flow Rate in 2-Port Mode:** Range A: 53 lpm (14 gpm)  
Range B: 31 lpm (8 gpm)

**Note:** For increased flow capacity in a 2-port flow control, see model PV72-20

**Internal Leakage:** .38 lpm (0.1 gpm) fully closed at 207 bar (3000 psi)

**Electrical:** 2 standard voltage ratings

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	350 ± 100 mA	1600 ± 200 mA
24 VDC	175 ± 50 mA	800 ± 100 mA

**Filtration:** See page 9.010.1

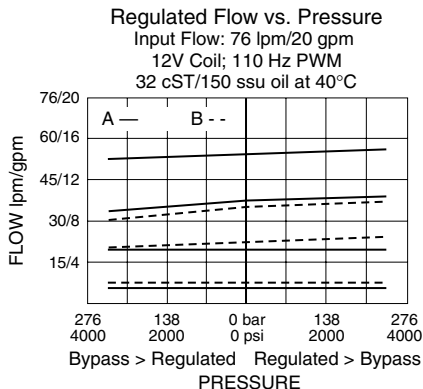
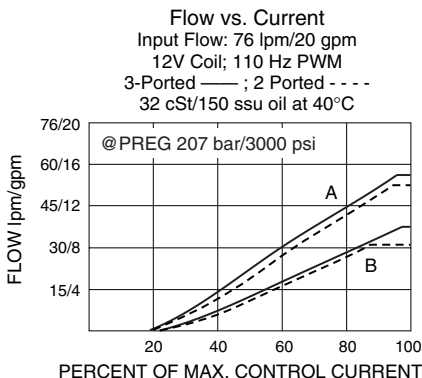
**Fluids:** Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 ssu)

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

**Cavity:** VC12-3; See page 9.112.1; **Cavity Tool:** CT12-3X-XX; See page 8.600.1

**Seal Kit:** SK12-3X-MM; See page 8.650.1

### PERFORMANCE



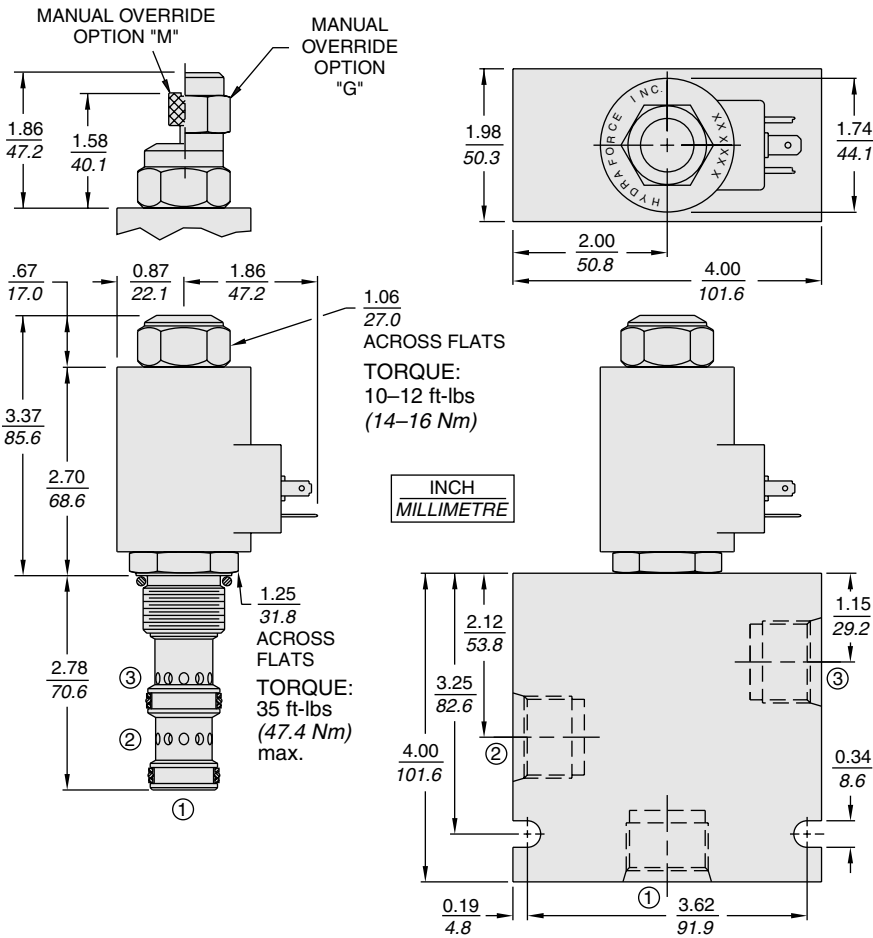
#### Recommended Controllers (See Section 3)

Input Sig. w/12V Coil	DIN Coil Mount	PCB Board	Metal Box	DIN Rail Mount
0-5 VDC	7114950	4000046	4000049	4000136
0-10 VDC	4000070	4000141	4000124	4000137
4-20 mA	4000123	4000143	4000130	4000139
PWM	—	4000144	4000133	4000140
<b>w/24V Coil</b>				
0-5 VDC	4000161	4000194	4000174	4000136
0-10 VDC	4000165	4000141	4000182	4000137
4-20 mA	4000169	4000143	4000186	4000139
PWM	—	4000144	4000133	4000140

# Normally Closed

# PV72-30

## DIMENSIONS



## MATERIALS

**Cartridge:** Weight: 0.36 kg. (0.8 lbs.); Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and polyester elastomer back-ups standard.

**Standard Ported Body:** Weight: 1.09 kg. (2.4 lbs.); Anodized high-strength 6061 T6 aluminum alloy, rated to 240 bar (3500 psi); See page 8.012.1. Steel and Ductile Iron bodies available; dimensions may differ; consult factory.

**Coil:** Weight: 0.32 kg. (0.7 lbs.); Unitzed thermoplastic encapsulated, Class H high temperature magnet-wire; See page 3.200.1.

## TO ORDER

### PV72-30

#### Flow Range

(Refer to Performance Curves.)

A  
B

#### Option(s)

None (Blank)  
Manual Override M  
Manual Override with Guard G

#### Porting

0 Cartridge Only  
10T SAE 10  
12T SAE 12  
16T SAE 16  
4B 1/2 in. BSP\*  
6B 3/4 in. BSP\*

\*BSP Body; U.K. Mfr. Only

#### Seals

Buna N (Std.) N  
Fluorocarbon V

#### Terminations Std. Coil

DS Dual Spades  
DG DIN 43650  
DL Leadwires (2)  
DL/W Leads w/Weatherpak® Connectors

#### Terminations E-Coil

ER Deutsch DT04-2P (IP69K Rated)

Coils with internal diode are available. Consult factory.

#### Voltage

0 Less Coil  
12 12 VDC  
24 24 VDC