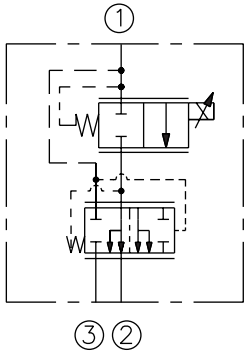


# ELECTRO-PROPORTIONAL VALVES—FLOW CONTROLS

## PFR72-33x-J Proportional Priority Flow Regulator,

### SYMBOLS

#### USASI/ISO:



#### Attention Manifold Designers:

To obtain these high flow capabilities using proportional flow controls and compensators, optimized cavity drillings are required. Please consult factory.

### DESCRIPTION

A pressure-compensated electrically-variable three-port flow regulator that is a priority (bypass) type control. This combination valve uses a PV72-33x proportional cartridge and an EC12-40 compensator.

### OPERATION

The **PFR72-33x-J** series will bypass all flow when de-energized at the pressure compensator spring value. When energized, this proportional valve/compensator package will regulate flow out of port ②, regardless of system working pressure, with an increasing current applied to the solenoid.

### FEATURES

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

### RATINGS

**Operating Pressure:** 207 bar (3000 psi)

**Pressure Rise:** Pressure at ① begins to rise higher than the compensating pressure differential when bypass flow exceeds 41.6 lpm (11 gpm).

**Internal Leakage:** 492 cc/min. (30 cu. in./min.) fully closed at 207 bar (3000 psi) out port ②.

**Electrical:** 2 standard voltage ratings

Coil Voltage	Threshold Current	Max. Control Current
12 VDC	300 ± 70 mA	1500 ± 200 mA
24 VDC	150 ± 35 mA	750 ± 100 mA

#### 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 until positive stop is found.

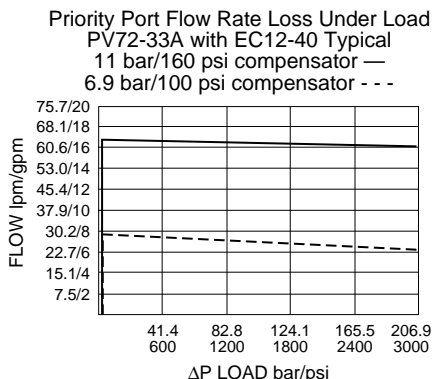
**Filtration:** See page 9.010.1

**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

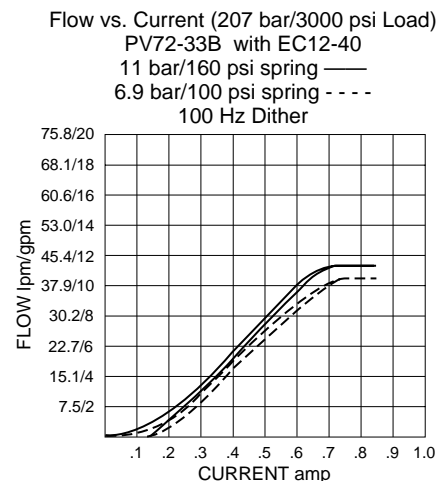
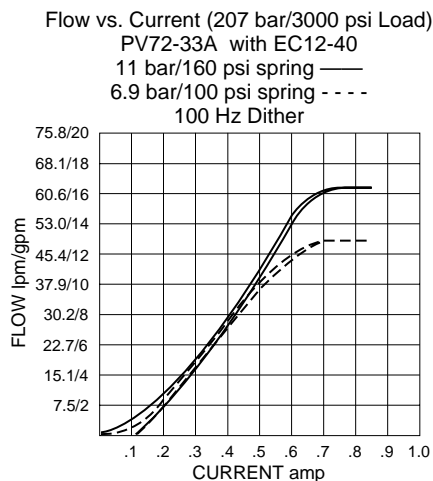
### PERFORMANCE CURVES

24 Volt coil used; 100 Hz dither; PWM controller



### Priority Port Flow Delivered Out Port ②:

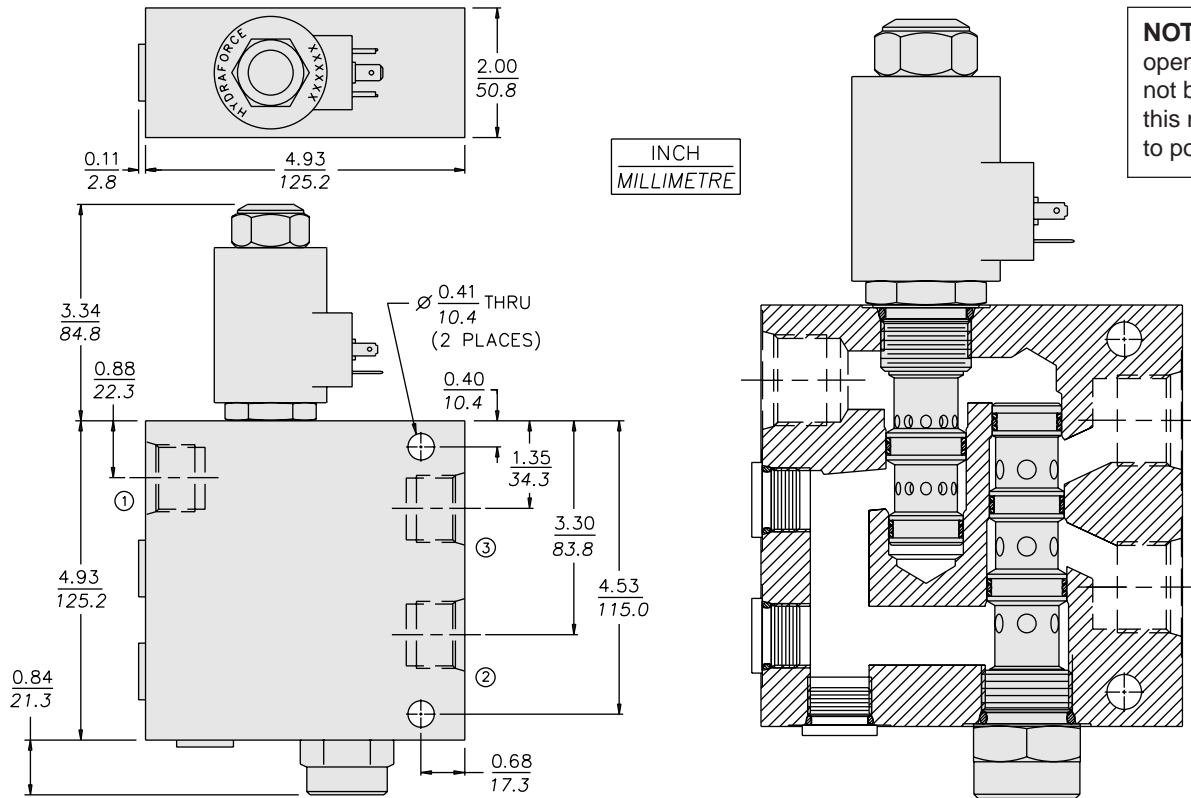
For 12 volt coils, double the current (amp) values shown.



# 3-Port, Pressure Compensated

# PFR72-33x-J

## DIMENSIONS



## MATERIALS

**Cartridge:** Steel with hardened work surfaces. Zinc-plated exposed surfaces. Buna N O-rings and back-ups standard.

**Standard Ported Body:** Anodized high-strength 6061 T6 aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. Consult factory.

**Coil:** D-Coil: See page 3.200.1  
E-Coil: See page 3.400.1

**Package Weight:** 2.95 kg.  
(6.5 lbs.)

**Seal Kit:** SK12-3x-MM (PV)  
SK12-4x-TMB (EC)

## TO ORDER

