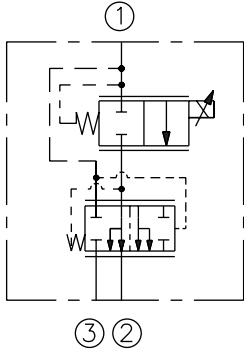


ELECTRO-PROPORTIONAL VALVES—FLOW CONTROLS

PFR72-33x-J Proportional Priority Flow Regulator, N.C.,

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 characteristics.
- 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.

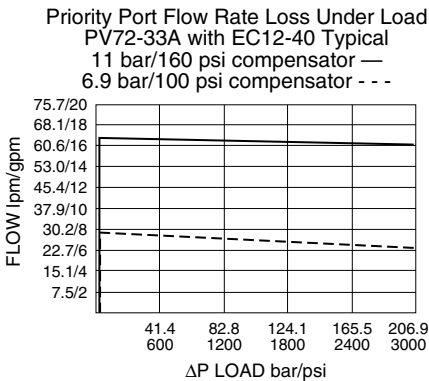
Filtration: See page 9.010.1

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

Installation: No restrictions; See page 9.020.1

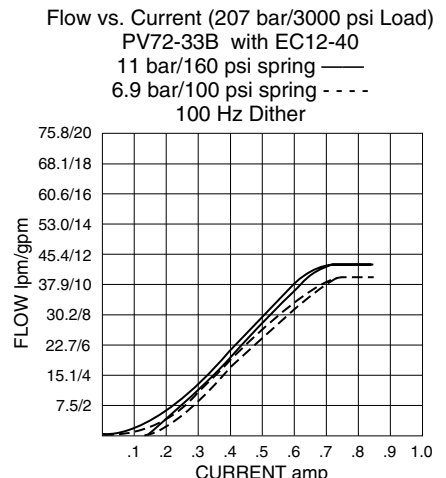
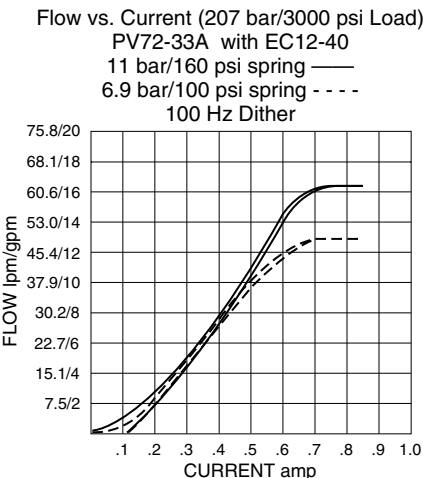
PERFORMANCE CURVES

24 Volt coil used; 100 Hz dither; PWM controller



Priority Port Flow Delivered Out Port ②:

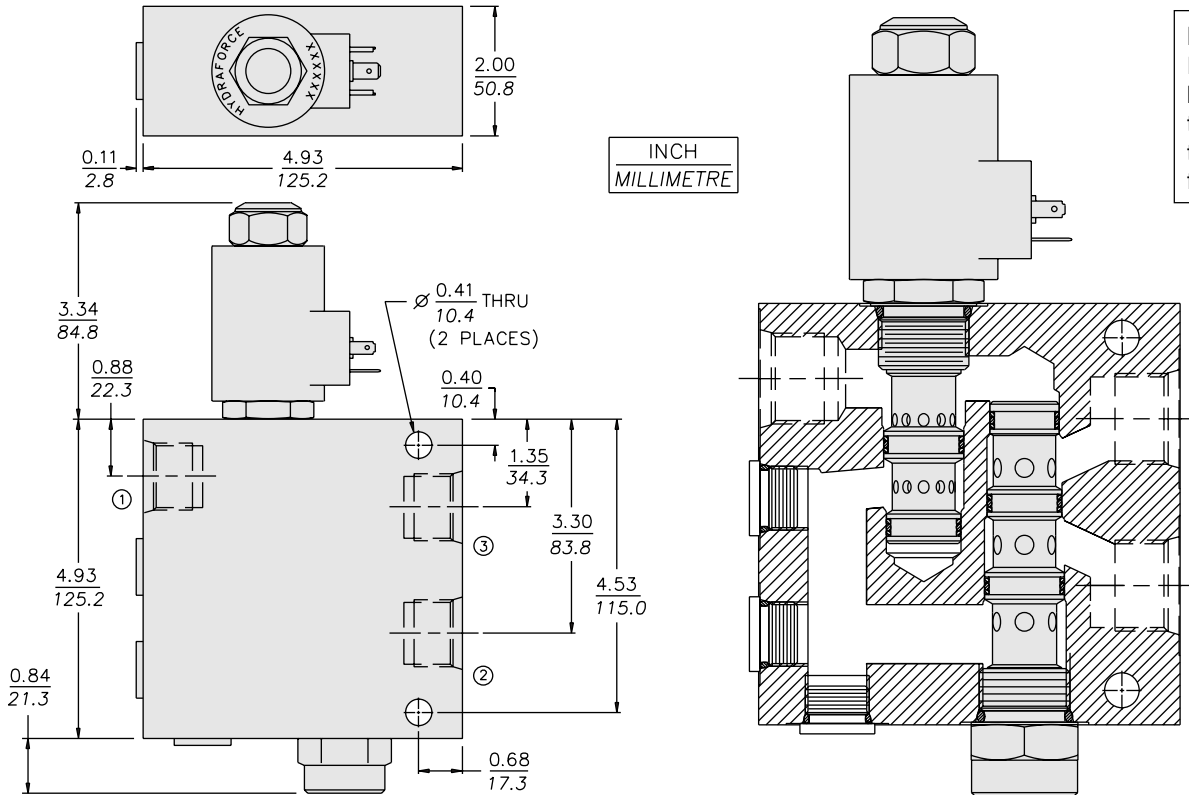
For 12 volt coils, double the current (amp) values shown.



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 240 bar (3500 psi). Steel and ductile iron bodies available; consult factory.

Coil: Unitized thermoplastic encapsulated, Class H high temperature magnetwire; See page 3.200.1.

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

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

TO ORDER

PFR72-33 - J - 12T - -

*PV Orifice Range

Orifice Range **A**
Orifice Range **B**

Override Option

(Blank) None
M Screw Type

*Compensator Spring

4.14 bar (100 psi) **60**
5.17 bar (100 psi) **75**
6.89 bar (100 psi) **100**
11.03 bar (160 psi) **160**

*Select Orifice Range and Compensator Spring by referring to the Performance Curves on the preceding page.

Seals

Buna N (Std.) **N**
Fluorocarbon **V**

Terminations

DS Dual Spades
DG DIN 43650
DL Leadwires (2)
DL/W Leads w/Weatherpak® Connectors
DR Deutsch DT04-2P

Coils with internal diode are available. Consult factory.

Voltage

0 Less Coil
12 12 VDC
24 24 VDC