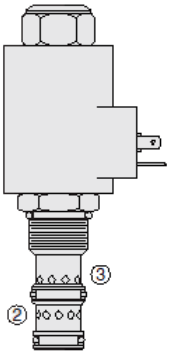
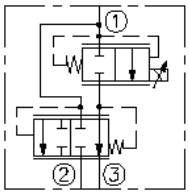
NORMALLY CLOSED PRESSURE COMPENSATED ELECTRO-PROPORTIONAL PRIORITY FLOW REGULATOR VALVE CARTRIDGE

Overview



SYMBOL



Description

PV72-30 is a solenoid operated, pressure compensated, spool type, normally closed, proportional priority flow control valve.

Operation

The valve provides priority regulated flow at port 3 with pressure compensated regulated and bypass flow. The regulated flow is proportional to electric current applied to the solenoid.

Features

- Choice of two regulated flow ranges
- Excellent linearity and hysteresis characteristics.
- Optional coil voltages and terminations.
- Efficient wet-armature construction.
- Cartridges are voltage-interchangeable.
- Unitized, molded coil design.
- Coil waterproofing standard.
- Manual Override option.

Ratings

Pressure Ratings

Pressure rating: 240 bar (3500 psi)

Proof pressure: 345 bar (5000 psi)

Burst pressure: 896 bar (13000 psi)

Flow Ratings

Flow rating: 0 to 57 lpm (0 to 15.0 gpm) note: For "a" flow range;

0 to 38 lpm (0 to 10.0 gpm) note: For "b" flow range

Maximum internal leakage: 0.38 lpm (0.1 gpm)

Hysteresis flow: lpm (gpm)

Temperature Ratings

Operating fluid temperature: -40 to 100 °C (-40 to 212 °F) note: With buna N seals

-26 to 204 °C (-15 to 400 °F) note: With fluorocarbon seals

-54 to 107 °C (-65 to 225 °F) note: With polyurethane seals

Storage temperature: -40 to 70 °C (-40 to 160 °F)

Ambient temperature: -40 to 70 °C (-40 to 160 °F)

Other Ratings

Corrosion protection: 960 hr salt spray per ASTM b117

Operating Parameters

Fluids: Mineral based or synthetic hydraulic fluid with lubricating properties

Fluid viscosity range: 7.4 to 420 cSt

Maximum operating contamination level: 18/16/13 per ISO 4406

NORMALLY CLOSED PRESSURE COMPENSATED ELECTRO-PROPORTIONAL PRIORITY FLOW REGULATOR VALVE CARTRIDGE

Properties

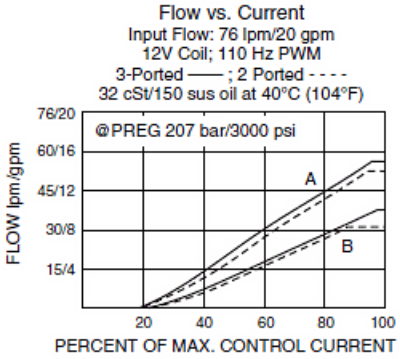
Unit weight: 0.42 kg (0.93 lb) note: PV72-30X
0.47 kg (1.03 lb) note: PV72-30XM
0.56 kg (1.23 lb) note: PV72-30XG
Internal wetted surface area: 339 cm^2 (52.5 in^2) note: PV72-30X
342 cm^2 (53.0 in^2) note: PV72-30XM PV72-30XG

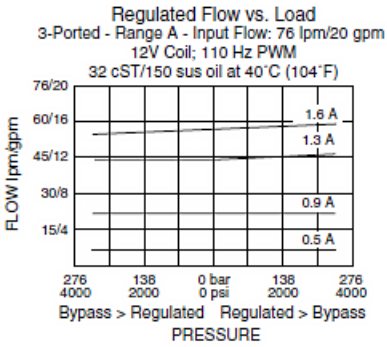
Electrical Parameters

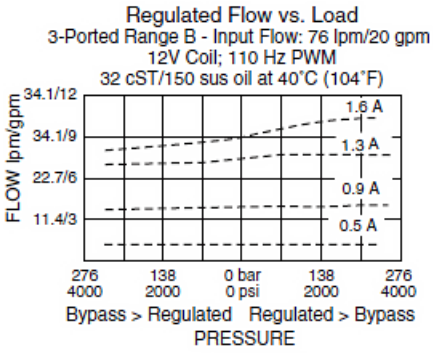
Note: With size 70 e-series and d-series coils
Dither PWM frequency: 100 to 250 Hz

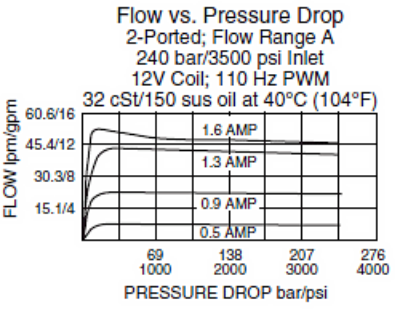
	12 V coil	24 V coil
Maximum control current	1600 mA	800 mA
Threshhold current	350 mA	175 mA
Valve inductance	240 mH	200 mH

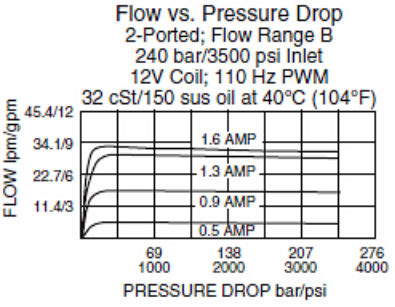
Performance





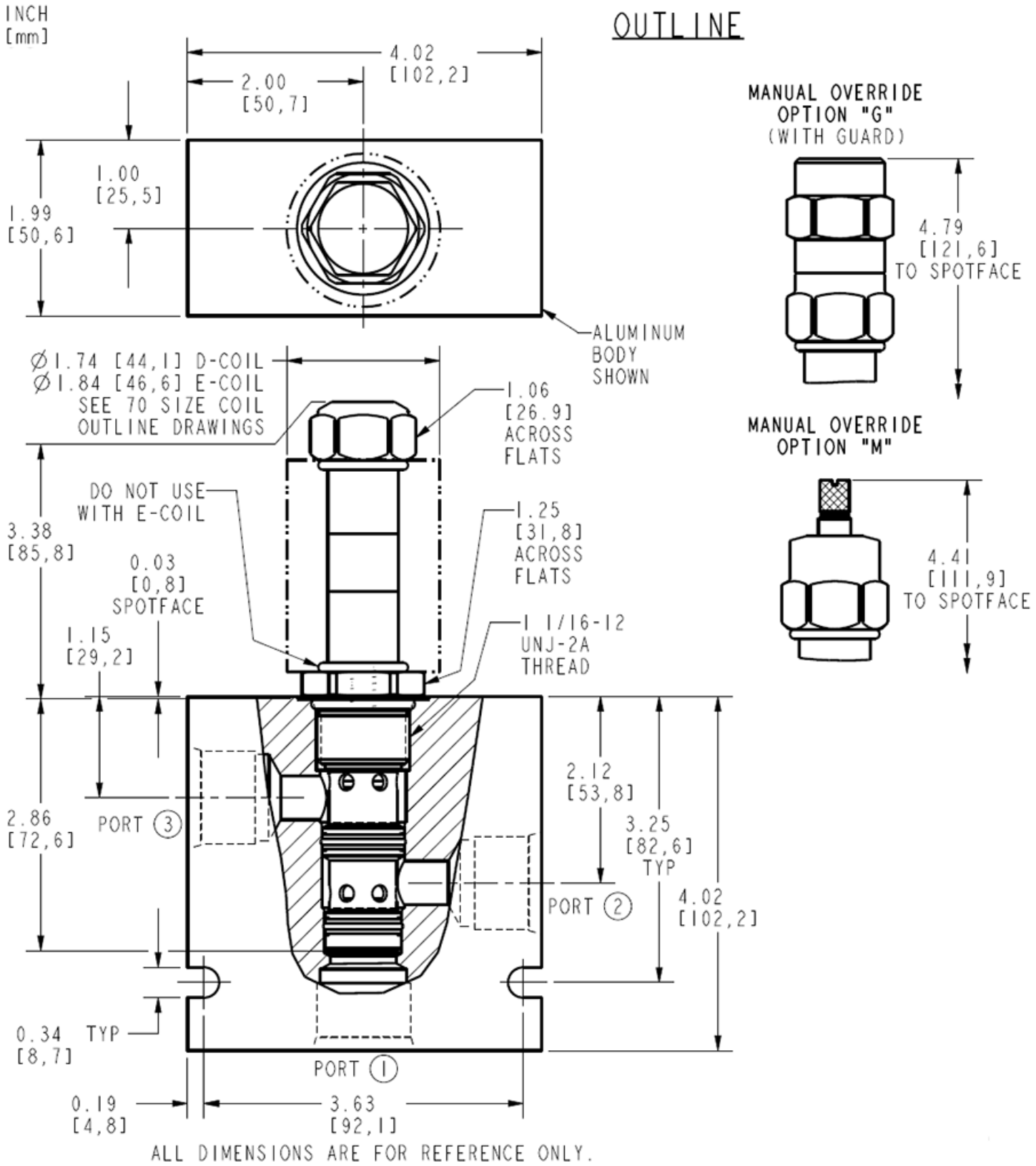






NORMALLY CLOSED PRESSURE COMPENSATED ELECTRO-PROPORTIONAL PRIORITY FLOW REGULATOR VALVE CARTRIDGE

Dimensions



ALL DIMENSIONS ARE FOR REFERENCE ONLY.

NORMALLY CLOSED PRESSURE COMPENSATED ELECTRO-PROPORTIONAL PRIORITY FLOW REGULATOR VALVE CARTRIDGE

Installation Specifications

NOTES: Cartridge Installation Instructions and Torque Values
Cavity: VC12-3
12-size-3-way Cavities
Cartridge installation torque: 45 to 50 N-m (33 to 37 ft-lb)
Maximum allowable torque: 68 N-m (50 ft-lb)
Coil nut torque: 14 to 16 N-m (10 to 12 ft-lb)
Cover cap torque: 7 to 9 N-m (5 to 7 ft-lb)
Orientation restriction: None

Accessories

Seal kit: SK12-3X-MM
Seal kit installation instructions
Housings: Available 12-3w valve bodies
Coils: 70 size D coils; 70 size E coils

Order Code

PV72-30__ __ - __ __ __ - __ - __ __ __ __

Flow Range
0-57 lpm (0-15 gpm) **A**
0-38 lpm (0-10 gpm) **B**

Porting
0 Cartridge Only
8T SAE 8
10T SAE 10
12T SAE 12
12TD SAE 12
4B 1/2 in. BSP*
6B 3/4 in. BSP*
*BSP Body; U.K. Mfr. Only

Terminations D-Coil
DS Dual Spades
DL Leadwires (2)

Terminations E-Coil
IP69K Rated
ER Deutsch DT04-2P
EY Metri-Pack® 150

Option(s)
None (Blank)
Manual Override **M***
Manual Override with Guard **G****
* Requires Coil Nut Kit P/N 4202180
** Requires Coil Nut Kit P/N 4001214

Seals
Buna N (Std.) **N**
Fluorocarbon **V**
Polyurethane **P**

Voltage
0 Less Coil
12 12 VDC
24 24 VDC

Model Options

PV72-30DE-H-J-L

D Max Regulated Flow

CODE	DESCRIPTION
A	56.8 lpm (15.0 gpm) Max Regulated Flow
B	37.9 lpm (10.0 gpm) Max Regulated Flow

E Manual Override

CODE	DESCRIPTION
BLANK	NONE
G	Variable Position Override, Red Knurled Knob with Cover Cap
M	Variable Position Override, Red Knurled Knob

NORMALLY CLOSED PRESSURE COMPENSATED ELECTRO-PROPORTIONAL PRIORITY FLOW REGULATOR VALVE CARTRIDGE

H Line Body

CODE	DESCRIPTION
0	No Body
8T	Aluminum SAE 8
10T	Aluminum SAE 10
12T	Aluminum SAE 12
12TD	Ductile Iron SAE 12
6B	Aluminum BSPP 3/4" (6)

J Seal

CODE	DESCRIPTION
N	Buna-N
V	Fluorocarbon
P	Polyurethane
U	PPDI Urethane

L Coil

CODE	DESCRIPTION
0	No Coil
12DG	12 VDC, D-Coil, DIN 43650
12DL	12 VDC, D-Coil, Dual Lead Wires
12DL/W	12 VDC, D-Coil, Dual Lead Wires with Weatherpak
12DS	12 VDC, D-Coil, Dual Spade
12ER	12 VDC, E-Coil, Deutsch
12EY	12 VDC, E-Coil, Metri-Pack 150
24DG	24 VDC, D-Coil, DIN 43650
24DL	24 VDC, D-Coil, Dual Lead Wires
24DS	24 VDC, D-Coil, Dual Spade
24ER	24 VDC, E-Coil, Deutsch