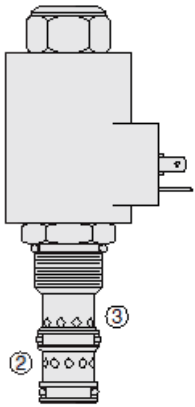
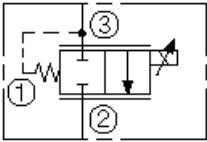




## Overview



### Symbol



### Description

PV72-33 is a solenoid operated, spool type, normally closed proportional flow control valve.

### Operation

The valve provides regulated flow from port 3 to port 2 with input from port 1 blocked. Regulated flow is proportional to electric current applied to solenoid. The valve is intended for use with a pressure compensator at pressure differential not exceeding 175 psi [12 bar].

### Features

- Choice of two regulated flow ranges
- Excellent linearity and hysteresis characteristics.
- Hardened spool and cage for long life.
- Optional control orifice sizes.
- 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)                          |
| Maximum internal leakage | 0.38 lpm (0.1 gpm) - <b>Note:</b> Max at 100 current |

### Temperature Ratings

|                             |                               |  |
|-----------------------------|-------------------------------|--|
| Operating fluid temperature | -40 to 100 °C (-40 to 212 °F) | - <b>Note:</b> With buna N seals       |
|                             | -26 to 204 °C (-15 to 400 °F) | - <b>Note:</b> With fluorocarbon seals |
|                             | -54 to 107 °C (-65 to 225 °F) | - <b>Note:</b> 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  |

## Properties

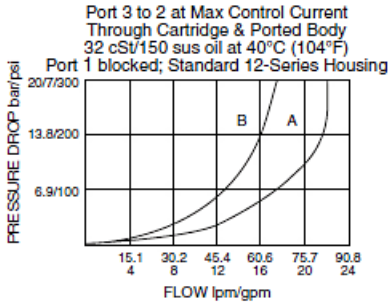
|                              |   |                                      |
|------------------------------|---|--------------------------------------|
| Unit weight                  | 0.40 kg (0.88 lb)                           | - <b>Note:</b> Blank option          |
|                              | 0.44 kg (0.98 lb)                           | - <b>Note:</b> "m" option            |
|                              | 0.55 kg (1.21 lb)                           | - <b>Note:</b> "g" option            |
| Internal wetted surface area | 283 cm <sup>2</sup> (43.8 in <sup>2</sup> ) | - <b>Note:</b> Blank option          |
|                              | 348 cm <sup>2</sup> (53.9 in <sup>2</sup> ) | - <b>Note:</b> "m" option "g" option |



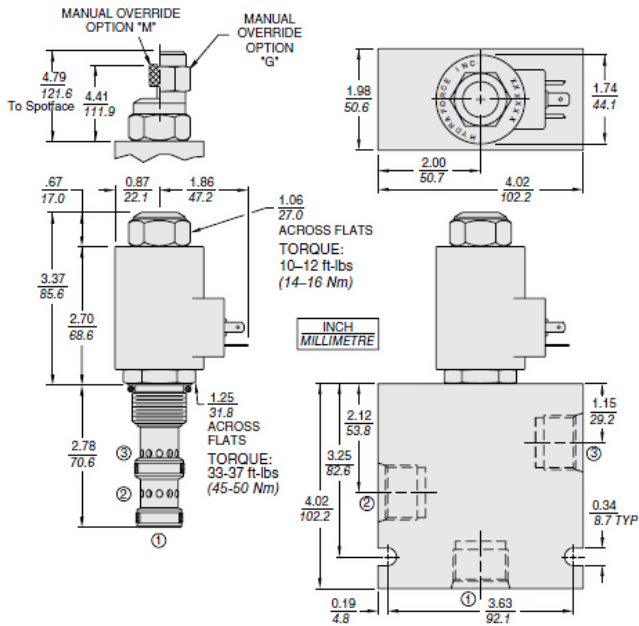
## Electrical Parameters

|                         |  |                            |
|-------------------------|--|----------------------------|
| Note                    | With size 70 e-series and d-series coils |                            |
| Maximum control current | 1500 mA                                  | - <b>Note:</b> 12 V coil   |
|                         | 750 mA                                   | - <b>Note:</b> 24 V coil   |
| Threshold current       | 300 mA                                   | - <b>Note:</b> 12 V coil   |
|                         | 150 mA                                   | - <b>Note:</b> 24 V coil   |
| Valve inductance        | 240 mH                                   | - <b>Note:</b> E-coil 12 V |
|                         | 200 mH                                   | - <b>Note:</b> D-coil 12 V |
|                         | 700 mH                                   | - <b>Note:</b> E-coil 24 V |
|                         | 600 mH                                   | - <b>Note:</b> E-coil 24 V |
| Dither PWM frequency    | 100 to 250 Hz                            |                            |

## Performance



## Dimensions



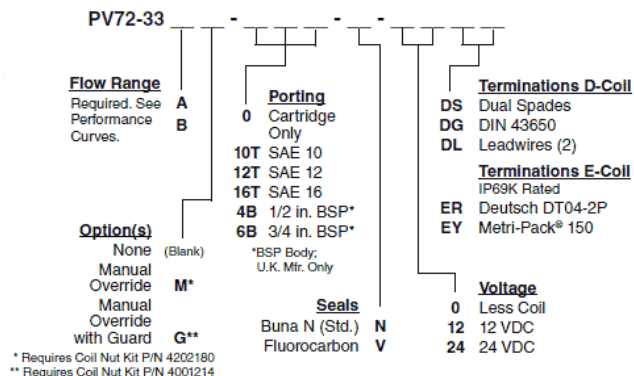
## Installation Specifications

|                               |                               |
|-------------------------------|-------------------------------|
| Cavity                        | VC12-3                        |
| Cartridge installation torque | 47 N-m (35 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 | - <b>Note:</b> X = seal option |
|----------|------------|--------------------------------|

## Order Code



**Model Options**

**PV72-33DE-H-J-L**

**D Max Regulated Flow**

| CODE | DESCRIPTION                            |
|------|--|
| A    | 80.6 lpm (21.3 gpm) Max Regulated Flow |
| B    | 58.7 lpm (15.5 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                |

**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                      |



| CODE | DESCRIPTION                     |
|------|---------------------------------|
| 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         |