

# Proportional Valves

## PSV12-34-02

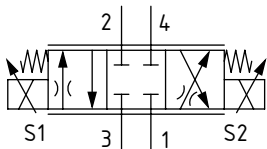
Proportional Directional Valve, 4-way, 3-position, Spool Type, Non-Compensated

250 bar [3600 psi] • 50 l/min [13 US gpm]

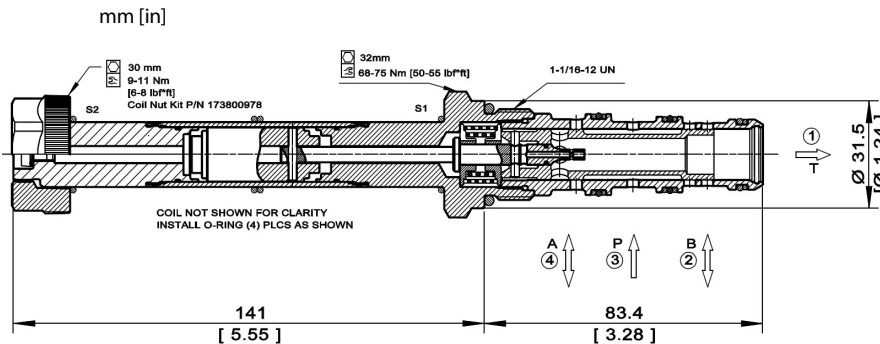
### DESCRIPTION AND OPERATION

This is a 4-way, 3-position, spool type, non-compensated proportional directional valve. In its de-energized condition, all ports are blocked. Increasing the current to the bottom coil will cause the spool to move, proportionally opening flow from port 3 to 2 with return flow passing from port 4 to 1. Increasing the current to the top coil will proportionally open flow from port 3 to 4 with return flow passing from port 2 to 1. Using this as a variable orifice in conjunction with a compensator, the valve will provide a compensated flow to an actuator in both directions. Port 1 should be used as the tank port with a maximum back pressure of 150 bar. For applications with unequal flows, the highest flow should be connected to Port 2. For optimal performance, install with the solenoid valve below the tank oil level in the horizontal or inverted position, reducing the chance for trapped air in the valve.

### SCHEMATIC



### DIMENSIONS



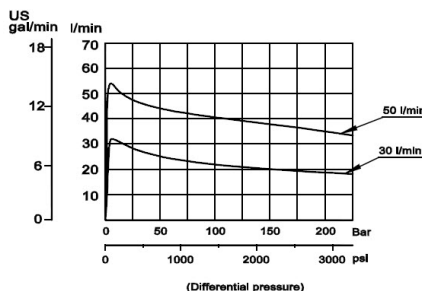
### PERFORMANCE DATA

Rated pressure*	250 bar [3600 psi]
Rated flow @ 10 bar [145 psi]	50 l/min [13 US gpm]
Maximum Hysteresis	4%
Threshold current	0.50 A [12 VDC coil] 0.25 A [24 VDC coil]
Maximum control current	1.8 A [12 VDC coil] 0.9 A [24 VDC coil]
Coil Options	M19
Weight	1.2 kg [2.64 lb]
Cavity	CP12-4

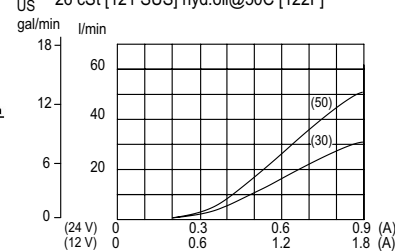
\*Rated Pressure based on NFPA fatigue test standards (at 1 Million Cycles)

### PERFORMANCE CURVES

Pressure compensation from Inlet to work port at Max current.  
26 cSt [121 SUS] hyd.oil@50°C [122°F]



Operating curves with M19 coil and nut.  
Curves made with a logic element set at 10 Bar.  
26 cSt [121 SUS] hyd.oil@50C [122F]



### MODEL CODE

PSV12 - 34 - 02 - 50 - 12D - DE - B - 00

#### Rated Flow @ 10 bar [145 psi]

Code	Flow
30	30 l/min (8 US gpm)
50	50 l/min (13 US gpm)

#### Coil Voltage

00 - No coil, nut included\*  
12D - 12 VDC  
24D - 24 VDC

\*Standard Coil - Plastic coil nut and o-rings (p/n 173800978)

#### Connector Type

00 - No coil  
AJ - AMP Junior  
AS - AMP SuperSeal 1.5  
DE - Deutsch  
DN - DIN 46650  
FL - Flying Leads

#### Housing

Code	Ports & Material	Housing Model Code
00	No Housing	
3B	AL 3/8 BSP	CP12-4-3B
4B	AL, 1/2 BSP	CP12-4-4B
8S	AL #8 SAE	CP12-4-8S
10S	AL, #10 SAE	CP12-4-10S

\* Aluminum bodies are to be used for pressures less than 210 bar [3000 psi].  
\* Additional housings available

#### Seal Option

Code	Seal kit
B - Buna - N	11106420
V - Viton	11106444