



# Proportional Valves Technical Information

## Proportional Directional PSV10-34-02



### OPERATION

This is a proportional, non-compensated, 3 position 4 way, directional flow control solenoid valve, with closed-center spool.

### APPLICATION NOTES

These cartridge valves are typically applied to provide bi-directional, proportional control of hydraulic cylinders and motors where low leakage is not required. For load-independent flow control, apply with a pressure compensator, such as CP700-4 (see Example Circuit). 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.

Note: For optimal performance install with the solenoid valve below the tank oil level in the horizontal position, reducing the chance for trapped air in the valve.

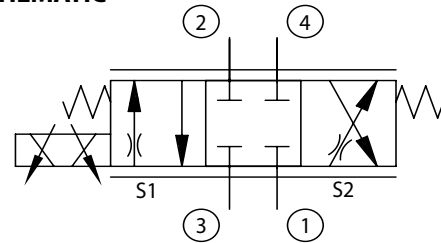


Shown with standard coils,  
DIN connectors



Shown with Robust Coil

### SCHEMATIC



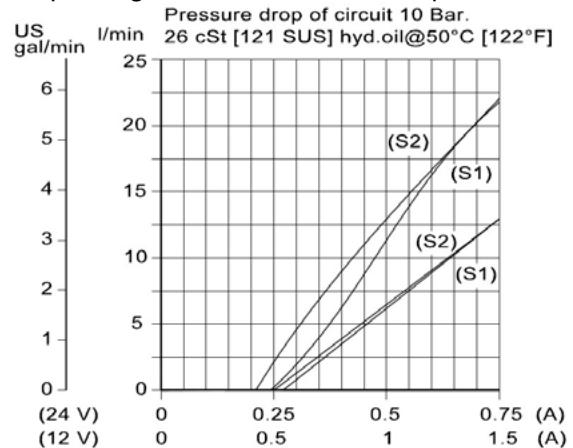
### SPECIFICATIONS

|  |  |
|--|--|
| Rated Pressure*                        | 250 bar [3600 psi]   |
| Maximum Rated Flow at 10 bar [145 psi] | 22 l/min<br>[6 US gal/min]   |
| Weight including coil                  | 0.77 kg [1.7 lbs]  |
| Hysteresis                             | 4% maximum   |
| Threshold current                      | 0.5 A (12 VDC coil)<br>0.25 A (24 VDC coil)                                |
| Maximum control current                | 1.5 A (12 VDC coil)<br>0.8 A (24 VDC coil)                                 |
| Cavity                                 | <b>SDC10-4</b>   |
| Standard Coil                          | <b>M16</b> 26 Watt   |
| Robust Coil                            | <b>R16</b> 20 Watt<br>Robust Nut P/N 173804910<br>(no coil O-rings needed) |

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

### THEORETICAL PERFORMANCE

Operating curves with M16 coil and plastic nut



Operating curves with R16 coil and steel nut

