



Proportional Valves Technical Information

Proportional Directional

PSV10-34-05



OPERATION

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

APPLICATION NOTES

These cartridge valves are typically applied to provide bi-directional, proportional control of hydraulic cylinders and motors. In applications requiring load-holding, PO checks or counterbalance valves can be added to provide a low leakage solution. 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.

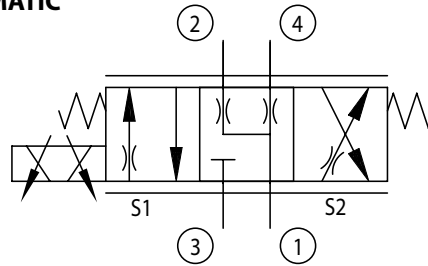


Shown with DIN connector, standard coil



Shown with Robust Coil

SCHEMATIC



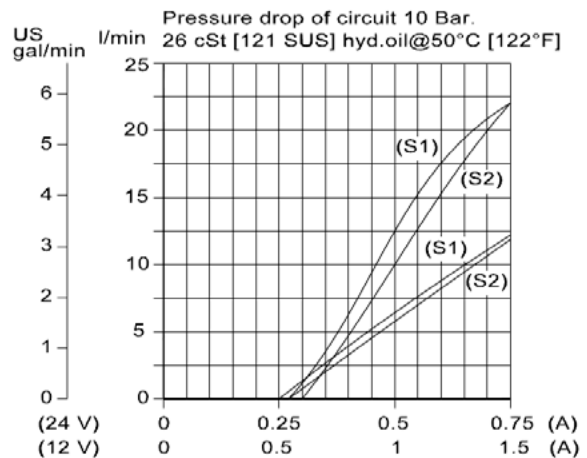
SPECIFICATIONS

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

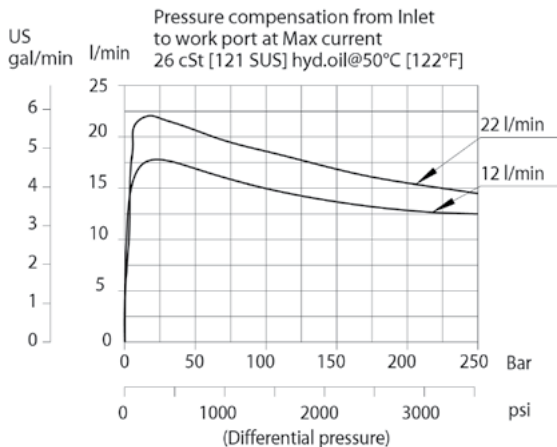
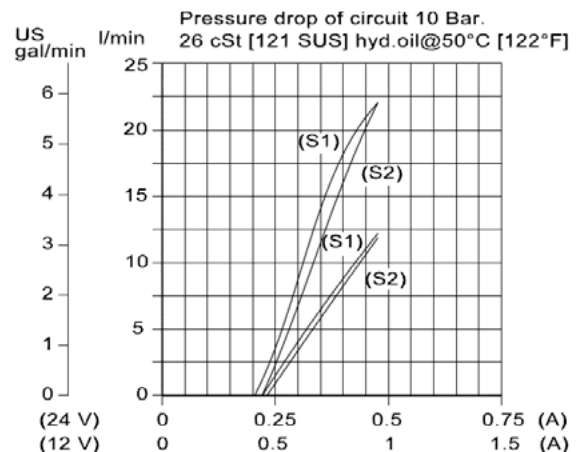
* Rated Pressure based on NFPA fatigue test standards (at 1 Million Cycles).

THEORETICAL PERFORMANCE

Operating curves with M16 coil and plastic nut



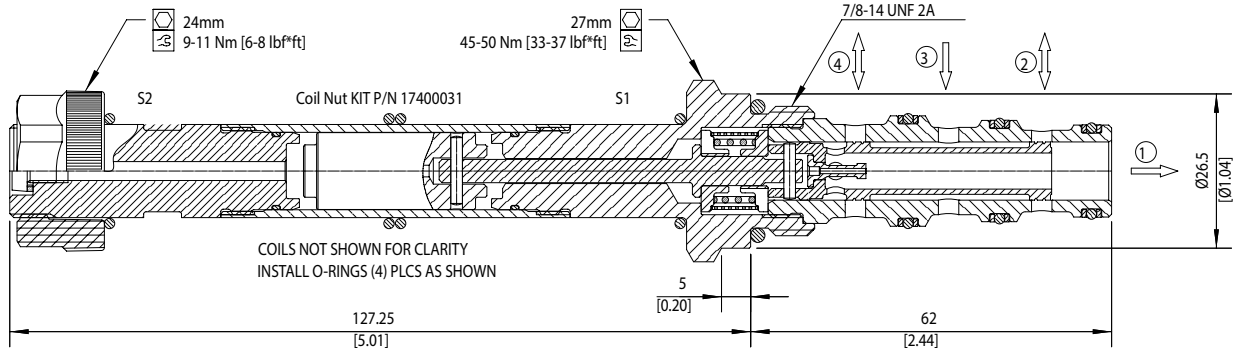
Operating curves with R16 coil and steel nut



DIMENSIONS

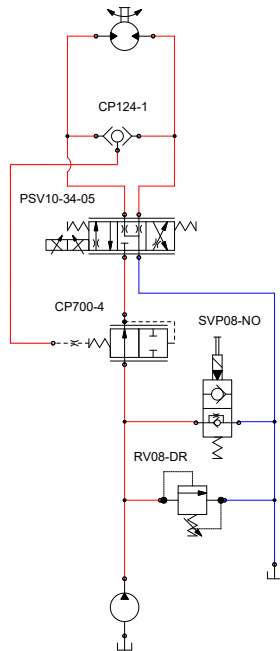
mm [in]

Cross-sectional view

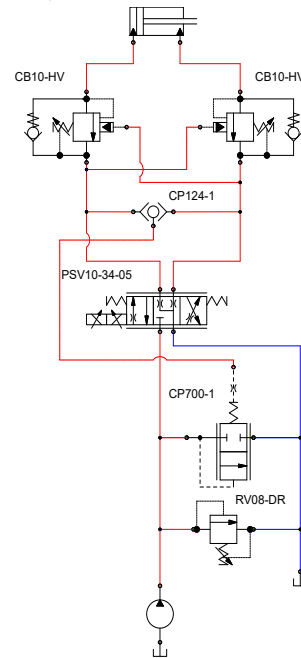


EXAMPLE CIRCUITS

Pressure Compensated Bi-directional Proportional Motor Control



Double Acting Cylinder with Proportional Speed Control



ORDERING INFORMATION

