Hi-Flow Proportional Valve Control Data (SCPV-1-3)

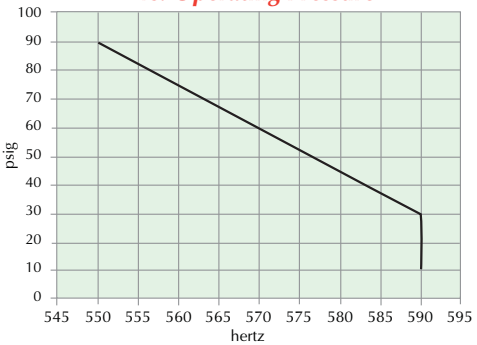
A **Bipolar Chopper Drive** (not included) is a power-efficient method of using current to drive a stepping motor to obtain high stepping rates. The chopper gets its name from the technique of rapidly turning the output voltage on and off (chopping) to control motor current.

Stepper motors require some external electrical components in order to operate. These components typically include a power supply, logic sequencer switching components and a clock pulse source to determine the step rate. Many commercially available drives have integrated these components into a complete package. See www.clippard.com/scpv for more information.

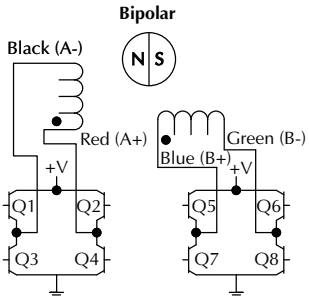
Salient Characteristics
Linear Actuator, 1" (25 mm)

Wiring:	Bipolar
Current/Phase:	385 mA
Motor Voltage:	5 VDC
Resistance/Phase:	13 ohms
Inductance/Phase:	8.08 mH
Power Consumption:	3.85 Watts
Rotor Inertia:	1.07 gcm2
Temperature Rise:	135°F (75°C)
Insulation Resistance:	20M ohms

Maximum Step Pulse Frequency vs. Operating Pressure



Stepping Sequence



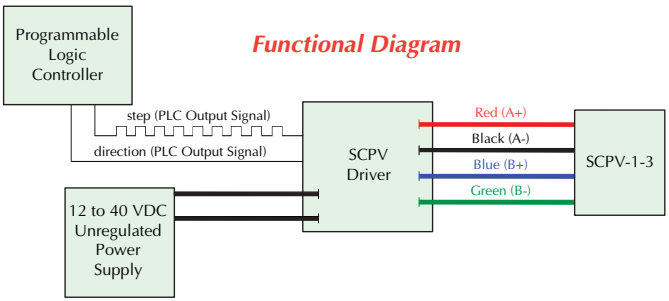
CW Rotation ↓

Bipolar Step	Q2-Q3	Q1-Q4	Q6-Q7	Q5-Q8
1	On	Off	On	Off
2	Off	On	On	Off
3	Off	On	Off	On
4	On	Off	Off	On
1	On	Off	On	Off

Wiring Diagram

Pin	Color	Pin	Color
1	Red (A+)	3	Green (B-)
2	Black (A-)	4	Blue (B+)

Functional Diagram



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