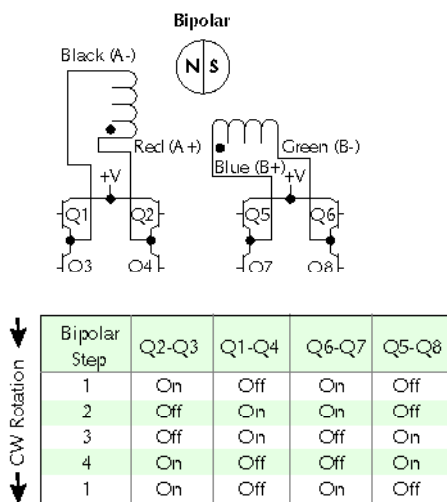


# Hi-Flow Proportional Valve Control Data

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](http://www.clippard.com/scpv) for more information.

## Stepping Sequence

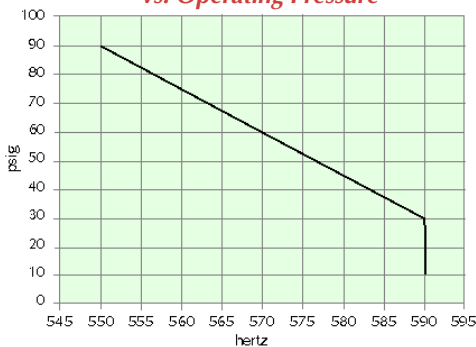


## Salient Characteristics

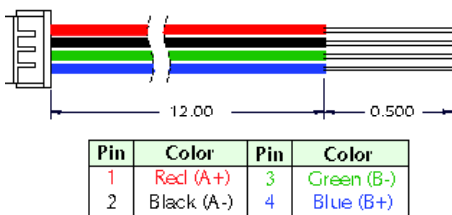
### Linear Actuator, 1" (25 mm)

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 gcm <sup>2</sup>
Temperature Rise:	135°F (75°C)
Insulation Resistance:	20M ohms

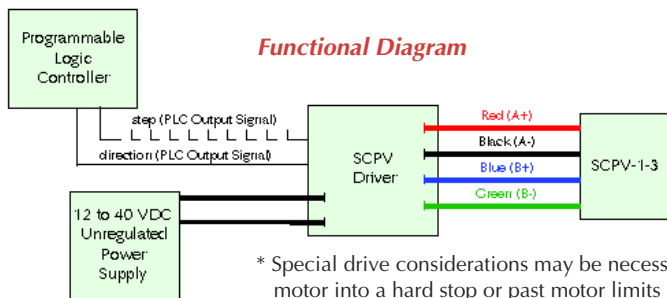
## Maximum Step Pulse Frequency vs. Operating Pressure



## Wiring Diagram



## Functional Diagram



\* Special drive considerations may be necessary when driving motor into a hard stop or past motor limits continuously.

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