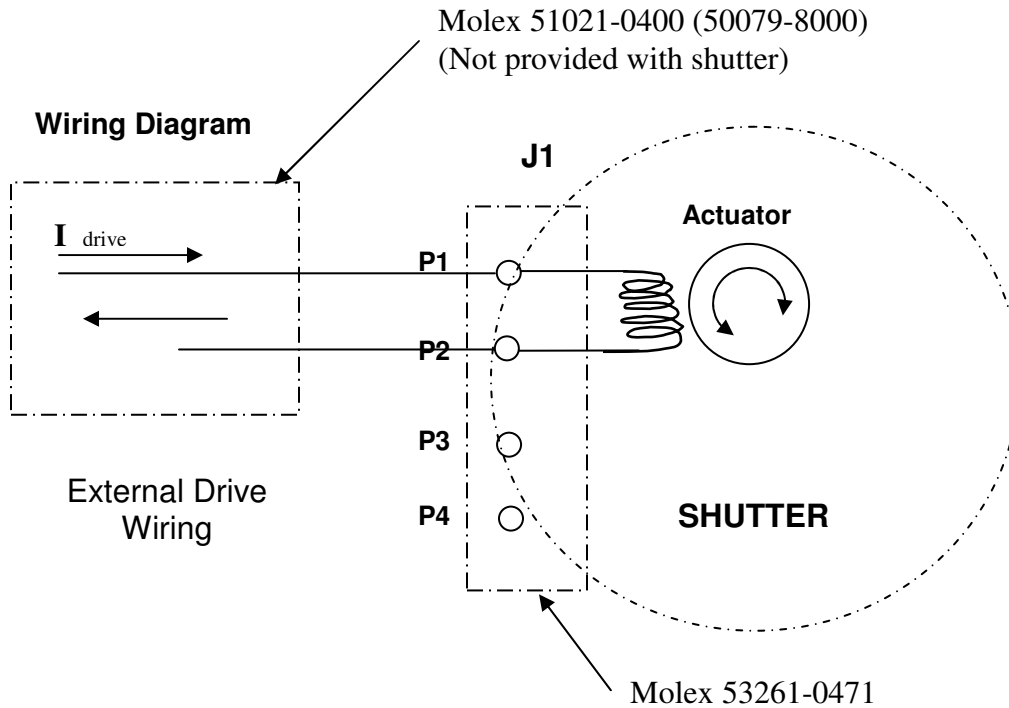


04RDS001 Shutter Drive Requirements



04RDS001 Shutter Drive Specifications

Actuator Coil Resistance	39.5 ohms +/- 10%	At 20 deg. C (R varies approx .394 % per deg. C)
Drive Current	225 mA (-0 / +20%)	(+) polarity to open shutter (-) polarity to close shutter A current controlled driver is highly recommended for most consistent operation over variations in coil resistance and wide temp range
Drive Pulse Duration	30 mS min	60mS recommended for optimum bounce settling
Blade Transition Time, total	60 mS typical	Incl. 40 mS bounce settling time (with 60 mS drive pulse)
Max drive duty cycle (% time powered at rated current)	25%	At 20 deg C ambient temp. (must be derated at higher ambient temperatures)
Max drive time at rated current	4 Sec	

Application Notes:

For an RDS-1 shutter operating at up to 70 deg C:

The total max coil resistance will be:

$$395 \text{ ohms} \times 110\% \times (1 + .00394 \times (70 - 20)) = 39.5 \times 1.1 \times 1.197 = 52 \text{ ohms}$$

and required max drive voltage will be:

$$V_{\text{max drive}} = I \times R = .225 \times 52 = 11.7 \text{ V}$$

(Note that controller supply voltage must be slightly higher to allow for switching losses.)

Melles Griot can recommend basic H-bridge block diagram drive circuit on request.