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Electronic Current Limit Switch- Handbrake

This circuit designed by Hollin Applications uses an input signal to switch the direction of a linear Actuator. The double pole switch changes relays in a H-Bridge configuration which changes the direction of current flow and shorts the D.C. Motor when switched off. This ensures a minimal amount of overrun on the Actuator. This circuit automatically converts the low power input signal to the high current motor drive.

In addition to the above features this circuit will also switch off the Actuator motor at a pre-determined current level. This can be adjusted easily by turning the knob on the onboard potentiometer. Anti - clockwise increases the force before switch off.

These circuits are specifically designed for Linear Actuator motors. The circuit mimics the start up and expected current curves from the motor. This is compared against the motor each time as it is running, should the motor current increase above the mimic curve then the motor is switched off. Open circuit the input switch for 7 msec. resets the trip latch.

This circuit also provides 2 wires for an isolated output. This connection is normally open circuit but closed circuit on a trip condition. This output is specifically design for use to switch the dash board handbrake light on.

The circuit is designed to drive the Actuator to its own limits in one direction for example handbrake off and to the internal current limit condition on handbrake on.

The circuit will only allow the handbrake to turn off when there is an input of 12 volts on the ignition in terminal. This is a safety feature which ensures the ignition is turned on before the Handbrake is turned off. If the switch is in the off position, but handbrake on the handbrake will be turned off when the ignition is turned on.

Connection,	12 volts DC capable 8 Amps for motor.
Input Signals	Simple Single pole dual throw switch, or double push buttons, usually supplied with red/green switch
Terminations	All ¼” Spades for power and Actuator signal
Casing	Unit supplied resin filled for protection.
Current range.	1 to 8 Amps.
Actuator	Small hiwin LAS or Danaher LA1 Actuator or Danaher E050 unit
Protection	The circuit should be protected by external 10 Amp auto blade fuse.
Size	100 x 60 x 30 mm.

Title	Standard Electronic Handbrake Wiring Kit	Date	08 March 2012
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