

QUAD OEM SOLENOID DRIVER
SPECIFICATIONS
WLM100606-1, REV 3 013007

SCOPE

The QUAD OEM SOLENOID DRIVER is an assembly that accepts both positive and negative standard logic commands and drives up to four independent solenoid-actuated devices. It features single-supply operation (+5 to +30 VDC) and provides both a timed pull-in pulse and a pulse-width-modulated (PWM) hold-in signal to each solenoid. The PWM frequency as well as the duty cycle are programmable by means of an on-board dipswitch. In addition to providing the option for three fixed-frequency PWM signals, it has a spread-spectrum option that reduces noise and narrow-band spurious interference. The EMI and turn-off response characteristics of the inductive fly-back are controlled with a diode-resistor network. Each solenoid has an LED on the assembly and a positive logic output to indicate that it is active.

ELECTRICAL SPECIFICATIONS

Supply Voltage: +5 VDC minimum, +30 VDC absolute maximum
Supply Current, quiescent, no solenoids active: 25 ma. nominal.
Supply Filtering: 22 microfarads, electrolytic.
Logic Inputs: Absolute Limits: -0.3 volts to +5.5 volts.
Logic Low: 0.6 V max. @ 250 microamps max sink.
Logic High: 1.5 V min.
Note: All inputs are provided with internal pull-up resistors. Unused positive (+) inputs must be externally grounded.
Logic Outputs: Absolute Limits: -0.3 volts to +5.5 volts.
Logic Low: 0.55 V max @ 1.5 ma sink.
Logic High: 2.9 V min @ 0.5 ma source.
Current load, per solenoid: 1 amp max, steady state, at supply voltage.
Pull-in Drive Voltage: Supply Voltage,
less circuit losses (0.4 ohm typical)
Duration of Pull-in Voltage: 20 milliseconds.
Hold-in Duty Cycle: Set by dipswitch to one of the following:
12%, 25%, 37%, 50%, 67%, 75%, 87%, 100%
PWM frequency: Set by dipswitch to one of the following:
256 Hz, 1096 Hz, 4096 Hz, spread spectrum up to 4096 Hz

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature: -20 to +70 deg C.
Storage Temperature: -40 to +85 deg C.
Humidity: 0 to 90%, non condensing.

MECHANICAL SPECIFICATIONS

Length: 2.60"
Width: 1.75"
Height: 0.550", max.
Mounting: Through holes, (4 qty), 0.140" dia, 1.45" x 2.30" centers.
Mounting Orientation: Any position.
Cooling: Convection, aided by conduction through mounting hardware.
Connector, Supply Voltage and Logic: 20 pin, Molex 90130-1120.
Connector, Solenoid, (4 qty): 3 pin, Molex 22-23-2031.
LED Indicators, (4 qty): Green, associated with solenoid connectors.