# L-Series SEALED ROCKER SWITCHES

The L-Series rocker switch is an innovative product offering total design flexibility, while at the same time setting new standards for performance and reliability. Its versatile design features include a neatly proportioned size that fits into an industry standard mounting hole of 1.734 x .867 (44.0mm x 22.0mm), countless unique choices for ratings, circuits, colors, illuminations and laser etched legends. These single or double pole switches also feature a broad choice of actuator styles, colors, and lenses with up to twelve terminals offering an extensive range of switch and lamp circuit options, including LED or incandescent illumination. Additionally, an optional plug-in terminal connector enables pre-wiring of wire harness.



## **Product Highlights:**

- · Sealed to IP67 for Above-Panel Components
- Withstands temperatures from -40°C to +85°C
- Vibration, shock, thermoshock, moisture and salt spray resistant

## **Typical Applications:**

- Construction machinery
- Agricultural equipment
- · On-highway transportation equipment



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# L-Series Switch DESIGN FEATURES

#### **LED LIGHTING**

Utilize less current and are not affected by vibration, providing long lasting illumination. Available in 3 standard colors.

#### **SEAL PROTECTION**

Locks out elements such as water, dust & debris. Sealed to IP67 for Above-Panel Components

#### TERMINALS

Available with 2 industry standard termination options: .250 or .187 tabs with up to 12 terminal options.

#### **LENS & LEGENDS**

Lens available in 2 sizes and 6 standard colors in either translucent or transparent materials. Numerous symbols and text available for imprinting or laser etching.

#### ACTUATOR

Available in rocker or paddle styles. Several standard color options also available.

#### **ROLLER PIN**

Eliminates need for lubricants, increasing the temperature range of the switch from -40° C to +85° C [-40° F to 185° F].

#### BASE

Fits into industry standard mounting hole of 1.734 x .867 in [44.0mm x 22.0mm].

## **Electrical**

Contact Rating	.4VA @ 24VDC (MAX) resistive 15 amps, 125VAC 10 amps, 250VAC 20 amps, 4-14VDC 15 amps, 15 29VDC
Dielectric Strength	15 amps, 15-28VDC 1250 Volts RMS between pole to pole
	3750 Volts RMS between live
Insulation Resistance	parts and accessible surfaces 50 Megaohms
Initial Contact Resistance Life	10 milliohms max. @ 4 VDC Up to 100,000 cycles maintained,
	50,000 cycles momentary circuit and load dependent
Contacts	90/10 silver-nickel, silver
Terminals	tin-oxide, gold Brass or copper/silver plate 3/16" (4.76mm) & 1/4" (6.3mm) Quick Connect terminations standard.

## **Physical**

Lighted	Incandescent - rated 10,000 hours
	LED - rated 100,000 hours 1/2 life
	(LED is internally ballasted for
	voltages to 24 VDC)
Seals	Rocker, base & bracket are sealed.
Daga	oodlodi
Base	Nylon 66 GF rated to 85°C with a
	flammability rating of 94V0.
Actuator	Basic actuator structure molded
	of thermoplastic polycarbonate
	with a hard Nylon 66
	thermoplastic surface overlay.
Lock	Acetal
Lens	Polycarbonate rated at 100°C
Function	2
	2 & 3 Position Rocker Style
Bracket	Nylon Zytel
Connector	Nylon 66 rated at 85°C. Polarized.

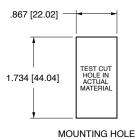
## Actuator Travel (Angular Displacement)

2 position 3 positions 26° 13° from center

## **Environmental**

Environmental	IP67, for above-panel
Corrosion	components of actual switch only Mixed Flowing Gas MFG Class III per ASTM B-827 & B-845, Method
Operating Temperature Vibration 1	H, with 3 years exposure. -40°C to + 85°C Per Mil-Std 202F, Method 204D Test Condition A 0.06 DA or 10G's 10-500 Hz. Tested with VCH connector. Test criteria - No loss of circuit during test and pre
Vibration 2	and post test contact resistance. Resonance search 24-50 Hz 0.40 DA 50-2000 ±10 G's peak Results Horizontal Axis 3-5 G's max.
	Random   24 Hz 0.06 PSD-Gsq/Hz   60 Hz 0.50   100 Hz 0.50   200 Hz 0.025   2000 Hz 0.025   No loss of circuit during test; <10µ
Shock	chatter. Per Mil-Std 202F, Method 213B, Test Condition K @ 30G's. Tested with VCH connector. Test criteria - No loss of circuit during test, pre, and post test contact resistance.
Salt Spray	Per Mil-Std 202F, Method 101D,
Thermal Shock	Test Condition A, 48 Hrs. Per Mil-Std 202F, Method 107F, Test Condition A, -55°C to 85°C. Test criteria - pre and post test
Moisture Resistance	contact resistance. Per Mil-Std 202F, Method 106F, Test Criteria - pre and post test contact resistance.

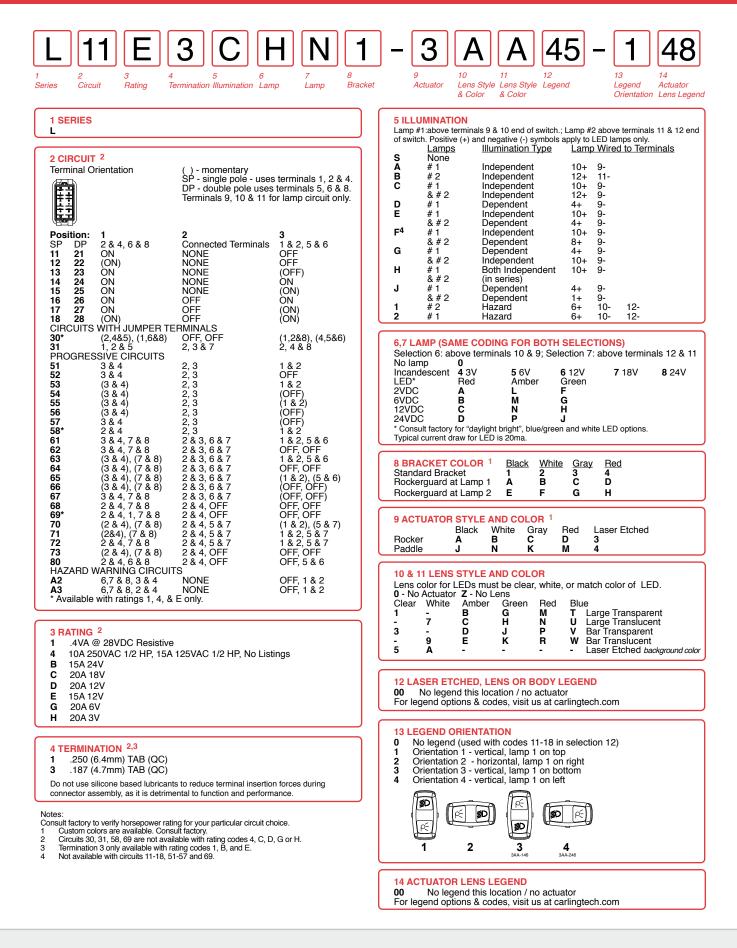
## **Mounting Specifications**

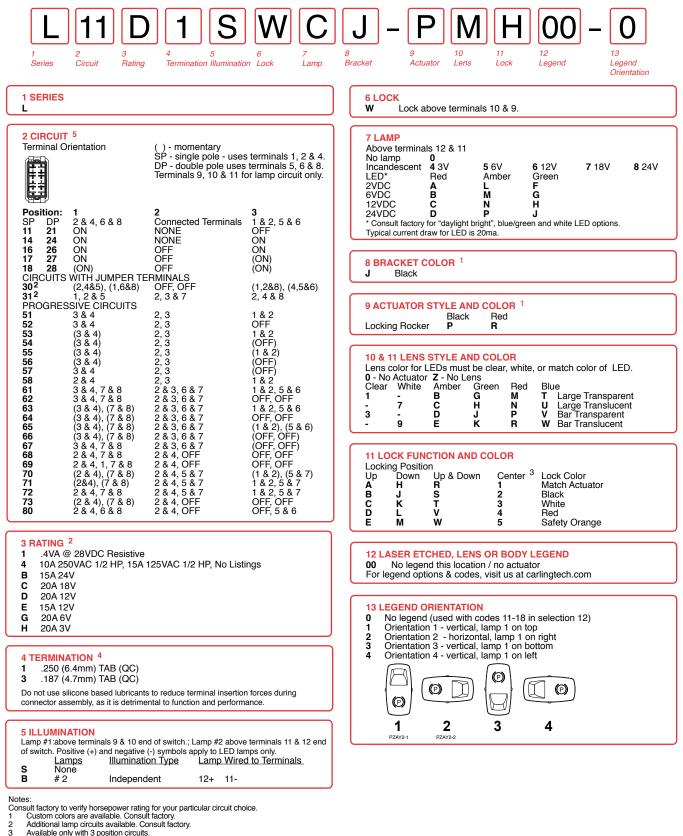


Panel Thickness Range Acceptable Panel Thickness .030 to .156 (.76mm to 3.96mm) Becommanded:

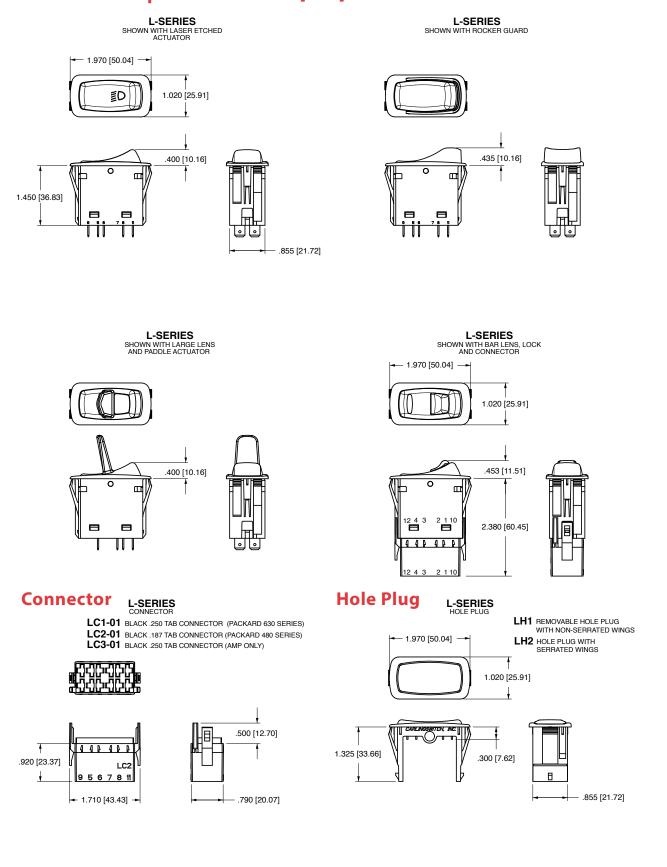
Recommended: .030, .062, .093, .125 and .156

\*Manufacturer reserves the right to change product specification without prior notice.



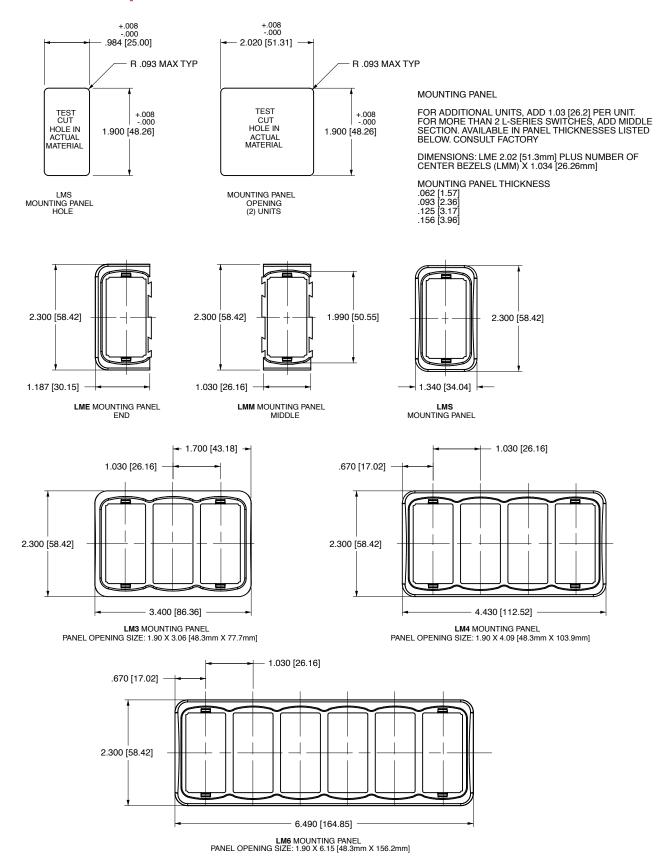


- Available only with 3 position circuits. Termination 3 only available with ratings 1, B and E. Circuits 30, 31, 58 and 69, are not available with rating codes 4, C, D, G or H. 5



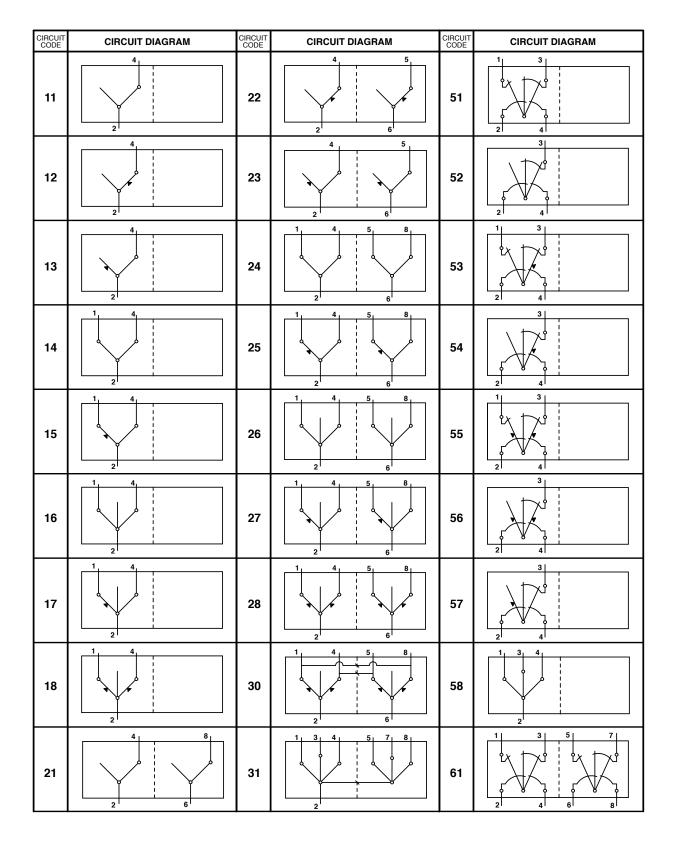
## **Dimensional Specifications: in. [mm]**

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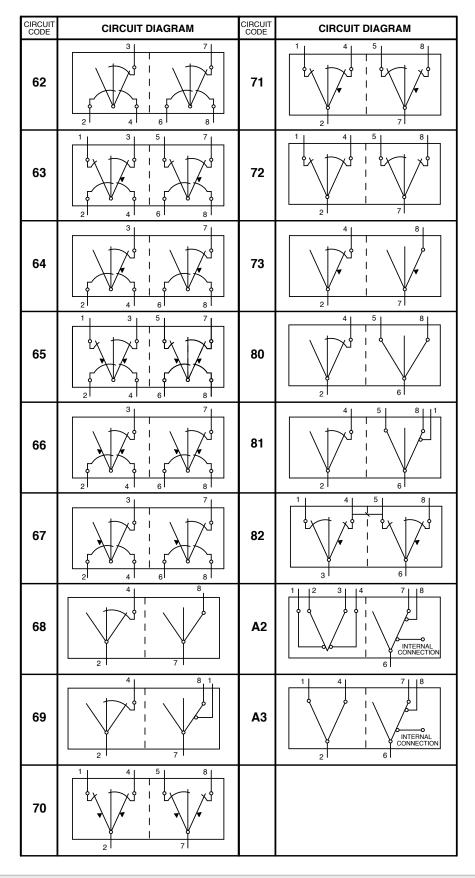


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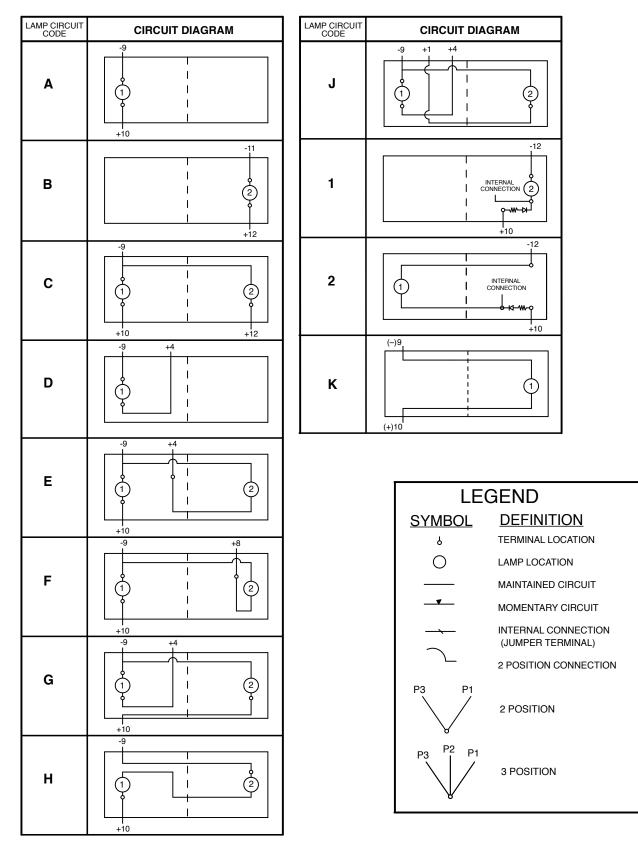
## **Circuit Diagrams:**



## **Circuit Diagrams:**



## **Lamp Circuit Diagrams:**



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