

LP-Series

ILLUMINATED INDICATORS

The LP-Series Illuminated Indicators are the perfect complement to the aesthetics, reliability and performance of our L-Series rocker switches. As a critical safety feature, the illumination alerts the operator of essential system functions or malfunctions, such as: Oil Pressure, High Temperature, Transmission or other fluid levels, Parking Brake or General System confirmations. The L-Series styling assures seamless integration into most any dashboard panel.



Product Highlights:

- ♦ Vibration, Shock, and Thermoshock Resistant
- ♦ 12 or 24 Volts
- ♦ Laser Etched or Lens Illumination
- ♦ IP67 Sealing

Typical Applications:

- ♦ On/Off-Highway Equipment
- ♦ Agricultural Equipment
- ♦ Construction Equipment



Carling Technologies™
Innovative Designs. Powerful Solutions.

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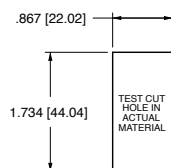
Electrical

Terminals	Brass or copper/silver plate 3/16" (4.76mm) & 1/4" (6.3mm) Quick Connect terminations standard.
Lighted	Incandescent - rated 10,000 hours LED - rated 100,000 hours 1/2 life (LED is internally ballasted for voltages to 24VDC)

Physical

Seals	Insert, base & bracket are sealed.
Base	Nylon 66 GF rated to 85°C with a flammability rating of 94VO.
Insert	Polycarbonate rated at 100°C.
Connector	Nylon 66 rated at 85°C. Polarized
Markings	Over 1000 pad printed or laser etched legends available
Bracket	Nylon 66 GF rated to 85°C

Mounting Specifications



MOUNTING HOLE

Panel Thickness Range

Acceptable Panel Thickness
.030 to .156 (.76mm to 3.96mm)
Recommended:
.030, .062, .093, .125 and .156

Environmental

Environmental	IP67, representing an index of protection as applied to electrical equipment in accordance with IEC 529, BS 5490, DIN 400 50 & NFC 20 010.
Corrosion Resistance	Mixed Flowing Gas MFG Class III per ASTM B-827 & B-845, Method H, with 3 years exposure.
Operating Temperature	-40°C to +85°C
Vibration 1	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 and post test contact resistance.
Vibration 2	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 chatter.
Shock	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, Test Condition A, 48 Hrs.
Thermal Shock	Per Mil-Std 202F, Method 107F, Test Condition A, -55°C to 85°C. Test criteria - pre and post test contact resistance.
Moisture Resistance	Per Mil-Std 202F, Method 106F, Test Criteria - pre and post test contact resistance.

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

LP	1	H	R	R	5	-	9	A	A	Y2	-	1	DU
1 Series	2 Termination	3 Illumination	4 Lamp	5 Lamp	6 Bracket Color		7 Insert Color	8 Style	9 Style	10 Legend 1		11 Legend Orientation	12 Legend 2

1 SERIES

LP L-Series Illumination Plug

2 TERMINATION³

1 .250 (8.35) x .032 (0.51) Quick Connect
 3 .187 (4.75) x .032 (0.51) Quick Connect

3 ILLUMINATION

LAMPS	ILLUMINATION	LAMP WIRED TO TERMINALS
A 1	—	10 (+) 8 (-)
B 1	—	10 (+) 8 (-)
2	—	12 (+) 11 (-)
C 1	—	10 (+) 8 (-)
2	—	12 (+) 8 (-)
E 1 & 2	Parallel	10 (+) 8 (-)
H 1 & 2	Series	10 (+) 8 (-)

LAMP 1 LOCATED ABOVE TERMINALS 9 & 10 END OF BRACKET.
 LAMP 2 LOCATED ABOVE TERMINALS 11 & 12 END OF BRACKET.
 POSITIVE (+) AND NEGATIVE (-) SYMBOLS APPLY TO LED LAMPS ONLY.

4,5 LAMP (same coding for both selections)²

Selection 4: specifies lamp 1 located above terminals 10 (+) & 9 (-).
 Selection 5: specifies lamp 2 located above terminals 12 (+) & 11 (-).

No lamp	0 (position 5 only)			
Incandescent	4 3V	5 6V	6 12V	7 18V
LED	Amber	Green	Red	8 24V
2VDC	L	F	R	
6VDC	M	G	S	
12VDC	N	H	T	
24VDC	P	J	V	

6 BRACKET COLOR

5 Black

7 INSERT COLOR^{1,2}

9 Painted Black - Laser Etch
 A Clear (Transparent)
 B White (Translucent)
 C Red (Translucent)
 D Amber (Translucent)
 E Green (Translucent)
 F Blue (Translucent)

8, 9 STYLE (same coding for both selections)

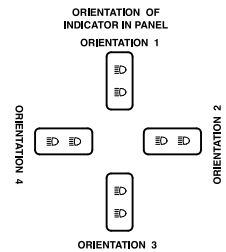
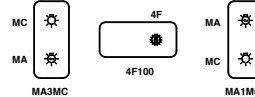
Z Not Painted (used with Insert Colors A-F)
 5 Clear Laser Etch Background Color (used with Insert Color 9)
 A White Laser Etch Background Color (used with Insert Color 9)

10 LEGEND OVER LAMP¹

00 No legend
 — Laser Etched or Body Legends
 For legend options, visit us at carlingtech.com

11 LEGEND ORIENTATION

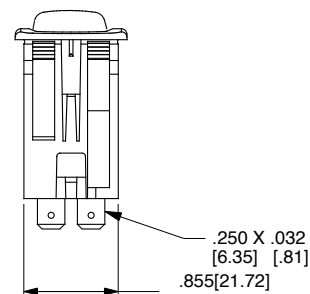
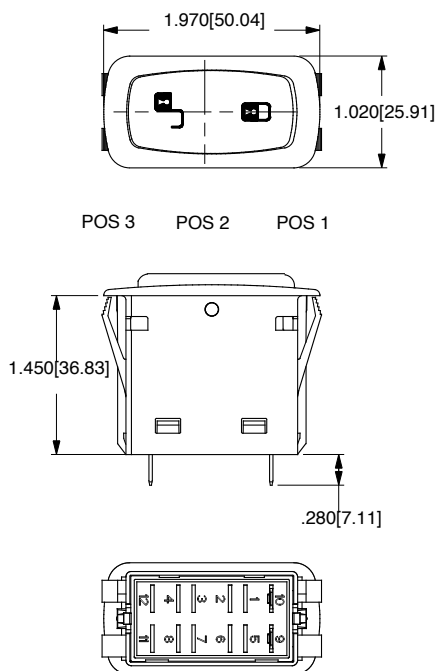
0 No legend
 1 Orientation 1
 2 Orientation 2
 3 Orientation 3
 4 Orientation 4

**12 LEGEND OVER LAMP²**

00 No legend
 — Laser Etched or Body Legends
 For legend options, visit us at carlingtech.com

Notes:

- To order separately, specify LPC and selection 7 code. Ex LPC-9
- For LEDs, insert color must be clear, white or match color of LED.
- For connector, specify part number LC2-01 (.187 tabs), LC3-01 (.250 tabs).



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About Carling

Founded in 1920, Carling Technologies is a leading manufacturer of electrical and electronic switches and assemblies, circuit breakers, electronic controls, power distribution units, and multiplexed power distribution systems. With four ISO registered manufacturing facilities and technical sales offices worldwide, Carling Technologies Sales, Service and Engineering teams do much more than manufacture electrical components, they engineer powerful solutions! To learn more about Carling please visit www.carlingtech.com/company-profile.

To view all of Carling's environmental, quality, health & safety certifications please visit www.carlingtech.com/environmental-certifications

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