

LW-Series Wiper/Washer Control



Keeping in step with the needs of the Transportation Industry, Carling Technologies introduces yet another addition to our L-series family of Control Products, the new Wiper/Washer Control. Offering the best of both worlds, this new product combines the reliability and performance that you've come to expect from the L-Series along with sleek aesthetics to seamlessly integrate into most any dashboard design. The Wiper/Washer Control features a robust packaging design which protects critical components, offers flexibility to meet a variety of customer requirements, while controlling several functions through the use of one single Control Product. Our integrated design provides an added bonus with the cost savings realized from the reduced need for insulated wires and connectors.

Electrical

Current Rating	1 relay 8 amps, 14 VDC 4 amps, 28 VDC 2 relays 1 amps, 14 VDC 1 amps, 28 VDC
Terminals	.187 (7.4mm) Quick Connect terminations standard.
Electrical Properties	Reverse polarity protection Over voltage protection Cold cranking protection according to SAE J1455, Sections. 4.11.1.1.1 and 4.11.1.2.1 Transient voltage protection which includes load dump and inductive switching according to SAE J1455, sec. 4.11.2.2 Electrostatic discharge protection according to SAE J1455 Sec. 4.11.2.2.5.1 (Discharge a 150 pf capacitor that has been charged to a potential of 15kV through 150 Ohm resistor.) Meets all other EMI/EMC requirements for class C trucks.

Mechanical

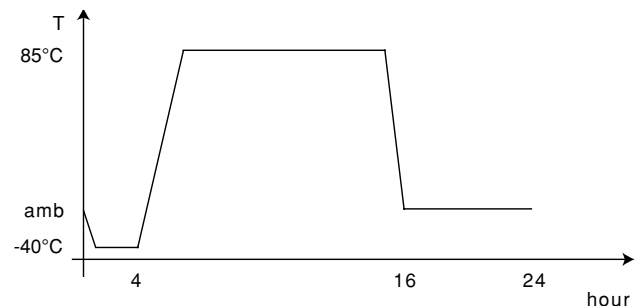
Mechanical Vibration	Sinusoidal Vibration: 10-55-10 Hz, 0.06" DA, one minute-cycle, three hours/axis Random Vibration: Three hours/axis, three mutually perpendicular axes with a test level 4G's. <u>Frequency</u> <u>Amplitude</u> 5Hz 0.16 G ² /Hz 100Hz 0.16 G ² /Hz 500Hz -3dB/octave roll-off Tests were conducted according to SAE J1455, Sec 5.7 and Sec. 4.9.4. Shock: MIL-STD-202G Method 213B, Test Condition K, 30G's, 11 ms.
Endurance Test	According to SAE J2349, March 97 for windshield washer switch for Trucks, Buses and Multipurpose Vehicles (20,000 cycle minimum).

Physical Characteristics

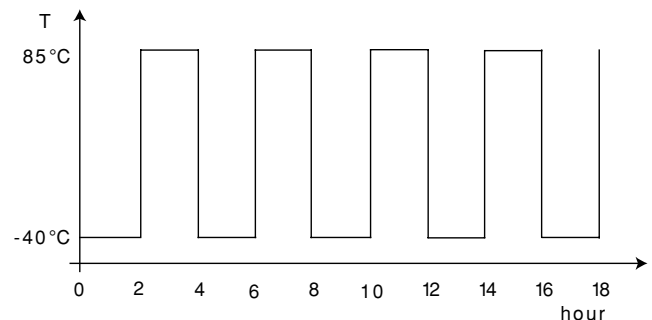
Illumination	LED, rated 100,000 hours 1/2 life
Cover	Acetate
Washer Actuator	Silicone
Toggle Actuator	Nylon 6/6 glass filled
Bracket	Nylon 6/6
Connector	Nylon 6/6 rated 85° polarized
Washer Function	Momentary
Toggle Function	Maintained Intermittent
Operation	Momentary
Weight	44 grams

Environmental

Operating Temperature	-25° C to + 85° C
Temperature Cycle	According to SAE J1455, Sec. 4.1.3.1 (See Figure below)



Thermal Shock	According to SAE J1455, Sec. 4.1.3.2 (see Fig)
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Humidity	According to SAE J1455, Sec. 4.2.3 (30 cycles for 8 hrs. with maximum temperature of 85°C and 95% relative humidity).
Dust Bombardment	According to SAE J1455, Sec. 4.7.3 (with dust concentration of 0.88gm/m ³ for 24 hours.)
Salt Spray	MIL-STD-202G, Method 101D for 96 hours.

NOTES:
For more detailed specifications, consult factory.

LW 1 A 1 1 Z - 1 1 AA 1 AA
 1 Series 2 Rating 3 Intermittent Timing 4 Wiper/Washer Timing 5 Lamp #1 6 Lamp #2 7 Bracket Color 8 Rocker/Paddle Color 9 Legend One 10 Legend Orientation 11 Legend Two

1 SERIES

LW Wiper/Washer Control with six intermittent positions: low, high, wash/wipe

2 RATING¹

1	8A, 14VDC (1 relay)	4	1A, 14VDC (1 relay)
2	4A, 28VDC (1 relay)	5	1A, 14VDC (2 relay)
3	1A, 14VDC (1 relay)	6	1A, 28VDC (2 relay)

3 INTERMITTENT TIMING

A 2-15 seconds

4 WIPER/WASHER TIMING

1	3 seconds	2	4 seconds
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5 LAMP #1 (above wash)

Z	no lamp	2	red LED
1	green LED	3	amber LED

6 LAMP #2 (above wipe)

Z	no lamp	2	red LED
1	green LED	3	amber LED

7 BRACKET COLOR

1 black

8 ROCKER/PADDLE COLOR

1 black

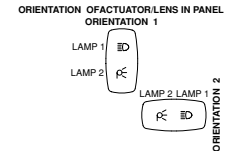
9 LEGEND #1

00 No legend

For legend options, see page 69 of this catalog.

10 LEGEND ORIENTATION

- 0** No legend
- 1** vertical (lamp 1 on top)
- 2** horizontal (lamp 1 on right)


11 LEGEND #2

00 No legend

For legend options, see page 69 of this catalog.

NOTES

1 Relay coil current is 1A max. Relay must have an arc suppression in parallel with the coil.

