

CVR-Series

Rheostat Switch

PRODUCT WEBPAGE

request sample, configure part



The CVR-Series is a configurable three- or four-position rheostat switch designed for vehicle lighting control. Available for 12V DC and 24V DC systems, the CVR-Series automotive rheostat switch is made with durable thermoplastic materials and silver-plated brass terminals for reliable operation in commercial vehicles, such as work trucks, agricultural equipment, and construction equipment. The front panel-mount dimmer switch is available with or without white backlighting.

12/24
V DC

3 or 4
Detent Positions

Snap-In
Mounting

Typical Applications

- Commercial Vehicles
- Construction Equipment
- Agricultural Equipment
- Work Trucks

Tech Specs

Electrical

Operating Voltage	12VDC/24VDC systems
Dielectric Strength	1500V RMS (Terminal to Shell)
Insulation Resistance	50 Megohms
Terminals	.250" (6.3mm) Quick Connect
Electrical Endurance	Minimum 10,000 Operations (2,000 cycles at -40 °C, 6,000 cycles at ambient temperature, 2,000 cycles at +85 °C)

Physical

Switch functions	3 or 4 wheel detents of rotation
Materials	Housing – PC Base – Nylon Top cover – PC Wheel – Nylon Terminal – Brass, Silver Plated
Weight	≈23.8g
Mating Connection	VC2 : AMP 250 series fastin-faston VC1 : Packard 630 and AMP 250 series fastin-faston
Mounting	Front panel mount

Environmental

Operating Temperature	-40°C to +85°C
Thermal, Hot Soak	IEC 60068-2-2 Test Bb, 85°C for 96 hours
Thermal, Cold Soak	IEC 60068-2-1 Test Ab, -40°C for 96 hours
Thermal, Shock	MIL-STD-202G Condition A-1, 25 cycle, -55°C to +85°C
Humidity, Cyclic	IEC 60068-2-38 Test Z/AD, -10°C to 65°C, 10 cycle for temperature / humidity composite, 24h per cycle.
Thermal, Cycling Each	IEC 60068-2-14 Test Nb, -40°C to 85°C, 25 cycles of 10 hours
Solar Radiation	ASTM G155-05A 300hr, 1.5W/(m ² *nm) at 420nm, 300hr,
Sealing Protection	IEC 60529; IP53, for above-panel components of the actual switch only
Shock	IEC 60068-2-27, 3 shocks in each direction of the 3 axes (18 total shocks) at 300 m/s ² for 11 ms
Drop	EN 60068-2-31 Test Ec Free Fall – Procedure I, drop in each direction of the 3 axes (6 total drops) from 1000 mm
Vibration, Sinus	MIL-STD-202G Method 204D, condition A, Sweep from 10Hz to 55Hz with +/-0.06inch, 55Hz to 500Hz with 10g. each axis 12time, total 36 time(9h)
Vibration, Random	MIL-STD-202G Method 214A Condition C, 50Hz to 2000Hz, 0.06PSD, 9.26Grms. each axis 8h, total 24h
Chemical Resistance	ISO 16750-5 Method II for Diesel fuel, Gasoline, Engine oil, Hydraulic fluid, Grease and Urea, interior cleaner .
Salt Spray	IEC 60068-2-11 Test Ka 5%NaCl, 96h.
ESD Contact Discharges	ISO 10605 Power off mode, +/-15kV air discharges, +/-8kV
Symbol Abrasion Resistance	RCA, 175g, 200 cycles.
Strength	withstand a torque 2N*m for 10s
Panel Insertion Force	25N to 45N

Ordering Scheme

Sample
Part No.

CVR - B 2 A - 100

Selection

1

2

3

4

5

1. SERIES

CVR Rheostat Switch

2. WHEEL DETENTS

A Three
B Four

3. OUTPUT

Voltage Divider

	System Voltage	Detent 0	Detent 1	Detent 2	Detent 3
1	12V	2.8V	5V	7.3V	9.5V
2	24V	5.5V	10V	14.5V	19V
3	12V	5V	7.3V	9.5V	-
4	24V	10V	14.5V	19V	-

Shunt Resistor (Only for 3 Detents)

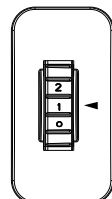
	System Voltage	Detent 0	Detent 1	Detent 2
A	12V or 24V	1.5K OHMS	4.2K OHMS	9.8K OHMS

4. BACK LIGHT COLOR

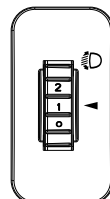
Z None
A White

5. CAP AND WHEEL LEGEND

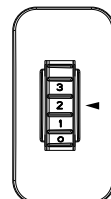
100 Standard legend



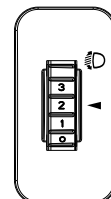
3 POSITION
WITHOUT BACKLIGHT



3 POSITIONS
WITH BACKLIGHT



4 POSITIONS
WITHOUT BACKLIGHT

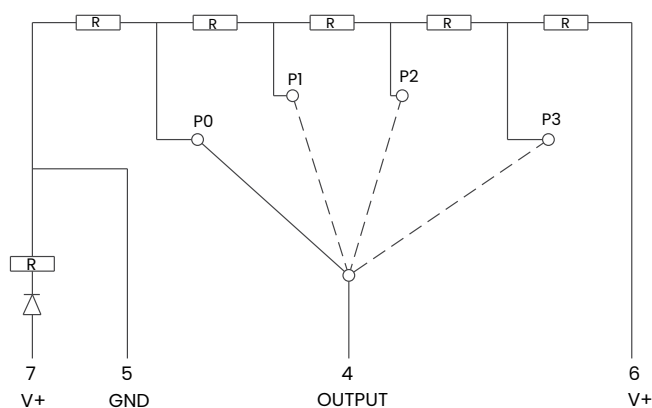


4 POSITIONS
WITH BACKLIGHT

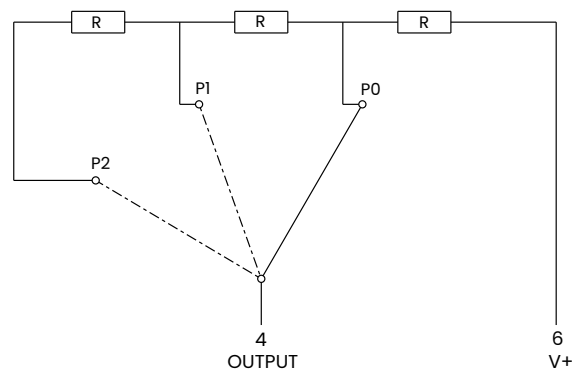
For additional legends, please consult factory.

Circuit Diagram

CIRCUIT DIAGRAM FOR
VOLTAGE DIVIDER OUTPUT

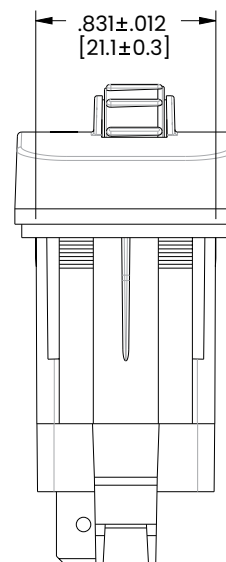
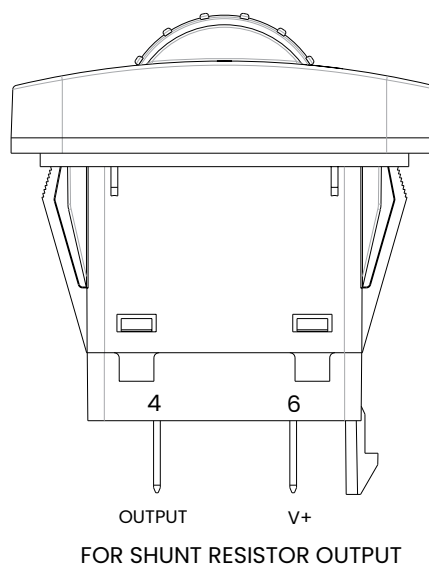
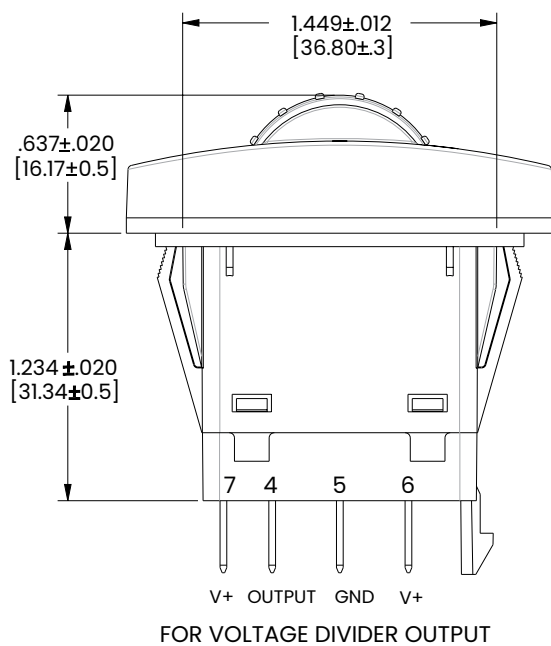
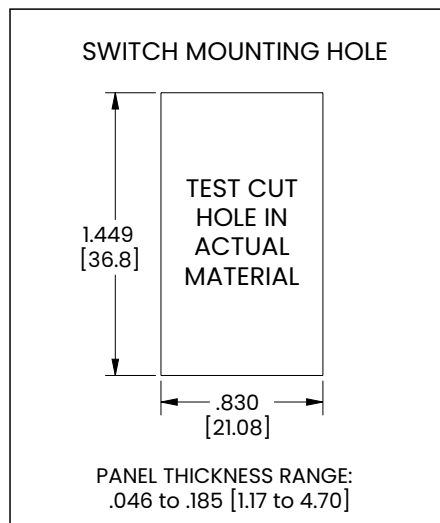
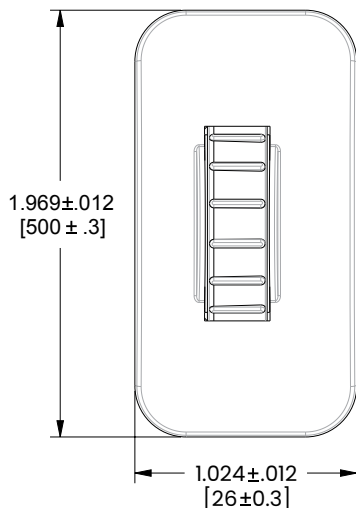


CIRCUIT DIAGRAM FOR
SHUNT RESISTOR OUTPUT



Dimensional Specs

inches [millimeters]



MATING CONNECTOR:
 VC2: AMP 250 series fastin-faston
 VC1: Packard 630 and AMP 250 series fastin-faston