

# V-Series

Contura Rotary Switches

[PRODUCT WEBPAGE](#)

*request sample, configure part, watch video*



The V-Series Contura Rotary Switch was designed for maximum performance and reliability leveraging the features of the widely popular V-Series Contura Rocker Switches. Available in maintained and momentary circuit options, the V-Series Rotary features a sturdy knob construction, up to three separate LEDs, and fits in an industry standard panel opening.

**2** Poles    **.4-20** Amps    **12-28** VDC    **IP67 Sealing** Above-Panel

## Typical Applications

- On/Off-Highway Equipment
- Test & Measurement
- Speed Control
- Marine
- Instrumentation

# Design Features

## OPTIONAL PANEL SEAL

Prevents water/dust ingress behind panel

## SEALS

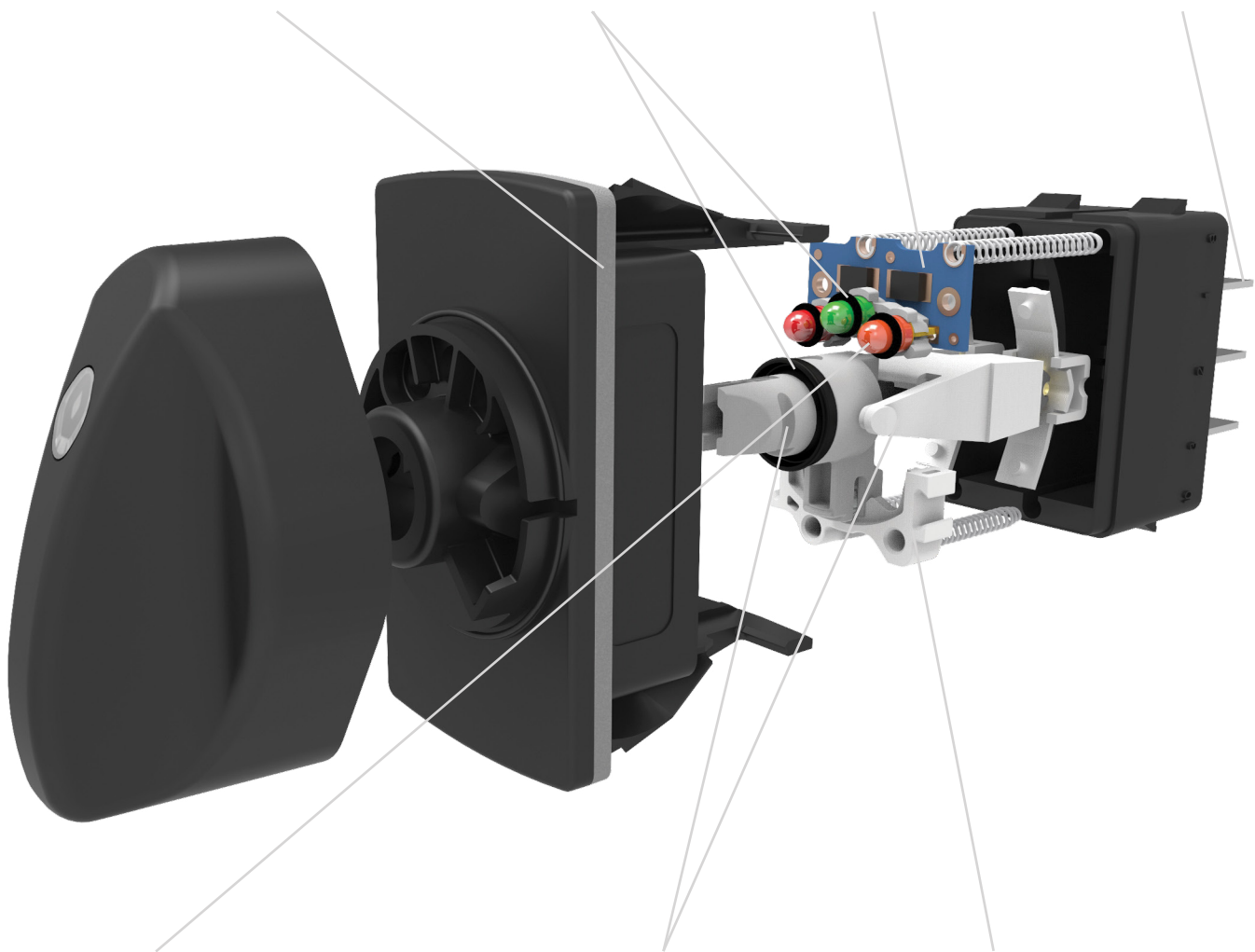
LED and stem seals provide IP67 protection above panel

## PC BOARD

Supports LEDs and surface mount resistors

## TERMINALS

Same pinout as V-Series Rocker Switches, requiring no harness change



## LEDS

Up to three separate LEDs

## ROTARY & LINEAR ACTUATOR

Patented mechanism that translates rotary to linear motion

## SECONDARY CAM

Provides definitive detent positions with ball & spring located in rotary actuator

# Tech Specs

## Electrical

Rating

Circuit	Voltage	Max Current Resistive
2 Position Maintain	12	20
2 Position Momentary	12	20
3 Position All	12	20
2 Position Maintain	24	15
2 Position Momentary	24	15
3 Position All	24	15

Dielectric Strength 1500 Volts RMS

Insulation Resistance 50 Megohms

Initial Contact Resistance 10 Milli Ohm max @ 4VDC

Life 50,000 Cycles Two Position  
25,000 Cycles Two Position  
Momentary and All Three position

Terminals 0.250" (6.3mm) Quick Connect

## Physical

Function Circuits Double Pole Single Throw, DPST  
Double Pole Double Throw, DPDT

Operation Two and Three Position  
Maintained and Momentary

Knob Rotation Two Position 60 Degrees  
Three Position 30 Degrees from  
Center

Illumination LED; Red, Green, Amber, Yellow,  
White, Blue

Seals LED O-ring(s) – Silicone, Bezel  
gasket – Neoprene, Knob seal –  
NBR

Flammability Exceeds FVMSS 302  
Requirements, Exterior  
Components, UL 94 V-2 or Better  
Interior Components, UL 94 HB or  
Better

Base Polyester, PBT

Bracket Nylon 66, PA

Knob Polybutylene Terephthalate, PBT  
6.5%GF

Lens Polycarbonate, PC

Connector Nylon 66, PA

Mounting Front Panel Snap In, 1.450"  
(36.83mm) X 0.830" (21.08mm)  
Panel Thickness, 0.030" – 0.187"  
(0.76 – 4.75mm)

## Environmental

Sealing IP67, for above-panel components  
of actual switch only.

Dust Mil STD 810, Method 510.2 Air  
Velocity 300 Ft/Min Duration 16Hr

Corrosion IEC 68-2-60 Mixed Flowing Gas  
(MFG) 14 Days

Chemical Splash Gasoline, Diesel, Motor Oil, Brake  
Fluid, Ammonia, Armour All

Salt Spray Mil STD 202G, Method 101, Test  
Condition A 96 Hr

Vibration Random Mil STD 202G, Method 214 test  
Condition C 10G's RMS

Vibration Sinusoidal Mil STD 202G, Method 204D, Test  
Condition A 0.06DA or 10G's 10-  
500Hz

Shock MIL-STD 202G, Method 213B Test  
Condition K, 30G's

Handling Shock 1 Meter Drop onto Hard Surface

Thermal Shock MIL-STD 202G, Method 107G Test  
Condition A -55 C to 85 C

Moisture Resistance MIL-STD 202G, Method 106F 10, 25 C  
to 65 C Cycles 95% RH

Thermal Cycling 25 Cycles -40 C to 85 C

Ignition Protection ISO 8846 with EC Directive 94/25/  
EC for Marine Products

UV Protection 300 hr Xenon Arc, 1.4W/m2  
wavelength 420 nm

ESD Human Static Discharge, +/- 15KV  
applied during normal operation  
Shipping/Handling, frequency  
range 200-2000 MHz applied  
voltage is +8KV to +15KV and -8KV  
to -15KV 3 discharge cycles

## Mechanical

Knob Impact 50 Gram weight dropped from a  
height of 18 inches on Top & Sides

# Ordering Scheme

Sample Part Number

**RV 21 D 2 B 6 0 0 B - K R C**

Selection 1 2 3 4 5 6 7 8 9 10 11 12

## 1. SERIES

**RV** Rotary Contura

## 2. CIRCUIT

Terminal Connections as viewed ( ) - momentary from bottom of switch:

8 - -7 DP - double pole uses 1, 2, 3 and 4, 5, 6.  
 1 - -4  
 2 - -5  
 3 - -6  
 10 - -9

Position:	1	2	3
DP	2 & 3, 5 & 6	Connected	Terminals 1 & 2, 4 & 5
21	ON	NONE	OFF
22	(ON)	NONE	(OFF)
23	ON	NONE	(OFF)
24	ON	NONE	ON
26	ON	OFF	ON
28	(ON)	OFF	(ON)

SPECIAL CIRCUITS	(ON)	OFF	ON
55	(ON)	OFF	ON
61	2 & 3, 5 & 6	2 & 3, 4 & 5	1 & 2, 4 & 5
62	2 & 3, 5 & 6	2 & 3	OFF
64	(2 & 3, 5 & 6)	2 & 3	OFF

## 3. RATING

1	.4VA 28VDC Resistive	D	20A 12V
B	15A 24V		

## 4. TERMINATION / BASE STYLE

8 Term	10 Term	Termination	Jumper
1	2	.250 TAB (QC) - no barriers	No
A	B	.250 TAB (QC) - with barriers	No
J 4, 5	K 4, 5	.250 TAB (QC) - no barriers	Yes (T2 to T5)

### Notes:

- Switch circuit uses terminals 1,2,3,4,5 & 6. Terminals 7,8,9 & 10 are for lamp circuit only.
- Jumper between terminals 2 & 5 for Circuits 61, 62, & 64 to be specified in the Termination & Jumper selection.
- Circuit 61 may be used for SP, OFF-ON-ON circuit.
- Base will not have terminal insulating barriers when connector and/or jumpers are used.
- Code J,K are optional for circuits 62 and 64. Customer may provide externally wired jumper to connect terminals 2 and 5.
- Lamp #1 located at top end of switch, above terminal 4.  
Lamp #2 located at top end of switch between terminals 1 & 4.  
Lamp #3 located at top end of switch, above terminal
- Positive (+) and negative (-) symbols apply to L.E.D. lamps only.  
Mounting hole size is 1.450" (36.83mm) by 0.830" (21.08mm). To mount multiple switches in single panel cut-out order optional interlocking mounting panels.
- Lens color for L.E.D.s must be clear, white, or match color of L.E.D.

[Configure Complete Part Number >](#)

[Browse Standard Parts >](#)

## 5. ILLUMINATION

Sealed	Lamps	when illuminated	Terminals
S	NONE		
A	# 1	Independent	8+ 7-
B	# 1	Dependent	3+ 7-
C	# 1	Independent	8+ 7-
	& # 3	Independent	10+ 7-
D	# 1	Dependent	3+ 7-
	& # 3	Dependent	1+ 7-
E	# 1	Independent	8+ 7-
	# 2	Independent	9+ 7-
	# 3	Independent	10+ 7-
F	# 1	Dependent	3+ 7-
	# 2	Independent	9+ 7-
	# 3	Dependent	1+ 7-
G	# 1	Dependent	3+ 7-
	# 3	Independent	8+ 7-
H	# 2	Independent	8+ 7-
J	# 1	Independent	8+ 7-
	# 2	Independent	10+ 7-
K	# 1	Dependent	3+ 7-
	# 2	Dependent	1+ 7-
L	# 1	Dependent	3+ 7-
	# 2	Independent	8+ 7-
M	# 2	Independent	8+ 7-
	# 3	Independent	10+ 7-
N	# 2	Dependent	3+ 7-
	# 3	Dependent	1+ 7-
P	# 2	Independent	10+ 7-
	# 3	Dependent	1+ 7-
R	# 3	Independent	8+ 7-
T	# 3	Dependent	1+ 7-

## 6, 7, 8. LAMP #1, 2 AND OR LAMP #3

Selection 6: above terminal 7; Selection 8: above terminal 8

No lamp	0	Red	Amber	Green	Blue	White
LED	C	N	H	J	E	6
12VDC	D	P	J	K	E	8
24VDC	D	P	J	K	E	8

## 9. BRACKET COLOR & PANEL SEAL

Color	No Gasket	1 Gasket	2 Gasket
Black	B	C	D
Gray	G	H	J
White	W	Y	Z

## 10. ACTUATOR STYLE

K Rotary Knob (Standard)

ACTUATOR ORIENTATION ABOVE TERMINALS



## 11. LENS COLOR

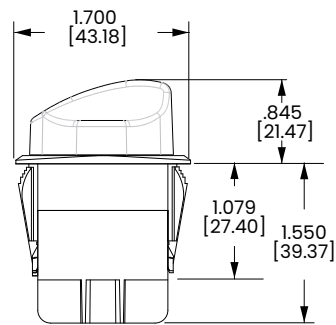
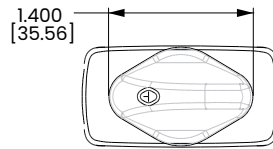
No Lens	Z	Amber	Green	Red	Blue
Clear	White	E	K	R	W
4	9				

## 12. KNOB COLOR

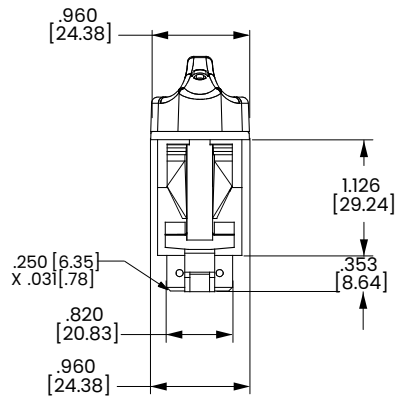
Black	Gray	Red	White
C	H	S	Y

# Dimensional Specs

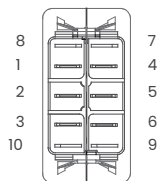
inches [millimeters]



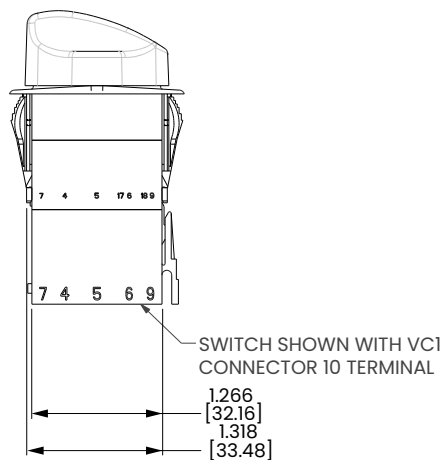
**10 TERMINAL BASE  
W/BARRIERS**



**10 TERMINAL BASE  
W/OBARRIERS**



**BOTTOM VIEW  
TERMINAL ARRANGEMENT  
10 TERMINAL BASE**



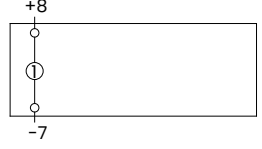
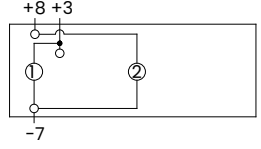
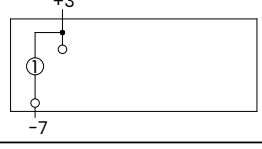
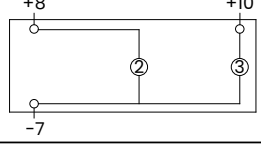
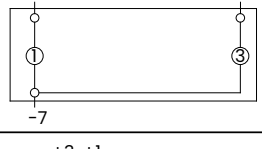
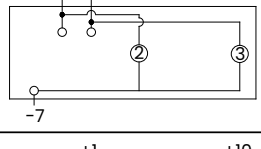
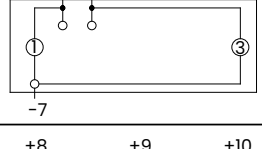
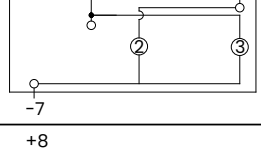
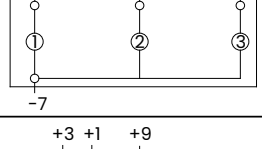

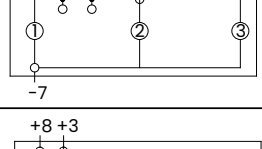
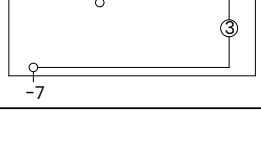
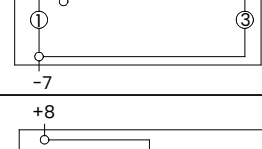
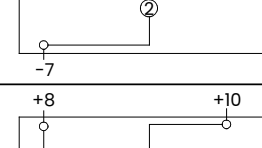
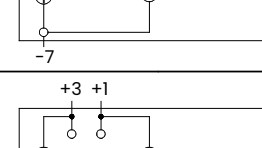
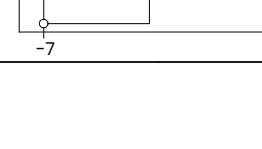
# Circuits Diagrams

CIRCUIT CODE	CIRCUIT DIAGRAM	KNOB POSITION
21		
22		
23		
24		
26		
28		

CIRCUIT CODE	CIRCUIT DIAGRAM	KNOB POSITION
55		
61		
62		
64		

LEGEND	
SYMBOL	DEFINITION
	TERMINAL LOCATION
	MAINTAINED CIRCUIT
	MOMENTARY CIRCUIT
	INTERNAL CONNECTION (JUMPER TERMINAL)
	2 POSITION CONNECTION
	2 POSITION CONNECTION
	2 POSITION
	3 POSITION

# Lamp Circuit Diagrams

LAMP CIRCUIT CODE	CIRCUIT DIAGRAM	LAMP CIRCUIT CODE	CIRCUIT DIAGRAM
<b>A</b>		<b>L</b>	
<b>B</b>		<b>M</b>	
<b>C</b>		<b>N</b>	
<b>D</b>		<b>P</b>	
<b>E</b>		<b>R</b>	
<b>F</b>		<b>T</b>	
<b>G</b>			
<b>H</b>			
<b>J</b>			
<b>K</b>			

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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 six ISO9001 and IATF16949 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](http://www.carlingtech.com/company-profile).

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