V-Series
CONTURA IV, V, VII SWITCHES

The V-Series Contura IV, V, & VII snap-in rocker switches offer countless unique options including choices for ratings, circuits, colors, illuminations and symbols. These single or double pole switches feature removable actuators in a choice of actuator styles and colors, and can be illuminated with either oval or bar shaped lenses. Actuators may also be purchased and stocked separately. An optional plug-in terminal connector enables pre-wiring of wire harnesses.

The Contura switches with sealed option, are certified to IP66/68, signifying complete protection against dust and prolonged spray and submersion under pressure, and are recognized to UL1500 - Ignition Protection for Marine Products. These switches are vibration, shock, thermoshock, moisture and salt spray resistant. Temperature ratings range from -40°C to +85°C.

Product Highlights:
• Countless options for ratings, circuits, colors, illuminations and legends
• Certified to IP66/68 for front panel components
• Vibration, shock, thermoshock, moisture and salt spray resistant
• Temperature range from -40°C to +85°C.

Typical Applications:
• On/Off Highway Equipment
• Marine
• Military Armored Vehicles
• Mining Machinery and Equipment
• Any application requiring environmental protection

Resources:
Download 3D CAD Files
IGS  STP
Watch Product Video

Carling Technologies

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www.carlingtech.com
V-Series Switch
DESIGN FEATURES

INTERCHANGEABLE ACTUATORS
Panel redesign is a snap with our wide range of rocker styles. Achieve maximum design variety with minimum inventory. Simply swap rockers to create an entirely new look for your panel.

DUAL SEAL PROTECTION
Seals out water, dust, debris, and enables switch certification to IP66/68 for front panel components.

CLEAN CONNECTIONS
Options for both eight and ten terminal base styles with AMP & Packard compatible connectors affords myriad circuit options while providing ease of assembly.

OPTIONAL PANEL SEAL
Helps prevent water/dust ingress behind panel.

MULTIPLE LIGHTING OPTIONS
In addition to Incandescent lamps, our LED illumination is offered in a wide array of light intensities, colors, as well as dual level, tri-color, and flashing options.

BRASS ROLLER PIN
Robust mechanism eliminates the need for lubricants. Enables switch to withstand -40°C to +85°C temperatures.

SILVER PLATED BUTT CONTACT MECHANISM
Providing 50k to 100k electrical cycles and a variety of different electrical ratings.

*Manufacturer reserves the right to change product specification without prior notice.
Contura II & III
The Contura II & III actuators are constructed of thermoplastic polycarbonate and are offered with a hard nylon overlay or a “soft-touch” elastomer overlay. These models incorporate aesthetic designs on the top and bottom of the rocker featuring two rows of raised “bumps” on the Contura II and three “indented” lines on the Contura III.

Contura IV
The Contura IV’s “Shape to create a Shape” actuator works with the curves, contours & advanced styling of the latest panel designs, flowing with these advanced curves & radii. This actuator style fits on the Contura flush bracket/bezel.

Contura V
The symmetrically curved Contura V actuator provides the perfect complement to the Contura IV’s “Shape to create a Shape” design concept. With its flush style mounting bracket, Contura V can be mounted in between two Contura IV’s, by itself, or in groups.

Contura VI (WAVE)
The Contura VI WAVE sealed rocker switches, when used in a row, create an uniquely appealing “wave” design on your panel. A variety of colors and finishes are available for both rocker and wave insert. Contura VI features bar and oval lenses.

Contura VII
Contura VII featuring gently curved corners and edges assuring compatibility with most any panel design. Intuitive feel is maximized by the use of 2 embossed circular pads located at opposite ends of the rocker. Any combination of Bar or Oval style lenses can be located in the pads providing a truly unique look, exclusive to Contura VII.

Contura X
The raised bracket/bezel on the Contura X helps prevent inadvertent actuation of the rocker, as well as preventing debris from being trapped under the actuator. This curved rocker style is available with a variety of lenses and legends.

Contura XI
The raised bracket/bezel on the Contura XI helps prevent inadvertent actuation of the rocker, as well as preventing debris from being trapped under the actuator. This convex style rocker is available with a wide variety of lenses and legends.

Contura XII
The Contura XII version features a paddle style actuator with the raised bracket/bezel of Contura X and XI. The contoured handle design provides intuitive recognition and ease of operation and is available with all Contura X and XI lens and legend offerings.

Contura XIV
The Contura XIV represents a sleek new crossover rocker design which should appeal to Trucks, Buses and Heavy Vehicles as well as the Marine Industry. Intuitive feel is provided by recessed ridges along with a Center Groove which effectively defines the boundary between top and bottom switch functions.

Illuminated Indicators & Accessories
Alert operator of systems functions or malfunctions, are offered with removable/replaceable lamps in Contura II, II, V or X styles. Accessories include connectors, mounting panels, hole plugs, panel seals, and actuator removal tools. Refer to accessories page for full details.
**Electrical**

**Contact Rating**
- .4VA @ 24VDC (MAX) resistive
- 15 amps, 125VAC
- 10 amps, 250VAC
- 1/2 HP 125-250VAC
- 20 amps, 4-14VDC
- 15 amps, 15-28VDC
- 10A, 14VT
- 6A, 125VAC L

**Dielectric Strength**
1500 Volts RMS

**Insulation Resistance**
50 Megohms

**Initial Contact Resistance**
10 milliohms max. @ 4VDC

**Life**
- 50,000 - 100,000 cycles circuit dependent

**Contacts**
- Silver alloy, silver tin-oxide, fine silver

**Terminals**
- Brass or copper/silver plate 1/4" (6.3mm) Quick Connect terminations standard. Solder lug, Wire Lead

**Mechanical**

**Endurance**
150,000 cycles minimum circuit dependent

**Physical**

**Lighted**
- Incandescent - rated 10,000 hours Neon - rated 25,000 hours LED - rated 100,000 hours 1/2 life (LED is internally ballasted for voltages to 24VDC)

**Seals**
- Optional external gasket panel seal
- Polyester blend rated to 125°C with a UL flammability rating of 94V0.

**Base**
- Contura II,III,IV,V, VI, VII Actuator
  - **Hard Surface:** Basic actuator structure molded of thermoplastic polycarbonate with a hard Nylon 66 thermoplastic surface overlay.
  - **Soft Surface:** Basic actuator structure molded of thermoplastic polycarbonate with an elastomer overlay.

**Contura X,XI,XII Actuator,VP**
- Nylon 66 Reinforced rated to 105°C
- Polycarbonate rated at 100°C
- Polycarbonate lens/sub-rocker with ABS shell

**Actuator Travel (Angular Displacement)**
- 2 position 18°
- 3 positions 9° from center

**Mounting Specifications**

**Panel Thickness Range**

<table>
<thead>
<tr>
<th>Gaskets</th>
<th>Acceptable Panel Thickness</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>.300 to .250 (.76 to 6.35mm)</td>
</tr>
<tr>
<td>1</td>
<td>.030 to .109 &amp; .147 to .157</td>
</tr>
<tr>
<td></td>
<td>(.76 to 2.77mm &amp; 3.73 to 3.98mm)</td>
</tr>
</tbody>
</table>

Recommended: No gasket with panel thickness of .032, .062, .093, .125, .187 or .250

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**Agency Certifications**

**Environmental**

**Sealing**
Sealed version: IP66/68, this rating applies to front panel components of the actual switch only, and signifies complete protection against dust as well as powerful jets of water.

**Corrosion**
Mixed Flowing Gas (MFG) Class III
3 year accelerated exposure per ASTM B-827, B-845 Silver and gold contacts

**Operating Temp.**
- Vibration 1
- Resonance search
  - 24-50 Hz 0.40 DA
  - 50-2000 Hz ±10 G’s peak
  - Horizontal Axis 3-5 G’s max.
  - Random
  - 24 Hr 0.06 PSD-Gsq/Hz
  - 60 Hr 0.50
  - 100 Hr 0.50
  - 200 Hr 0.025
  - 2000 Hz 0.025
  - No loss of circuit during test; <10μ seconds chatter.

**Vibration 2**
- Resonance search
  - 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.

**Shock**
- Per Mil-Std 202F, Method 101D, Test Condition A, 96 Hrs. Sealed version only.
- Mil STD 810, Method 510.2 Air Velocity 300 Ft/Min Duration 16Hr

**Salt Spray**
- Per Mil-Std 202F, Method 107F, Test Cond. A, -55°C to +85°C. Test criteria - pre and post test contact resistance.

**Dust**
- Per Mil-Std 202F, Method 106F, Test Criteria - pre and post test contact resistance.

**Thermal Shock**
- Per Mil-Std 202F, Method 107F, Test Cond. A, -55°C to +85°C. Test criteria - pre and post test contact resistance.

**Moisture Resistance**
- All Contura switches with sealed construction meet the requirements of UL1500/ISO8846 for ignition protection, in addition to conformance with EC directive 94/25/EC for marine products.

**Ignition Protection**
- All Contura switches with sealed construction meet the requirements of UL1500/ISO8846 for ignition protection, in addition to conformance with EC directive 94/25/EC for marine products.
V 1 D A B T O B - E P C 00 - 00

1 SERIES

V

2 CIRCUIT

Terminal Connections as viewed ( ) - momentary from bottom of switch: SP - single pole - uses terminals 1, 2 & 3.
SP DP - double pole uses terminals 1, 2, 3, 4, 5 & 6.

8 terminal 10 terminal
8 - 7 8 - 7 Terminals 7, 8, 9 & 10 for lamp circuit only.
1 - 4
2 - 5
3 - 6
10 - 9

Position: 1
2
3
A ON OFF NONE
B (ON)
C ON OFF NONE
D ON OFF NONE
E ON OFF NONE
F ON OFF NONE
G ON OFF NONE
H ON OFF NONE

*Jumper between terminals 2 & 5 for circuits H, G, M & R are specified in selection 4. External jumper between terminals 2 & 4 for circuit E are provided by customer. Circuit E may be used for SP OFF-ON-ON circuit.

3 RATING

4 .4VA @ 28VDC Resistive
B 15A 24V
C 20A 18V
D 20A 12V
E 20A 14V, 10A 14VT (circuit 1, 4, A & D only)
F 10A 14V, 6A 14VT (circuit G only)
M .4VA/20A 12V
N .4VA/15A 24V

4 TERMINATION / BASE STYLE

6 term 10 Term Termination Jumper
A B -250 TAB (QC) no barriers No
B 250 TAB (QC) with barriers Yes to 5
C Solder Lug no barriers No
D Wire Leads no barriers No
E Wire Leads No

Note: Codes J & K for circuits H, G & M. Do not use silicone based lubricants to reduce terminal insertion forces during connector assembly, as it is detrimental to function and performance.

5 ILLUMINATION & SWITCH SEALING

Lamp #1 above terminals 1 & 4 end of switch; Lamp #2 above terminals 3 & 6 end of switch. Positive (+) and negative (-) symbols apply to LED lamps only.

<table>
<thead>
<tr>
<th>Lamp Type</th>
<th>Illumination Type</th>
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<tbody>
<tr>
<td>S</td>
<td>INDEPENDENT</td>
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<tr>
<td>A</td>
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<tr>
<td>B</td>
<td>UP</td>
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<td>C</td>
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<td>G</td>
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<td>H</td>
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<td>I</td>
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<td>J</td>
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<td>N</td>
<td>UP</td>
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<tr>
<td>P</td>
<td>DOWN</td>
</tr>
<tr>
<td>Q</td>
<td>UP</td>
</tr>
</tbody>
</table>

Notes:
1 Consult factory to verify horsepower rating for your particular circuit choice.
2 Custom colors are available. Consult factory.
3 Gloss brow is on left side of E actuator and right side of F actuator.
4 Additional ratings available. See V-Series Switch Accessories page.
5 Laser etched rocker only available with lens code Z & actuator colors black, nickel or pewter.
6 Pewter and nickel colors only available with laser etched actuator.
V-Series Contura Sealed Rocker Switches - Contura V - Ordering Scheme

1 SERIES

V

2 CIRCUIT

Terminal Connections as viewed ( ) - momentary
from bottom of switch: SP - single pole - uses terminals 1, 2 & 3.
8 terminal 10 terminal DP - double pole uses terminals 1, 2, 3, 4, 5 & 6.
8 - 7 8 - 7 Terminals 7, 8, 9 & 10 for lamp circuit only.
1 - 4 1 - 4
2 - 5 2 - 5
3 - 6 3 - 6
4 - 9 4 - 9
5 - 10 5 - 10

Position:

1 A
2 B
3 C
4 D
5 E
6 F
7 G
8 H
9 J
10 K

SPECIAL CIRCUITS

H* (2 & 3, 5 & 6) 2 & 3 OFF
I* (2 & 3, 5 & 4) 5 & 4 OFF
J* (2 & 3, 5 & 6) 2 & 3 OFF
K* (2 & 3, 5 & 6) 5 & 4 OFF
L* (2 & 3, 5 & 6) 2 & 3 OFF
M* (2 & 3, 5 & 6) 5 & 4 OFF
N* (2 & 3, 5 & 6) 2 & 3 OFF
O* (2 & 3, 5 & 6) 5 & 4 OFF
P* (2 & 3, 5 & 6) 2 & 3 OFF
Q* (2 & 3, 5 & 6) 5 & 4 OFF
R* (2 & 3, 5 & 6) 2 & 3 OFF
S* (2 & 3, 5 & 6) 5 & 4 OFF
T* (2 & 3, 5 & 6) 2 & 3 OFF
U* (2 & 3, 5 & 6) 5 & 4 OFF
V* (2 & 3, 5 & 6) 2 & 3 OFF
W* (2 & 3, 5 & 6) 5 & 4 OFF
X* (2 & 3, 5 & 6) 2 & 3 OFF
Y* (2 & 3, 5 & 6) 5 & 4 OFF
Z* (2 & 3, 5 & 6) 2 & 3 OFF

*Jumper between terminals 2 & 5 for circuits H, G, M, R & S are specified in selection 4. External jumper between terminals 2 & 4 for circuit E are provided by customer. Circuit E may be used for SP OFF-ON-ON circuit.

3 RATING

4.3VA @ 28VDC Resistive
B 15A 24V
C 20A 18V
D 20A 12V
E 25A 14V
F 10A 14V, 10A 14VT (circuit G only)
M 30A 15V
N 48V/40A 12V

4 TERMINATION / BASE STYLE

Term 10 Termin Termin Jumper

A -250 TAB (QC) No Barriers No
B -250 TAB (QC) with Barriers No
C - 250 TAB (QC) No Barriers Yes T2 to 5
D Solder Lug No Barriers No
E Wire Leads No Barriers No
F Wire Leads No Barriers No

Note: Codes J & K for circuits H, G, M & D. Do not use silicone based lubricants to reduce terminal insertion forces during connector assembly, as it is detrimental to function and performance.

5 ILLUMINATION & SWITCH SEALING

Lamp #1 above terminals 1, 4 & 4 end of switch: Lamp #2 above terminals 3 & 6 end of switch. Positive (+) and negative (-) symbols apply to LED lamps only.

Sealed Unsealed Lamps illumination Type Lamp wired to Terminals

S 0 NONE INDEPENDENT 8 (+) 7 (-)
A 1 1 DOWN 3 (+) 7 (-)
B 1 1 UP 3 (+) 7 (-)
D 2 4 DOWN 3 (+) 7 (-)
E 1 5 UP 3 (+) 7 (-)
F 6 1 UP 3 (+) 7 (-)
G 7 1 UP 3 (+) 7 (-)
H 7 2 INDEPENDENT 8 (+) 7 (-)
I 7 2 INDEPENDENT 8 (+) 7 (-)
J 7 2 INDEPENDENT 8 (+) 7 (-)
K 7 2 INDEPENDENT 8 (+) 7 (-)
L 7 2 INDEPENDENT 8 (+) 7 (-)
M 7 2 INDEPENDENT 8 (+) 7 (-)
N 7 2 INDEPENDENT 8 (+) 7 (-)
O 7 2 INDEPENDENT 8 (+) 7 (-)

SINGLE POLE SWITCHES ONLY

J 8 1 DOWN 3 (+) 7 (-)
K 8 1 INDEPENDENT 8 (+) 7 (-)
L 8 1 INDEPENDENT 8 (+) 7 (-)
M 8 1 INDEPENDENT 8 (+) 7 (-)
N 8 1 INDEPENDENT 8 (+) 7 (-)
O 8 1 INDEPENDENT 8 (+) 7 (-)
P 8 1 INDEPENDENT 8 (+) 7 (-)
Q 8 1 INDEPENDENT 8 (+) 7 (-)
R 8 1 INDEPENDENT 8 (+) 7 (-)
S 8 1 INDEPENDENT 8 (+) 7 (-)
T 8 1 INDEPENDENT 8 (+) 7 (-)
U 8 1 INDEPENDENT 8 (+) 7 (-)
V 8 1 INDEPENDENT 8 (+) 7 (-)
W 8 1 INDEPENDENT 8 (+) 7 (-)
X 8 1 INDEPENDENT 8 (+) 7 (-)
Y 8 1 INDEPENDENT 8 (+) 7 (-)
Z 8 1 INDEPENDENT 8 (+) 7 (-)

DOUBLET POLE SWITCHES ONLY

L 9 2 DOWN 3 (+) 6 (-)
M 9 2 UP 3 (+) 6 (-)
N 9 2 UP 3 (+) 6 (-)
O 9 2 UP 3 (+) 6 (-)
P 9 2 UP 3 (+) 6 (-)
Q 9 2 UP 3 (+) 6 (-)
R 9 2 UP 3 (+) 6 (-)
S 9 2 UP 3 (+) 6 (-)
T 9 2 UP 3 (+) 6 (-)
U 9 2 UP 3 (+) 6 (-)
V 9 2 UP 3 (+) 6 (-)
W 9 2 UP 3 (+) 6 (-)
X 9 2 UP 3 (+) 6 (-)
Y 9 2 UP 3 (+) 6 (-)
Z 9 2 UP 3 (+) 6 (-)

Notes:
Consult factory to verify horsepower rating for your particular circuit choice.
1 Custom colors are available. Consult factory.
2 White imprinting is standard on black actuator; Black imprinting is standard on red and gray actuators. Custom colors are available, consult factory.
3 Laser etched rocker only available with lens code Z & actuator colors black, nickel or pewter.
4 Additional ratings available. See V-Series Switch Accessories page.
5 Nickel and Pewter colors are not recommended with Neon lamps.
6 Consult factory for “daylight bright” LED options. Typical current draw for LED is 20mA.
V Series Contura Sealed Rocker Switches - Contura IV & V Locking - Ordering Scheme

1 SERIES
V

2 CIRCUIT
Terminal Connections as viewed ( ) - momentary
from bottom of switch: SP - single pole - uses terminals 1, 2 & 3.
8 terminal 10 terminal
5 - - 7 8 - - 6 3 - - 6 Terminals 7, 8, 9 & 10 for lamp circuit only.
1 - - 4 1 - - 4
2 - - 5 2 - - 5
3 - - 6 3 - - 6
Position: 10 - - 9
SP DP
2 & 3, 5 & 6 Connected Terminals 1 & 2, 4 & 5

3 RATING
1 .4VA @ 28VDC Resistive
B 15A 24V
C 20A 18V
D 20A 12V
E 20A 14V, 10A 14VT (circuit 1, 4, A & D only)
F 10A 14V, 6A 14VT (circuit G only)
M .4VA/20A 12V
N .4VA/15A 24V

4 TERMINATION / BASE STYLE
Term 10 Term Termination Jumper
A B 250 TAB (QC) no barriers No
J K 250 TAB (QC) with barriers Yes T2 to 5
S 5 Solder Lug no barriers No
C D Solder Lug No
G H Wire Leads no barriers No
E F Wire Leads No
Note: Codes J & K for circuits H, G & M. Do not use silicone based lubricants to reduce terminal insertion forces during connector assembly, as it is detrimental to function and performance.

5 ILLUMINATION & SWITCH SEALING
Lamp #1 above terminals 1 & 4 end of switch. Lamp #2 above terminals 3 & 6 end of switch. Positive (+) and negative (-) symbols apply to LED lamps only
Sealed Unsealed Lamps Illumination Type Lamp wired to Terminals
S 0 NONE 3 (+) 7 (-)
C 1 UP 8 (+) 7 (-)
H 2 INDEPENDENT 3 (+) 7 (-)
M R 1 UP 3 (+) 6 (-)

6 LOCK
Lock above terminals 1 & 4 end of switch. W low profile lock Y 6 high profile lock

7 LAMP
Lamp above terminals 3 & 6 end of switch
No lamp 0
Neon 1 105VAC 2 250VAC
Incandescent 4 3V 5 6V 6 12V 7 18V 8 24V
LED* Red Amber Green Red
2VDC A B C D F R
6VDC B M G S
12VDC C N H T
24VDC D P J V
Consult factory for “daylight bright” LED options. Typical current draw for LED is 20mA.

8 FLUSH BRACKET COLOR 1, PANEL SEAL
No Seal Black White Gray
One Seal C Y H

9 HARD SURFACE ACTUATOR
CONTURA IV:
Orientation Black Gray Red White
Left J K L M
Right N P R S
CONTURA V:
Orientation Black Gray Red White
U V W Y

10 LENS
Z - No Lens
A Clear White B Blue C Red
D Amber E Neon F bar lens
G H J K L M oval lens

11 ACTUATOR LOCK FUNCTION AND COLOR
Lock Color
Match Actuator Up Down Up & Down Center 3
A B C D E F bar lens
Black A H R 1
Red C K T 3
White B J S 2
Gray F G N 6

12 ACTUATOR LENS OR BODY LEGEND
00 - No Legend
21 22 23 24
25 26 27 28
OFF ON O I
F N
For additional legend options & codes, visit us at www.carlingtech.com.

13 LEGEND ORIENTATION
0
1 Orientation 1
2 Orientation 2
3 Orientation 3
4 Orientation 4
1 2 3 4

Notes:
Consult factory to verify horsepower rating for your particular circuit choice.
1 Custom colors are available.
2 White imprinting is standard on black actuators; Black imprinting is standard on white, red and gray actuators. Custom colors are available, consult factory.
3 Only available with 3 position circuits. Center OFF and special circuits only available with center position lock function.
4 Additional ratings available. See V-Series Switch Accessories page.
5 Located at TS-6 end of switch.
6 Contura V style only.
**V-Series Contura Sealed Rocker Switches - Contura VII - Ordering Scheme**

1. **V SERIES**
   - Contura VII

2. **CIRCUIT**
   - Terminal Connections as viewed from bottom of switch:
     - SP - single pole - uses terminals 1, 2 & 3.

3. **RATING**
   - Legend: 1.4VA @ 28VDC Resistive
   - 2. 15A 24V
   - 3. 20A 12V
   - 4. 20A 14V, 10A 14VT (circuit 1, 4, A & D only)
   - 5. 10A 14V, 6A 14VT (circuit G only)
   - 6. 4VA/20A 12V
   - 7. 4VA/15A 24V

4. **TERMINATION / BASE STYLE**
   - Legend: 1 Term 10 Term
   - Jumper: ( ) - momentary
   - From bottom of switch:
     - SP: terminals 2 & 3, 5 & 6
     - DP: terminals 2 & 3, 5 & 6

5. **ILLUMINATION & SWITCH SEALING**
   - Lamp #1 above terminals 1 & 4 end of switch; Lamp #2 above terminals 3 & 6 end of switch.
   - Lamp wiring to actuator:
     - LED: ( ) - momentary
     - Body legend, lens legend must be specified in selection 12; body legend
     - Lamp orientation over terminals: 1, 4, 3, 6

6. **LAMP**
   - Legend: 6.7 LAMP (same coding for both selections)
   - Selection 6: above terminals 1, 4, 5 & 6
     - No lamp
     - Neutral
     - Incandescent
     - LED
     - Red
     - Amber
     - Amber
     - Green
     - Red
     - 2VDC
     - A
     - L
     - F
     - 6VDC
     - B
     - M
     - G
     - 12VDC
     - C
     - N
     - H
     - 24VDC
     - D
     - P
     - J
     - V
     - Consult factory for “daylight bright” LED options. Typical current draw for LED is 20mA.

7. **8 FLUSH BRACKET COLOR 1, PANEL SEAL**
   - Legend: Black White Gray
   - No Seal Black White Gray
   - One Seal C Y H

8. **9 ACTUATOR COLOR / THUMB PRINT COLOR 1**
   - Legend: Grey/Black
   - N/A - No Actuator
   - C Red/Black
   - Y Green/Black
   - O Red/White
   - H Red/Gray
   - L Red
   - I White/Black
   - For additional legend options & codes, visit us at www.carlingtech.com.

9. **10 LENS**
   - Lens color for LEDs must be clear, white, or match color of LED.
   - Green or blue lenses are not recommended with neon lamps.
   - White Amber Green Red Blue Lens style & location
   - B G M T
   - C H N U
   - D J P V
   - E K R W
   - F L S Y
   - 1 2 3 4 5

10. **11 ACTUATOR LENS OR BODY LEGENDS 2**
    - Legend: Orientation 2
    - No legend (used with codes 11-18 in selection 12)
    - Orientation 1
    - Orientation 2
    - Orientation 3
    - Orientation 4

11. **12 ACTUATOR LENS OR BODY LEGENDS 2**
    - Legend: Orientation 2
    - No legend this location / no actuator
    - Orientation 1
    - Orientation 2
    - Orientation 3
    - Orientation 4

12. **13 LEGEND ORIENTATION**
    - Legend: Orientation 2
    - No legend this location / no actuator
    - Orientation 1
    - Orientation 2
    - Orientation 3
    - Orientation 4

13. **14 ACTUATOR LENS LEGEND**
    - Legend: Orientation 2
    - No legend this location / no actuator
    - Orientation 1
    - Orientation 2
    - Orientation 3
    - Orientation 4

Email: sales@carlingtech.com  Application Support: team2@carlingtech.com
Phone: (860) 793–9281  Fax: (860) 793–9231  www.carlingtech.com

Red and gray actuators. Custom colors are available, consult factory.

Notes:
- Additional legends available. See V-Series Switch Accessories page.
- Levels available for lighted oval lens version only.
Dimensional Specifications: in. [mm]

**CONTURA IV**
- Shown with bar lens

**CONTURA V**
- Shown with bar lens

**CONTURA V**
- Shown with low profile lock

**CONTURA VII**
- Shown with large lens and bar lens

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**CONTURA IV**
- 10 Terminal Base W/O Barriers

**CONTURA V**
- 8 Terminal Base W/O Barriers

**CONTURA VII**
- 10 Terminal Base W/O Barriers

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**CONTURA IV**
- 10 Terminal Base W/O Barriers

**CONTURA V**
- 8 Terminal Base W/BarrIers

**CONTURA VII**
- 10 Terminal Base W/O Barriers

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**CONTURA IV**
- Switch shown with VCI connector 10 terminal

**CONTURA V**
- Switch shown with VCH connector 8 terminal

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**CONTURA V**
- Bottom view terminal arrangement 8 terminal base

**CONTURA VII**
- Bottom view terminal arrangement 10 terminal base

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**CONTURA VII**
- Switch shown with VCI connector 10 terminal
# Circuit Diagrams:

<table>
<thead>
<tr>
<th>Circuit Code</th>
<th>Circuit Diagram</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>![Diagram A]</td>
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<tr>
<td>2</td>
<td>![Diagram B]</td>
</tr>
<tr>
<td>3</td>
<td>![Diagram C]</td>
</tr>
<tr>
<td>4</td>
<td>![Diagram D]</td>
</tr>
<tr>
<td>5</td>
<td>![Diagram E]</td>
</tr>
<tr>
<td>6</td>
<td>![Diagram F]</td>
</tr>
<tr>
<td>7</td>
<td>![Diagram G]</td>
</tr>
<tr>
<td>8</td>
<td>![Diagram H]</td>
</tr>
</tbody>
</table>

## Symbol Legend

<table>
<thead>
<tr>
<th>Sym.</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>⊙</td>
<td>Designates terminals and contacts</td>
</tr>
<tr>
<td>●</td>
<td>Designates maintained circuits</td>
</tr>
<tr>
<td>□</td>
<td>Designates other position</td>
</tr>
<tr>
<td>○</td>
<td>Designates momentary circuits</td>
</tr>
<tr>
<td>----</td>
<td>Designates two position connection</td>
</tr>
<tr>
<td>☛</td>
<td>Designates external jumper provided by customer</td>
</tr>
</tbody>
</table>
Lamp Circuit Diagrams:

<table>
<thead>
<tr>
<th>LAMP CIRCUIT CODE</th>
<th>CIRCUIT DIAGRAM</th>
<th>LAMP CIRCUIT CODE</th>
<th>CIRCUIT DIAGRAM</th>
<th>LAMP CIRCUIT CODE</th>
<th>CIRCUIT DIAGRAM</th>
<th>LAMP CIRCUIT CODE</th>
<th>CIRCUIT DIAGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>A / 1</td>
<td></td>
<td>F / 6</td>
<td></td>
<td>L / 9</td>
<td></td>
<td>SPECIAL #1</td>
<td></td>
</tr>
<tr>
<td></td>
<td>+8</td>
<td></td>
<td>+8 +3 +6</td>
<td></td>
<td>+3 +6</td>
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<td></td>
<td>-7</td>
<td></td>
<td>-7</td>
<td></td>
<td>-7</td>
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<td>-7</td>
</tr>
<tr>
<td>B / 2</td>
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<td>G / 7</td>
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<td></td>
<td>+8 +3 +6</td>
<td></td>
<td>+8 +3 +6</td>
</tr>
<tr>
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<td>+3</td>
<td></td>
<td>-7</td>
<td></td>
<td>-7</td>
<td></td>
<td>-7</td>
</tr>
<tr>
<td>C / 3</td>
<td></td>
<td>H / Z</td>
<td></td>
<td></td>
<td>+8 +3 +6</td>
<td></td>
<td>+8 +3 +6</td>
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<tr>
<td></td>
<td>+3</td>
<td></td>
<td>-7</td>
<td></td>
<td>-7</td>
<td></td>
<td>-7</td>
</tr>
<tr>
<td>D / 4</td>
<td></td>
<td>J / 8</td>
<td></td>
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<td>-8 +3 +6</td>
<td></td>
<td>+1 +3 +6</td>
</tr>
<tr>
<td></td>
<td>+1 +3</td>
<td></td>
<td>-7</td>
<td></td>
<td>-7</td>
<td></td>
<td>-7</td>
</tr>
<tr>
<td>E / 5</td>
<td>+1 +3</td>
<td></td>
<td>+8 +6</td>
<td></td>
<td>+8 +10</td>
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<td></td>
<td>-7</td>
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<td>-7</td>
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<td>-7</td>
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</tbody>
</table>

J-Series Hazard Warning Circuit Diagrams:

<table>
<thead>
<tr>
<th>CIRCUIT CODE</th>
<th>CIRCUIT DIAGRAM</th>
<th>CIRCUIT CODE</th>
<th>CIRCUIT DIAGRAM</th>
</tr>
</thead>
<tbody>
<tr>
<td>J1</td>
<td></td>
<td>J5</td>
<td></td>
</tr>
<tr>
<td>1 2 5 8</td>
<td>17 18 10(-)</td>
<td>10(-) 1 3 17 18</td>
<td></td>
</tr>
<tr>
<td>J2</td>
<td>11 13 3 14 5 8</td>
<td>JA</td>
<td>11 13 3 14 6 5</td>
</tr>
<tr>
<td>J3</td>
<td>1 3 17 18 10(-)</td>
<td>JJ</td>
<td>11 13 3 14</td>
</tr>
<tr>
<td>J4</td>
<td>1 3 17 18 10(-)</td>
<td>JK</td>
<td>11 13 3 14 5 8 12 16</td>
</tr>
</tbody>
</table>

NOTE: J circuits are available for all non-locking V-Series styles. Consult factory for part number details.

SYMBOL LEGEND

<table>
<thead>
<tr>
<th>SYM</th>
<th>DEFINITION</th>
</tr>
</thead>
<tbody>
<tr>
<td>designate terminals and contacts</td>
<td></td>
</tr>
<tr>
<td>designate lamp location</td>
<td></td>
</tr>
</tbody>
</table>
Reduce inventory levels and cost by stocking actuators and base switches separately.

Contura II, III, IV, V actuator only: VV with code A or C for selection 9, & with selections 10-14 in the ordering schemes.
Contura VI actuator with lenses and inserts only: VV with code selections 9-16
Contura X, XI, XII, XIV actuators with lenses separately: VV with code selections 9-14 in the ordering schemes.

Panel Seal: VPS

Contura X & XI actuators without lenses separately:

<table>
<thead>
<tr>
<th>VVR</th>
<th>6</th>
<th>1</th>
<th>00</th>
<th>1</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>Actuator Separately</td>
<td>2</td>
<td>Actuator Style/Color</td>
<td>3</td>
</tr>
</tbody>
</table>

1 CONTURA X & XI ACTUATOR SEPARATELY

VVR

2 ACTUATOR STYLE & COLOR

Black | Gray | White | Red
Contura X | 1 | 2 | 3 | 4
Contura XI | 6 | 7 | 8 | 9

3 LENS OPENING FOR

1 | One bar lens
2 | One bar lenses
3 | One square lens
4 | Two square lens

4 ACTUATOR LENS OR BODY LEGEND

00 - No Legend this location
ON | 11 | 12 | OFF | 13 | 14 | O | 15 | O | 16 | O | 17 | O | 18 | I | F | N | F | F

For additional legend options & codes, visit us at www.carlingtech.com.

5 LEGEND ORIENTATION

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

Contura XII actuators without lenses separately:

<table>
<thead>
<tr>
<th>VVP</th>
<th>J</th>
<th>1</th>
<th>Z</th>
<th>21</th>
<th>1</th>
<th>00</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Actuator</td>
<td>2</td>
<td>Style &amp; Color</td>
<td>3</td>
<td>Lens Opening</td>
<td>4</td>
</tr>
</tbody>
</table>

1 CONTURA XII ACTUATOR SEPARATELY

VVP

2 ACTUATOR STYLE & COLOR

J | Black | K | Gray | N | White | M | Red

3 LENS OR BODY LEGEND

00 - No Legend
ON | 21 | OFF | 22 | ON | 23 | O | 24 | I
OFF | 25 | O | 26 | O | 27 | O | 28 | I

For additional legend options & codes, visit us at www.carlingtech.com.

6 LEGEND ORIENTATION

0 | No legend
1 | Orientation 1
2 | Orientation 2

Contura X, XI & XII actuator lens assembly separately:

<table>
<thead>
<tr>
<th>VVL</th>
<th>2</th>
<th>1</th>
<th>00</th>
<th>0</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lens Separately</td>
<td>2</td>
<td>Lens Style</td>
<td>3</td>
</tr>
</tbody>
</table>

1 CONTURA X, XI & XII LENS SEPARATELY

VVL

2 LENS STYLE

1 | Bar lens
2 | One Piece Square lens
3 | Bottom of Two-Piece Square lens

3 TRANSLUCENT LENS COLOR

1 | Clear | 2 | White | 3 | Amber | 4 | Green | 5 | Red | 6 | Blue

4 LENS OR BODY LEGEND

00 - No Legend
OFF | 21 | OFF | 22 | ON | 23 | O | 24 | I
OFF | 25 | O | 26 | O | 27 | O | 28 | I

For additional legend options & codes, visit us at www.carlingtech.com.

5 LEGEND ORIENTATION

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

Contura X, XI & XII top piece of 2-piece lens separately:

<table>
<thead>
<tr>
<th>VVT</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lens Separately</td>
</tr>
</tbody>
</table>

1 TOP OF LENS SEPARATELY

VVT

2 COLOR

1 | Clear | 2 | Smoke | 3 | White

Contura X, XI & XII actuator lens assembly:

Email: sales@carlingtech.com     Application Support: team2@carlingtech.com
Phone: (860) 793–9281     Fax: (860) 793–9231     www.carlingtech.com
Easily integrate Contura products into your system, with Contura Accessories

Contura Connectors

<table>
<thead>
<tr>
<th>COMPANY SERIES</th>
<th>PART NO</th>
<th>WIRE RANGE</th>
<th>ORIENTATION</th>
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</thead>
<tbody>
<tr>
<td>PACKARD 58 SERIES</td>
<td>02965680</td>
<td>12</td>
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<td>02965471</td>
<td>12(21)-14</td>
<td>1.0-2.0</td>
</tr>
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<td>02965470</td>
<td>12(21)-14</td>
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<td>02965469</td>
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<td>.5-.8</td>
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<tr>
<td>PACKARD METRI-PACK 630 SERIES</td>
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<td></td>
<td>12056224</td>
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<td>12015867</td>
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<td>1.0-2.0</td>
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<td>12020035</td>
<td>20-18</td>
<td>.5-.8</td>
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<tr>
<td></td>
<td>12015832</td>
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<td>.5-.8</td>
</tr>
<tr>
<td>AMP 250 SERIES FASTIN-FASTON</td>
<td>62033-1</td>
<td>16-12</td>
<td>1.3-3</td>
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<tr>
<td></td>
<td>62035-2</td>
<td>16-12</td>
<td>(2) 1.3</td>
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<tr>
<td></td>
<td>42100-1</td>
<td>18-14</td>
<td>.8-2</td>
</tr>
<tr>
<td></td>
<td>62029-1</td>
<td>22-18</td>
<td>.3-.9</td>
</tr>
</tbody>
</table>

NOTE: Consult Delphi Packard and/or Amp on actual part numbers and availability.

Delphi Packard is a registered trademark of Delphi-Packard Electrical Systems Warren, Ohio

AMP is a registered trademark of AMP Inc. Harrisburg, PA

Consult Delphi Packard and/or Amp on actual part numbers and availability.

Contura X Boot (P/N VB1-01)

Contura II, III, IV, V, VI & VII Actuator Removal Tool (P/N VRT)

Additional V-Series Ratings

1. .4A @ 28VDC Resistive
2. 10A 250VAC 1/2 HP, 15A 125 VAC 1/2 HP, No Agency Listings
3. 10A 250VAC 1/2 HP, 15A 125 VAC 1/2 HP, UL Recognized, CSA Certified
4. B 15A 24V
5. C 20A 18V
6. D 20A 12V
7. E 20A 14V, 10A 14VT (circuits 1, 4, A, D only)
8. F 10A 14V, 6A, 14VT (circuit G only)
9. G 20A 8V
10. H 20A 3V
11. L 15A 125 VAC, 10A 250VAC, 1/2 HP 125-250 VAC; 6A 125 VAC L
12. M .4A/20A 12V (combi-contact) (combination gold/silver contacts for borderline dry circuit applications)
13. N .4A/15A 24V (combi-contact) (combination gold/silver contacts for borderline dry circuit applications)

NOTES
Consult factory to determine availability for individual circuits and their HP rating.
1. Not available with Contura 7 or 14 rocker styles.
2. Rating L available with circuits 1, 4, A & D only.
Contura Mounting Panels
Dimensional Specifications: in. [mm]

Contura Hole Plug
Dimensional Specifications: in. [mm]
Authorized Sales Representatives and Distributors

Click on a region of the map below to find your local representatives and distributors or visit www.carlingtech.com/findarep.

![World Map](image)

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