



V 1 D A

1 SERIES

2 CIRCUIT

Terminal Connections as viewed from bottom of switch:

- 8 - -7
- 1 - -4
- 2 - -5
- 3 - -6

SP - single pole - uses terminals 1, 2 & 3.

DP - double pole uses terminals 1, 2, 3, 4, 5 & 6.

Terminals 7 & 8 for lamp circuit only.

Position:	1	2	3
	2 & 3	CONNECTED	1 & 2
SP DP	5 & 6	TERMINALS	4 & 5
1 A	ON	NONE	OFF
2 B	(ON)	NONE	OFF
3 C	ON	NONE	(OFF)
4 D	ON	NONE	ON
5 F	ON	NONE	(ON)
6 J	ON	OFF	ON
7 K	ON	OFF	(ON)
8 L	(ON)	OFF	(ON)

SPECIAL CIRCUITS

H*	2 & 3	2 & 3, 5 & 4	5 & 4
G*	2 & 3, 5 & 6	2 & 3	OFF
M*	(2 & 3, 5 & 6)	2 & 3	OFF
E*	5 & 6	5 & 3	5 & 1

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

3 RATING

4	10A 250VAC 1/2 HP, 15A 125 VAC 1/2 HP	No Agency Listings
5	10A 250VAC 1/2 HP, 15A 125 VAC 1/2 HP	UL Recognized, CSA Certified
B	15A 24V	
C	20A 18V	
D	20A 12V	
G	20A 6V	
H	20A 3V	

4 TERMINATION & JUMPER

	TERMINATION	JUMPER
1	.250TAB (QC) NO BARRIERS	NO
A	.250TAB (QC) WITH BARRIERS	NO
J	.250TAB (QC) NO BARRIERS	YES T2 TO 5

NOTE: Base will not have terminal insulating barriers when connector and/or jumpers are used. Code J is optional for circuits H, G and M. Customer may provide externally wired jumper to connect terminals 2 and 5.

V-Series Components and Accessories:

* Black is standard. For custom colors, consult factory.

To order switch without actuator specify V with code selections 2 through 8. (ex.) V1DABC0B-00000

To order actuator separately specify VV with code selections 9 through 13. (ex.) VVARBMA

For hole plug, order VHP. (399-09002-001)

For external panel seal, order VPS. (999-16543-001)

For actuator removal tool (for flush bracket), order VRT. (999-16702-001)

For mounting panel, end section, order VME. (536-11583-001)

For mounting panel, middle section, order VMM. (536-11582-001)

For connector housing, order VCH. (999-16716-001)

(Customer to supply connector terminals. Connector housing accepts certain Amp, Packard or other industry standard .250TAB (QC) terminals. Please consult factory.)



B 6 0 B

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

SEALED	UNSEALED	LAMPS	ACTUATOR LENS LAMP POSITION WHEN WIRED TO ILLUMINATED	TERMINALS
S	0	NONE		
A	1	#1	INDEPENDENT	8+ 7-
B	2	#1	DOWN	3+ 7-
C	3	#2	UP	3+ 7-
D	4	#1	DOWN	3+ 7-
		AND #2	DOWN	1+ 7-
E	5	#1	UP	1+ 7-
		AND #2	UP	3+ 7-
F	6	#1	INDEPENDENT	8+ 7-
		AND #2	UP	3+ 6-
G	7	#1	INDEPENDENT	8+ 7-
		AND #2	UP	3+ 7-
H	Z	#2	INDEPENDENT	8+ 7-

FOLLOWING SELECTIONS FOR SINGLE POLE SWITCHES ONLY

J	8	#1	DOWN	3+ 8-
		AND #2	INDEPENDENT	6+ 7-
K	W	#1	INDEPENDENT	8+ 7-
		AND #2	INDEPENDENT	6+ 7-

FOLLOWING SELECTIONS FOR DOUBLE POLE SWITCHES ONLY

L	9	#1	DOWN	3+ 6-
M	R	#2	UP	3+ 6-
N	T	#1	DOWN	3+ 6-
		AND #2	DOWN	1+ 4-
P	V	#1	UP	1+ 4-
		AND #2	UP	3+ 6-

6, 7 LAMP

Selection 6: above terminals 1 & 4

Selection 7: above terminals 3 & 6

USE SAME CODING FOR BOTH SELECTIONS

0 - NO LAMP THIS LOCATION

NEON	INCANDESCENT*
1 - 125VAC	4 - 3V
2 - 250VAC	5 - 6V
	6 - 12V
	7 - 18V
	8 - 24V

LED

	RED	AMBER	GREEN	SUPERBRIGHT RED
2VDC	A	L	F	R
6VDC	B	M	G	S
12VDC	C	N	H	T
24VDC	D	P	J	V

8 BRACKET COLOR¹, PANEL SEAL

# OF SEALS:	FLUSH BRACKET (CONTURA II, III, XI)		RAISED BRACKET (CONTURA XI ONLY)	
	0	1	0	1
BRACKET COLOR:				
BLACK	B	C	1	4
WHITE	W	Y	2	5
GRAY	G	H	3	6

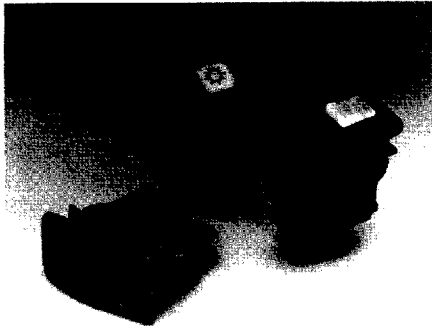
Mounting Hole Size: 1.450" x 0.830"
36.83mm 21.08mm

To mount multiple switches in single panel cut-out order optional interlocking mounting panels.

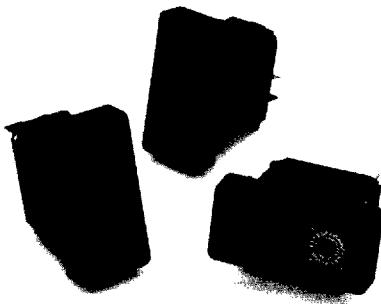
# OF GASKETS	ACCEPTABLE PANEL THICKNESS RANGE
0	.030" to .250" .76mm 4.76mm
1	.030" to .109" & .147" to .157" .76mm 2.77mm 3.73mm 3.98mm

A-25-15

V-Series



CONTURA II & III



NEW !! CONTURA XI

The V-Series CONTURA rocker switches offer countless unique options including choices for ratings, colors, illuminations and symbols. These switches feature removable actuators in a choice of rocker actuator styles and colors, are available in single or double pole configurations, and can be illuminated with either square or bar shaped lenses. An optional plug-in terminal connector enables pre-wiring of wire harness.

The Contura II and III versions, with sealed front panel components, are certified to IP66 and IP68, signifying complete protection against dust and prolonged spray and submersion under pressure, and are recognized at UL1500 - Ignition Protection for Marine Products. These switches are vibration, shock, thermo-shock, moisture and salt spray resistant. The Contura II and III actuators are available with optional "soft-touch" surfaces, optional lock-on terminal connector, and actuator removal tools.

The *NEW* Contura XI version is available with square lenses in either one or two part construction with back-lit legends, for increased durability of lens symbol, and feature a built in Rockerguard® which helps prevent inadvertent actuation of the rocker. In addition, the CONTURA XI actuator also fits on the CONTURA II and CONTURA III base. Thus, actuators and square lenses may be purchased and stocked separate from the base assembly.

Specifications

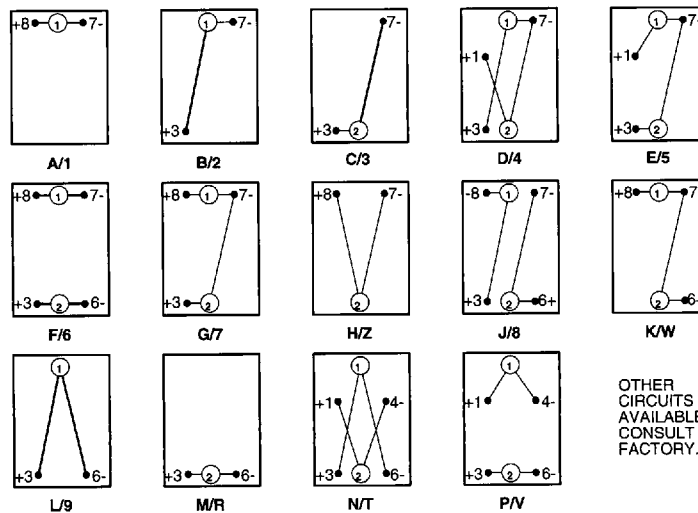
- **Certifications*:**
CONTURA II and III: UL, CSA
CONTURA XI: Approvals Pending
- **Dielectric Strength:** 2,000 V RMS
- **Insulation Resistance:** 50 Megohms
- **Base Material:** Polyester
- **Actuator Material:**
CONTURA II and III:
Underlay: Polycarbonate
Hard overlay: Nylon
Soft overlay: Thermoplastic elastomer
CONTURA XI:
Nylon
Lens Material: Polycarbonate
- **Bracket/Bezel Material:** Nylon
- **Temperature Ratings:** -40°C to 85°C

CONTURA II and III are designed and tested in accordance with requirements of specification MIL STD 202F as follows:

- **Vibration:** 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.
- **Shock:** Method 213B, Test Condition K @ 30 G's. Tested with VCH connector. Test criteria - No loss of circuit during test and pre and post test contact resistance.
- **Salt Spray:** Method 101D, Test Condition A, 48 Hrs. Sealed Version only.
- **Thermal Shock:** Method 107F, Test Condition A, -55° to +85°C. Test Criteria - pre and post contact resistance.
- **Moisture Resistance:** Method 106E. Test criteria - pre and post test contact resistance.

* Due to ongoing technological advances, consult factory for certification specifics.

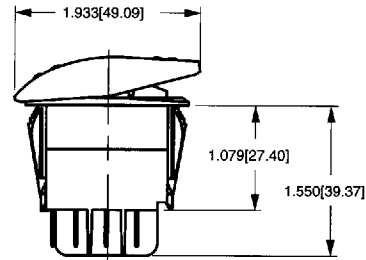
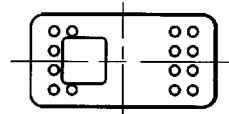
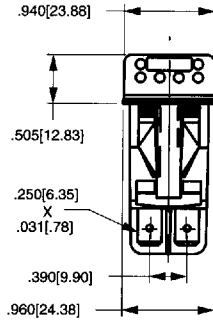
Circuit Options



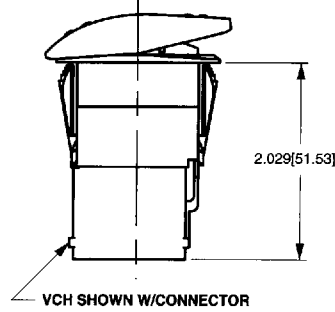
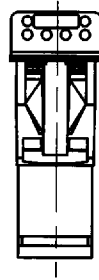
CARLINGSWITCH

Dimensional Specifications: in. [mm]

CONTURA II STYLE
SHOWN WITH
SQUARE LENS

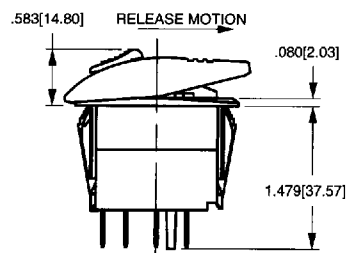
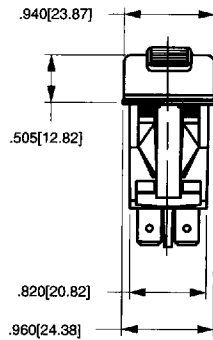


BASE W/BARRIERS

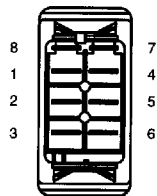


VCH SHOWN W/CONNECTOR

CONTURA III STYLE
SHOWN WITH
LOCKING ROCKER



BASE W/O BARRIERS

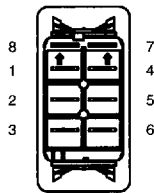
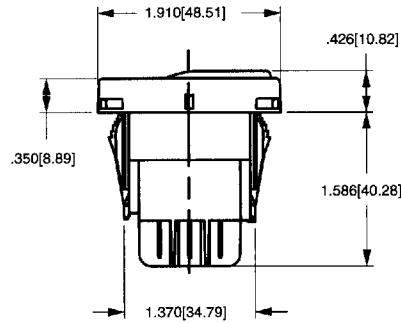
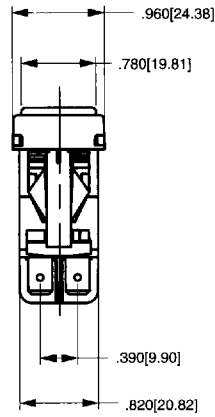


BOTTOM VIEW
TERMINAL ARRANGEMENT

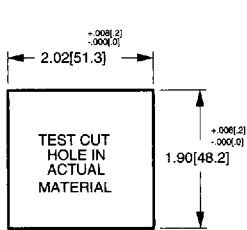
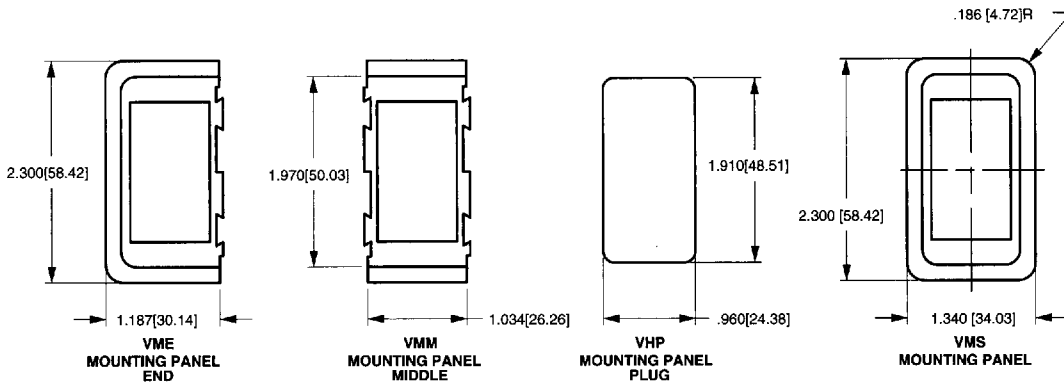
CARLINGSWITCH

Dimensional Specifications: in. [mm]

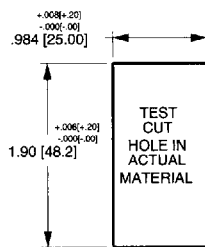
CONTURA XI STYLE
SHOWN WITH
TWO SQUARE LENS



BOTTOM VIEW
TERMINAL ARRANGEMENT



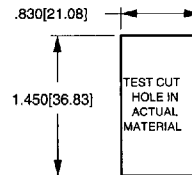
MOUNTING PANEL OPENING
(2) UNITS



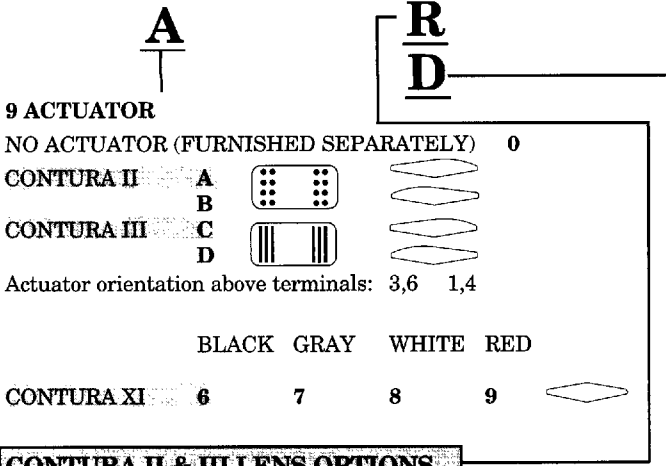
VMS
MOUNTING PANEL HOLE

MOUNTING PANEL
For additional units, add 1.03[26.2] per unit.
For more than 2 V-Series Switches, add
middle section. Available in Panel Thicknesses
listed below. Consult factory.

MOUNTING PANEL THICKNESS	
.062[1.57]	.187[4.75]
.093[2.36]	.250[6.35]
.125[3.17]	.375[9.52]



SWITCH
MOUNTING HOLE



CONTURA II & III LENS OPTIONS

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.

0 - NO ACTUATOR	Z - NO LENS	Lens Location & Style:				
CLEAR	WHITE	AMBER	GREEN	RED	BLUE	
1	6	B	G	M	T	
2	7	C	H	N	U	
3	8	D	J	P	V	
Square lens options available only for Contura II:						
4	9	E	K	R	W	
5	A	F	L	S	Y	

CONTURA XI LENS OPTIONS

10 LENS - ABOVE LAMP #1 TERMINALS 1,4

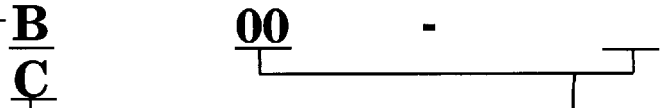
0 - NO ACTUATOR	Z - NO LENS						Lens Location & Style:
CLEAR	WHITE	AMBER	GREEN	RED	BLUE	LENS STYLE	
3	8	D	J	P	V	BAR LENS	
4	9	E	K	R	W	ONE PIECE	
5	A	F	L	S	Y	TWO PIECE	
SQUARE LENS w/clear top protective lens*							
2	7	C	H	N	U	TWO PIECE	
SQUARE LENS w/smoke top protective lens*							
1	6	B	G	M	T	TWO PIECE	
SQUARE LENS w/white top protective lens*							

* ALL bottom lenses will be molded of OPAQUE material. Consult factory for other lens colors.

CONTURA II & III ACTUATOR OPTIONS

11 ACTUATOR COLOR¹ AND TEXTURE

0 - NO ACTUATOR	SOFT SURFACE	HARD SURFACE
BLACK	B	C
GRAY	G	H
RED	R	S
WHITE	W	Y

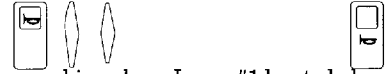


CONTURA XI LENS OPTIONS

11 LENS - ABOVE LAMP #2 TERMINALS 3,6
USE CODES LISTED IN SELECTION 10.

12, 13 ACTUATOR LENS MARKINGS:

Selection 12 orientation of lens marking: actuator symbol marking:



Selection 12 for lens marking above Lamp #1 located above terminals 1 & 4 end of switch for CONTURA XI. CONTURA II and III lens orientation determined in selections 6, 7, 9 and 10.

Selection 13 orientation of lens marking: actuator symbol marking:



Selection 13 for lens marking above Lamp #2 located above terminals 3 & 6 end of switch for CONTURA XI. CONTURA II and III lens orientation determined in selections 6, 7, 9 and 10.

NO MARKING THIS LOCATION/NO ACTUATOR

in selection 12, use code **00**

in selection 13, no code required.

ACTUATOR MARKINGS

	SYMBOL	SQUARE LENS MARKING	
		NEGATIVE	POSITIVE
11 ON OFF			
12 OFF ON			
13 O			
14 O			
15 O O F N F			
17 O			

* Square lens marking only available on CONTURA II and XI.
* Additional orientations available, consult factory. Request chart C-0086 from factory for additional markings; For two-piece square lens, imprinting on bottom lens is standard.

NOTES:
Shading indicates standard configurations.

- Custom colors are available. Consult factory.
- Not available on Soft surface actuators. White imprinting is standard on black actuators. Black imprinting is standard on white, red and gray actuators. Custom colors are available. Consult factory.
- 18V bulbs recommended for 13.8V applications for more pleasing illumination.