

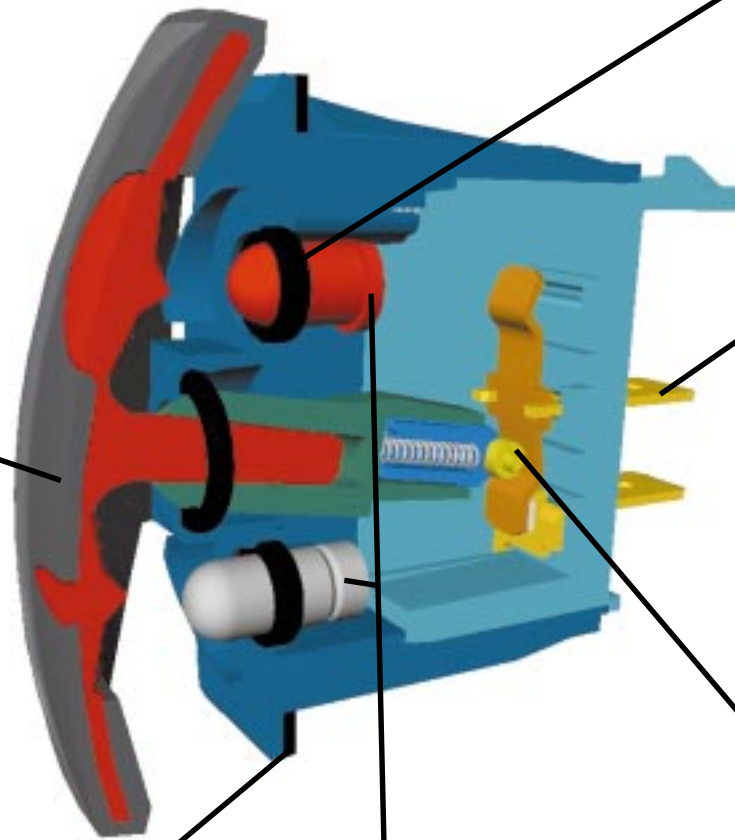
Whatever your application, our Contura switches deliver the performance you demand

— and the flexibility you need. There's no challenge these sealed switches can't help you address. Especially since they're IP66/IP68 certified, UL1500 recognized, and able to withstand temperatures from -40°C to +85°C. Never have such rugged switches been available in such attractive packages. A dazzling array of light, lens and legend options on several actuator styles, plus countless circuit combinations, and valuable accessories, make our Contura switches the ideal choice.

Maximum Design Options with minimum inventories

Panel redesign is a snap, requiring no tooling change, with our removable interchangeable actuators. A unique balance between aesthetics and functionality

Optional Panel Seal



Seals out water, dust and debris

Dual seal protection locks out elements. Certified to IP66/IP68.

Clean Connections

Offered in both eight and ten terminal base options. AMP & Packard compatible connectors available.

Withstands Extreme Temperatures

Roller pin mechanism eliminates need for lubricants, so it can withstand from -40°C to +85°C.

Myriad Lighting Options

Incandescent lamps & LED illumination. Our LED illumination is offered in a wide array of light intensities, colors, as well as dual level illumination and flashing options.

Maximize Design Options with the V-Series Contura Switches

V-Series switches offer countless unique options including choices for ratings, colors, illuminations and symbols. These switches feature removable actuators in a choice of actuator styles and colors, are available in single or double pole configurations, and can be illuminated with either square or bar shaped lenses.



Contura II and Contura III

The Contura II and III actuators are constructed of thermoplastic polycarbonate, and are offered with either a hard nylon overlay, or a "soft-touch" elastomer overlay. The Contura II incorporates an aesthetic design of two rows of raised "bumps" on the top and bottom of the rocker, while the Contura III incorporates three rows of bars.



Contura IV

The Contura IV's "Shape to create a Shape" actuator supports the designer, by working with the curves, contours and advanced styling of the latest panel designs, flowing with these advanced curves and radii. This actuator style fits on the Contura II & III flush bracket/bezel.



Contura X and Contura XI

The raised bracket/bezel on the Contura X and XI helps prevent inadvertent actuation of the rocker, as well as preventing debris from being trapped under the actuator. The conventionally designed actuators are available with one-piece bar lenses, or square lenses in either one or two part construction with backlit legends, for increased durability of lens symbols. Actuators and square lenses may be purchased/stocked separately from the base.



Contura XII

The Contura XII version incorporates a paddle style handle on the raised bracket/bezel, also used in the Contura X and XI switch. The contoured handle design provides intuitive recognition and ease of operation for a variety of transportation related applications, and is available with all Contura X and XI lens and legend offerings.



Illuminated Plug

The Illuminated Plug is an additional design option, for our modular and flexible V-Series Contura® system. It is offered with removable/replaceable lamps, Contura styling, and LED illumination. As a critical safety feature, it's illumination alerts the operator of essential system functions or malfunctions like: oil pressure, high temperature, transmission or other fluid levels, parking brake, or general system malfunction.

V-Series Accessories/Options

Carlingswitch also offers many V-Series accessories to meet the needs of the Transportation Market: including connectors, mounting panels, hole plugs, panel seals, and actuator removal tools. Please refer to pages 22 & 23 of this catalog for more information. In addition, Multi-Circuit Options for hazard warnings, additional lamp configurations, and progressive circuits are available. Please refer to the Ordering Information on pages 10-21 of this catalog for more information.



Connector



Mounting Panel



Modular Mounting Panel



Hole Plug



Contura X Boot



Removal Tool

General Specifications

Electrical

Contact Rating4VA @ 24VDC (MAX) resistive 15 amps, 125 VAC 10 amps, 250 VAC 1/2 HP 125-250 VAC 20 amps, 4-14 VDC 15 amps, 15-28 VDC 10A 14VT 6A 125 VAC L
Dielectric Strength	1500 Volts RMS
Insulation Resistance	50 Megohms
Initial Contact Resistance.	10 milliohms max. @ 4 VDC
Life	50,000- 100,000 cycles circuit dependent
Contacts	Silver cad-oxide, 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

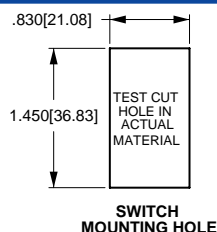
Physical Characteristics

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 24 VDC)
Seals	Internal Optional external gasket panel seal
Base	Polyester blend rated to 125C with a UL flammability rating of 94 V-0.
Contura II, III, IV 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
Lens	Polycarbonate rated at 100°C

Actuator Travel (Angular Displacement)

2 position	18°
3 positions	9° from center

Mounting Specifications



Environmental

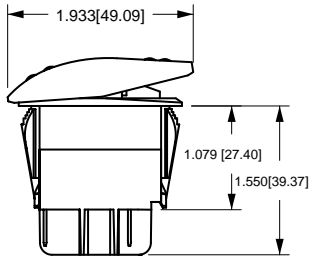
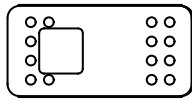
Environmental	Sealed version: IP68, in accordance with IEC 529, BS 5490, DIN 400 50 & NFC 20 010. This rating applies to front panel components and signifies protection against dust and the prolonged effects of immersion under pressure. The standard test for immersion under pressure requires submersion under one meter of water for 30 minutes. The V-Series switch has exceeded these parameters, having been actuated and illuminated during submersion. NOTE: Sealed switch with optional panel gasket will meet IP67 rating.
Corrosion	Flowing Mixed Gas (FMG) Class III 3 year accelerated exposure per ASTM B-827, B-845 Silver and gold contacts
Operating Temperature	-40° C to + 85° C
Vibration 1	Per Mil-Std 202F, 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.
Vibration 2	Resonance search 24-50 Hz 0.40 DA 50-2000 ±10 G's peak Results Horizontal Axis 3-5 G's max. Random 24 Hz 0.06 PSD-Gsq/Hz 60 Hz 0.50 100 Hz 0.50 200 Hz 0.025 2000 Hz 0.025 No loss of circuit during test; <10µ seconds chatter.
Shock	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.
Salt Spray	Per Mil-Std 202F, Method 101D, Test Condition A, 48 Hrs. Sealed version only.
Dust	Per Mil-Std 810C, Method 520.2 Air Velocity 300 ±200 Feet/Min, Test Duration 16 Hrs.
Thermal Shock	Per Mil-Std 202F, Method 107F, Test Condition A, -55°C to 85°C. Test criteria - pre and post test contact resistance
Moisture Resistance	Per Mil-Std 202F, Method 107F, Test Criteria - pre and post test contact resistance
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.

Agency Certifications



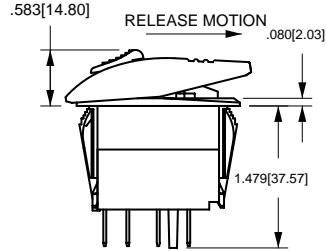
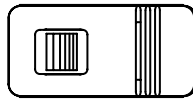
Dimensional Specifications: in. [mm]

CONTURA II STYLE
SHOWN WITH SQUARE LENS



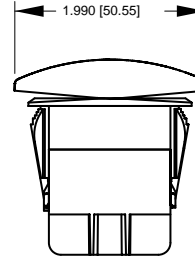
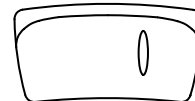
8 TERMINAL BASE W/BARRIERS

CONTURA III STYLE
SHOWN WITH LOCKING ROCKER

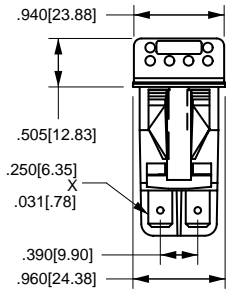


8 TERMINAL BASE W/O BARRIERS

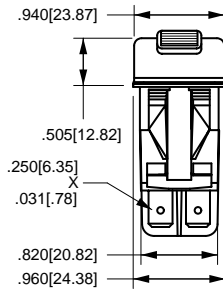
CONTURA IV STYLE
SHOWN WITH BAR LENS



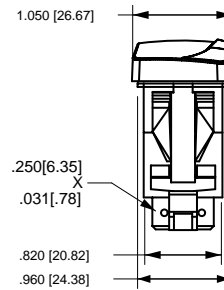
10 TERMINAL BASE W/BARRIERS



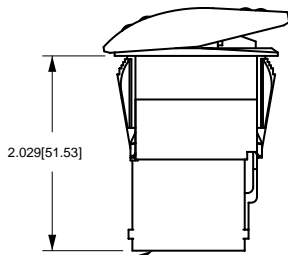
8 TERMINAL BASE W/BARRIERS



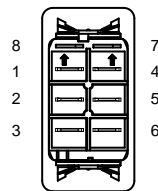
10 TERMINAL BASE W/BARRIERS



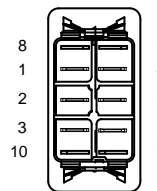
10 TERMINAL BASE W/O BARRIERS



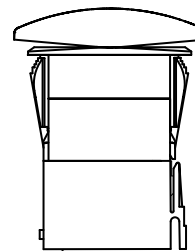
SWITCH SHOWN WITH VCH CONNECTOR 8 TERMINAL



BOTTOM VIEW TERMINAL ARRANGEMENT 8 TERMINAL BASE



BOTTOM VIEW TERMINAL ARRANGEMENT 10 TERMINAL BASE

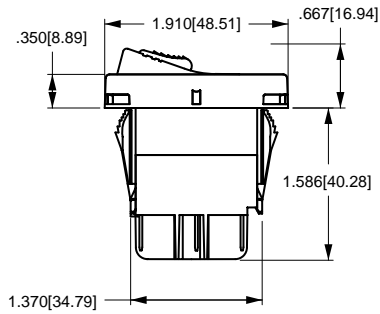
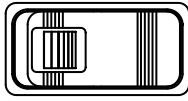


SWITCH SHOWN WITH VC1 CONNECTOR 10 TERMINAL

Dimensional Specifications: in. [mm]

CONTURA X STYLE

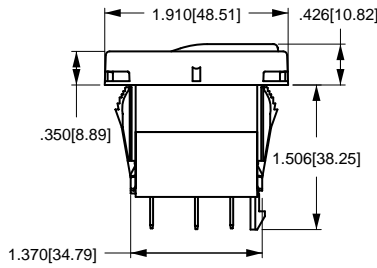
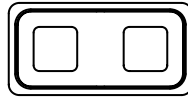
SHOWN WITH RAISED BRACKET AND LOCKING ROCKER



8 TERMINAL BASE W/BARRIERS

CONTURA XI STYLE

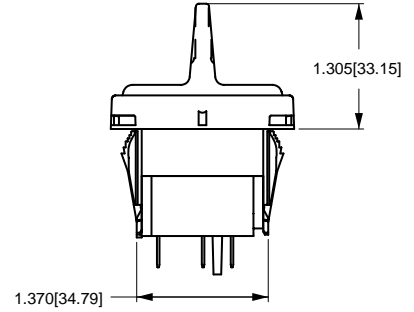
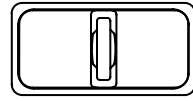
SHOWN WITH RAISED BRACKET AND TWO SQUARE LENSES



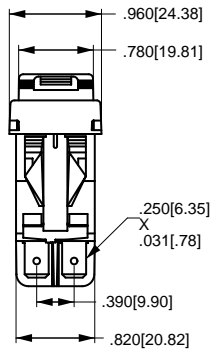
10 TERMINAL BASE W/O BARRIERS

CONTURA XII STYLE

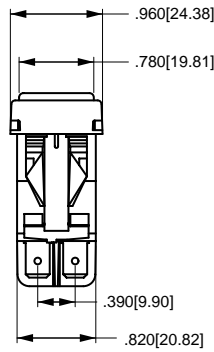
SHOWN WITH PADDLE ACTUATOR



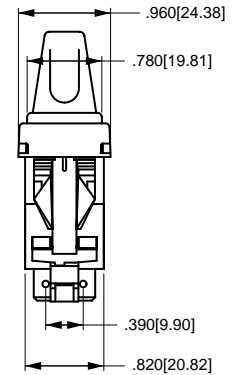
8 TERMINAL BASE W/O BARRIERS



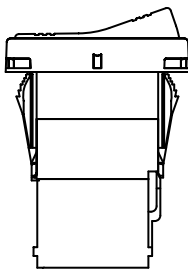
8 TERMINAL BASE W/BARRIERS



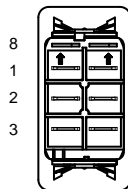
10 TERMINAL BASE W/BARRIERS



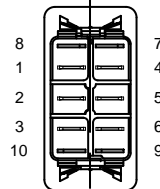
10 TERMINAL BASE W/O BARRIERS



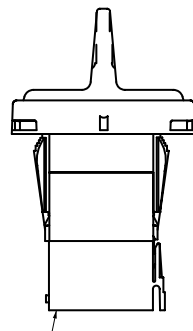
SWITCH SHOWN WITH VCH CONNECTOR 8 TERMINAL



BOTTOM VIEW TERMINAL ARRANGEMENT 8 TERMINAL BASE



BOTTOM VIEW TERMINAL ARRANGEMENT 10 TERMINAL BASE



SWITCH SHOWN WITH VC1 CONNECTOR 10 TERMINAL

Standard Switch Circuit Diagrams¹

CIRCUIT	CIRCUIT DIAGRAM
1	
2	
3	
4	
5	
6	
7	
8	

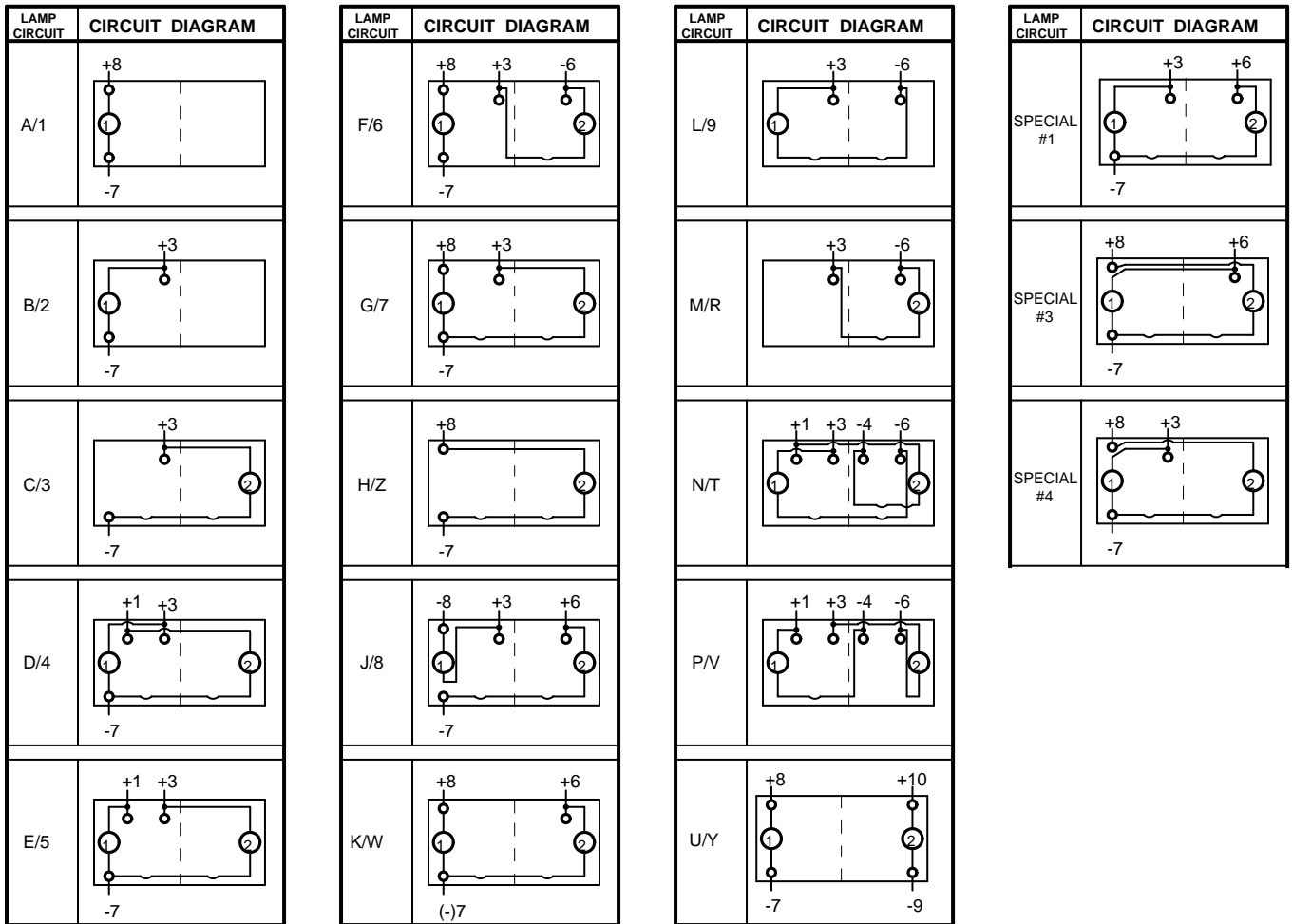
CIRCUIT	CIRCUIT DIAGRAM
A	
B	
C	
D	
E	
F	
G	
H	

CIRCUIT	CIRCUIT DIAGRAM
J	
K	
L	
M	
R	
S	

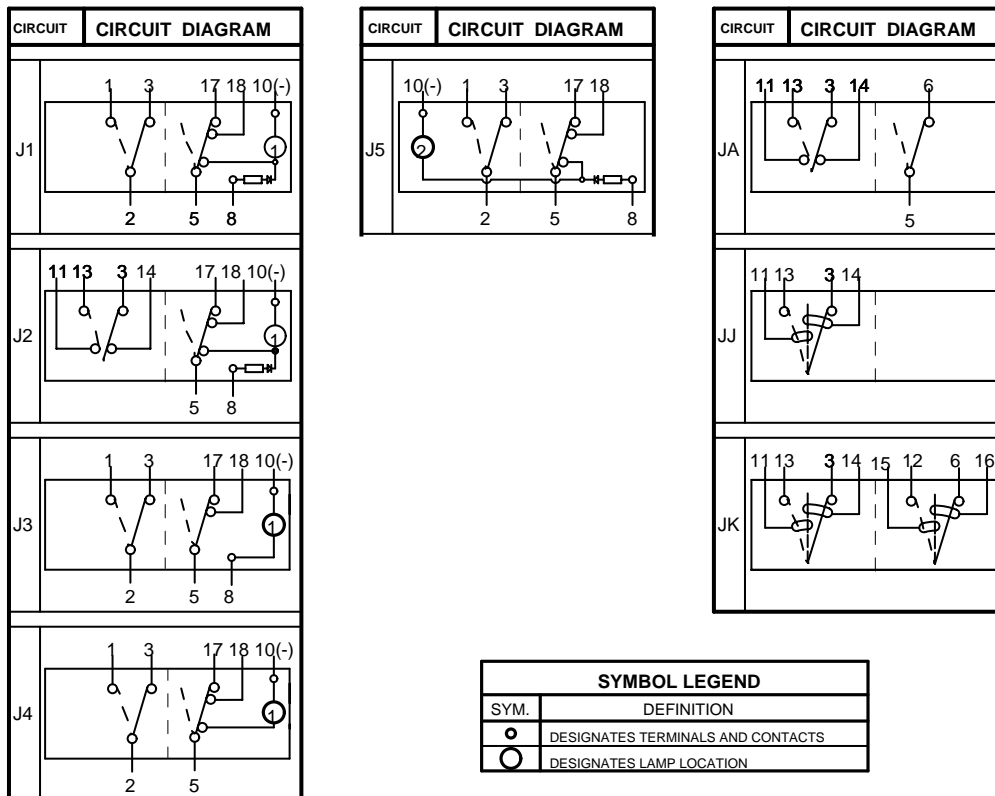
SYMBOL LEGEND	
SYM.	DEFINITION
	DESIGNATES TERMINALS AND CONTACTS
	DESIGNATES LAMP LOCATION
	DESIGNATES MAINTAINED CIRCUITS
	DESIGNATES OTHER POSITION
	DESIGNATES MOMENTARY CIRCUITS
	DESIGNATES TWO POSITION CONNECTION
	DESIGNATES EXTERNAL JUMPER PROVIDED BY CUSTOMER

NOTE
1 Other circuits available, consult factory.

Standard Lamp Circuit Diagrams¹



Specialty (Hazard/Progressive) Lamp Circuit Diagrams^{1,2}



NOTE

- Other circuits available, consult factory.
- Consult factory for ordering information.



1 SERIES

V

2 CIRCUIT

Terminal Connections as viewed from bottom of switch:

8 terminal	10 terminal
8 - - 7	8 - - 7
1 - - 4	1 - - 4
2 - - 5	2 - - 5
3 - - 6	3 - - 6
	10 - - 9

() - momentary
 SP - single pole - uses terminals 1, 2 & 3.
 DP - double pole uses terminals 1, 2, 3, 4, 5 & 6.
 Terminals 7, 8, 9 & 10 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
S	2 & 3, 5 & 6	2 & 3	1 & 2
M*	(2 & 3, 5 & 6)	2 & 3	OFF
R	(2 & 3, 5 & 6)	2 & 3	1 & 2
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. Special circuits H, M & E not available with ratings 5 through 9.

3 RATING

- 1** .4VA @ 28VDC Resistive
- 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
- 6*** 15A 125VAC 1/2 HP, 12(2)A 125 VAC μ T85
- 7*** 15A 125VAC 1/2 HP, 12(6)A 125 VAC T85
- 8*** 10A 250VAC, 15A 125VAC, 1/2 HP 125-250 VAC, 12(2)A 250 VAC μ T85
- 9*** 10A 250VAC, 15A 125VAC, 1/2 HP 125-250 VAC, 12(6)A 250 VAC T85
- B** 15A 24V
- C** 20A 18V
- D** 20A 12V
- E** 20A 14V, 10A 14VT (circuits 1, 4, A, & D only)
- F** 10A 14V, 6A, 14VT (circuit G only)
- G** 20A 6V
- H** 20A 3V
- L** 15A 125 VAC, 10A 250VAC,
1/2 HP 125-250 VAC; 6A 125 VAC L

* Ratings 6, 7, 8 & 9 are UL, CSA, VDE, DEMKO, SEMKO, NEMKO, FIMKO and BEAB certified, require terminations A or B for double pole circuits, and are not available with illumination circuits 4, 8, D, J, N, & T or with wire lead or solder lug terminations. Circuits 1, 4, A & D are not available with rating 6 & 8. Rating 7 & 9 only available with circuits 1, 4, A & D. Circuits 2, 3, 5, 7, 8, K, L are 1/2 HP 250VAC only with rating 8. Ratings 6 & 7 must specify lamp code 1 (125VAC neon). Ratings 8 & 9 must specify lamp code 2 (250VAC neon). Rating L available with circuits 1, 4, A & D only.

4 TERMINATION/BASE STYLE

8 Base	10 Termination	Jumper
1	2 .250 TAB (QC) no barriers	No
A	B .250 TAB (QC) with barriers	No
J	K .250 TAB (QC) no barriers	Yes T2 to 5
3	4 Solder Lug no barriers	No
C	D Solder Lug	No
5	6 Wire Leads no barriers	No
E	F Wire Leads	No

Note: Codes J & K for circuits H, G & M. Ratings 6, 7, 8 & 9 require terminations A or B only.

5 ILLUMINATION & SWITCH SEALING

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 ILLUMINATED	ACTUATOR LENS POSITION WHEN WIRED TO	LAMP 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 & # 2 Down	3+ 1+	7- 7-
E	5	# 1 Up & # 2 Up	1+ 3+	7- 7-
F	6	# 1 Independent & # 2 Up	8+ 3+	7- 6-
G	7	# 1 Independent & # 2 Up	8+ 3+	7- 7-
H	Z	# 2 Independent	8+	7-

Selections for Single Pole Switches Only:

J	8	# 1 Down & # 2 Independent	3+ 6+	8- 7-
K	W	# 1 Independent & # 2 Independent	8+ 6+	7- 7-

Selections for Double Pole Switches Only:

L	9	# 1 Down	3+	6-
M	R	# 2 Up	3+	6-
N	T	# 1 Down & # 2 Down	3+ 1+	6- 4-
P	V	# 1 Up & # 2 Up	1+ 3+	4- 6-
U	Y	# 1 Independent & # 2 Independent	8+ 10+	7- 9-

6, 7 LAMP

Selection 6: above terminals 1 & 4; Selection 7: above terminals 3 & 6

USE SAME CODING FOR BOTH SELECTIONS

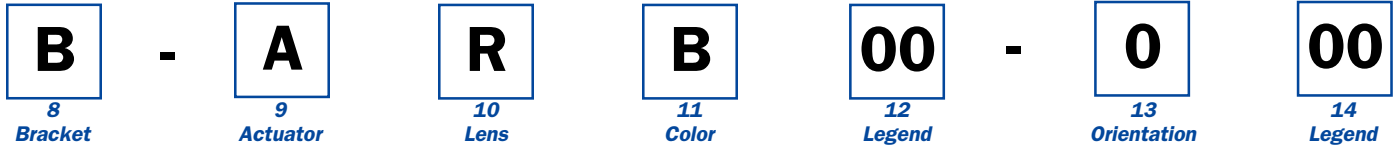
0 - NO LAMP THIS LOCATION

Neon **1** - 125VAC **2** - 250VAC

Incandescent **4** - 3V **5** - 6V **6** - 12V **7** - 18V **8** - 24V

LED

	Red	Amber	Green	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

	FLUSH BRACKET	
# OF SEALS:	0	1
BRACKET COLOR:		
Black	B	C
White	W	Y
Gray	G	H

9 ACTUATOR

0 - No Actuator (Furnished Separately)

	Actuator	Lens style & location
Contura II	A	
Contura III	C	
	D	

Actuator orientation above terminals: 3,6 1,4

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			
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	

11 ACTUATOR COLOR¹ AND TEXTURE

	SOFT SURFACE		HARD SURFACE	
Black	B		C	
Gray	G		H	
Red	R		S	
White	W		Y	

To order V-Series components separately:
Switch without actuator, specify: V with code selections **2 - 8**. (ex.) V1DABC0B-00000-000
Actuator, specify: VV with code **A** or **C** only for selection 9, with code selections 10 - 14. (ex.) VVARBMA-100.
Panel Seal, specify VPS.

12 ACTUATOR LENS OR BODY LEGENDS²

00 - NO LEGEND THIS LOCATION/NO ACTUATOR

11 ON OFF	15 O O F N F
12 OFF ON	16 O O N F F
13 O	17 O
14 O 	18 O

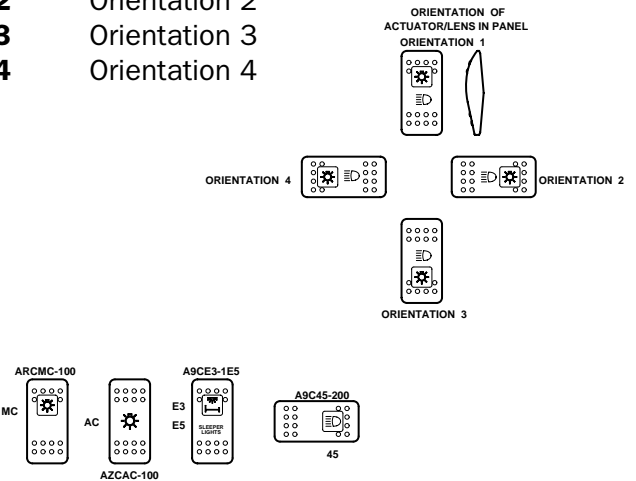
For additional legend options & codes, see pages 34 - 42 of this catalog

13 LEGEND ORIENTATION⁴

Field 13 must be 0 if legend code in selection 12 is 11 - 18.

0 - NO LEGEND

- 1** Orientation 1
- 2** Orientation 2
- 3** Orientation 3
- 4** Orientation 4



14 ACTUATOR LENS LEGENDS

Field 14 must be 00 if legend code in selection 12 is 11 - 18.

00 - NO LEGEND this location/NO ACTUATOR

Selection 14 required when switch requires two legends. If the two legends consist of one lens and one body legend, lens legend must be specified in selection 12; body legend specified in selection 14.

For legend options & codes, see pages 34 - 42 of this catalog

NOTES:

Shading indicates standard configurations.

Consult factory to verify horsepower rating for your particular circuit choice.

- 1 Custom colors are available. Consult factory.
- 2 Body legends 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.
- 4 For CONTURA II with square lens: Orientation 1 & 2 only available with actuators A & C from selection 9; Orientation 3 & 4 only available with actuators B & D from selection 9.



Contura II



Contura III



1 SERIES

V

2 CIRCUIT⁵

Terminal Connections as viewed from bottom of switch:

8 terminal	10 terminal
8 - - 7	8 - - 7
1 - - 4	1 - - 4
2 - - 5	2 - - 5
3 - - 6	3 - - 6
	10 - - 9

() - momentary
 SP - single pole - uses terminals 1, 2 & 3.
 DP - double pole uses terminals 1, 2, 3, 4, 5 & 6.
 Terminals 7, 8, 9 & 10 for lamp circuit only.

Position:		<u>1</u>	<u>2</u>	<u>3</u> (lock)
SP	DP	2 & 3	CONNECTED	1 & 2
1	A	ON	NONE	OFF
4	D	ON	NONE	ON
6	J	ON	OFF	ON
7	K	ON	OFF	(ON)
8	L	(ON)	OFF	(ON)
9	N	OFF	NONE	ON

SPECIAL CIRCUITS

H*	2 & 3	2 & 3, 5 & 4	5 & 4
G*	2 & 3, 5 & 6	2 & 3	OFF
S	2 & 3, 5 & 6	2 & 3	1 & 2
M*	(2 & 3, 5 & 6)	2 & 3	OFF
R	(2 & 3, 5 & 6)	2 & 3	1 & 2
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. Special circuits H, M & E not available with ratings 5 through 9.

3 RATING

- 1** .4VA @ 28VDC Resistive
- 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
- 6*** 15A 125VAC 1/2 HP, 12(2)A 125 VAC μ T85
- 7*** 15A 125VAC 1/2 HP, 12(6)A 125 VAC T85
- 8*** 10A 250VAC, 15A 125VAC, 1/2 HP 125-250 VAC, 12(2)A 250 VAC μ T85
- 9*** 10A 250VAC, 15A 125VAC, 1/2 HP 125-250 VAC, 12(6)A 250 VAC T85
- B** 15A 24V
- C** 20A 18V
- D** 20A 12V
- E** 20A 14V, 10A 14VT (circuits 1, 4, A, & D only)
- F** 10A 14V, 6A, 14VT (circuit G only)
- G** 20A 6V
- H** 20A 3V
- L** 15A 125 VAC, 10A 250VAC,
1/2 HP 125-250 VAC; 6A 125 VAC L

* Ratings 6, 7, 8 & 9 are UL, CSA, VDE, DEMKO, SEMKO, NEMKO, FIMKO and BEAB certified, require terminations A or B for double pole circuits, and are not available with wire lead or solder lug terminations. Circuits 1, 4, A & D are not available with rating 6 & 8. Rating 7 & 9 only available with circuits 1, 4, A & D. Circuits 2, 3, 5, 7, 8, K, L are 1/2 HP 250VAC only with rating 8. Ratings 6 & 7 must specify lamp code 1 (125VAC neon). Ratings 8 & 9 must specify lamp code 2 (250VAC neon). Rating L available with circuits 1, 4, A & D only.

4 TERMINATION/BASE STYLE

8 Base	10 Termination	Jumper
1	2 .250 TAB (QC) no barriers	No
A	B .250 TAB (QC) with barriers	No
J	K .250 TAB (QC) no barriers	Yes T2 to 5
3	4 Solder Lug no barriers	No
C	D Solder Lug	No
5	6 Wire Leads no barriers	No
E	F Wire Leads	No

Note: Codes J & K for circuits H, G & M. Ratings 6, 7, 8 & 9 require terminations A or B only.

5 ILLUMINATION & SWITCH SEALING

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.

		ACTUATOR LENS POSITION WHEN	LAMP WIRED TO TERMINALS
SEALED	UNSEALED	LAMPS ILLUMINATED	
S	0	None	
C	3	# 2 Up	3+ 7-
H	Z	# 2 Independent	8+ 7-

Selections for Single Pole Switches Only:
 Selections for Double Pole Switches Only:

M	R	# 2 Up	3+ 6-
----------	----------	--------	-------

6 LOCK

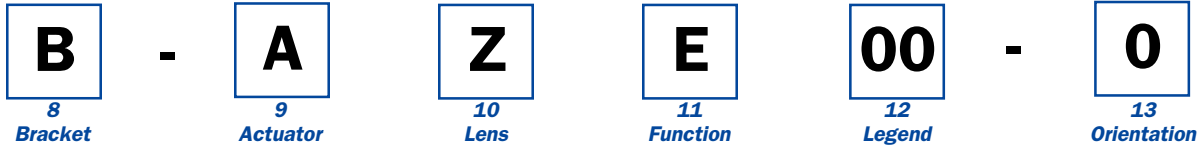
Lock located above terminals 1 & 4 end of switch.

W Lock Option

7 LAMP

Lamp located above terminals 3 & 6 end of switch

0 - NO LAMP THIS LOCATION																									
Neon 1 - 125VAC 2 - 250VAC																									
Incandescent 4 - 3V 5 - 6V 6 - 12V 7 - 18V 8 - 24V																									
LED																									
<table border="0"> <tr> <td></td> <td>Red</td> <td>Amber</td> <td>Green</td> <td>Red</td> </tr> <tr> <td>2VDC</td> <td>A</td> <td>L</td> <td>F</td> <td>R</td> </tr> <tr> <td>6VDC</td> <td>B</td> <td>M</td> <td>G</td> <td>S</td> </tr> <tr> <td>12VDC</td> <td>C</td> <td>N</td> <td>H</td> <td>T</td> </tr> <tr> <td>24VDC</td> <td>D</td> <td>P</td> <td>J</td> <td>V</td> </tr> </table>		Red	Amber	Green	Red	2VDC	A	L	F	R	6VDC	B	M	G	S	12VDC	C	N	H	T	24VDC	D	P	J	V
	Red	Amber	Green	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

FLUSH BRACKET

OF SEALS: 0 1

BRACKET COLOR:

Black	B	C
White	W	Y
Gray	G	H

9 ACTUATOR COLOR & STYLE

Hard Surface Actuators

	Black	Gray	Red	White
Contura II	A	B	G	H
Contura III	C	D	E	F

Actuator orientation above terminals: 3,6 1,4

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				
Clear	White	Amber	Green	Red	Blue
3	8	D	J	P	V

Lens style & location

11 ACTUATOR LOCK FUNCTION¹ & COLOR

Locked position:

Up	Down	Up & Down	Center ⁴	Lock Color
A	H	R	1	Match Actuator
B	J	S	2	Black
C	K	T	3	White
D	L	V	4	Red
E	M	W	5	Safety Orange

12 ACTUATOR LEGENDS²

00 - NO LEGEND

21 OFF		25 O F	
22 ON		26 O N	
23 O		27 O	
24 I		28 I	

For additional legend options & codes, see pages 34 - 42 of this catalog

13 LEGEND ORIENTATION

Field 13 must be 0 if legend code in selection 12 is 21-28.

0 - NO LEGEND

1	Orientation 1
2	Orientation 2
3	Orientation 3
4	Orientation 4

AZC43-1
AZC43-2

NOTES:

Shading indicates standard configurations.

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 actuators; Black imprinting is standard on white, red & gray actuators; Custom colors are available, consult factory.
 - 4 Only available with 3 position circuits.
- Center off and special circuits only available with center position lock function.



Contura II with lock



1 SERIES
V

2 CIRCUIT

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

Position:	1	2	3	
SP	DP	2 & 3	CONNECTED	1 & 2
1	A	5 & 6	TERMINALS	4 & 5
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

	1	2	3
H*	2 & 3	2 & 3, 5 & 4	5 & 4
G*	2 & 3, 5 & 6	2 & 3	OFF
S	2 & 3, 5 & 6	2 & 3	1 & 2
M*	(2 & 3, 5 & 6)	2 & 3	OFF
R	(2 & 3, 5 & 6)	2 & 3	1 & 2
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. Special circuits H, M & E not available with ratings 5 through 9.

3 RATING

- 1 .4VA @ 28VDC Resistive
- 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
- 6* 15A 125VAC 1/2 HP, 12(2)A 125 VAC μ T85
- 7* 15A 125VAC 1/2 HP, 12(6)A 125 VAC T85
- 8* 10A 250VAC, 15A 125VAC, 1/2 HP 125-250
VAC, 12(2)A 250 VAC μ T85
- 9* 10A 250VAC, 15A 125VAC, 1/2 HP 125-250
VAC, 12(6)A 250 VAC T85
- B 15A 24V
- C 20A 18V
- D 20A 12V
- E 20A 14V, 10A 14VT (circuits 1, 4, A, & D only)
- F 10A 14V, 6A, 14VT (circuit G only)
- G 20A 6V
- H 20A 3V
- L 15A 125 VAC, 10A 250VAC,
1/2 HP 125-250 VAC; 6A 125 VAC L

* Ratings 6, 7, 8 & 9 are UL, CSA, VDE, DEMKO, SEMKO, NEMKO, FIMKO and BEAB certified, require terminations A or B for double pole circuits, and are not available with illumination circuits 4, 8, D, J, N, & T or with wire lead or solder lug terminations. Circuits 1, 4, A & D are not available with rating 6 & 8. Rating 7 & 9 only available with circuits 1, 4, A & D. Circuits 2, 3, 5, 7, 8, K, L are 1/2 HP 250VAC only with rating 8. Ratings 6 & 7 must specify lamp code 1 (125VAC neon). Ratings 8 & 9 must specify lamp code 2 (250VAC neon). Rating L available with circuits 1, 4, A & D only.

4 TERMINATION/BASE STYLE

8 Base	10 Termination	Jumper
1	2 .250 TAB (QC) no barriers	No
A	B .250 TAB (QC) with barriers	No
J	K .250 TAB (QC) no barriers	Yes T2 to 5
3	4 Solder Lug no barriers	No
C	D Solder Lug	No
5	6 Wire Leads no barriers	No
E	F Wire Leads	No

Note: Codes J & K for circuits H, G & M. Ratings 6, 7, 8 & 9 require terminations A or B only.

5 ILLUMINATION & SWITCH SEALING

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 ILLUMINATED	ACTUATOR POSITION WHEN WIRED TO	LENS	LAMP 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 & # 2 Down			3+ 7- 1+ 7-
E	5	# 1 Up & # 2 Up			1+ 7- 3+ 7-
F	6	# 1 Independent & # 2 Up			8+ 7- 3+ 6-
G	7	# 1 Independent & # 2 Up			8+ 7- 3+ 7-
H	Z	# 2 Independent			8+ 7-

Selections for Single Pole Switches Only:

J	8	# 1 Down & # 2 Independent	3+ 8- 6+ 7-
K	W	# 1 Independent & # 2 Independent	8+ 7- 6+ 7-

Selections for Double Pole Switches Only:

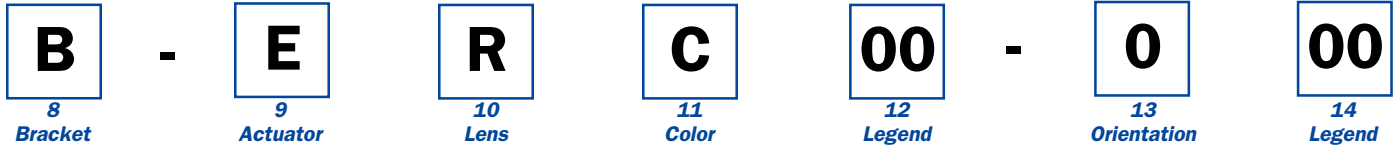
L	9	# 1 Down	3+ 6-
M	R	# 2 Up	3+ 6-
N	T	# 1 Down & # 2 Down	3+ 6- 1+ 4-
P	V	# 1 Up & # 2 Up	1+ 4- 3+ 6-
U	Y	# 1 Independent & # 2 Independent	8+ 7- 10+ 9-

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 1 - 125VAC 2 - 250VAC
 Incandescent 4 - 3V 5 - 6V 6 - 12V 7 - 18V 8 - 24V
 LED

	Red	Amber	Green	Red
2VDC	A	L	F	R
6VDC	B	M	G	S
12VDC	C	N	H	T





8 BRACKET COLOR¹, PANEL SEAL

FLUSH BRACKET

# OF SEALS:	0	1
BRACKET COLOR:		
Black	B	C
White	W	Y
Gray	G	H






9 ACTUATOR⁴

0 - No Actuator (Furnished Separately)

Contura IV	E	
	F	
Actuator orientation above terminals:		3,6 1,4

10 LENS

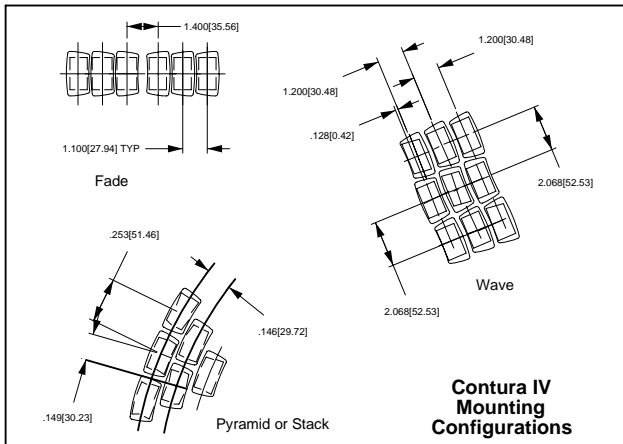
Lens color for LEDs must be clear, white, or match color of LED. Green or blue lenses are not recommended with Neon lamps.

0 - No Actuator		Z - No Lens				Lens style & location
Clear	White	Amber	Green	Red	Blue	
1	6	B	G	M	T	
2	7	C	H	N	U	
3	8	D	J	P	V	
4	9	E	K	R	W	
5	A	F	L	S	Y	

11 ACTUATOR COLOR¹

0 - No Actuator

Black	C
Gray	Y
Red	S
White	H



NOTES:



Shading indicates standard configurations.

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 actuators; Black imprinting is standard on white, red and gray actuators; Custom colors are available, consult factory.
- 4 Gloss brow is on left side of E actuator and right side of F actuator.

12 ACTUATOR LENS OR BODY LEGENDS²

00 - NO LEGEND THIS LOCATION/NO ACTUATOR

	
11 ON OFF	15 O O F N F
12 OFF ON	16 O O N F F
13 O	17 O F
14 O 	18 O

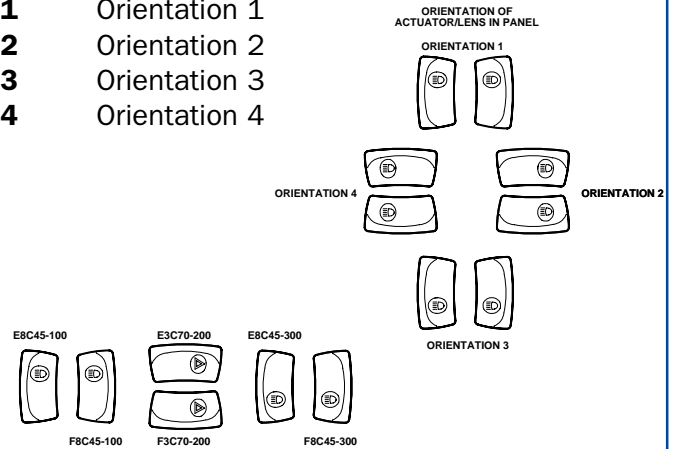
For additional legend options & codes, see pages 34 - 42 of this catalog

13 LEGEND ORIENTATION

Field 13 must be 0 if legend code in selection 12 is 11 - 18.

0 - NO LEGEND

- 1 Orientation 1
- 2 Orientation 2
- 3 Orientation 3
- 4 Orientation 4



14 ACTUATOR LENS LEGENDS

Field 14 must be 00 if legend code in selection 12 is 11 - 18.

00 - NO LEGEND this location/NO ACTUATOR

Selection 14 required when switch requires two legends. If the two legends consist of one lens and one body legend, lens legend must be specified in selection 12; body legend specified in selection 14.

For legend options & codes, see pages 34 - 42 of this catalog

V-Series Components:

To order **switch without actuator** specify: **V** with code selections **2** through **8**. (ex.) V1DABTOB-00000-000
 To order **actuator separately** specify: **VV** with code **E** or **F** only for selection 9, and codes from above scheme for selections 10 through 14. (ex.) VVERCMA-100



Contura IV



1 SERIES

V

2 CIRCUIT

Terminal Connections as viewed from bottom of switch:

8 terminal	10 terminal
8 - - 7	8 - - 7
1 - - 4	1 - - 4
2 - - 5	2 - - 5
3 - - 6	3 - - 6
	10 - - 9

() - momentary
 SP - single pole - uses terminals 1, 2 & 3.
 DP - double pole uses terminals 1, 2, 3, 4, 5 & 6.
 Terminals 7, 8, 9 & 10 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
S	2 & 3, 5 & 6	2 & 3	1 & 2
M*	(2 & 3, 5 & 6)	2 & 3	OFF
R	(2 & 3, 5 & 6)	2 & 3	1 & 2
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. Special circuits H, M & E not available with ratings 5 through 9.

3 RATING

- 1 .4VA @ 28VDC Resistive
- 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
- 6* 15A 125VAC 1/2 HP, 12(2)A 125 VAC μ T85
- 7* 15A 125VAC 1/2 HP, 12(6)A 125 VAC T85
- 8* 10A 250VAC, 15A 125VAC, 1/2 HP 125-250
VAC, 12(2)A 250 VAC μ T85
- 9* 10A 250VAC, 15A 125VAC, 1/2 HP 125-250
VAC, 12(6)A 250 VAC T85
- B 15A 24V
- C 20A 18V
- D 20A 12V
- E 20A 14V, 10A 14VT (circuits 1, 4, A, & D only)
- F 10A 14V, 6A, 14VT (circuit G only)
- G 20A 6V
- H 20A 3V
- L 15A 125 VAC, 10A 250VAC,
1/2 HP 125-250 VAC; 6A 125 VAC L

* Ratings 6, 7, 8 & 9 are UL, CSA, VDE, DEMKO, SEMKO, NEMKO, FIMKO and BEAB certified, require terminations A or B for double pole circuits, and are not available with illumination circuits 4, 8, D, J, N, & T or with wire lead or solder lug terminations. Circuits 1, 4, A & D are not available with rating 6 & 8. Rating 7 & 9 only available with circuits 1, 4, A & D. Circuits 2, 3, 5, 7, 8, K, L are 1/2 HP 250VAC only with rating 8. Ratings 6 & 7 must specify lamp code 1 (125VAC neon). Ratings 8 & 9 must specify lamp code 2 (250VAC neon). Rating L available with circuits 1, 4, A & D only.

4 TERMINATION/BASE STYLE

		Jumper
8 Base	10 Termination	
1	2 .250 TAB (QC) no barriers	No
A	B .250 TAB (QC) with barriers	No
J	K .250 TAB (QC) no barriers	Yes T2 to 5
3	4 Solder Lug no barriers	No
C	D Solder Lug	No
5	6 Wire Leads no barriers	No
E	F Wire Leads	No

Note: Codes J & K for circuits H, G & M. Ratings 6, 7, 8 & 9 require terminations A or B only.

5 ILLUMINATION & SWITCH SEALING

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	ACTUATOR LENS POSITION WHEN ILLUMINATED	LAMP WIRED TO 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 & # 2 Down	3+ 7- 1+ 7-
E	5	# 1 Up & # 2 Up	1+ 7- 3+ 7-
F	6	# 1 Independent & # 2 Up	8+ 7- 3+ 6-
G	7	# 1 Independent & # 2 Up	8+ 7- 3+ 7-
H	Z	# 2 Independent	8+ 7-

Selections for Single Pole Switches Only:

J	8	# 1 Down & # 2 Independent	3+ 8- 6+ 7-
K	W	# 1 Independent & # 2 Independent	8+ 7- 6+ 7-

Selections for Double Pole Switches Only:

L	9	# 1 Down	3+ 6-
M	R	# 2 Up	3+ 6-
N	T	# 1 Down & # 2 Down	3+ 6- 1+ 4-
P	V	# 1 Up & # 2 Up	1+ 4- 3+ 6-
U	Y	# 1 Independent & # 2 Independent	8+ 7- 10+ 9-

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 1 - 125VAC 2 - 250VAC				
Incandescent 4 - 3V 5 - 6V 6 - 12V 7 - 18V 8 - 24V				
LED				
		Red	Amber	Green
2VDC	A	L	F	R
6VDC	B	M	G	S
12VDC	C	N	H	T
24VDC	D	P	J	V

1	-	6	P	Z	00	-	0	00
8 <i>Bracket</i>		9 <i>Actuator</i>	10 <i>Lens</i>	11 <i>Lens</i>	12 <i>Legend</i>		13 <i>Orientation</i>	14 <i>Legend</i>

8 BRACKET COLOR¹, PANEL SEAL (External Foam Gasket)

Contura X & XI with flush bracket

of gaskets: 0 1 2

Bracket Color:

Black **B C D**

White **W Y Z**

Gray **G H J**

Contura X, XI, & XII with raised bracket

of gaskets: 0 1

Bracket Color:

Black **1 4**

White **2 5**

Gray **3 6**

9 ACTUATOR

0 - No Actuator (Furnished Separately)

	Black	Gray	White	Red	Lens style & location
Contura X	1	2	3	4	
Contura XI	6	7	8	9	
Contura XII	J	K	N	M	

Contura X

Contura XI

Contura XII

Lens style & location



10 LENS - ABOVE LAMP #1 TERMINALS 1,4

11 LENS - ABOVE LAMP #2 TERMINALS 3,6

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

Clear	White	Amber	Green	Red	Blue	Lens Style
3	8	D	J	P	V	Bar lens
4	9	E	K	R	W	One piece square lens
5	A	F	L	S	Y	Two piece square lens
2	7	C	H	N	U	Two piece square lens
1	6	B	G	M	T	Two piece square lens

3 8 D J P V

4 9 E K R W

5 A F L S Y

2 7 C H N U

1 6 B G M T

Lens Style

Bar lens

One piece square lens

Two piece square lens

Two piece square lens

Two piece square lens

w/clear top protective lens*

w/smoke top protective lens*

w/white top protective lens*

*All bottom lenses will be molded of opaque material. Consult factory for other lens colors.

To order V-Series components separately:

Switch without actuator, specify: V with code selections **2 - 8**. (ex.) V1DABC01-00000-000
Actuator with lenses, specify: VV with code selections 9-14.
Actuator & lenses separately see pages 20 - 21.

NOTES:

Shading indicates standard configurations.

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 actuators; Black imprinting is standard on white, red and gray actuators; Custom colors are available, consult factory.

4 With two square lenses, use selection 12 for lens above lamp 1, and use selection 14 for lens above lamp 2.

12 ACTUATOR LENS OR BODY LEGENDS²

00 - NO LEGEND THIS LOCATION/NO ACTUATOR

Contura X & XI

Contura XII

11 ON OFF	15 O O F N F	21 OFF	25 O F F
12 OFF ON	16 O O N F F	22 ON	26 O N
13 O	17 O	23 O	27 O
14 O 	18 O	24	28

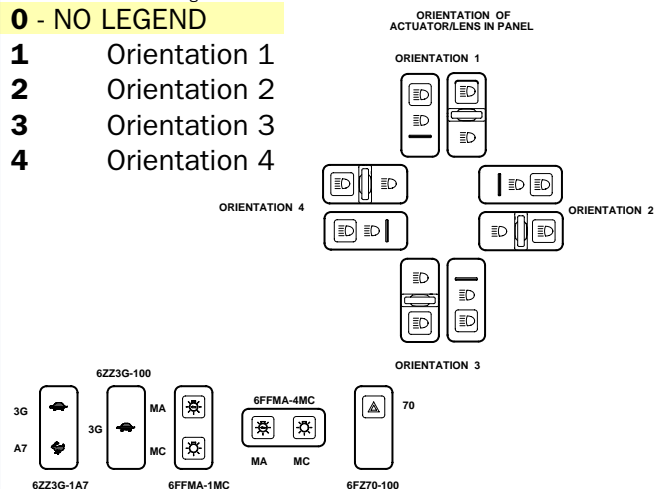
For additional legend options & codes, see pages 34 - 42 of this catalog

13 LEGEND ORIENTATION⁴

Field 13 must be 0 if legend code in selection 12 is 11 - 18. Center of actuator marking is not available for Contura XII.

0 - NO LEGEND

- Orientation 1
- Orientation 2
- Orientation 3
- Orientation 4



14 ACTUATOR LENS LEGENDS

Field 14 must be 00 if legend code in selection 12 is 11 - 18.

00 - NO LEGEND this location/NO ACTUATOR

Selection 14 required when switch requires two legends. If the two legends consist of one lens and one body legend, lens legend must be specified in selection 12; body legend specified in selection 14.

For legend options & codes, see pages 34 - 42 of this catalog



Contura X



Contura XI



Contura XII

V	1	D	A	S	W	0
1 <i>Series</i>	2 <i>Circuit</i>	3 <i>Rating</i>	4 <i>Termination</i>	5 <i>Illumination</i>	6 <i>Lock</i>	7 <i>Lamp</i>

1 SERIES

2 CIRCUIT

Terminal Connections as viewed from bottom of switch:

8 terminal	10 terminal
8 - 7	8 - 7
1 - 4	1 - 4
2 - 5	2 - 5
3 - 6	3 - 6
	10 - 9

SP - single pole - uses terminals 1, 2 & 3.
DP - double pole uses terminals 1, 2, 3, 4, 5 & 6.
Terminals 7, 8, 9 & 10 for lamp circuit only.

Position: 1 2 3 (lock)

	2 & 3	CONNECTED	1 & 2
SP	5 & 6	TERMINALS	4 & 5
1	A	ON	NONE
4	D	ON	NONE
9	N	OFF	ON

3 RATING

1	.4VA @ 28VDC Resistive
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
7*	15A 125VAC 1/2 HP, 12(6)A 125 VAC T85
9*	10A 250VAC, 15A 125VAC, 1/2 HP 125-250 VAC, 12(6)A 250 VAC T85
B	15A 24V
C	20A 18V
D	20A 12V
E	20A 14V, 10A 14VT
G	20A 6V
H	20A 3V
L	15A 125 VAC, 10A 250VAC, 1/2 HP 125-250 VAC; 6A 125 VAC L

* Ratings 7 & 9 are UL, CSA, VDE, DEMKO, SEMKO, NEMKO, FIMKO and BEAB certified, require terminations A or B for double pole circuits, and are not available with wire lead or solder lug terminations. Rating 7 & 9 only available with circuits 1, 4, A & D. Rating 7 must specify lamp code 1 (125VAC neon). Rating 9 must specify lamp code 2 (250VAC neon).

4 TERMINATION/BASE STYLE

8 Base	10 Termination	Jumper
1	2 .250 TAB (QC) no barriers	No
A	B .250 TAB (QC) with barriers	No
3	4 Solder Lug no barriers	No
C	D Solder Lug	No
5	6 Wire Leads no barriers	No
E	F Wire Leads	No

Note: Ratings 7 & 9 require terminations A or B only.

5 ILLUMINATION & SWITCH SEALING

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

	ACTUATOR LENS	LAMP
	POSITION WHEN	WIRED TO
SEALED	UNSEALED	LAMPS ILLUMINATED
S	0	None
C	3	# 2 Up
H	Z	# 2 Independent
Selections for Double Pole Switches Only:		
M	R	# 2 Up

6 LOCK

Lock located above terminals 1 & 4 end of switch.

W	Lock Option
----------	-------------

7 LAMP

Lamp located above terminals 3 & 6 end of switch

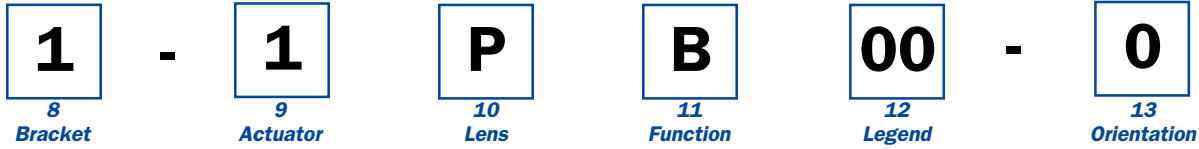
0 - NO LAMP THIS LOCATION

Neon **1** - 125VAC **2** - 250VAC

Incandescent **4** - 3V **5** - 6V **6** - 12V **7** - 18V **8** - 24V

LED

	Red	Amber	Green	Red
	superbright	superbright	superbright	superbright
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 (external foam gasket)

Raised Bracket
of gaskets: 0 1

BRACKET COLOR:

Black	1	4
White	2	5
Gray	3	6

9 ACTUATOR COLOR & STYLE

Hard Surface Actuators

	Black	Gray	Red	White	
Contura X	1	2	3	4	

Actuator orientation above terminals: 3,6 1,4

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.

Lens above terminals 3, 6

Z No Lens

Clear	White	Amber	Green	Red	Blue	
3	8	D	J	P	V	Bar lens
4	9	E	K	R	W	One piece square lens
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.

11 ACTUATOR LOCK FUNCTION¹ & COLOR

Locks in Up Position	Locks in Down Position	Locks in Up & Down Position	Lock Color
A	H	R	Match Actuator
B	J	S	Black
C	K	T	White
D	L	V	Red
K	M	W	Safety Orange

12 ACTUATOR LEGENDS²

00 - NO LEGEND

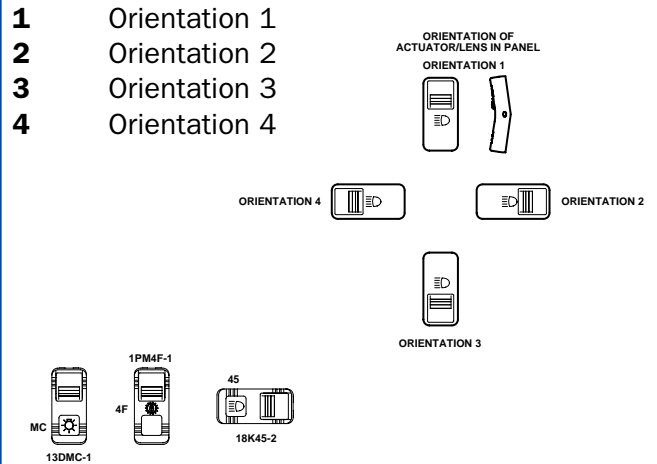
21 OFF		25 O F F	
22 ON		26 O N	
23 O		27 O	
24 I		28 I	

For additional legend options & codes, see pages 34 - 42 of this catalog

13 LEGEND ORIENTATION

Field 13 must be 0 if legend code in selection 12 is 21 - 28.

0 - NO LEGEND



NOTES:

Shading indicates standard configurations.

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 actuators; Black imprinting is standard on white, red and gray actuators; Custom colors are available, consult factory.



Contura X with lock

Reduce inventory levels and cost by stocking actuators and base switches separately.

To order base switch separately, and Contura II, III & IV actuators separately, see pages 10-17.

To order Contura X, XI & XII actuators and lenses separately, refer to the following ordering information:

Contura X, XI & XII Actuator with Assembled Lenses

VVR

1
Actuator

6

2
Style & Color

1

3
Lens

1

4
Lens

00

5
Actuator Legend

0

6
Legend Orientation

1 CONTURA X, XI, XII ACTUATOR VVR

2 ACTUATOR STYLE AND COLOR

Contura	Black	Gray	White	Red
X	1	2	3	4
XI	6	7	8	9
XII	J	K	N	M

3,4 LENS STYLE & COLOR¹

0 NO LENS	Clear	White	Amber	Green	Red	Blue	Lens Style
3	8	D	J	P	V		Bar
4	9	E	K	R	W		1-pc square
5	A	F	L	S	Y		2-pc square
							w/clear top protective lens*
2	7	C	H	N	U		2-pc square
							w/smoke top protective lens*
1	6	B	G	M	T		2-pc square
							w/white top protective lens*

*All bottom lenses will be molded of opaque material. Consult factory for other lens colors.

4 ACTUATOR LENS OR BODY LEGENDS²

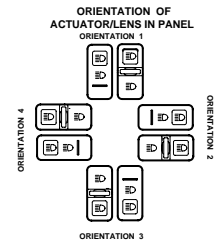
00 NO LEGEND THIS LOCATION/NO ACTUATOR

11 ON	15 O O
OFF	F N
	F
12 OFF	16 O O
ON	N F
	F
13	17 O
O	
14 O	18 O

For additional legend options & codes, see pages 34 - 42 of this catalog

5 LEGEND ORIENTATION¹

- 0** NO LEGEND
- 1** Orientation 1
- 2** Orientation 2
- 3** Orientation 3
- 4** Orientation 4



NOTES

- 1 If actuator has two bar lenses or two square lenses, then legend orientation must be option 0, 1 or 2 only.
- 2 If only one lens, specify 0 in selection 4.
- 3 Center of actuator marking is not available for Contura XII.

Contura X, XI & XII Actuator Separately

VVR

1
Actuator Separately

6

2
Style & Color

1

3
Lens Opening

00

4
Actuator Legend

0

5
Legend Orientation

1 CONTURA X, XI, XII ACTUATOR SEPARATELY VVR

2 ACTUATOR STYLE AND COLOR

Contura	Black	Gray	White	Red
X	1	2	3	4
XI	6	7	8	9
XII	J	K	N	M

3 LENS OPENING FOR¹

- 1** One bar lens
- 2** Two bar lenses
- 3** One Square lens
- 4** Two Square lenses
- 5** Square lens on top/Bar lens on bottom (Contura X only)

4 ACTUATOR LENS OR BODY LEGENDS

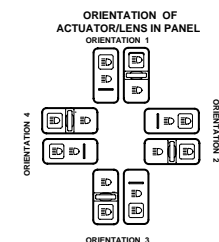
00 NO LEGEND THIS LOCATION/NO ACTUATOR

11 ON	15 O O
OFF	F N
	F
12 OFF	16 O O
ON	N F
	F
13	17 O
O	
14 O	18 O

For additional legend options & codes, see pages 34 - 42 of this catalog

5 LEGEND ORIENTATION¹

- 0** NO LEGEND
- 1** Orientation 1
- 2** Orientation 2
- 3** Orientation 3
- 4** Orientation 4



NOTES

- Center of actuator marking is not available for Contura XII.
- 1 If actuator has opening for two bar lenses or two square lenses, then legend orientation must be option 0, 1 or 2 only.



1 piece lens/bar lens are positioned the same as bottom lens for assembly, minus the top lens. Lenses snap in from bottom.

Contura X, XI & XII Lens Separately



1
Lens
Separately



2
Lens
Style



3
Lens
Color



4
Lens
Legend



5
Legend
Orientation

**1 CONTURA X, XI & XII LENS SEPARATELY
VVL**

2 LENS STYLE

- 1** Bar Lens¹
- 2** One Piece Square Lens
- 3** Bottom of 2-Piece Square Lens²

3 TRANSLUCENT LENS COLOR

- 1** Clear
- 2** White
- 3** Amber
- 4** Green³
- 5** Red
- 6** Blue³

NOTES

- 1 Legend not available on bar lens.
- 2 Must also order top piece of 2-piece square lens separately. (See below.)
- 3 Not recommended in conjunction with neon lamps.

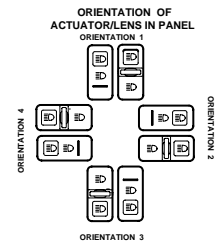
**4 LENS LEGENDS
00 NO LEGEND THIS
LOCATION/NO ACTUATOR**

horizontal actuator	vertical actuator
21 OFF	25 O F F
22 ON	26 O N
23 O	27 O
24	28

For additional legend options & codes, see pages 34 - 42 of this catalog

**5 LEGEND ORIENTA-
TION ON LENS WHEN
IN ROCKER**

- 0** NO LEGEND
- 1** Orientation 1
- 2** Orientation 2
- 3** Orientation 3
- 4** Orientation 4



Contura X, XI & XII Top Piece of Two-Piece Square Lens Separately



1
Lens
Separately



2
Lens
Color

**1 CONTURA X, XI & XII - TOP OF TWO-PIECE SQUARE LENS SEPARATELY
VVT**

2 LENS COLOR

- 1** Clear
- 2** Smoke
- 3** White

Mounting between switch bezel and your panel, our **VP1** panel seal protects critical components behind the panel.



Contura X, XI & XII Panel Seal

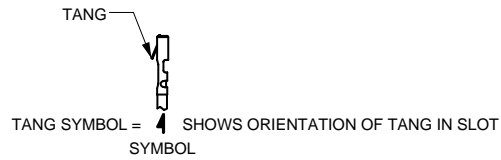
Contura Accessories

To easily integrate Contura products into your system, Carlingswitch also offers many accessories, including:

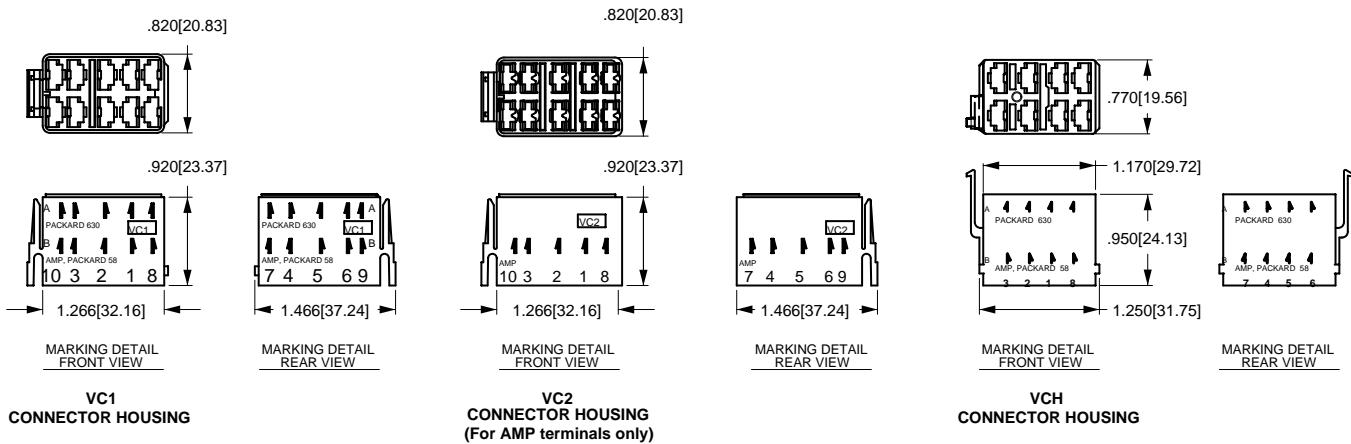
Contura Connectors



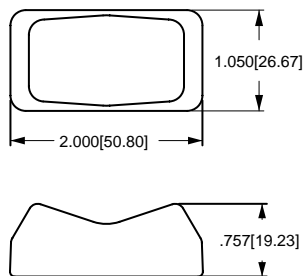
Q.C. SELECTION GUIDE					
COMPANY SERIES	PART NO		WIRE RANGE		ORIENTATION
	PLAIN BRASS	TIN PLATED BRASS	AWG	MM ² (REF)	
PACKARD 58 SERIES	02965580		12	3.0	B
	02965471	12010601	(2)16-14	(2)1.0-2.0	
	02965470		16-14	1.0-2.0	
	02965469	06288318	20-18	.5-8	
PACKARD METRI-PACK 630 SERIES		12084590	12	3.0	A
		12052224	12	3.0	
		12015870	16-14	1.0-2.0	
		12020035	(2)22-18	(2).5-.8	
	12015832	12015869	20-18	.5-.8	
		12052222	20-22	.35-.5	
AMP 250 SERIES FASTIN-FASTON	60253-1	60253-2	16-12	1.3-3	B
	42100-1	42100-2	(2) 16	(2) 1.3	
	60295-1	60295-2	18-14	.8-2	
		22-18	.3-9		



NOTE: Consult Delphi Packard and/or Amp on actual part numbers and availability.
AMP is a registered trademark of AMP Inc. Harrisburg, PA
Delphi Packard is a registered trademark of Delphi-Packard Electrical Systems Warren, Ohio



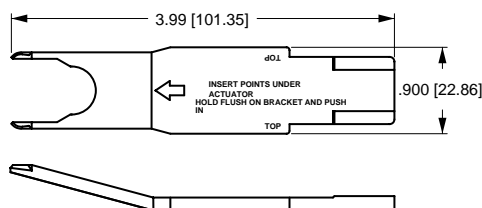
Contura X Boot



VB1-01
CONTURA X BOOT



Contura II, II & IV Actuator Removal Tool



VRT
ACTUATOR REMOVAL
TOOL
(For flush bracket)



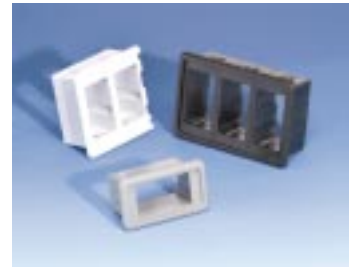
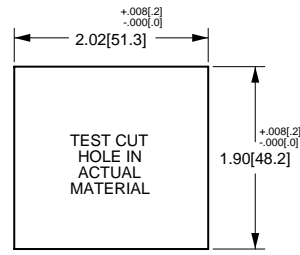
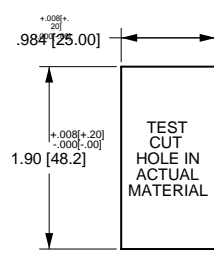
Contura Mounting Panels

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.

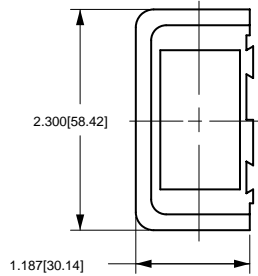
MOUNTING PANEL THICKNESS

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

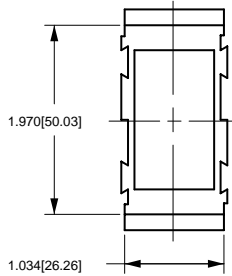


VMS MOUNTING PANEL HOLE

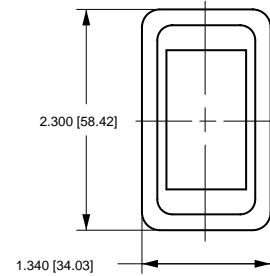
MOUNTING PANEL OPENING (2) UNITS



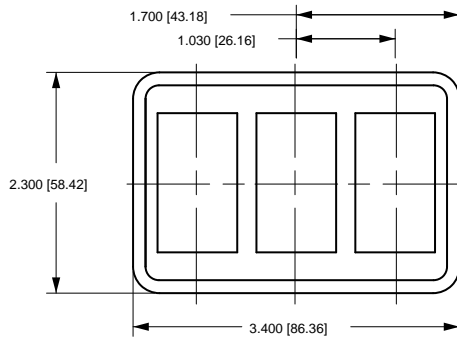
VME MOUNTING PANEL END



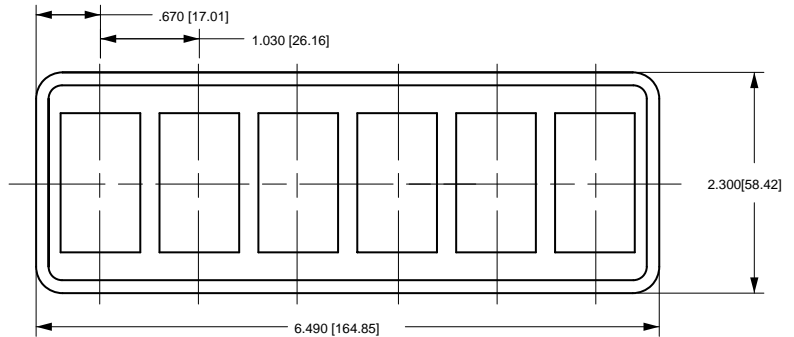
VMM MOUNTING PANEL MIDDLE



VMS MOUNTING PANEL

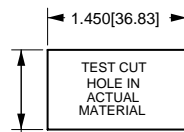


VM3 MOUNTING PANEL

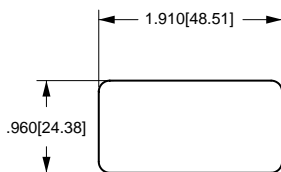
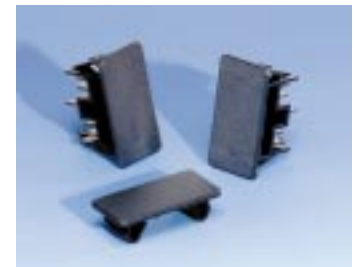


VM6 MOUNTING PANEL

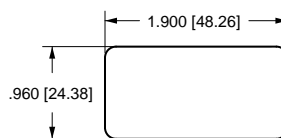
Contura Hole Plug



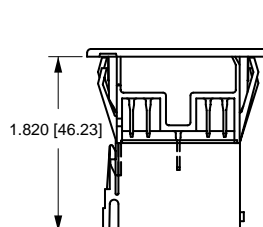
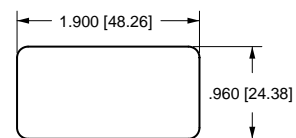
PLUG MOUNTING HOLE



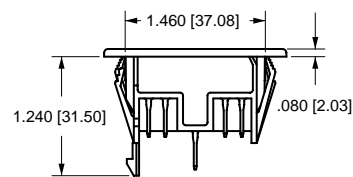
VHP MOUNTING PANEL PLUG



DETAIL VIEW VH1 HOLE PLUG (No wing serrations for ease of removal)



VH1 HOLE PLUG (No wing serrations) (With VC1 connector attached)



VH2 HOLE PLUG (With wing serrations)



DETAIL VIEW VH2 HOLE PLUG (With wing serrations)

VP	1	6	6	-	B	1	1
1 Series	2 Termination	3 Illumination	4 Illumination		5 Housing Color	6 Lens Design	7 Lens Design

1 SERIES

VP Illuminated plug
H2¹ housing only
H3² lamp module only
HP1-01³ VP connector

5 HOUSING COLOR

B Black
W White
R Red
G Gray

2 TERMINATION

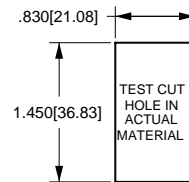
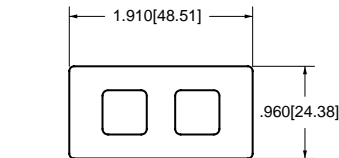
1 .250tabs

6,7 LENS DESIGN lamp #1 or #2^{4,5,6}

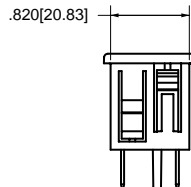
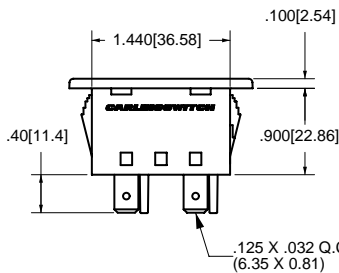
Z no lens
1 Transparent diamond square¹⁰
2 Translucent square⁷

3,4 ILLUMINATION lamp #1 or #2^{4,5,6}

0 no lamp
 NEON⁸
1 125VAC **2** 250VAC
 INCANDESCENT
4 3V **5** 6V **6** 12V
7 18V **8** 24V
 LED
 Amber Green Red
L **F** **R** 2VDC
M **G** **S** 6VDC
N **H** **T** 12VDC
P **J** **V** 24VDC



ILLUMINATED PLUG MOUNTING HOLE



MOUNTING PANEL THICKNESSES:

.062 [1.57]	.250 [6.35]
.093 [2.36]	.375 [9.52]
.125 [3.17]	.500 [12.70]
.187 [4.75]	



8
Lens Color



9
Lens Color

-



10
Legend



11
Orientation



12
Legend

8,9 LENS COLOR/TYPE lamp #1 or #2 ^{4,5,6}

Z no lens

Clear	White	Amber	Green ⁹	Red	Blue ⁹	Lens style
4	9	E	K	R	W	1 piece
5	A	F	L	S	Y	2 piece w/ clear top
2	7	C	H	N	U	2 piece w/ smoke top
1	6	B	G	M	T	2 piece w/ white top

10 LAMP #1 LENS OR BODY LEGENDS⁵

00 No marking

See pages 34 - 42 for complete listings of available legends.

NOTES

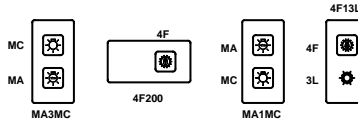
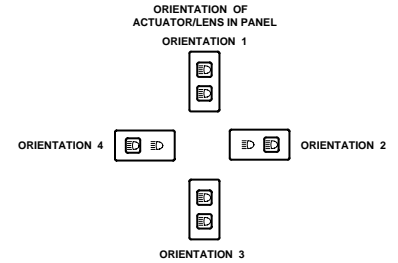
Shading indicates standard configurations.

- To order housing with lenses only, specify H2 followed by fields 5-12.
- To order lamp module only, specify H3 followed by fields 2-3.
- To order VP connector, specify HP1-01.
- If only 1 lamp, specify 0 in selection 4 and Z in selections 7 & 9.
- Lamp and lens #1 located over terminals 1A and 1B.
- Lamp and lens #2 located over terminals 2A and 2B.
- Available with 2 piece lens option only.
- Not recommended with blue or green lenses.
- Not recommended with neon lamps.
- Available with one piece lens option only.

11 MARKING ORIENTATION

0 No marking

- Position 1
- Position 2
- Position 3
- Position 4



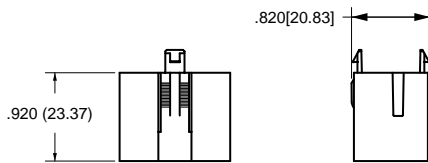
12 LAMP #2 LENS OR BODY LEGENDS⁶

00 No marking

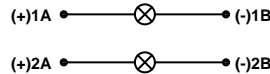
See pages 34 - 42 for complete listings of available legends.



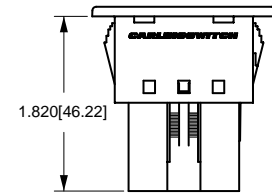
Illuminated Plug



ILLUMINATED PLUG CONNECTOR



CIRCUIT DIAGRAM



ILLUMINATED PLUG WITH CONNECTOR

To move ahead in your industry, rely on our inside connections



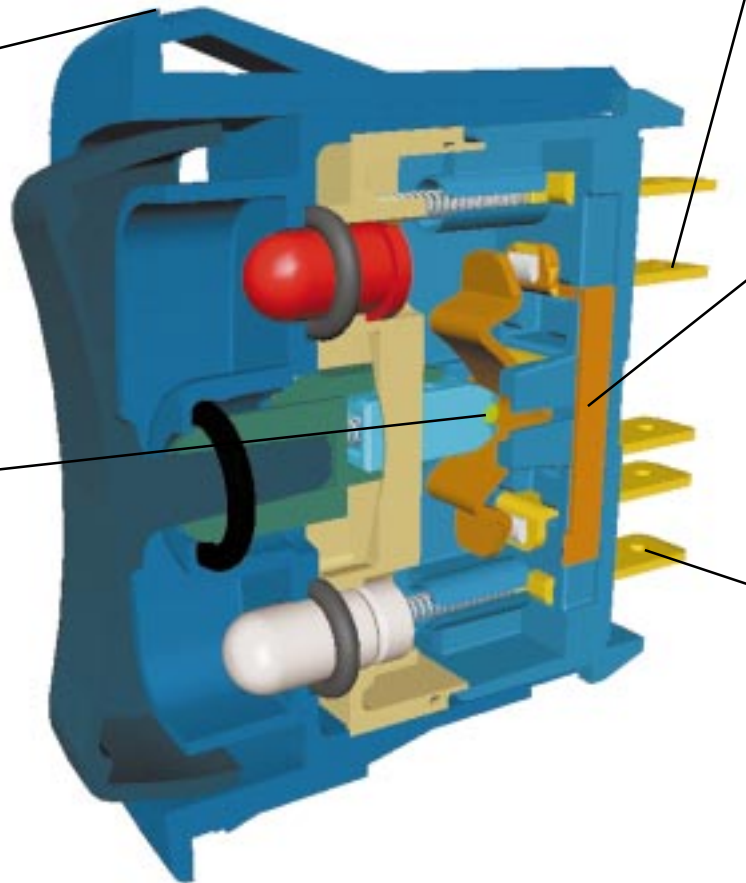
Making the right connections has never been easier — now that Carlingswitch has introduced the L-Series Rocker Switch. Not only does this innovative switch offer total design flexibility, it sets new standards for both performance and reliability. It's IP67 certified, and able to withstand temperatures from -40°C to +85°C. Features include countless switch and lamp circuit combinations, LED illuminated lenses or laser etched rockers, as well as hundreds of legend choices and several accessories.

Eliminates need for retooling

Neatly proportioned, our L-Series fits into industry standard mounting holes of 1.734" x .867" and 44.0mm x 22.0mm

Withstands extreme temperatures

Roller pin mechanism eliminates need for lubricants, so it can withstand from -40°C to +85°C.



Integrates easily into your system

You can choose from a variety of termination options, including .250 TAB QC & .187 TAB QC.

Ensures greater shock protection

Welded lamp connection and one-piece internal, jumperless terminal withstand extreme shock and vibration.

Maximizes your design flexibility

Twelve terminals offer you an extensive range of switch and lamp circuit options, including LED or incandescent illumination.

L-Series Accessories

Carlingswitch also offers L-Series accessories to meet the needs of the Transportation Market: including hole plugs and connectors. Please consult factory for more information.



Hole Plug



Connector

General Specifications

Electrical

Contact Rating4VA @ 24VDC (MAX) resistive
 15 amps, 125 VAC
 10 amps, 250 VAC
 20 amps, 4-14 VDC
 15 amps, 15-28 VDC

Dielectric Strength1250 Volts RMS between pole to pole
 3750 Volts RMS between live parts and accessible surfaces

Insulation Resistance . . . 50 Megohms

Initial Contact Resistance. 10 milliohms max. @ 4 VDC

Life 100,000 cycles maintained,
 50,000 cycles momentary at rated voltage and current

Contacts90/10 silver-nickel, silver tin-oxide, gold

Terminals Brass or copper/silver plate
 3/16" (4.76mm) & 1/4" (6.3mm)
 Quick Connect terminations standard.

Mechanical

Endurance 250,000 cycles minimum

Physical Characteristics

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

Seals Rocker, base & bracket are sealed.

Base Polyester blend rated to 85°C with a

Actuator Nylon 66 Reinforced, rated to 105°C (modular lens). Locking rocker, standard rocker & paddle. Laser etching with a polycarbonate actuator.

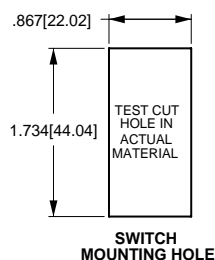
Lens Polycarbonate rated at 100°C. Front snap-in.

Connector Nylon 66 rated at 85°C. Polarized.

Actuator Travel (Angular Displacement)

2 position 26°
 3 positions 13° from center

Mounting Specifications



Environmental

Environmental IP67, representing an index of protection as applied to electrical equipment in accordance with IEC 529, BS 5490, DIN 400 50 & NFC 20 010.

Corrosion Resistance . . . MFG Class III per ASTM B-827 & B-845, Method H, with 3 years exposure

Operating Temperature . . . -40° C to + 85° C

Vibration 1 Per Mil-Std 202F, 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.

Vibration 2 Resonance search
 24-50 Hz 0.40 DA
 50-2000 ±10 G's peak
 Results Horizontal Axis 3-5 G's max. Random
 24 Hz 0.06 PSD-Gsq/Hz
 60 Hz 0.50
 100 Hz 0.50
 200 Hz 0.025
 2000 Hz 0.025
 No loss of circuit during test; <10µ chatter.

Shock 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.

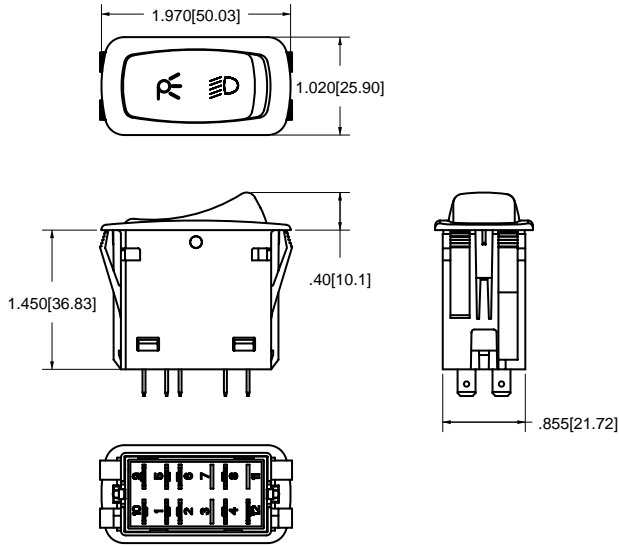
Salt Spray Per Mil-Std 202F, Method 101D, Test Condition A, 48 Hrs.

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

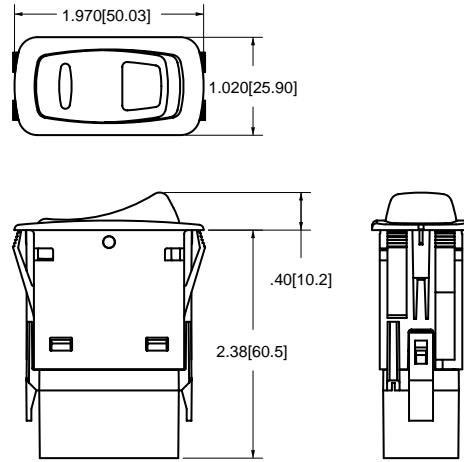
Moisture Resistance . . . Per Mil-Std 202F, Method 106E, Test Criteria - pre and post test contact resistance

L-Series Dimensional Specifications & Accessories

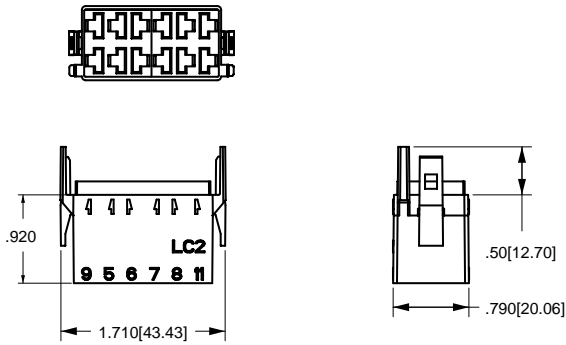
L SERIES
SHOWN WITH LASER ETCHED
ACTUATOR



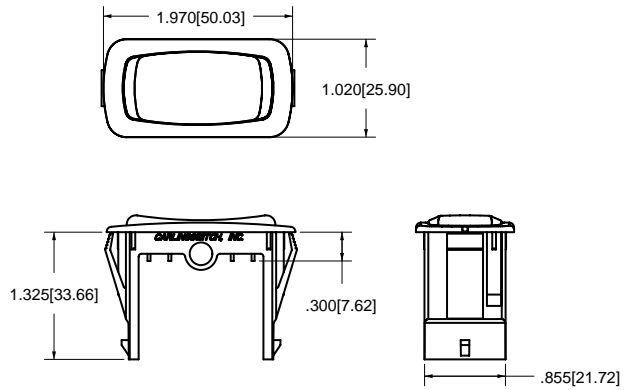
L SERIES
SHOWN WITH SNAP-IN LENS
AND CONNECTOR



L SERIES
CONNECTOR



L SERIES
HOLE PLUG



Switch Circuit Diagrams¹

CIRCUIT CODE	SCHEMATIC	CIRCUIT CODE	SCHEMATIC	CIRCUIT CODE	SCHEMATIC
11		23		53	
12		24		54	
13		25		55	
14		26		56	
15		27		57	
16		28		58	
17		30		61	
18		31		62	
21		51		63	
22		52		64	

NOTE
See page 31 for schematic legend.
1 Other circuits available, consult factory.

Switch Circuit Diagrams¹

CIRCUIT CODE	SCHEMATIC
65	
66	
67	
68	
69	
70	
71	
72	

NOTE
See page 31 for schematic legend.
1 Other circuits available, consult factory.

Lamp Circuit Diagrams¹

ILLUMIN. CODE	CIRCUIT DIAGRAM
A	
B	
C	
D	
E	
F	
G	
H	

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

NOTE
1 Other circuits available, consult factory.

L	11	D	3	C	H	N
1 Series	2 Circuit	3 Rating	4 Termination	5 Illumination	6 Lamp	7 Lamp

1 SERIES

- L** Standard Switch
- L** w/o rocker
- LL** Actuator Only

2 CIRCUIT

() - momentary

Position:	<u>1</u>	<u>2</u>	<u>3</u>
	2&4	CONNECTED	1&2
SP DP	6&8	TERMINALS	5&6
11	21 ON	NONE	OFF
12	22 (ON)	NONE	OFF
13	23 ON	NONE	(OFF)
14	24 ON	NONE	ON
15	25 ON	NONE	(ON)
16	26 ON	OFF	ON
17	27 ON	OFF	(ON)
18	28 (ON)	OFF	(ON)
CIRCUITS WITH JUMPER TERMINALS			
30	(2,4&5),(1,6&8)	OFF, OFF	(1,2&8),(4,5&6)
31	1,2&5	2,3&7	2,4&8
PROGRESSIVE CIRCUITS			
51	3&4	2&3	1&2
52	3&4	2&3	OFF
53	(3&4)	2&3	1&2
54	(3&4)	2&3	OFF
55	(3&4)	2&3	(1&2)
56	(3&4)	2&3	(OFF)
57	3&4	2&3	(OFF)
58	2&4	2&3	1&2
61	3&4,7&8	2&3,6&7	1&2,5&6
62	3&4,7&8	2&3,6&7	OFF
63	(3&4),(7&8)	2&3,6&7	1&2,5&6
64	(3&4),(7&8)	2&3,6&7	OFF,OFF
65	(3&4),(7&8)	2&3,6&7	(1&2),(5&6)
66	(3&4),(7&8)	2&3,6&7	(OFF)
67	3&4,7&8	2&3,6&7	(OFF)
68	2&4,7&8	2&4,OFF	OFF
69	2&4,1,7&8	2&4,OFF	OFF
70	(2&4),(7&8)	2&4,5&7	(1&2),(5&7)
71	(2&4),(7&8)	2&4,5&7	1&2,5&7
72	2&4,7&8	2&4,5&7	1&2,5&7

3 RATING

- 1** .4VA @ 28VDC Resistive
- 4** 10A 250VAC 1/2 HP, 15A 125 VAC 1/2 HP
No Agency Listings
- B** 15A 24V
- C** 20A 18V
- D** 20A 12V
- E** 15A 12V
- G** 20A 6V
- H** 20A 3V

4 TERMINATION

- 1** .250 (6.4mm) TAB (QC)
- 2** Solder Lug
- 3** .187 (4.7mm) TAB (QC)
- 4** PC
- 5** Wire Leads

5 ILLUMINATION

Lamp #1 located above terminals 9 & 10 end of switch.
Lamp #2 located above terminals 11 & 12 end of switch.
Positive (+) and negative (-) symbols apply to LED lamps only.

	LAMPS	ILLUMINATION TYPE	LAMP WIRED TO TERMINALS	
S	None			
A	# 1	Independent	10+	9-
B	# 2	Independent	12+	11-
C	# 1	Independent	10+	9-
	&# 2	Independent	12+	9-
D	# 1	Dependent	4+	9-
E	# 1	Independent	10+	9-
	&# 2	Dependent	4+	9-
F	# 1	Independent	10+	9-
	&# 2	Dependent	8+	9-
G	# 1	Dependent	4+	9-
	&# 2	Independent	10+	9-
H	# 1	Both Independent	10+	9-
	&# 2	(in series)		

6, 7 LAMP #1 and/or LAMP #2²

Selection 6: above terminals 10 and 9
Selection 7: above terminals 12 and 11
Use same coding for both selections.

0 - NO LAMP THIS LOCATION

Incandescent

- 4** 3V
- 5** 6V
- 6** 12V
- 7** 18V
- 8** 24V

LED	Red	Amber	Green
2VDC	A	L	F
6VDC	B	M	G
12VDC	C	N	H
24VDC	D	P	J

* Blue/Green and White LEDs also available.
Consult factory.

1	-	3	A	A	45	-	1	48
<small>8</small>		<small>9</small>	<small>10</small>	<small>11</small>	<small>12</small>		<small>13</small>	<small>14</small>
<i>Bracket</i>		<i>Actuator</i>	<i>Lens</i>	<i>Lens</i>	<i>Legend</i>		<i>Orientation</i>	<i>Legend</i>

8 BRACKET COLOR¹

BRACKET

- 1** Black
- 2** White
- 3** Gray
- 4** Red

9 ACTUATOR STYLE & COLOR¹

ROCKER

- A** Black
- B** White
- C** Gray
- D** Red

3 Laser Etched

PADDLE

- J** Black
- N** White
- K** Gray
- M** Red
- 4** Laser Etched

10 & 11 LENS STYLE & COLOR

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

	Clear	White	Amber	Green	Red	Blue	Lens Style
1	6	B	G	M	T		Large
2	7	C	H	N	U		Large
3	8	D	J	P	V		Bar
4	9	E	K	R	W		Bar
5	A	F	L	S	Y		Translucent
							Laser Etch
							Background
							Color

L-Series Components:

To order **switch without actuator** specify: **L** with code selections **2** through **8**.
(ex.) L1113S001-00000-000

To order **actuator separately** specify: **LL** with codes from above scheme for selections 9 through 14.
(ex.) LLANZAMA-100

NOTES:

Shading indicates available options. Contact factory for availability of other listed options. Consult factory to verify horsepower rating for your particular circuit choice.

1 Custom colors are available. Consult factory.

2 18V bulbs recommended for 13.8 V applications for sharper illumination.

12 LASER ETCH, LENS OR BODY LEGENDS

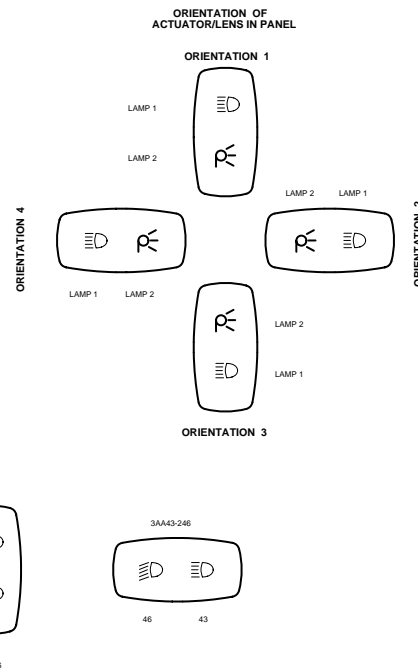
00 - NO LEGEND

For legend options & codes, see pages 34 - 42 of this catalog

13 LEGEND ORIENTATION

0 - NO LEGEND

- 1** Vertical (lamp 1 on top)
- 2** Horizontal (lamp 1 on right)
- 3** Vertical (lamp 1 on bottom)
- 4** Horizontal (lamp 1 on left)



14 ACTUATOR LENS LEGENDS

00 NO LEGEND

For legend options & codes, see pages 34 - 42 of this catalog



L-Series

Legends

LEGEND		LEGEND CODE		
SYMBOL	NAME <small>(SYMBOL MEANING)</small>	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	RUNNING LIGHTS (UNDER POWER)	AA	NA	MA
	LIGHT	AB	NB	MB
	MASTER LIGHT SWITCH	AC	NC	MC
	HORN	AD	ND	MD
	PROPULSION SYSTEM TRIM TRIMMING OPERATION	AE	NE	ME
	VENTILATION FAN OR BLOWER	AF	NF	MF
	WINDSHIELD WASHER	AG	NG	MG
	WINDSHIELD WIPER	AH	NH	MH
	BILGE PUMP	AJ	NJ	MJ
	BILGE BLOWER	AK	NK	MK
	POTABLE WATER PRESSURE	AL	NL	ML
	ENGINE START	AM		MM
	ENGINE STOP	AN		MN
	DRIVE TILT TILT OPERATION	30		31
	EMERGENCY START	32		33
	UP/DOWN LIFT	34		
	TRIM TAB TRIMMING OPERATION	35		36

LEGEND		LEGEND CODE		
SYMBOL	NAME <small>(SYMBOL MEANING)</small>	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	ANCHOR LIGHT	37		38
	ANCHOR	39		40
	WATER FLUSHING TAP FOR OUTBOARDS	41		42
	HIGH BEAM	43	44	45
	LOW / DIPPED BEAM	46	47	48
	SIDE MARKER LIGHT	DG	49	DF
	INTERIOR LIGHT	50	51	52
	WORK LIGHT	53	54	55
	WORK LAMP	56	57	58
	LOADING FLOOR LAMP	CW	59	CY
	ON-WIPER-INT DELAY	60		
	ROTARY BEACON	61	62	63
	LAMP TEST	DK	64	DL
	WINDSHIELD WIPER/WASHER	65	66	67
	HAZARD WARNING	68	69	70
	WARM AIR BLOWER	71	72	73
	HORN REAR	AX	74	Y4





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



Legends shown represent positive lens legend, where image is stamped on lens. On negative lens legends, the background is stamped black so that only the image will be illuminated when the switch is actuated.

Legend size may vary on V and L-Series switches.

¹ Negative legends not available on L-Series.

Legends

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	REAR FOG LAMP	75	76	77
	DIFFERENTIAL LOCK	78	79	80
	ALL WHEEL DRIVE	81	82	83
	DIRECTION INDICATOR	84	85	86
ENG HATCH		87		88
HORN		89		90
BLOWER		91		92
DEPTH		93		94
BILGE PUMP		95		96
NAV LTS		97		98
COURT LTS		99		1A
PANEL LTS		1B		1C
ANCH LTS		1D		1E
TRIM TAB		1F		1G
WATER PUMP		1H		1J
WIPER		1K		1L
BILGE		1M		

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
ENG COMP		1N		1P
ACC		1R	1S	1T
NAV ANC		1U		1V
WNDLS UP/DN		1W		1Y
NAV ANCH LTS		1Z		2A
WNDLS ON/OFF		2B		2C
DOCKING LTS		2D		2E
	MUSIC	2F		2G
	BATTERY	2H		2J
	LEVER UP/DOWN	2K		
	ENG PREHEAT	2M		2N
UP		2P		2R
ANTENNA		2S		
DOWN		2T		
PRESS		2U		
AUX START		2V		2W
	GAS	2Y		2Z















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









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Legend size may vary on V and L-Series switches.

1 Negative legends not available on L-Series.

Legends

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	RIDE CONTROL	3A		3B
	KICK OUT	3C		3D
	BEACON	3E		3F
	SLOW	3G		3H
	CHECK	3J	DJ	3K
	A/C	3L		3M
	REAR DEFOGGER	3N	3P	3R
	FORK LIFT	3S		3T
	ENG PREHEAT	3U		3V
	REAR WINDOW WIPER	AY	3Y	Y5
	EXCAVATOR BACKHOE BOOM SHIFT	4B		4C
	UNLOCK	4D		4E
	TRANSMISSION LOCK	4F		4G
	FORK LIFT DOWN / UP	4H		

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	DRIVER SEAT LIGHTING	4J		4K
	SIDE MARKER LAMPS	4L	4M	4N
	FOG LAMP	4P	4R	4S
	TRUNK LIGHT	4T		4U
RED		4V		4W
AMBER		4Y		
	LINE INDICATOR	5B		5C
	HANDICAP	5D	BX	5E
	STOP REQUEST	5F		5G
	WINDSCREEN HEATING & VENTILATION	5H		5J
	EXTERIOR MIRROR DEFROSTER	5K		5L
	MOMENTARY LEVER	5M		5N
	SLOW	5P		5R
HIGH		5T	Y6	5U
LOW		5V	Y7	5W
PARK		5Y		5Z


















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















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Legend size may vary on V and L-Series switches.

¹ Negative legends not available on L-Series.

Legends

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	WASHER	6C		
	SUPPLEMENTAL STEERING	6D		6E
	BATT PARL	6F		6G
	DEPTH SOUNDER	6H		6J
	MUTE	6K		6L
	TIMER	6M		
	MAN	6N		
	LIVEWELL	6R		
	WATER TANK		6S	
	REAR WASHER/WIPER	6T	BY	6U
	FRONT DIFFERENTIAL LOCK	6V		6W
	LEVER UP/DOWN	6Y		
	BILGE PUMP#1	6Z		7A
	BILGE PUMP#2	7B		7C
	BILGE PUMP#3	7D		7E
	RIGHT STABILIZER	7F		7G
	LEFT STABILIZER	7H		7J

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	HEAD LIGHTS	7K		
	CL / ID LIGHTS	7L		
	CRUISE CONTROL	7M		
	SET/DECEL RES/ACCEL	7N		
	ENGINE BRAKE	7P		
	HIGH MED LOW	7R		
	POWER WINDOW	7S		
	ENGINE FAN	7T		
	DRIVING LIGHTS	7U		
	FOG LIGHTS	7V		
	TRAILER CL / ID LIGHTS	7W		
	ENGINE DIAGN	7Y		
	LH/RH TANK	7Z		
	MIRROR DEFOG	8A		
	BACKUP LIGHTS	8B		
	DASH LIGHTS	8C		
	CAB SLEEPER	8D		

NOTES

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Legends

LEGEND		LEGEND CODE		
SYMBOL	NAME <small>(SYMBOL MEANING)</small>	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	SLEEPER START	8E		
	HIGH LOW	8F		
	CRUISE CONTROL	8G	8H	8J
	CRUISE CONTROL ADJUST	8K	8L	8M
	ENGINE BRAKE	8N	8P	8R
	HIGH/MED/LOW	8S	8T	8U
	POWER WINDOW	8V	8W	8Y
	ENGINE FAN	8Z	9A	9B
	DIAGNOSTICS	9C	9D	9E
	LH/RH TANK	9F	9G	9H
	LENS BLACKOUT		9J	
	VARIABLE	9L	9M	9N
	MIRROR ADJUST	9P	9R	9S
	SPEAKER	9T		9U
	SLEEPER START	9V	9W	9Y
	HIGH / LOW	9Z	A1	A2
	BEACON	A3		

LEGEND		LEGEND CODE		
SYMBOL	NAME <small>(SYMBOL MEANING)</small>	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	MIRROR	A4		
	MASTER SWITCH	A5		A6
	RABBIT (FAST)	A7		A8
	RETARDER	A9		B1
	EXHAUST BRAKE	B2	BZ	B3
	TANDEM AXLE	B4		B5
	AIR TANK	B6		B7
	DRAIN	B8		
	AUTOMATIC TRANSMISSION	B9		C1
	LOADER BUCKET DOWN	C2		C3
	LOADER BUCKET	C4		C5
	AUTO	C6		
	NEUTRAL LOCK	C7		C8
	TRANSMISSION NEUTRALIZER	C9		D1
	RUNNING / ANCHOR LIGHTS	D2		
	TRIM TAB TRIMMING OPERATION	D3		D5
	TRACTOR FORWARD	D6		D7













NOTES












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Legends

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	STEERING	D8		D9
BATTERY PARALLEL		E1		
	MIRROR DEFROST	DD	E2	DE
	SLEEPER LIGHTS		E3	
	IDLE SPEED		E4	
SLEEPER LIGHTS		E5		
IDLE SPEED		E6		
	MOWER DECK UP/DN	E7		E8
	4 / 2 WD LOCK	E9		F1
	STEERING CONTROL	F2		F3
	DRIVE TILT UP	F4		F5
	MILL MAIN	F6		F7
	MILL REVERSAL	F8		F9
	HEAD LIGHTS	G1		G2
	WORK LIGHT	G3		G4
RAISE		G5		G6
LOWER		G7		G8

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
FWD		G9		H1
REV		H2		H3
	BROOM	H4		H5
	SANDER	H6		H7
KNEEL		H8		
	CHIME MUTE	DY	H9	DZ
R. DOOR		J1		J2
F. DOOR		J3		J4
AUX BATT		J5		J6
	SWING MAIN	J7		J8
	ACTIVE SWING	J9		K1
	CENTERING	K2		K3
	REAR OPERATION AUTO-LIFT RELEASE	K4		K5
		K6		K7
	ARROW		K8	
	FRONT WINDOW DEFROST	K9		L1
	REAR WINDOW DEFROST	L2		L3

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Legends

LEGEND		LEGEND CODE		
SYMBOL	NAME <small>(SYMBOL MEANING)</small>	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	SIDE WINDOW DEFROST	L4		L5
		L6		L7
	CRAWLER STRETCHING	L8		L9
	CRAWLER LOOSENING	M1		M2
	SEARCH LIGHT	M3		M4
	SIDE MIRROR DEFROST	M5		M6
		M7	CA	M8
	UNLOADER AUGER	M9		N1
	REVERSING	N2		N3
	DRIVING LIGHT	N4		N5
	HAZARD	N6		N7
	EXTRA PLUG	N8		N9
	GRAIN TANK LIGHT	P1		P2
	ROTOR LIGHT	P3		P4
	CHAFF SPREADER	P5		P6
	HANDLE	P7		P8
	LEFT / RIGHT TABLE	P9		R1

LEGEND		LEGEND CODE		
SYMBOL	NAME <small>(SYMBOL MEANING)</small>	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	LEFT SIDE KNIFE	R2		R3
	ALL MECHANISMS	R4		R5
	MONITOR MENU	R6		R7
	VERTICAL BAR	S1		S2
	THRESHING SYSTEM	S3		S4
	TABLE MOVEMENT	S5		S6
	CYLINDER SPEED	S7		S8
	COVER PLATE	S9		T1
	ENGINE STARTING AID	T2		T3
	TRACTION CONTROL SYSTEM	T4		T5
	HYDRAULIC DIVERTER VALVE	T6		T7
	LAMP TEST	T8	T9	U1
	DOCKING LIGHT	U2		U3
	ROCKSHAFT	U4		U5
	AUX	U6		U7
	DOCK LIGHTS	U8		
	CTSY LIGHTS	U9		

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V-SERIES
 Contura II & III
 Contura IV
 Contura X & XI
 Contura XII
 Contura XIII
 Illuminated Plug
 L-SERIES

Legends

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	TRIM	V1		
	AIR TEMP SEA	V2		
	ENGINE LIGHTS	V3		
	TRANS LIGHTS	V4		
	DEFOG	V5		
	SEAT	V6		
	UP TRAILER	V7		
	DEPTH FINDER	V8		
	EXHAUST	V9		
	SINK PUMP	W1		W2
	STORAGE LIGHTS	W3		
	UP HATCH DOWN	W4		
	TRAILER 3rd AXLE LIFT	W5	W6	W7
	TRAILER 3rd AXLE LIFT	W8		
	HANDLE BAR HEATER	W9		Y1
	PARKING BRAKE	Y2	DH	Y3
	ARROW (UP)	Y8		Y9

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	ARROW (DOWN)	Z1		Z2
	RIGHT SIDE KNIFE	Z3		Z4
	HYDRAULIC HAMMER	Z5		Z6
	HYDRA-CLAMP	Z7		Z8
	SHOVEL FLOAT	Z9		AP
	SHOVEL HORIZONTALLY	AR		AS
	HYDRAULIC HITCH	AT		AU
	LOCK	AV	BW	AW
	LIGHT	AZ		BA
	BLOWER FAST	BB		BC
	ARROW (LEFT)	BD		BE
	ARROW (RIGHT)	BF		BG
	HYDRAULIC FLUID	BH		BJ
	WORK LIGHTS	BK		BL
	TRACTOR WITH REAR PTO	BM		BN
	READING LIGHTS	BP		BR
	5 TH GEAR LOCKOUT	BS		BT

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Legends

LEGEND		LEGEND CODE		
SYMBOL	NAME (SYMBOL MEANING)	BODY	LENS	
			NEGATIVE ¹	POSITIVE
	FAILURE/ MALFUNCTION	BU		BV
COCKPIT LIGHTS		CB		CC
STOR LTS	STORAGE LIGHTS	CD		CE
SEAT		CF		CG
LIGHTS		CH		CK
ANCHOR		CJ		CL
	POWER TAKE OFF	CR		CS
STBD		CM		CN
FUEL		CP		CT
PORT		CU		CV
	SEAT BELT	CZ		DA
	ENGINE DIAGNOSTIC	DB		DC
	TRANS. OIL TEMP	DM		DN
	TRANS. OIL PRESSURE	DP		DR
	AIR FILTER	DS		DT
	WATER TEMP.	DU		DV
	ENG.. OIL PRESSURE	DW		DX

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