



**Carling Technologies®**

Innovative Designs. Powerful Solutions.

# MILITARY

## SEALED COTS SWITCHES AND CIRCUIT BREAKERS

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## SELECTOR GUIDE

# INTRODUCTION

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Your military equipment is only as tough as the components used in building it! Carling Technologies' products feature a wide range of switches and circuit breakers that were designed and tested to withstand the harsh environments found in military applications. Carling Technologies COTS products provide military OEMs with a reliable and cost effective solution to their design requirements. By drawing upon over 90 years of design excellence, Carling Technologies is able to provide switch and circuit breaker solutions that are sure to be compliant with the most demanding environmental requirements.

Use the links below to learn more about the Carling Switch and Circuit Protection COTS products best suited for your military solutions.

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## CUSTOM SOLUTIONS

If you can imagine it, Carling Technologies can create it. From a minor modification to an existing product to a co-development concept, no one can develop, design and manufacture a custom engineered product with greater ease, more efficiency, or more cost effectively than Carling Technologies. As a vertically integrated company with manufacturing facilities on three continents, Carling Technologies offers end-to-end product solutions, from concept and design to tooling, fabrication, and manufacturing. Carling's independence and dedication to customers ensure the flexibility to respond quickly to any opportunity or requirement. And Carling's network of employees in ISO/TS-registered manufacturing plants and sales offices stretches worldwide, guaranteeing that Carling experts are always nearby to provide you with answers and support whenever and wherever you need them.

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# CHECK OUT THE NEW CONFIGURIT TOOL

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[www.carlingtech.com/configurit](http://www.carlingtech.com/configurit)

Carling's CONFIGURIT tool to configure a complete and valid part number. This easy-to-use tool allows you to select the part features that best suit your application and it provides additional part number details such as datasheets, 3D CAD models and 2D sales drawings.







**PART NUMBER:**

V 1 B 2 S 0 0 B · G Z C 00 · 0 00

**Take Action**

[Download 3D CAD File](#) [Download Datasheet](#) [Get Sample](#)

**CIRCUIT PROTECTION**

 <b>MS-Series</b>	 <b>A-Series</b>	 <b>B-Series</b>	 <b>C-Series</b>	 <b>E-Series</b>	 <b>F-Series</b>	
1-3	1-6 (handle) 1-3 (rocker/toggle)	1-6	1-6 (handle) 1-3 (rocker/toggle)	1-6	1-3	<b>Poles</b>
sealed metal toggle	sealed metal toggle, handle, rocker, paddle	handle, rocker	sealed metal toggle, handle, rocker	handle	handle	<b>Actuator Style</b>
<b>DC:</b> instantaneous, short & medium	<b>AC, DC, AC/DC:</b> instantaneous, ultra-short, short, medium & long <b>AC, DC:</b> high inrush-short, medium & long	<b>AC, DC, AC/DC:</b> instantaneous, ultra-short, short, medium & long <b>AC, DC:</b> high inrush-short, medium & long	<b>AC, DC, AC/DC:</b> instant, ultrashort, short, medium & long <b>AC, DC:</b> high inrush-short, medium & long	<b>AC, DC, AC/DC:</b> instant, short, medium & long, high inrush-short, medium & long	<b>AC, DC:</b> short, medium & long	<b>Available Delays</b>
0.2-30A@ 65VDC 240VAC, 120/240VAC	0.02-30A@ 277VAC, 80VDC 31.0-50A@ 125/250VAC, 65VDC	0.02-30A@ 277VAC, 80VDC  0.02-30A@ 125/250VAC, 65VDC	<b>UL Listed:</b> 0.02-250A@80VDC 0.1-100A@125VDC 0.02-70A@120VAC 0.02-20A@240VAC <b>UL Recognized:</b> 0.02-30A@ 480WYE/277VAC 2 Pole, 1Ø; 3 Pole, 3Ø 0.02-50A@277VAC 0.02-100A@ 250VAC, 80VDC 0.02-100A@ 120/240VAC, 65VDC	<b>UL Listed</b> 0.02-100A@ 240VAC, 80VDC, 125VDC <b>UL Recognized</b> 0.02-100A @ 277VAC, 160VDC, 1 pole 0.02-100A @600VAC, 2 Pole 1Ø 3 pole 3Ø 0.02-120A @125VDC, 1 pole	<b>UL489 Listed:</b> 50-250A@125VDC 100-250A@ 120/240VAC 100-250A @ 277VAC 100-250A@ 208Y/120, 3ØVAC <b>UL489A Listed</b> 250-700A @ 125VDC	<b>Max Current &amp; Voltage Ratings</b>
3000A, U1@ 65VDC 2000A, U1@ 240VAC 2000A, U1@ 120/240VAC	7500A@80VDC, UL only 3000A @ 120/250VAC, UL only 5000A@277VAC, with fuse backup	7500A @ 80 VDC, UL only 3000A @ 125/250VAC, UL only 5000A @ 277VAC, with fuse backup	<b>UL Listed:</b> 50000A@80VDC, 1P only 10000A@120VAC 5000A@125VDC/240VAC <b>UL Recognized:</b> 7500A@80VDC 3000A@125/250VAC, UL only 5000A@250VAC listed construction 5000A@480WYE/277VAC with fuse backup	<b>UL Listed</b> 50000A@80VDC 10000A@125VDC & 240VAC-5KA <b>UL Recognized</b> 5000A@125VDC 5000A@600VAC, without fuse backup 10000A@600VAC, with fuse backup	50000A@125VDC 10000A@120/240, 277, 208Y/120VAC	<b>Max Interrupting Capacity</b>
5A @ 125VAC 3A @ 32VDC .1A @ 125VAC, 32VDC	10.1A@125VAC 0.1A@125VAC (gold contacts) 0.5A@65VDC 0.1A@80VDC	10.1A@125 VAC 0.1A@125 VAC (gold contacts), 0.5A@65 VDC 0.1A@80 VDC	10.1A@250 VAC 0.1A@125 VAC (gold contacts), 0.5A@80 VDC	10.1A@250VAC 1.0A@65VDC 0.1A@80VDC	10.1A@250VAC 0.5A@65VDC 0.1A@80VDC	<b>Auxiliary Switch Rating</b>
series and switch only	series, shunt, relay, switch only, series with remote shutdown, relay & shunt trip dual coil	series, shunt, relay, switch only, series with remote shutdown, relay & shunt trip dual coil, mid-trip with alarm switch	series, shunt, relay, switch only, series with remote shutdown, relay & shunt trip dual coil, mid-trip with alarm switch	series, shunt, relay, switch only, series with remote shutdown	series & switch only with or without metering shunt	<b>Available Circuits</b>
.250" QC tabs 8-32 screw & solder type	.250" QC tabs 8-32 & 10-32 screw (& metric), PCB	.250" QC tabs, 8-32 & 10-32 screw (& metric), PCB	10-32 stud, 1/4-20 stud, 10-32 screw with saddle clamp, 7/16 clip & push-In	10-32 stud, 1/4-20 stud 0-32 screw, 1/4-20 screw, box wire connector	3/8-16 stud, 3/8- 16 screw & box wire connector	<b>Terminal Options</b>
front panel	threaded inserts: front panel snap-in	threaded inserts: front panel snap-in	threaded inserts	rear or front panel	rear or front panel	<b>Mounting Method</b>
UL1077, cUL, TUV	UL1077, CSA, VDE, TUV (rocker), UL1500, UL489A	UL1077, CSA, VDE, TUV; UL1500, UL489, UL489A	UL1077, CSA, VDE, TUV, UL1500, UL489, UL489A	UL1077, CSA, VDE, UL1500, UL489	cUL,TUV, UL489, UL489A	<b>Agency Approvals</b>


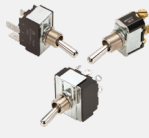


\*Options and approvals shown may apply to specific construction combinations only, consult factory for clarification.

Manufacturer reserves the right to change product specifications without prior notice.

**ROCKER SWITCHES**
**ROTARY SWITCH**

 <b>V-Series</b>	 <b>W-Series</b>	 <b>L-Series</b>	 <b>V-Rotary</b>	
1, 2	1, 2	1, 2	1, 2	<b>Poles</b>
IP66/68; up to 20/15A 12/24VDC 15A 125VAC 10A 250VAC	IP68 including connector; up to 10A 24VDC	IP67; up to 15A 125VAC 10A 250VAC 20A 18VDC	up to 15A 24VDC 20A 12VDC	<b>Ratings</b>
Rocker, Paddle, Locking Rocker	Bezel-Less Rocker, Paddle & Locking Rocker	Rocker, Paddle, Locking Rocker	IP67, ergonomic knob	<b>Actuator</b>
.830" x 1.450" [21.08mm x 36.83mm] snap-in mount	.830" x 1.450" [21.08mm x 36.83mm] snap-in mount	.867" x 1.734" [22mm x 44mm] snap-in mount	.830" x 1.450" [21.08mm x 36.83mm] snap-in mount	<b>Mounting Hole Specifications</b>
.250 tabs solder lug wire leads	.110 tabs	.187 tab .250 tabs	solder lug .250 tabs wire leads	<b>Termination</b>
incandescent, LED, neon	LED	incandescent, LED	incandescent, LED	<b>Illumination</b>
UL, CSA	n/a	n/a	pending	<b>Approvals</b>

**TOGGLES SWITCHES**
**USB CHARGER**

 <b>ST-Series</b>	 <b>F / G / H / I</b>	 <b>DK / EK</b>	 <b>V-Charger</b>	
1, 2	1, 2, 3, 4	1, 2	1	<b>Poles</b>
10A 250VAC 15A 125VAC 16A 12/24VDC	up to 20A 125VAC 20A 277VAC 2 HP 250VAC	up to 20A 125VAC/DC 10A 250VAC/DC	12V/24VDC	<b>Ratings</b>
IP68, bat, paddle	paddle, toggle (bat)	toggle (bat), toggle (ball)	sealed spring-loaded access doors; curved or square	<b>Actuator</b>
.500" dia [12.7mm] bushing mount	.500" dia [12.7mm] bushing mount	.500" dia [12.7mm] bushing mount	.830" x 1.450" [21.08mm x 36.83mm] snap-in mount	<b>Mounting Hole Specifications</b>
.250 tabs Screw Terminals with cage clamps	.187 tabs solder lug .250 tabs screw terms wire leads PC terms	screw terms	.250 tabs	<b>Termination</b>
n/a	n/a	n/a	LED	<b>Illumination</b>
UL60079-15, cUL	UL, CSA, VDE	UL, CSA	n/a	<b>Approvals</b>

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## ELECTRONIC SYSTEMS



**CKP-Series**



**VM-Series**

SAE J1939 CAN 2.0b Protocol	SAE J1939 CAN 2.0b Protocol	<b>Software</b>
12 individual loads	6 individual rockers, up to 12 total loads	<b>Circuitry</b>
8-32 V	12 or 24 V	<b>Operating Voltage</b>
1, 2, or 3 LED's per load	Dependent or Independent LED's	<b>Illumination</b>
IP69 Front Panel; IP68 Back Panel when connected	IP68 Front Panel; IP68 Back Panel when connected	<b>Sealing</b>
Deutsch DT-Series Connector	Deutsch DT-Series Connector	<b>Termination</b>
Custom or standard laser etched backlighting	Custom or standard laser etched backlighting	<b>Legends</b>

## BATTERY DISCONNECT



**BD-Series**



**BD1-Series**

1	1	<b>Poles</b>
100-300 Amps 12VDC/24VDC	250 Amps 12VDC/24VDC	<b>Ratings</b>
ergonomic knob	ergonomic knob; removable option available	<b>Actuator</b>
M8 Bolt and Nut	M6/M7 Bolt and Nut	<b>Mounting Hole Specifications</b>
M10 Stud M14 Stud	M10 Stud; 19 and 27mm length	<b>Termination</b>

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