

# BD-Series

## BATTERY DISCONNECT POWER SWITCH

Carling Technologies BD-Series battery disconnect switch is designed to minimize battery drain, ensure maintenance personnel safety, and when used in conjunction with a padlock, provide vehicle theft protection.



### Resources:

[Download 3D CAD Files](#)

[IGS >](#) [STP >](#)

[Watch Product Video](#)



### Product Highlights:

- ♦ 100-250 Amps
- ♦ 12VDC/24VDC
- ♦ IP67 Sealing Protection
- ♦ Lock Compatible

### Typical Applications:

- ♦ On/Off-Highway Equipment
- ♦ Military
- ♦ Marine

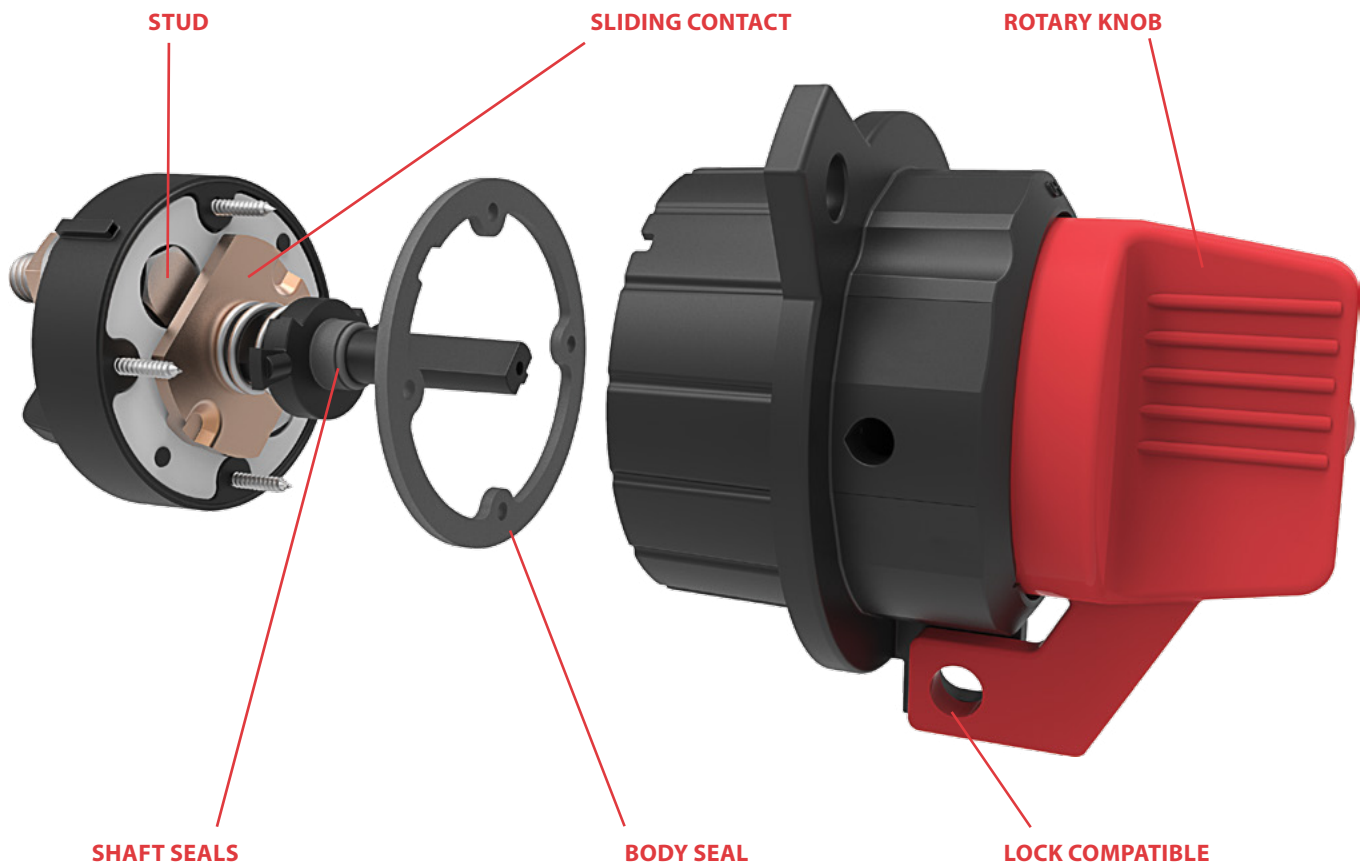


**Carling Technologies, Inc.**  
60 Johnson Avenue, Plainville, CT 06062  
Email: [sales@carlingtech.com](mailto:sales@carlingtech.com)  
Application Support: [team2@carlingtech.com](mailto:team2@carlingtech.com)  
Phone: 860.793.9281 Fax: 860.793.9231

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

# BD-Series

## DESIGN FEATURES



**Electrical**

Application Voltage	DC Rated voltage: 12VDC / 24VDC Range of operating voltage: 12VDC: min 9VDC, max 16VDC; 24VDC: min 18VDC, max 32VDC
Current Ratings	12VDC/24VDC: rated 100A, max 250A
Intermittent Current	1500A: 3 seconds on, 60 seconds off @24VDC,1500A, repeated 10 times, voltage drop should not be more than 400mV between main terminals.
Dielectric Strength	50HZ, 550VAC for 1 minute between electrically / isolated terminals in main circuit; between terminals of main circuit, knob and enclosure.
Insulation Resistance	Minimum of 100 Megohms 1 min @ 500VDC
Temperature rise	Terminal should not exceed 60°C above ambient.
Endurance	2 seconds ON and 2 seconds OFF per operation, load with rated current & voltage. 12V test @14V±0.1V; 24V test @28V±0.2V. 50,000 cycles: 100A current; 20,000 cycles: 200A current; 3,000 cycles: 250A current.

**Physical**

Number of Poles	1 pole
Wiring Terminals	Line/Load terminal: M10 brass nuts Torque value: (6~8 Nm)
Mounting	M8 Iron nut, torque value: 10-15 Nm.
Torque Operation	1.0~3.0 Nm
Body Color	Black
Actuator Color	Red handle, with white color "Arrow" legends.
Weight	340g
Material	Base (PBT glass enforced), Bracket & Knob (nylon glass enforced), Studs (Copper + Tin plating), Nuts (Brass)

**Mechanical**

Free drop	No damage after 3 drops from 1000 mm height
Endurance	More than 100,000 cycles without load

**Environmental**

Operating Temp.	-40 °C to +85 °C.
Moisture Resistance	IEC 60068-2-38 or G/T 2423.34, Test Z/AD: Composite temperature/humidity cyclic test, ten 24-hour cycles @ -10°C to +65°C, ≤80-96% RH.
Thermal Cycling	IEC 60068-2-14 or GB/T 2423.22, Test Nb, 25 Cycles -40°C to +85°C
Thermal Shock	IEC 60068-2-14 or GB/T 2423.22, Test Na (Five cycles @ -55°C to +25°C to +85°C to +25°C)
Cold/Heat Resistance	IEC 60068-2-1 or GB/T 2423.1 Cold: Test A, work 8 hours @ -40°C IEC 60068-2-2 or GB/T 2423.2 Heat: Test B, work 8 hours @ +85°C
Vibration	IEC 60068-2-34 or GB/ T2423.11,10~500Hz, Random vibration test for 8 hours in each of the 3 mutually perpendicular axes. 25Gs @ Z axes, 12.5Gs @ X/Y axes. powered.
Salt Spray	IEC 60068-2-11 or GB/T 2423.17, 48 hrs.
Fire and Smoke	IEC 60695-11-10 or GB/T 2408, HB
Dust/Waterproof	IEC 60529 or GB4208, IP 67
Chemical Splash	Gasoline, Diesel, Motor Oil, Brake Fluid, Ammonia, Armor All
UV Protection	ASTM G155-05a, cycle 11, 300 hr Xenon Arc, 1.4W/(m <sup>2</sup> ·nm ), wavelength 420 nm.

\*Manufacturer reserves the right to change product specification without prior notice.



**1 SERIES**  
**BD** Battery Disconnect Power Switch

**3 TERMINATION**  
**10** M10 Stud

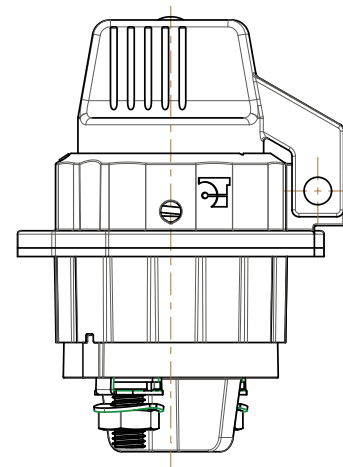
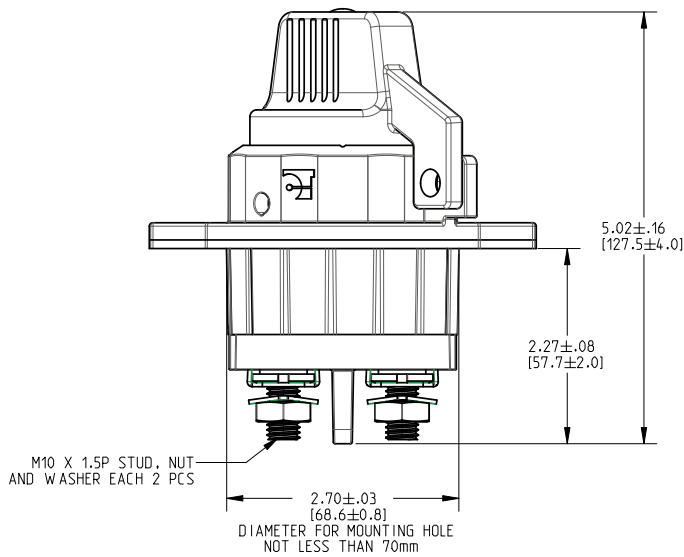
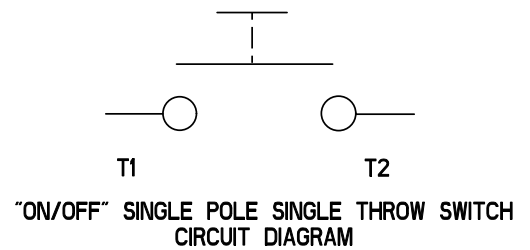
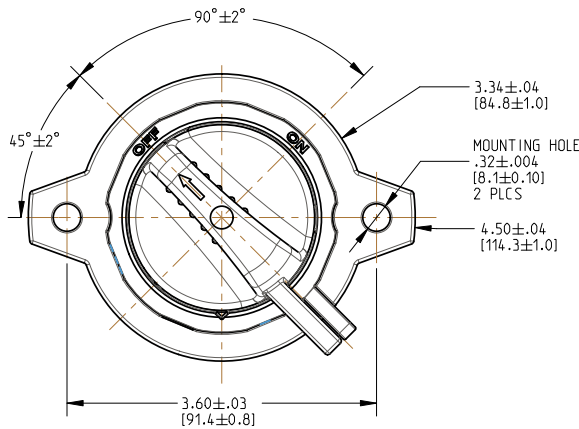
**2 RATING / OPERATION CYCLE**  
**A** 100A @ 24VDC: 50,000 Operation  
 200A @ 24VDC: 20,000 Operation  
 250A @ 24VDC: 3,000 Operation

Note: Refer to Endurance Specifications for test parameters.

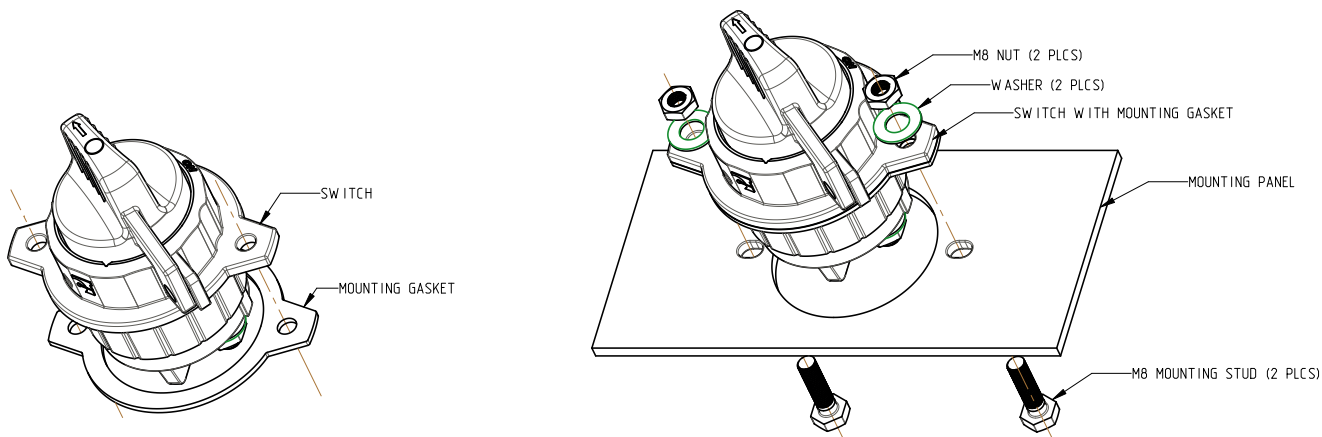
**4 KNOB COLOR**  
**R** Red

**5 LEGEND**  
**A** Arrow Legend, White Color

**Dimensional Specifications: in. [mm]**

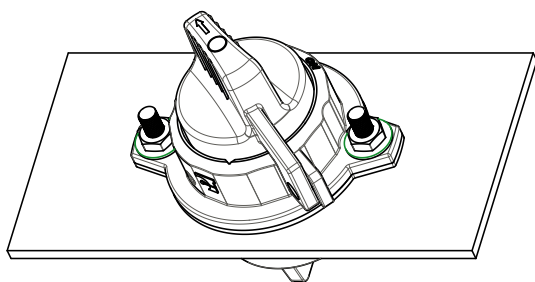


### Mounting Method 1: in. [mm]

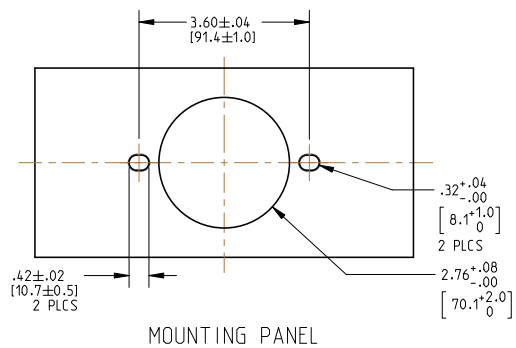


MOUNTING STEP 1: PUT THE MOUNTING GASKET WITH THE SWITCH ORIENTATION AS SHOWN

MOUNTING STEP 2: ORIENT AS SHOWN AND INSTALL THE SWITCH IN MOUNTING PANEL HOLE; THEN INSERT STUDS AND WASHERS AS SHOWN.



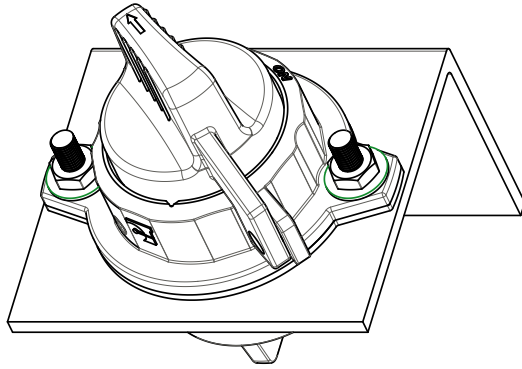
MOUNTING STEP 3: TIGHTEN 2PCS M8 NUTS (USE TORQUE [10-15Nm])



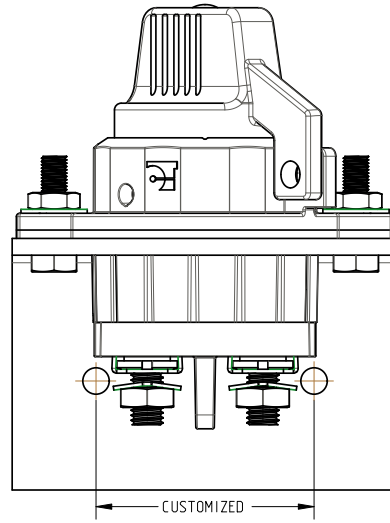
Notes:

1 Switch can be mounted horizontally or vertically.

## Mounting Method 2: in. [mm]

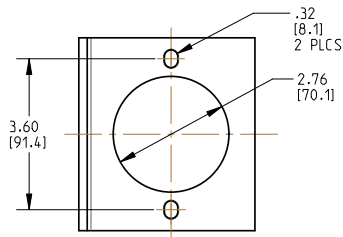
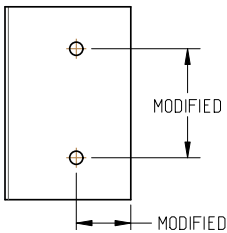
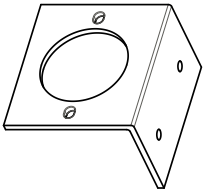


MOUNTING STEP 1: INSTALLING SWITCH WITH MOUNTING BRACKET ORIENTATION AS SHOWN

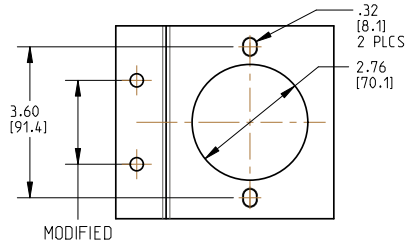
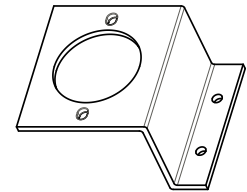
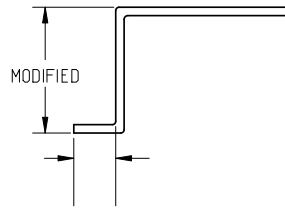


MOUNTING STEP 2: ORIENT AS SHOWN AND INSTALL THE SWITCH ASSY IN CUSTOMER PANEL.

### "L" SHAPE MOUNTING BRACKET



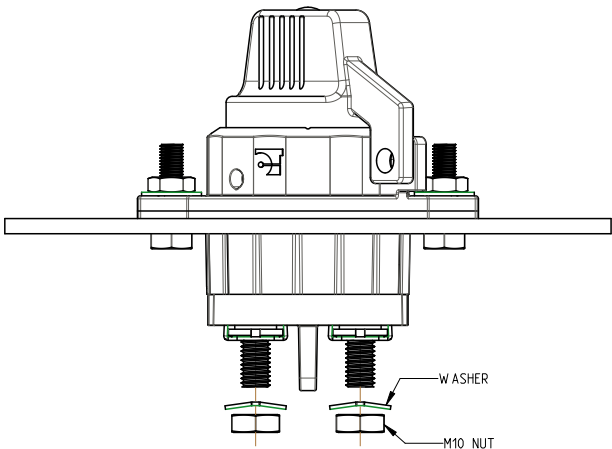
### "Z" SHAPE MOUNTING BRACKET



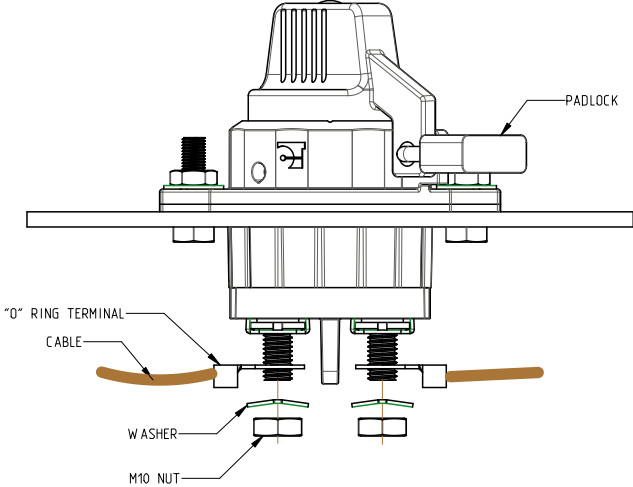
**Notes:**

- 1 Switch can be mounted horizontally or vertically.

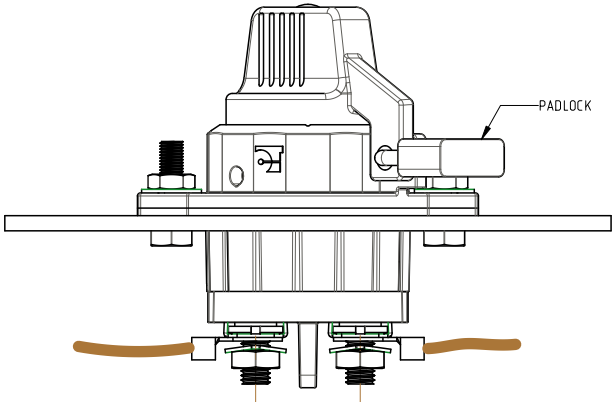
Wiring: in. [mm]



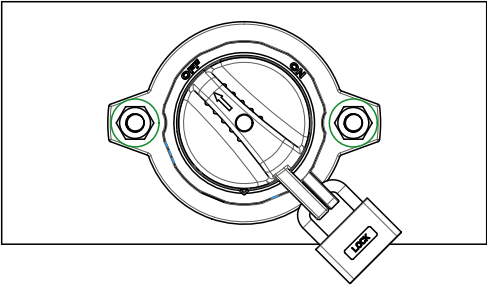
WIRING 1: DISCONNECT WASHERS AND NUTS



WIRING 2: ATTACH 2PCS M10 "0" RING TERMINALS AS SHOWN, THEN RE-FASTEN WASHERS AND NUTS;



WIRING 3: TIGHTEN 2PCS BRASS M10 NUTS (USE TORQUE (6-8Nm))



WHEN USED IN CONJUNCTION WITH A PAD LOCK, SWITCH CAN BE LOCKED IN THE "OFF" POSITION TO PROVIDE SECURITY AND SAFETY





## Authorized Sales Representatives and Distributors

Click on a region of the map below to find your local representatives and distributors or visit [www.carlingtech.com/findarep](http://www.carlingtech.com/findarep).



## About Carling

Founded in 1920, Carling Technologies is a leading manufacturer of electrical and electronic switches and assemblies, circuit breakers, electronic controls, power distribution units, and multiplexed power distribution systems. With four ISO registered manufacturing facilities and technical sales offices worldwide, Carling Technologies Sales, Service and Engineering teams do much more than manufacture electrical components, they engineer powerful solutions! To learn more about Carling please visit [www.carlingtech.com/company-profile](http://www.carlingtech.com/company-profile).

To view all of Carling's environmental, quality, health & safety certifications please visit [www.carlingtech.com/environmental-certifications](http://www.carlingtech.com/environmental-certifications)

## **Worldwide Headquarters**

Carling Technologies, Inc.  
60 Johnson Avenue, Plainville, CT 06062  
**Phone:** 860.793.9281 **Fax:** 860.793.9231  
**Email:** sales@carlingtech.com

**Northern Region Sales Office:** nrsm@carlingtech.com  
**Southeast Region Sales Office:** sersm@carlingtech.com  
**Midwest Region Sales Office:** mrsm@carlingtech.com  
**West Region Sales Office:** wrsm@carlingtech.com  
**Latin America Sales Office:** larsm@carlingtech.com

## **Asia-Pacific Headquarters**

Carling Technologies, Asia-Pacific Ltd.,  
Suite 1607, 16/F Tower 2, The Gateway,  
Harbour City, 25 Canton Road,  
Tsimshatsui, Kowloon, Hong Kong  
**Phone:** Int + 852-2737-2277 **Fax:** Int + 852-2736-9332  
**Email:** sales@carlingtech.com.hk

**Shenzhen, China:** shenzhen@carlingtech.com  
**Shanghai, China:** shanghai@carlingtech.com  
**Pune, India:** india@carlingtech.com  
**Kaohsiung, Taiwan:** taiwan@carlingtech.com  
**Yokohama, Japan:** japan@carlingtech.com

## **Europe | Middle East | Africa Headquarters**

Carling Technologies LTD  
4 Airport Business Park, Exeter Airport,  
Clyst Honiton, Exeter, Devon, EX5 2UL, UK  
**Phone:** Int + 44 1392.364422 **Fax:** Int + 44 1392.364477  
**Email:** ltd.sales@carlingtech.com

**Germany:** gmbh@carlingtech.com  
**France:** sas@carlingtech.com



**Carling Technologies®**

Innovative Designs. Powerful Solutions.