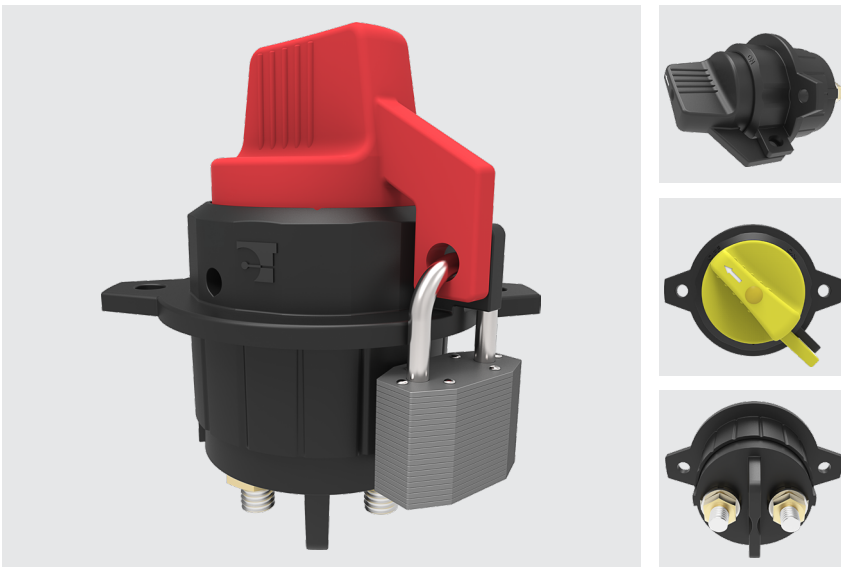


BD-Series

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, provides vehicle theft protection.



Product Highlights:

- Single Pole, 100-300 Amps
- 12VDC/24VDC
- Fully Sealed to IP67, Including Below the Panel
- Red, Yellow or Black Ergonomic Knob
- Lock Compatible

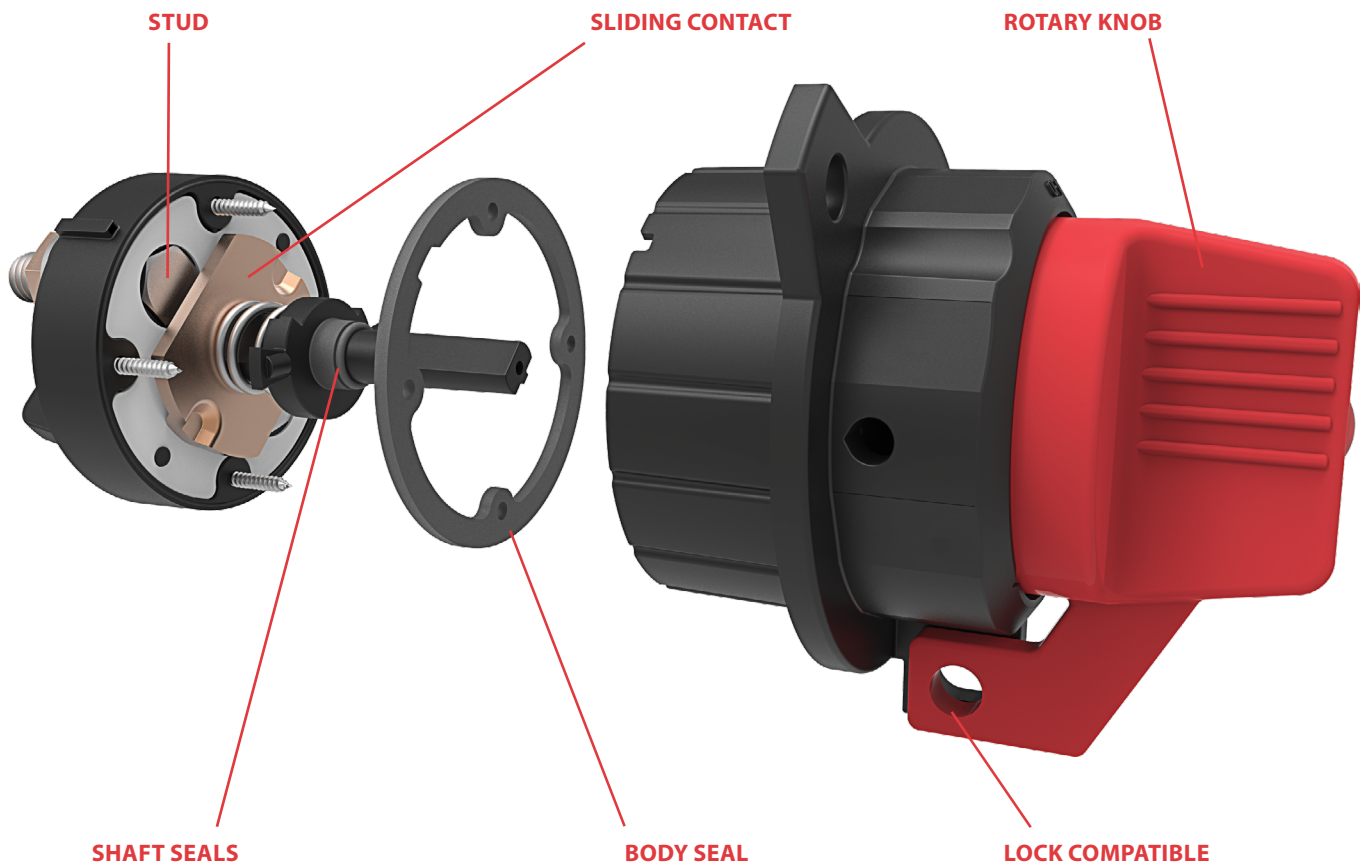
Typical Applications:

- On/Off-Highway Equipment
- Military
- Marine



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 300A (M10 Studs); 12VDC/24VDC: rated 300A (M14 Studs)
Intermittent Current	24VDC/1500A, 3 seconds on, 60 seconds off, 10 cycles: voltage drop should not exceed 400mV between main terminals. 28V/1500A/30 seconds: voltage drop should not exceed 400mV 28V/2000A/5 seconds followed by 28V/750A/30 seconds followed by 28V/250A/24 hours: voltage drop should not exceed 100mV
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	For M10 Studs: 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 2 seconds ON and 6 seconds OFF per operation, load with rated current & voltage. 12V test @14V±0.1V; 24V test @28V±0.2V 3,000 cycles: 300A current For M14 Studs: 2 seconds ON and 6 seconds OFF per operation, load with rated current & voltage. 12V test @14V±0.1V; 24V test @28V±0.2V 3,000 cycles: 300A current

Mechanical

Handling Shock	Fully functional after 3 drops from 1000 mm height. Surface damage may occur.
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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 cycle 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 (5 cycles @ -55°C to +25°C to +85°C to +25°C)
Thermal Resistance	IEC 60068-2-1 or GB/T 2423.1 Cold: Test A, operate 8 hours @ -40°C IEC 60068-2-2 or GB/T 2423.2 Heat: Test B, operate 8 hours @ +85°C
Vibration	IEC 60068-2-34 or GB/ T 2423.11, 10-500 Hz, 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 hours
Fire and Smoke	IEC 60695-11-10 or GB/T 2408, HB
Dust / Waterproof	IP68, for above and below-panel components of actual switch only
Chemical Splash	Gasoline, Diesel, Motor Oil, Brake Fluid, Ammonia, Armor All
UV Protection	ASTM G155-05a, cycle 11, 300 hr Xenon Arc, 1.4W / (m2 Nm), wavelength 420 Nm

Physical

Number of Poles	1 pole
Wiring Terminals	Line / Load terminal: M10 brass nuts Torque value: M10 (6-8 Nm); M14 (10-14 Nm)
Mounting	M8 Iron nut, torque value: (10-15 Nm)
Torque Operation	1.0-3.0 Nm
Body Color	Black
Actuator Color	Handle color optional, with white color "Arrow" legends.
Weight	(M10 Studs): 340±10 g / set; (M14 Studs): 385±10 g / set
Material	Base (PBT glass filled), Bracket & Knob (nylon glass filled), Studs (Copper + Tin plating), Nuts (Brass)

*Manufacturer reserves the right to change product specification without prior notice.
GPS-0001 Rev: D

BD **A** **10** - **R** **A**

1 Series 2 Rating 3 Termination 4 Knob Color 5 Legend

1 SERIES

BD Battery Disconnect Power Switch

2 RATING / CYCLES

A 100A @ 24VDC: 50,000 Cycles
 200A @ 24VDC: 20,000 Cycles
 250A @ 24VDC: 3,000 Cycles
B 300A @ 24VDC: 3,000 Cycles

Note: Refer to General Specifications for test parameters.

3 TERMINATION

10 M10 Stud
14 M14 Stud

4 KNOB COLOR

R Red
Y Yellow
B Black

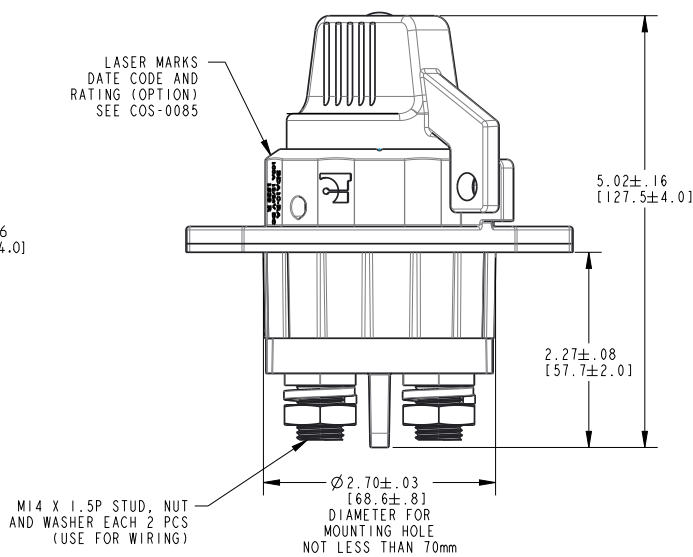
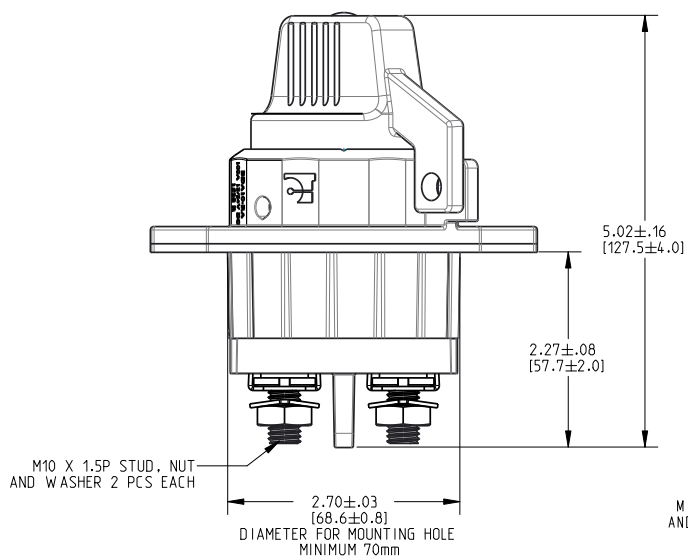
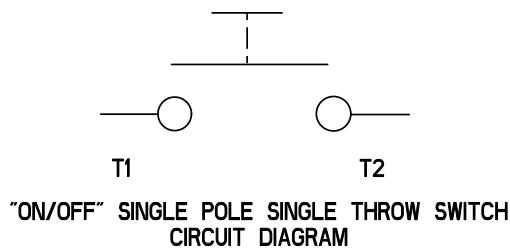
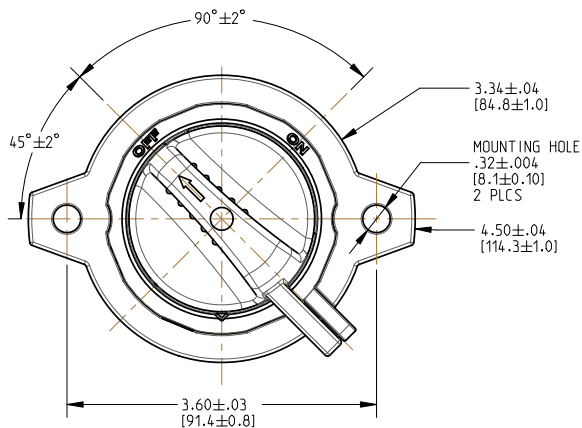
5 LEGEND

A Arrow Legend, White Color

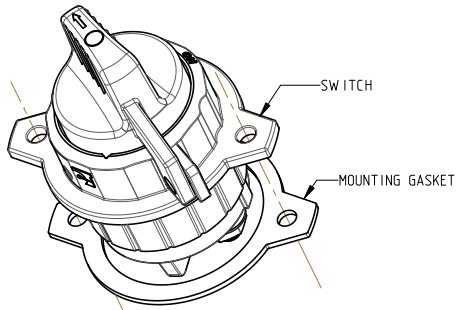
Notes:

1 Only available with code B from box 2.

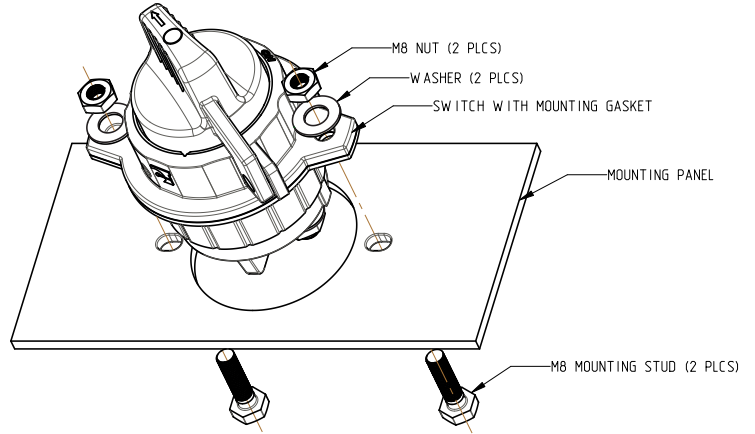
Dimensional Specifications: in. [mm]



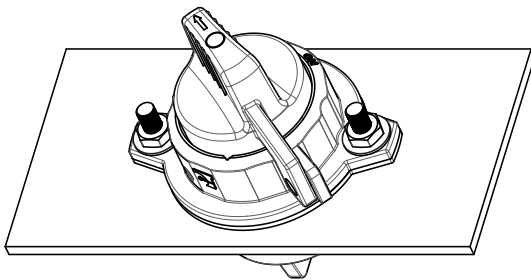
Mounting Method 1: in. [mm]



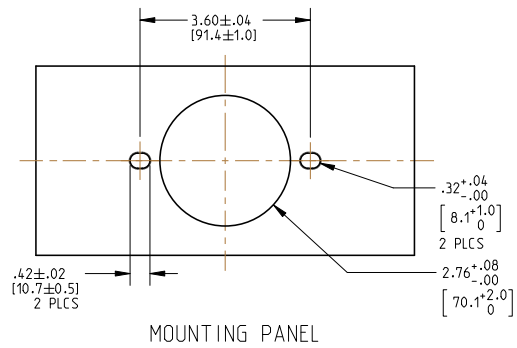
MOUNTING STEP 1: ATTACH MOUNTING GASKET WITH THE SWITCH ORIENTATION AS SHOWN



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



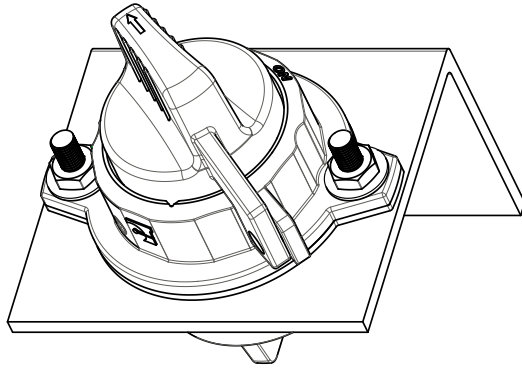
MOUNTING STEP 3: TIGHTEN 2PCS M8 NUTS (REC. TORQUE [10-15Nm])



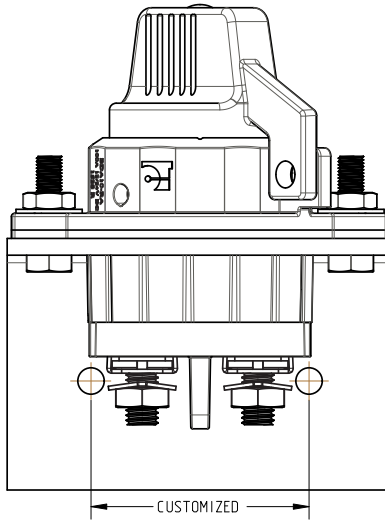
Notes:

- 1 Switch can be mounted horizontally or vertically.

Mounting Method 2: in. [mm]



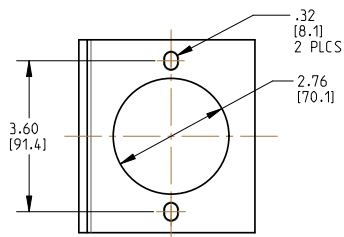
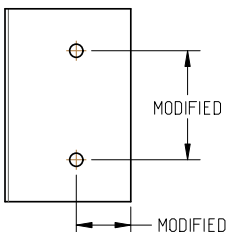
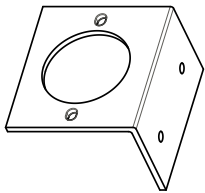
MOUNTING STEP 1: INSTALL SWITCH WITH MOUNTING BRACKET ORIENTATION AS SHOWN



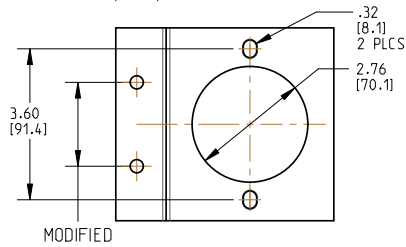
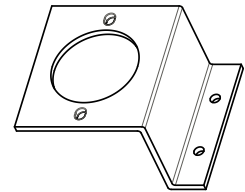
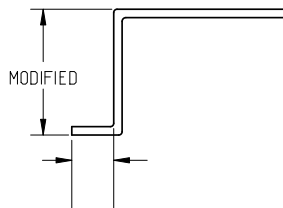
MOUNTING BRACKET CAN BE MODIFIED AS BELOW

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

"L" SHAPE MOUNTING BRACKET



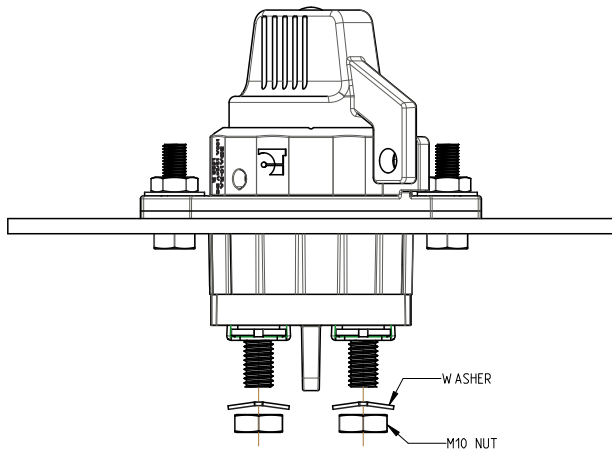
"Z" SHAPE MOUNTING BRACKET



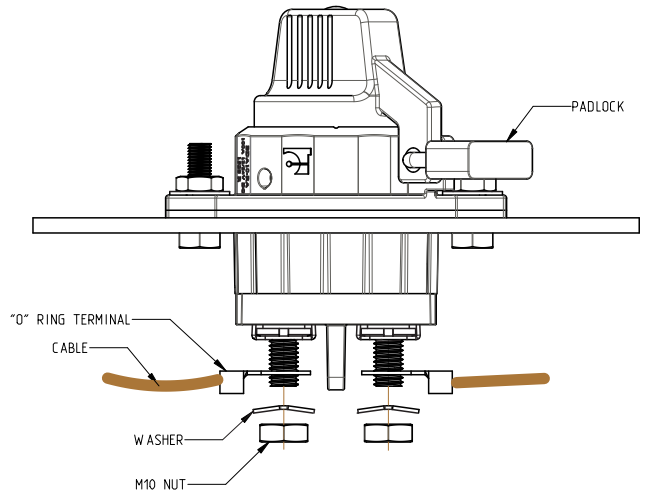
Notes:

- 1 Switch can be mounted horizontally or vertically.

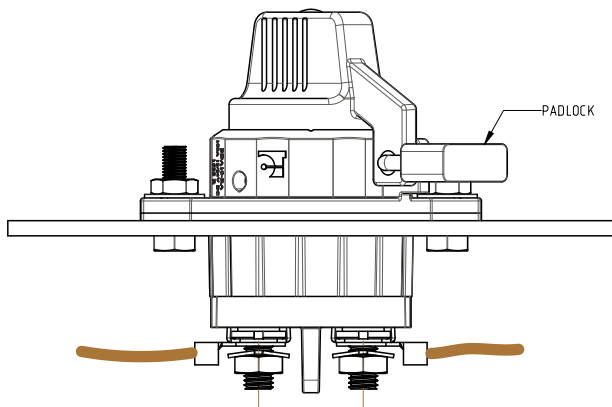
Wiring: in. [mm]



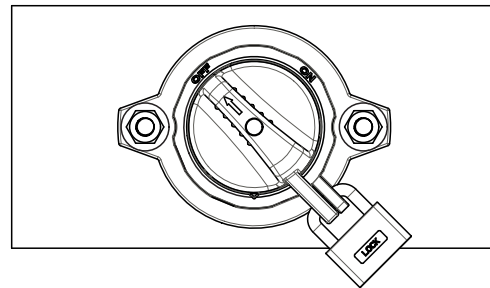
WIRING 1: DISCONNECT WASHERS AND NUTS



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



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



WHEN USED IN CONJUNCTION WITH A PAD LOCK, SWITCH CAN BE LOCKED IN THE "OFF" POSITION AS A SAFETY MEASURE