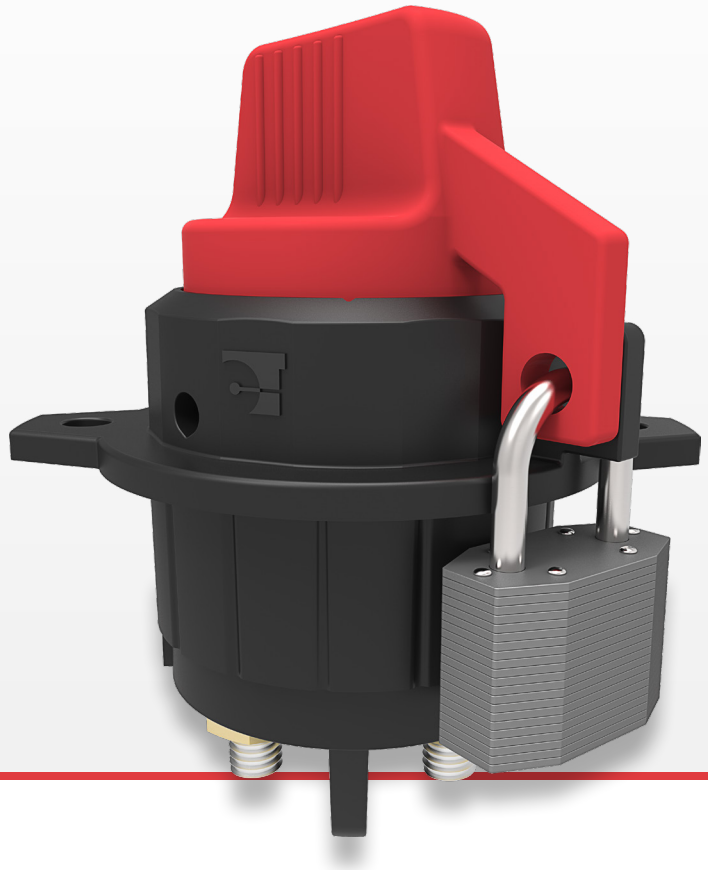
Littelfuse® | Carling Technologies®
A Littelfuse® Brand

BD-Series

Battery Disconnect Power Switch

PRODUCT WEBPAGE

request sample, configure part, watch video





The 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.

1	100-300	12-24	IP67 Sealing
Pole	Amps	VDC	Above-Panel

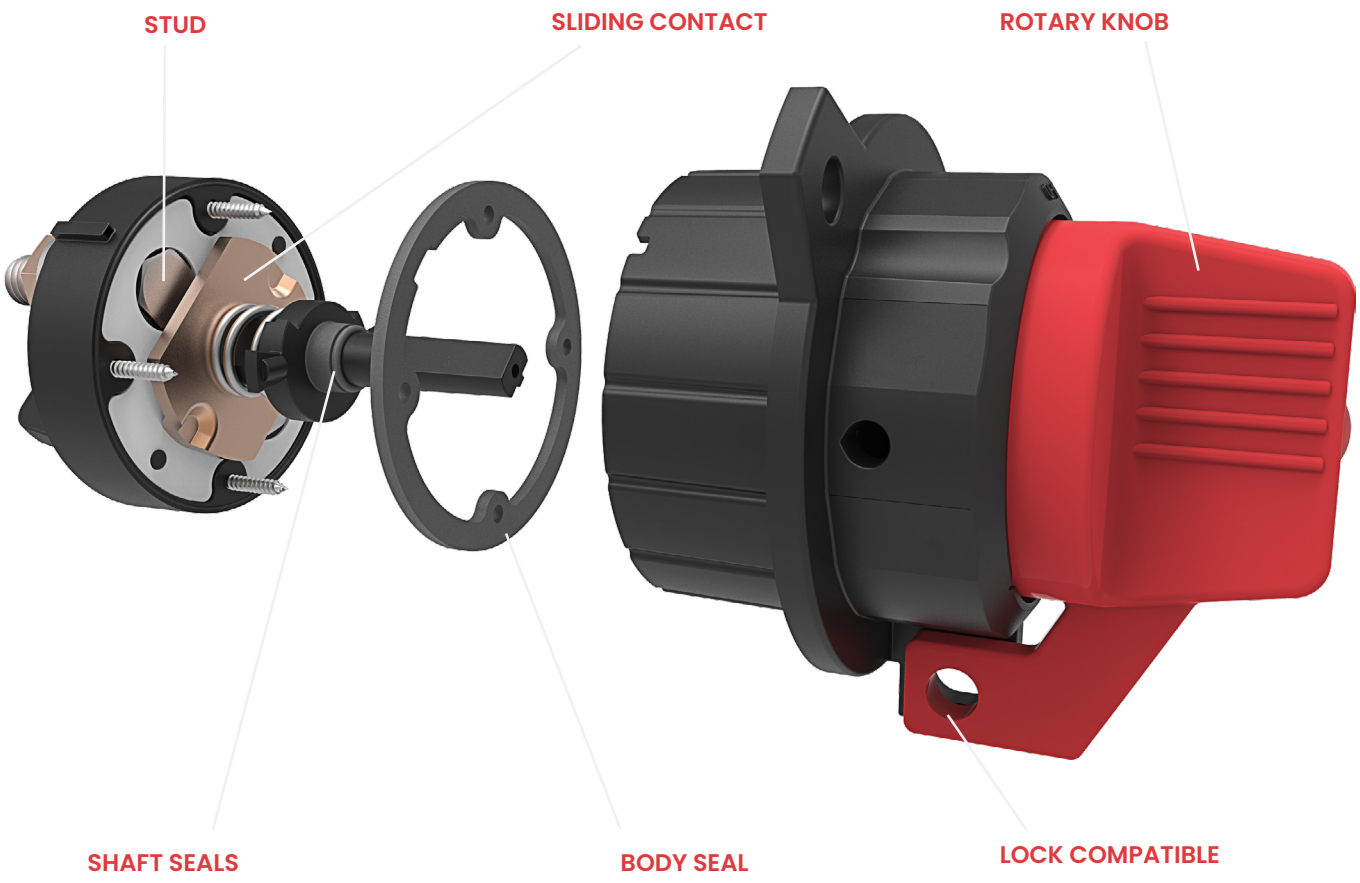
Typical Applications

- On/Off-Highway Equipment
- Marine

www.carlingtech.com 860.793.9281 sales@carlingtech.com

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Design Features



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Tech Specs

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.12Vtest @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.

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	IP67, 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)

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

Sample Part Number: BD A 10 - R A

Selection	1	2	3		4	5

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[1] M14 Stud

4. KNOB COLOR

R Red
Y Yellow
B Black

5. LEGEND

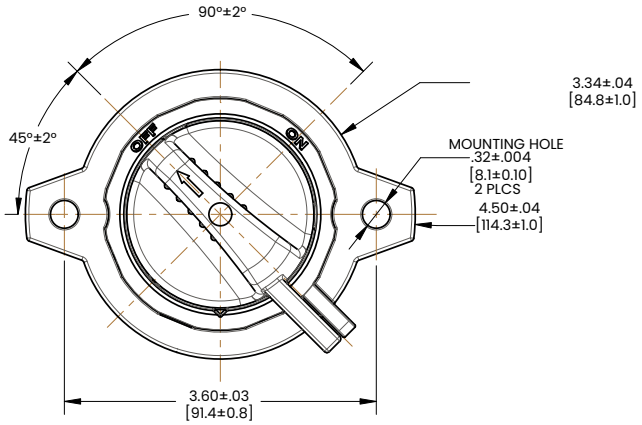
A Arrow Legend, White Color

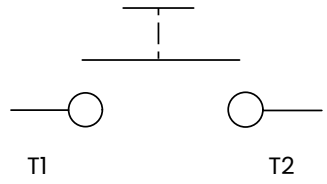
Notes:
1 Only available with code B from box 2.

Configure Complete Part Number > | Browse Standard Parts >

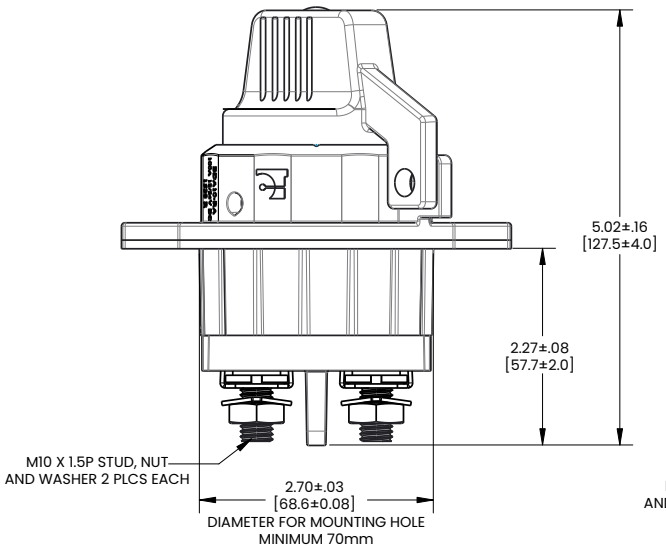
Dimensional Specs

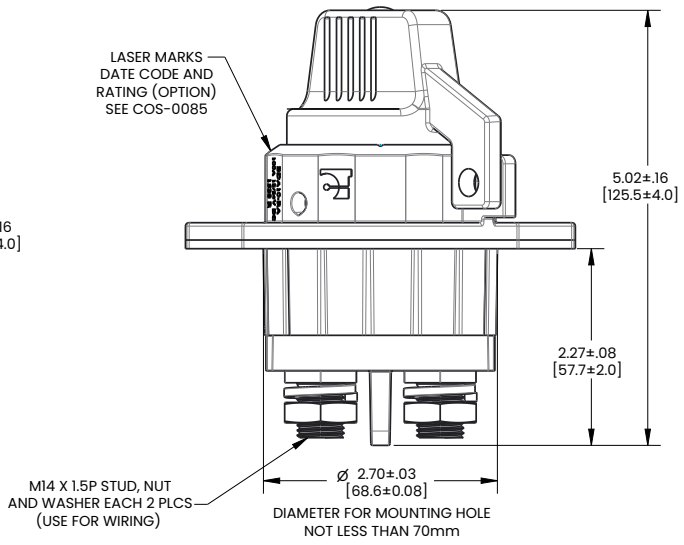
inches [millimeters]





"ON/OFF" SINGLE POLE SINGLE THROW SWITCH CIRCUIT DIAGRAM



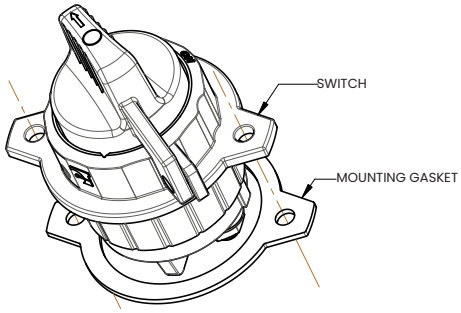


COS-0085 Rev: E, CLA-0141 Rev: C
*Manufacturer reserves the right to change product specification without prior notice.

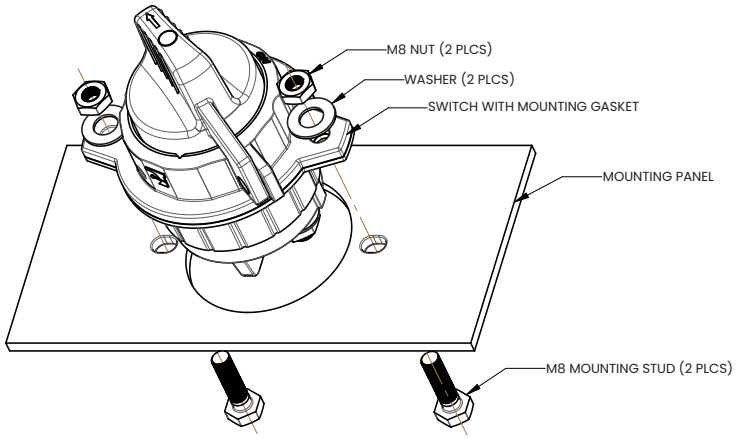
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Mounting Method 1

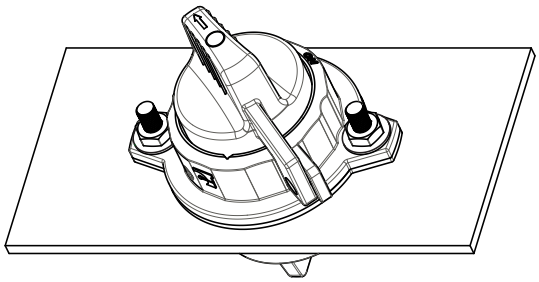
inches [millimeters]



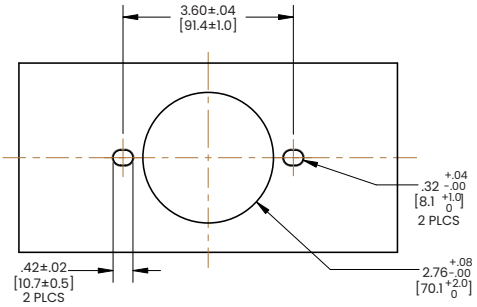
MOUNTING STEP 1: ATTACH MOUNTING GASKET WITH THE SWITCH ORIENTATION AS SHOWN



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



MOUNTING STEP 3: TIGHTEN 2PLCS M8 NUTS (REC. TORQUE [10-5Nm])



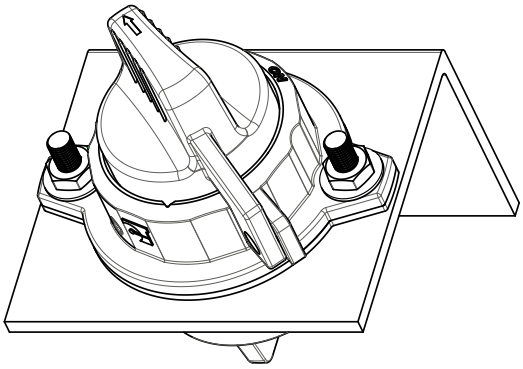
MOUNTING PANEL

Notes:
1 Switch can be mounted horizontally or vertically.

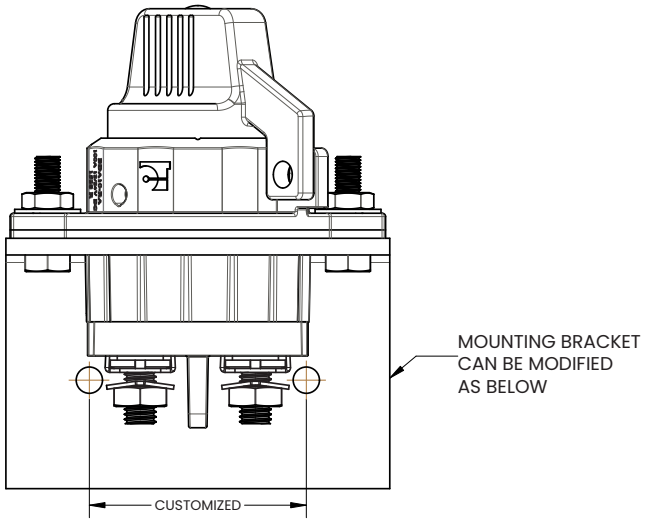
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Mounting Method 2

inches [millimeters]

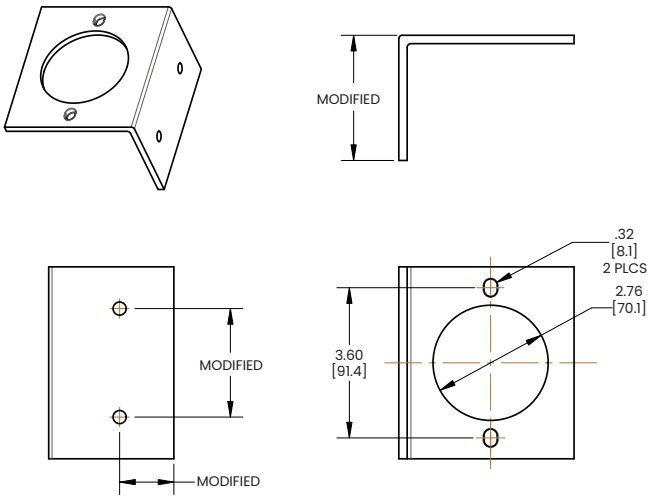


MOUNTING STEP 1: INSTALL SWITCH WITH MOUNTING BRACKET ORIENTATION AS SHOWN

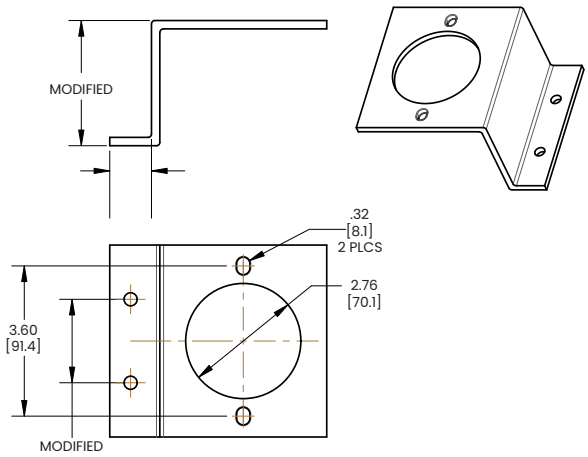


MOUNTING STEP 2: ORIENT AS SHOWN AND INSTALL THE SWITCH IN CUSTOMER PANEL.

"L" SHAPED MOUNTING BRACKET



"Z" SHAPED MOUNTING BRACKET

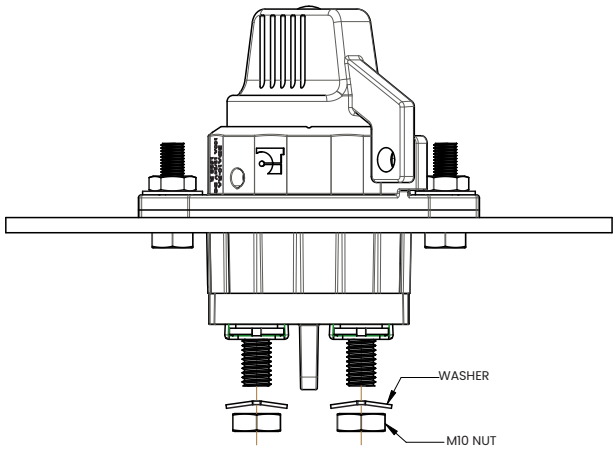


Notes:
1 Switch can be mounted horizontally or vertically.

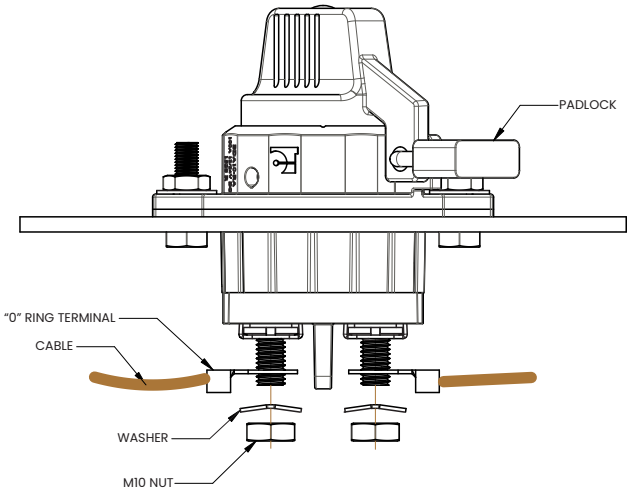
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Wiring

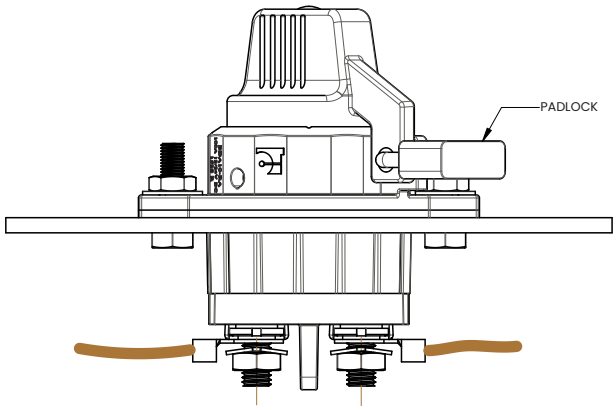
inches [millimeters]



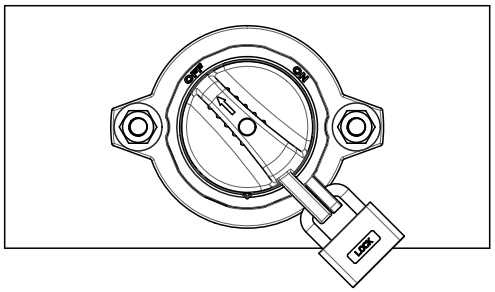
WIRING 1: DISCONNECT WASHERS AND NUTS



WIRING 2: ATTACH 2PLCS 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 CONJUCTION WITH A PAD LOCK, SWITCH CAN BE
LOCKED IN THE "OFF" POSITION AS A SAFETY MEASURE

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