



BATTERY CAPACITY METER INSTRUCTION GUIDE

Product Diagram



Product Overview

- BigBattery's 350A Battery Capacity Meter is a high-precision coulombmeter which will monitor your batteries' voltage, current, & remaining capacity to give you an accurate, real-time depiction of the state of your batteries as you use them.
- This meter is suitable for any application that uses our batteries, such as golf carts, RVs, camper vans, food trucks, electrical equipment, and more.

Battery Compatibility

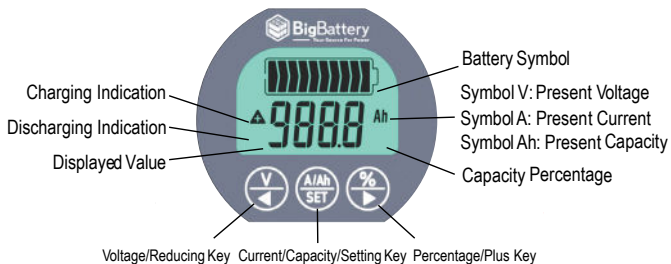
- BigBattery's 350A Battery Capacity Meter is compatible with any of our lithium-ion batteries, including both our nickel magnesium cobalt (NMC) and lithium iron phosphate (LiFePO₄) batteries. It has a working voltage from 8V to 120V.





Technical Parameters

Parameter	Value	Unit
Working Voltage	8.0 - 120.0	V
Working Dissipation	10.0 - 12.0	mA
Standby Dissipation	0.5 - 0.6	mA
Sleep Dissipation	50 - 60	uA
Voltage Accuracy	±1.0	%

Parameter	Value	Unit
Current Accuracy	±1.0	%
Capacity Accuracy	±1.0	%
Backlight On Current	80.0 - 120.0	mA
Preset Capacity Value	0.1 - 999	Ah
Working Current	0.0 - 400.0	A
Temperature Range	14 - 140	°F
Weight	410	g
Size	ø59*20	mm

Interface Overview



- Press the  key to display present voltage;
- Press the  key to display present current, then press the  key again to display present Ah capacity;
- Press the  key to display the present capacity percentage, as shown in the figure below.



present voltage



present current



present Ah capacity

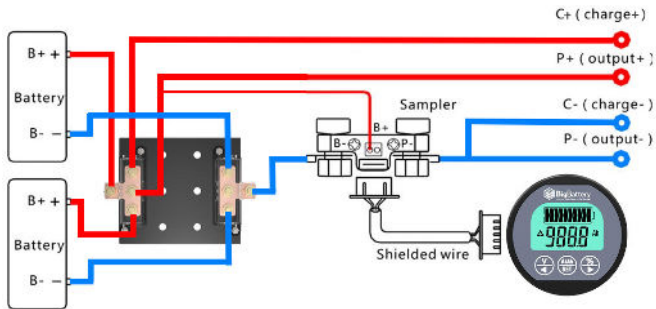


present capacity percentage

Connection Overview

Included with the 350A Battery Capacity Meter is a shielded communication wire, a shunt, and a 20AWG ring terminal wire.

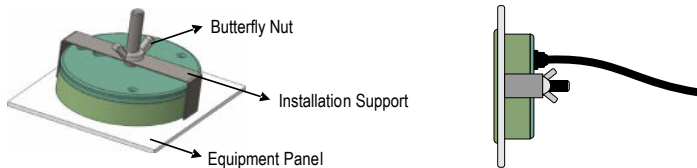
1. First, connect the ring terminal end of the 20AWG wire to the positive side of the busbar and feed the other end into either of the two small holes labeled "B+" on the green terminal block located on the shunt. Once the wire is fed into the hole, use a small flathead screwdriver to tighten the screw and secure the wire.
2. Then, connect the bolt labeled "B-" on the shunt to the negative side of the busbar and connect the bolt labeled "P-" on the shunt to both the negative cable of the output and the charger. Connect the positive cable of the output and charger to the positive side of the busbar.
3. Finally, connect one end of the shielded wire to the white socket on the shunt, and the other end to the capacity meter socket. Confirm that the display turns on after being powered.
4. Connection Principle: Ensure that all current will pass through the shunt. Use the connection diagram on the following page as a reference when connecting cables and wiring.








NOTE: Cable colors may differ from colors in diagram.


Mounting


First, create a round hole with a diameter of 54.5 mm on the panel of your equipment. Next, insert the meter into the hole from the front. Finally, tighten the bracket on the back, as shown in the figure below.







Initial Setup

1. Once all wires have been connected, turn on the meter. The screen should display the capacity percentage. If the screen doesn't turn on, check the connections. Begin charging or discharging the battery and check whether the current shown matches the actual current. If there is a large deviation, check the connections.
2. To program the amp-hour capacity, hold the  key for 3 seconds to enter into the Ah capacity setting interface. You will see the setting value flicker, you can then adjust the capacity by pressing the  key to decrease the value and press the  key to increase the value. You can hold down the keys to continuously adjust the value. Once the capacity is properly set, press the  key to save and exit. We recommend setting this as 10% less than the rated capacity of your batteries in order to have a buffer and increase the lifespan of your batteries.
3. In order to calibrate the capacity percentage you will need to reset it when the battery is either at full capacity or empty. To do this, first press the  key to switch to the percentage display and follow either of the two methods below.

Method 1 (recommended): After fully charging the battery, hold the  key for 3 seconds to set the capacity display to 100%.

Method 2: After fully discharging the battery, hold the  key for 3 seconds to set the capacity display to 0%.

Functional Behavior

1. When charging or discharging, it's important that the coulombmeter is functional or else the capacity will not properly calculate.
2. When connected to a load and the discharge current is greater than the "Backlight On" current, the screen will display the discharging symbol: 
3. When connected to a charger and the charge current is greater than the "Backlight On" current, the screen will display the charging symbol: 
4. When the charge or discharge current value is less than the backlight turn-off current, the meter will enter into low power mode and the backlight will turn off; the meter will retain its programmed parameters. The backlight can also be turned off or on by holding the  &  buttons at the same time.
5. Due to the sensitivity of the meter, you may see the backlight turn on for a short time due to influence from nearby electronics such as the motor turning on or off and other inductive loads, this is normal.
6. Rapidly changing current can affect the sampling accuracy which may cause errors.

Attention: Avoid having the meter under sunlight for long periods of time and having the meter in temperatures below 14°F or greater than 140°F, this can shorten the lifespan of the LCD screen.