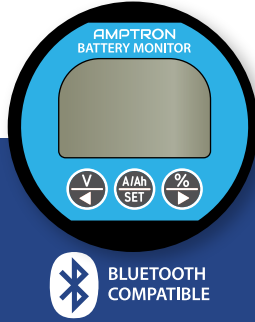


USER MANUAL

COULOMETER BATTERY MONITOR

AT-COULMON-BT-500A-8-80AV01

Please read through the guide in detail before installing and using your new battery monitor. Should you have any questions concerning safety precautions, installation or use, please contact us using the contact details below.



Product Introduction:

The Coulometer Battery Monitor is a high-precision meter that allows you to check the status of your battery via the monitor display or your smartphone with the Amtron BluPro Smart Monitor app. Through the use of the current shunt, the battery monitor measures the discharge or recharge currents and calculates the Ampere-hours (Ah) going in and out of the battery. High-precision voltage measurements are taken and displayed in real-time through the use of a field-installed sense wire. The Coulometer battery monitor is well-suited for all types of Lithium-ion, lead-acid and nickel-metal hydride batteries.

Applications:

Suitable for traction/mobile and stationary applications.

- Golf Carts & Utility Vehicles
- Marine RVs
- Solar Energy Storage
- Aerial Work Platforms
- Robots

Data Displayed:

- Battery Voltage
- Battery Current
- Battery State of Charge (SOC)
- Total Ampere-hours

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Parameter	Min	Max	Unit
Voltage	8.0	80.0	V
Current	0.0	500.0	A
Capacity	0.1	999.0	Ah
Active Parasitic Current		14.0	mA
Standby Parasitic Current		0.8	mA
Sleep Parasitic Current		80.0	uA
Voltage Accuracy	±1		%
Current Accuracy	±1		%
Capacity Accuracy	±1		%

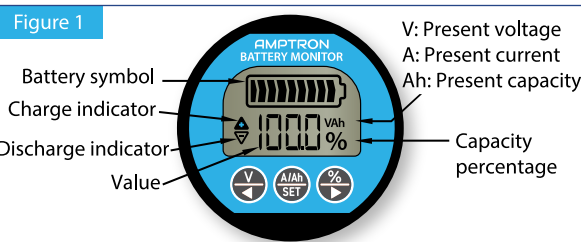
Included Components:

- Current shunt
- Shielded wire (3M)
- Display
- Butterfly nut
- Sense wire 22AWG (1M) with fuse.

Additional Components Needed For Installation:

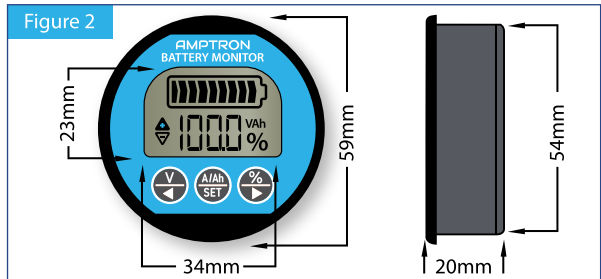
- Additional battery cable (for the negative terminal)
- 54mm hole saw or knock out tool (for panel-mount applications)

Battery Display:



COULOMETER BATTERY MONITOR

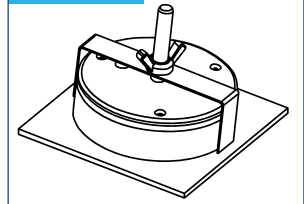
Dimensions:



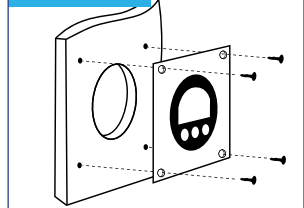
Monitor Display Installation:

1. Use a hole saw to cut a 54mm hole in the surface on which the battery monitor is to be mounted.
2. If you can access the hole from the rear, insert the monitor into the hole from the front. From the rear, slip the bracket over the stud and screw the wingnut onto the stud and tighten until the bracket is firmly holding the display in place.
3. If you cannot access the hole from the rear, then you can use the alternative attachment flange, following similar steps as specified in point 2. Then use the 4 screw holes to attach the monitor with the attachment flange from the front of the hole.

Rear Mount



Front Mount



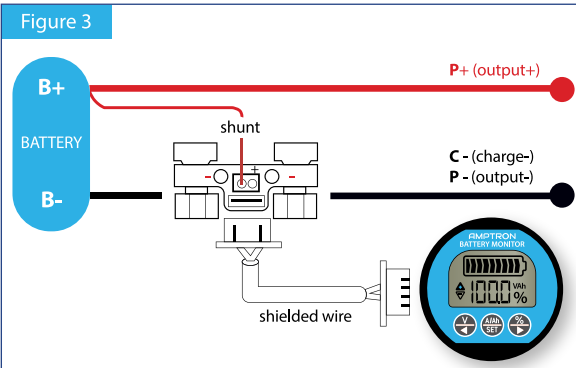
COULOMETER BATTERY MONITOR

Electrical Connections:

NOTE: Given the multitude of different applications for which this monitor can be used, the correct gauge of wire to be used is not specified. If you are unsure of the correct gauge for your setup, please consult a qualified automotive electrician or contact Amtron technical support for advice.

As shown in figure 3:

1. Connect the "B-" terminal of the shunt by running a cable to the negative terminal of the battery.
2. Connect all the load and charger negative cables to the "P-" terminal of the shunt, or if these cables are combined onto a bus bar or fuse box, then run a cable from the bus bar or fuse box.
3. Connect the sense wire to one of the two terminals marked "B+" on the shunt, and connect the ring connector to the positive terminal of the battery.
4. Finally, connect the monitor's shielded display cable (already attached to the display) to the shunt.



COULOMETER BATTERY MONITOR

Preparation Steps:

Fully charge the battery bank such that it reaches 100% SOC. Failure to take this step will lead to erroneous SOC readings.

Setting Up The Battery Monitor:

1. Ensure the battery display indicates the discharge current and the charge current correctly. Use the charge and discharge indicators to ensure it is capturing the appropriate current direction (in/out).
2. Ensure that the battery voltage is displayed correctly.
3. Fully charge the battery bank such that it reaches 100% SOC.
4. To initialise the capacity, press the % button for three seconds to set the capacity to 100%.
5. To enter the capacity, press the A/Ah button for three seconds. Use the V button and the % button to increase or decrease the capacity. Press the A/Ah button when done.
6. **For parallel connections:** Enter the total capacity of the system by adding the capacities in Ahs of each battery. For example, three 50Ah batteries will sum up to 150Ah.

For series connections:

- a. The system capacity will equal the capacity of a single battery.
- b. Connect the voltage sense wire to the battery that has the positive terminal of the system.

For Series-Parallel connections:

Connect the shunt to the battery that has the negative terminal of the system, and the voltage sense wire to the battery that has the positive terminal of the system.

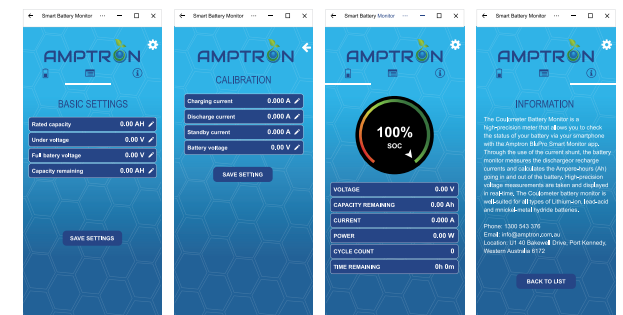
Connect 'Amtron BluPro Smart Monitor App'

1. Connect to [Amtron BluPro Smart Monitor App](#) via the Google Play store or Apple App store.



COULOMETER BATTERY MONITOR

2. Open the app and select the Battery Monitor by its serial number.
3. At the 'BASIC SETTINGS' screen, enter the battery parameter information required followed by tapping 'SAVE SETTINGS' on the bottom.
4. Tap the setting button on the top right, into the 'CALIBRATION' screen, enter the battery parameter information required, followed by tapping 'SAVE SETTING' at the bottom.
5. You will now be in the dashboard where you can monitor the battery's state of charge, voltage, current, temperature, time remaining and the cycle life.
6. Your smart battery monitor is now ready.



Technical Support: If you have technical questions about your Battery Monitor, please contact the original place of purchase or Amtron direct.

Warranty: Two-year limited warranty.