MIDNITE SOLAR INC.

# Battery Capacity Meter

## MNBCM / MNBCMS


## *Keep your batteries alive longer!*

***MidNite has a new battery capacity meter. This meter was designed for our Africa distributor to aid in keeping batteries alive longer.***

MidNite Solar's voltage based battery capacity meter has auto sensing for 12, 24, 36 and 48 volt batteries. This new meter has LEDs that correspond to battery voltage with an accuracy of +/- 1%. These LED indicators show if batteries have received a full charge in various durations; recently, longer than one week or over two weeks.

Sulfation can be a problem. The MidNite battery capacity meter indicates a lack of sufficient charging that can lead to sulfation. There are settings for Gel, AGM and flooded batteries.

At a glance reading from a distance is ideal for golf carts, forklifts and virtually any other battery powered vehicle, toy or tool.

The MidNite battery capacity meter is voltage based, requires no shunt and needs no calibration. For mobile applications, MidNite's MNBCMS version supplies an extra switch wire. This feature allows the LEDS to be turned off while retaining the Battery Care memories. This wire should be connected through a fused switch to Battery positive. This is usually the ignition switch of a vehicle but can also be any type of push button or toggle switch.


Batteries have a 90% charge


Batteries have a 50% charge


Batteries have only a 20% charge

GREEN LED will light up when the batteries have received a "Full Charge" with in the last week.

AMBER LED will come on if the batteries have not been fully charged for 1 week.

RED LED shows that the batteries have not been charged for 2 weeks or more.

**www.midnitesolar.com**
**17722 67th Ave. NE., Arlington, WA. 360-403-7207 FAX: 360-691-6862**

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## PRODUCT SPECIFICATIONS

| | |
|---|---|
| **Battery voltage (automatic select)** | **12v, 24v, 36v, 48v** |
| **Battery types supported** | **Gel, AGM, Flooded Lead Acid** |
| **Maximum input voltage (reverse polarity protected)** | **70v** |
| **Average power draw** | **12.5 mA** |
| **Switched version when "Off"** | **6mA or .07 watts @ 12v** |
| **Physical size** | **4.75" x 3.76" x 0.85"** |
| **Wire size** | **9 feet - 10 inches, 22 AWG** |

**Approximate battery voltages relative to percent State of Charge.**

| 12 Volt Batt. | 24 Volt Batt. | 36 Volt Batt. | 48 Volt Batt. | State of Charge |
|---|---|---|---|---|
| 11.65 | 23.30 | 34.95 | 46.60 | 10% |
| 11.77 | 23.54 | 35.31 | 47.08 | 20% |
| 11.89 | 23.79 | 35.67 | 47.58 | 30% |
| 12.02 | 24.03 | 36.06 | 48.06 | 40% |
| 12.14 | 24.28 | 36.42 | 48.56 | 50% |
| 12.26 | 24.52 | 36.78 | 49.04 | 60% |
| 12.38 | 24.77 | 37.14 | 49.54 | 70% |
| 12.51 | 25.01 | 37.53 | 50.02 | 80% |
| 12.63 | 25.25 | 37.89 | 50.50 | 90% |
| 12.75 | 25.50 | 38.25 | 51.00 | 100% |

**The green LED will be illuminated under the following conditions:**
**FOR BATTERY SYSTEM VOLTAGE: 12v, 24v, 36v, 48v**
**For Gel batteries, the voltage must reach 14.2v, 28.4v, 42.6v, 56.8v (for 1 hour)**
**For AGM batteries, the voltage must reach 14.4v, 28.8v, 43.2v, 57.6v (for 1 hour)**
**For Flooded batteries, the voltage must reach 14.7v, 29.4v, 44.1v, 58.8v (for 2 hours)**

**There are ten battery state of charge LEDs and three battery care LEDs.**
**State of charge is displayed by the arched ten LED percentage meter.**
**The three battery care LEDs are on the left side and will indicate the following conditions:**
**1- The top GREEN LED will light up when the batteries have received a "Full Charge" with in the last week.**
**2- The center AMBER LED will come on if the batteries have not been fully charged for 1 week.**
**3- The bottom RED LED shows that the batteries have not been charged for 2 weeks or more.**


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