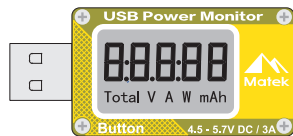# USB Power Monitor

SKU: UPM

The UPM can be used to measure the output performance of any USB charging adapters, PC USB, Car USB chargers & Power banks etc. It can also be used to diagnose faulty USB ports, evaluate the quality of USB cables & the capacity of portable power source.

Features

- Low power MCU with 10bit ADC
- 25x15mm segment LCD shows clear and accurate numerical readings
- 6 modes allows the user to measure real-time Voltage,Current,Watt,Capacity, Total capacity & Time
- Very low current sensing resistor(10mΩ) for less voltage drop
- Over-voltage protection & alarm(Max 5.7V)
- Over-load protection(Max.3A)
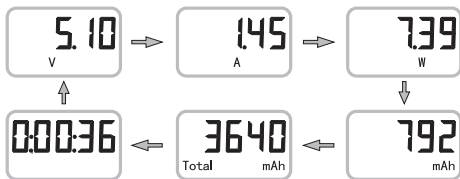- Self-closedown function to avoid the device is over charged.

Specifications

- Working voltage range: 4.5~5.7V DC
- Working current range: 0~3A
- Voltage precision:+/-0.5% , Resolution:0.01V
- Current precision:+/-1% , Resolution:0.01A
- Current sensing resistor: 10mΩ
- Standby current: 20mA
- Size & weight: 43x25x11mm, 15g

How to Use

1. Connect the UPM into the host machine (Home USB charging adapter, Car USB charger, PC USB port, portable power bank,etc.)
   - If the input voltage is out of the range of 4.5~5.7V DC, the UPM will alarm "BeBe" & voltage value will blink

2. When the UPM is ready for use it will turn on blue LED, beep & display the USB voltage(V)

3. Connect a target device to the UPM. The UPM will beep once again, then the Initial mode voltage(V) will be replaced with current(A)

4. The 6 modes of the UPM can be changed by pressing the button to cycle as follows.

- Voltage(V) - Input voltage value is displayed in real time.
- Current(A) - Current value is displayed in real time.
- Power(W) - Input power is displayed in real time.
- Capacity(mAh) - Output capacity add up to value in real time (Count from UPM & device connection through disconnection).
- Total capacity(Total mAh) - Count from UPM & USB adapter connection through disconnection
- Time(0:00:00) - Charging time escaped in real time (Count from UPM & device connection through disconnection).

5. The current will be cutted automatically when the device is full charged or unpluged.

   UPM alarms "Be..Be..Be", blue LED goes out, and "End" is displayed.
   - Press the button to clear "End" & switch on the current.

6. Notes
   - Capacity (mAh) will be cleared after the device is unplugged
   - Total mAh will be cleared after the UPM is unplugged from USB power source
   - Blue LED ON/OFF - Output ON/OFF
   - Protection - Over 5.7V or over 3A, No output.

Settings

Self-closedown function & End Level setting

UPM detect the full charging according to End Level(EL). Pls set the EL according to different devices.
If the current is cutted automatically & device is not full charged, Pls adjust the EL value bigger.

- Hold the button 3 seconds to enter the setting. Quick press the button to cycle through the value (10, 20, 30, 40, 60, OFF). Default value is 30.
- Save & exit with beep if no action within 5 seconds.
- OFF - Close the function.

Connections

| Home USB charger, Car charger, PC USB Portable power bank | UPM | USB Cable | Phone, Tablet PC, GPS, etc. |