1.Description:

XY-LUP is an instrument with integrated buck-boost power supply module and multi-function voltage ammeter.

In 'PER' work mode,it can be used as buck-boost power supply module.It can convert to DC 3.5V~12V to DC 1.2V~24V and power is about 2W~3W.

In 'VAH' work mode,it can be used as multi-function voltage ammeter.It can be used to measure voltage,current,power,battery capacity,discharging time.

It is very suitable for technical engineers to develop, debug instrumentation, after-sales engineers travel maintenance, etc.

2.Features:

1>.Dual operating system
2>.Support power supply output function
3>.Support test power supply function
4>Support over power protection
5>.LCD high definition display
6>.Automatic calibration
7>.Multi-parameter simultaneous display
8>.Support power saving mode
9>.Three voltage input methods
10>.Support voltage and current calibration

3.Parameters:

1>.Product name: XY-LUP Boost Buck Converter Voltmeter Ammeter;
2>.Model: XY-LUP;
3>.Work Voltage:DC 3.5V-12V;
4>.Output Voltage:DC 1.2V-24V;
5>.Output Power:3W(MAX);
Maximum output power within 2W when output DC 1.2V~2V;
Maximum output power within 3W when output DC 2V~20V;
Maximum output power within 2.5W when output DC 20V~24V;
6>.Output voltage accuracy:+/-0.5%
7>.Output voltage accuracy:+/-1%
8>.Measure voltage range:DC 0~35V
9>.Measure current range:0~3A
10>.Measure power range:0~110W
11>.Measure battery capacity range:0~9999Ah
12>.Discharging time:0~100hours
13>.Work Temperature:-40℃~85℃;
14>.Work Humidity:0%~95%RH;
15>.Size:77*33*16mm;

4.Mode Switching:

1>.The default is the Power Output Mode PER at first;

2>.Keep press button 'ON/OFF' to switch mode;

3>.When power is remove, module can remembers current operating mode.The default work will be the same mode when power on at next time.

5.Power Output Mode PER:

1>.Input from standard USB male socket,Micro USB female socket and 'VIN+/VIN-';

2>.Output from 'OUT+' and 'OUT-'.The 'COM' terminal can not be used at PER mode.

3>.Rotate the potentiometer to adjust the output voltage;

4>.There is a symbol 'OUT' when work in PER mode;

5>.Terminal 'COM' unavailable at PER mode;

6>.Short press button 'ON/OFF' to turn ON or OFF output voltage.At this time, screen will display 0V.

7>.Keep press button 'ON/OFF' for 2 second to switch display output current or output power at the second line.

8>.Keep press button 'ON/OFF' for 5 second to turn ON or OFF display screen backlight.But the module can output voltage normally.

9>.Keep press button 'ON/OFF' for 10 second to turn switch work mode PER or VAH.

10>.The module supports over-power protection. If the rated power is exceeded, the module will automatically stop output voltage and the LCD will display 'OPP' and flash.

11>.The module does not support reverse connection protection, please do not short circuit and reverse.

6.Multi-function Meter Mode VAH:

1>.Module work voltage : Standard USB male socket,Micro USB female socket and 'VIN+/VIN-' are used to provide work voltage from module.

2>.Measuring voltage : 'V' and 'COM' terminals are used to measure Measured Device Voltage.

3>.Measuring current : 'A' and 'COM' terminals are used to measure Measured Device Current.

4>.Short press button 'ON/OFF' to switch display Measured Device Voltage,Current,Power,Time.And also can measure Battery capacity,Battery discharging time if connect battery.

5>.Keep press button 'ON/OFF' for 5 second to turn ON or OFF display screen backlight.But the module can output voltage normally.

6>.Keep press button 'ON/OFF' for 10 second to turn switch work mode PER or VAH.

7>.The module does not support reverse connection protection, please do not short circuit and reverse.

8>.Potentiometer is not available at VAH mode.

7.Calibrate Voltage/Current:

1>.Calibrate Voltage:Keep press button 'ON/OFF' before power ON and then power ON and release button.Automatically enter calibration mode after 5 second.The voltage display will flashing.Short press button to adjust and calibration voltage. Adjustment range is -0.2V~0.2V.Enter current calibration mode if keep press button for 2 second.

2>.Calibrate Current:Enter current calibration mode if keep press button for 2 second after Calibrate Voltage.The current display will flashing.Short press button to adjust and calibration voltage. Adjustment range is -0.02A~0.02A.Automatically save parameters and return to the normal display interface if keep press button for 5 second.

3>.User needs to repeat the correction multiple times. If the voltage(current) error exceeds 0.2V(0.02A).

4>.For example:Change 12V to 12.5V:

4.1>.First calibration:Change 12V to 12.2V

4.2>.Second calibration:Change 12.2V to 12.4V

4.3>.Third calibration:Change 12.4V to 12.5V

8.Use steps:

1>.Connect to power supply from input terminal;

2>.Set work mode by keep press button 'ON/OFF' for 10second;

3>.Connect load or Device Voltage;

4>.Rotate potentiometer to change output voltage if work in PER mode;

5>.Short press button 'ON/OFF' to switch parameter display;

6>.Test and use.

9.Application:

1>.Ordinary low power supply;

2>.Voltmeter;

3>.Ammeter;

4>.Battery capacity tester;

5>.Battery load capacity tester;

10.Note:

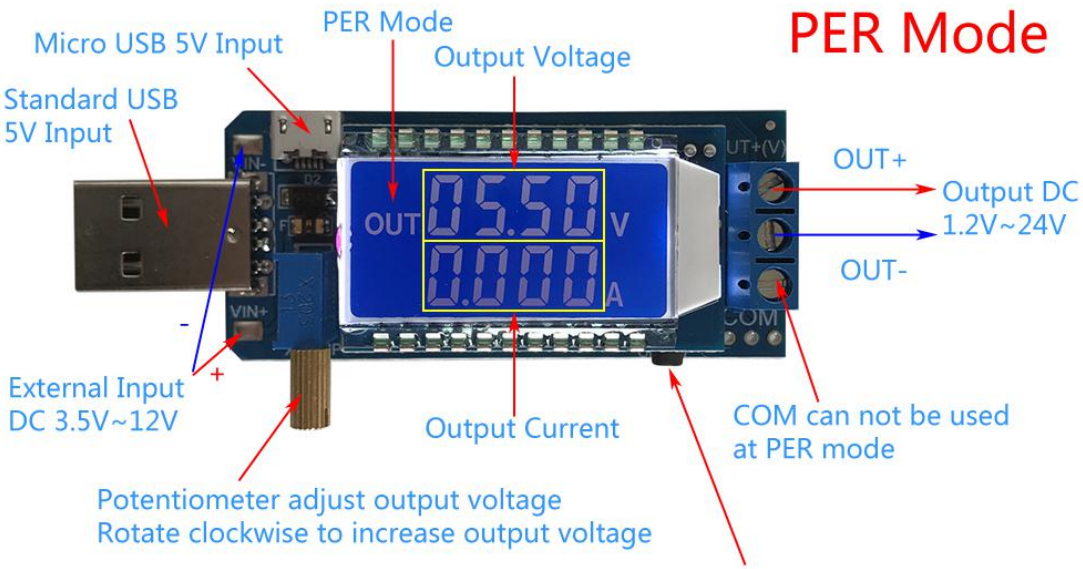
1>.The module does not support reverse connection protection, please do not short circuit and reverse.

2>.Adjust the working mode before use.

3>.USB just can input DC 5V.User need input from 'VIN+' and 'VIN-' if input 3.5V-12V.

11.Package:

1>.1pcs XY-LUP Boost Buck Converter Voltmeter Ammeter;



PER Mode

1.Short press button ON/OFF to turn ON or OFF output voltage.At this time, screen will display 0V.
2.Keep press button ON/OFF for 2 second to switch display output current or output power at the second line.
3.Keep press button ON/OFF for 5 second to turn ON or OFF display screen backlight.But the module can output voltage normally.
4.Keep press button ON/OFF for 10 second to turn switch work mode PER or VAH.

It is a low power output power module, please pay attention to the output power.

Maximum output power within 2W when output DC 1.2V~2V;
Maximum output power within 3W when output DC 2V~20V;
Maximum output power within 2.5W when output DC 20V~24V;

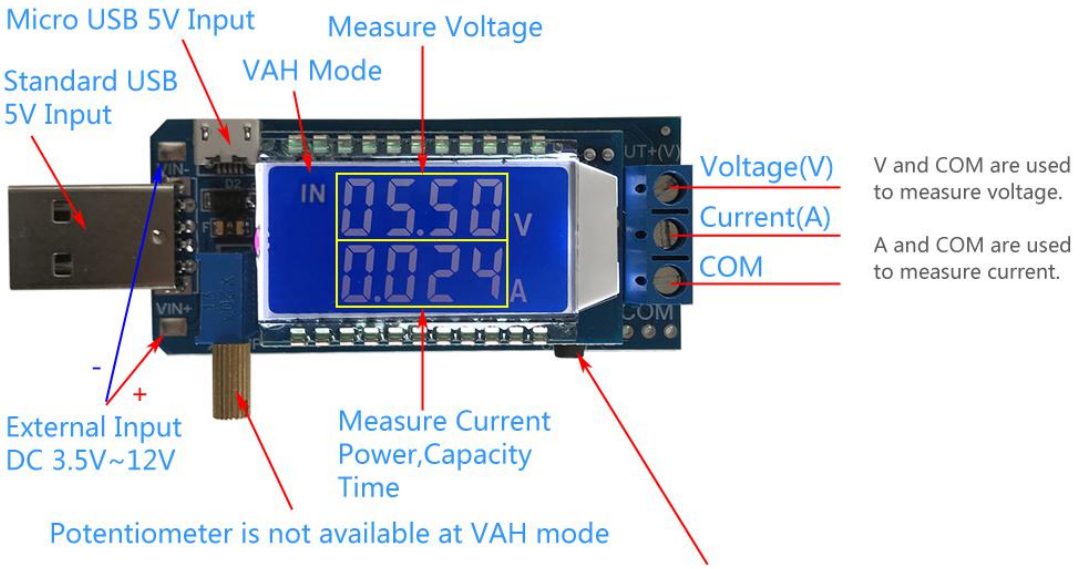
The module supports over-power protection. If the rated power is exceeded, the module will automatically stop output voltage and the LCD will display OPP and flash.

PER Mode:Wiring Diagram

Potentiometer regulates output voltage

VAH Mode

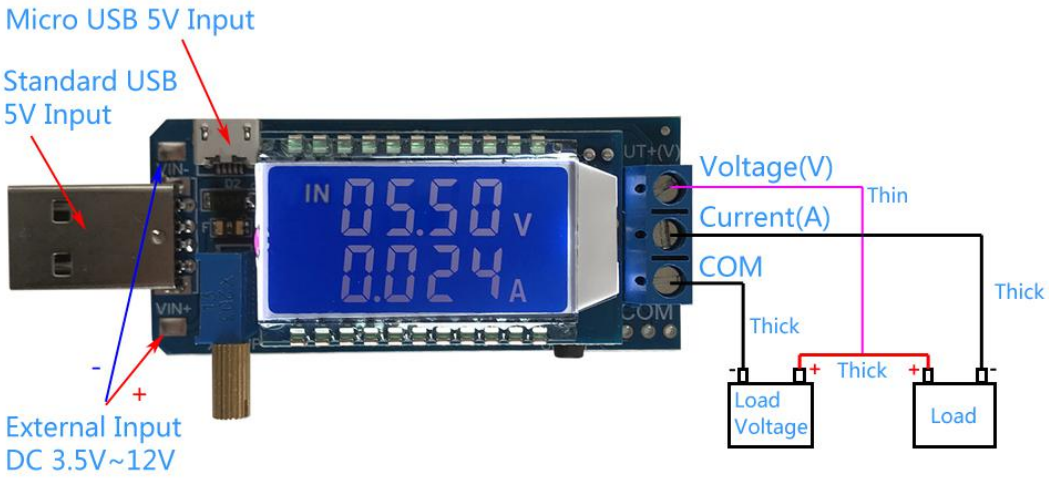
Measure Voltage(0~35V), Current(0~3A), Power(0~110W), Battery Capacity(0~9999Ah), Discharging Time(0~100h)



1.Short press button ON/OFF to switch display Measured Device Voltage,Current, Power,Time.And also can measure Battery capacity,Battery discharging time if connect battery.
2.Keep press button ON/OFF for 5 second to turn ON or OFF display screen backlight.But the module can output voltage normally.
3.Keep press button ON/OFF for 10 second to turn switch work mode PER or VAH.

The module does not support reverse connection protection, please do not short circuit and reverse.

VAH Mode : Wiring Diagram



Measure Voltage(0~35V), Current(0~3A), Power(0~110W),
Battery Capacity(0~9999Ah), Discharging Time(0~100h)

In VAH work mode,it can be used as multi-function voltage ammeter.

It can be used to measure voltage,current,power,battery capacity,discharging time

Calibrate Voltage/Current

1>.Calibrate Voltage:Keep press button ON/OFF before power ON and then power ON and release button.Automatically enter calibration mode after 5 second.The voltage display will flashing.Short press button to adjust and calibration voltage. Adjustment range is -0.2V~0.2V.Enter current calibration mode if keep press button for 2 second.

2>.Calibrate Current:Enter current calibration mode if keep press button for 2 second after Calibrate Voltage.The current display will flashing.Short press button to adjust and calibration voltage. Adjustment range is -0.02A~0.02A. Automatically save parameters and return to the normal display interface if keep press button for 5 second.

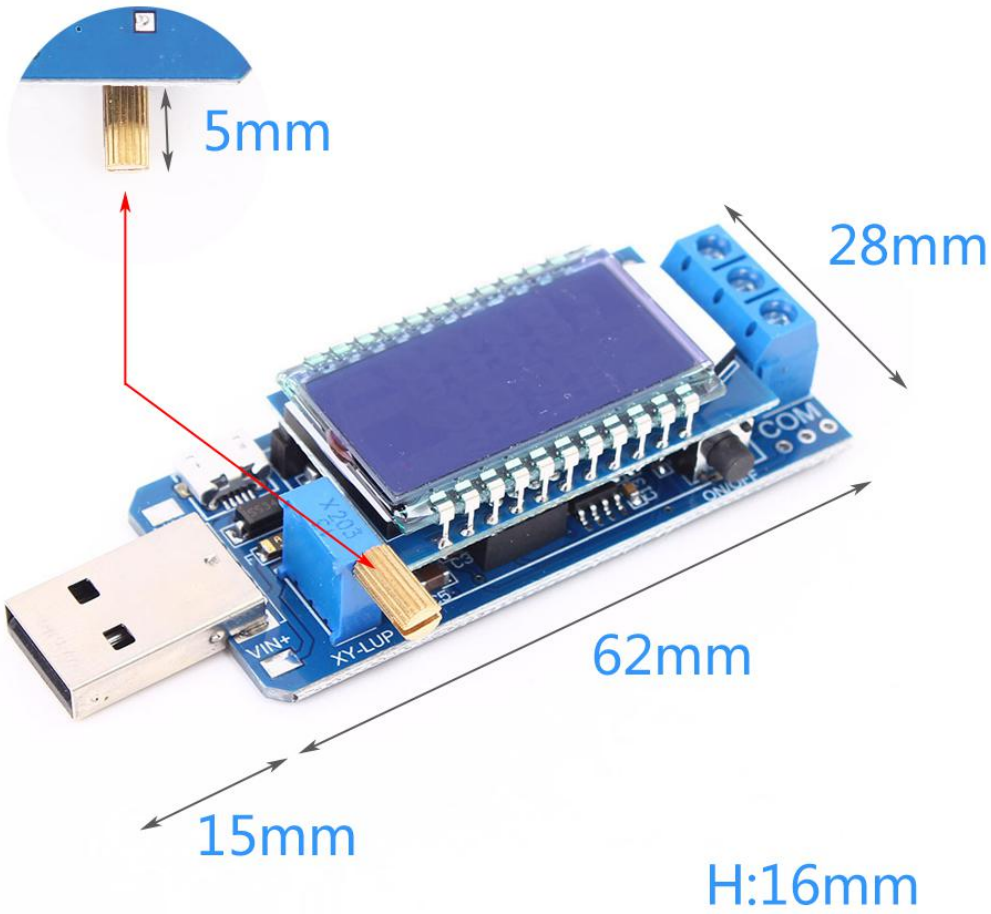
3>.User needs to repeat the correction multiple times. If the voltage(current) error exceeds 0.2V(0.02A).

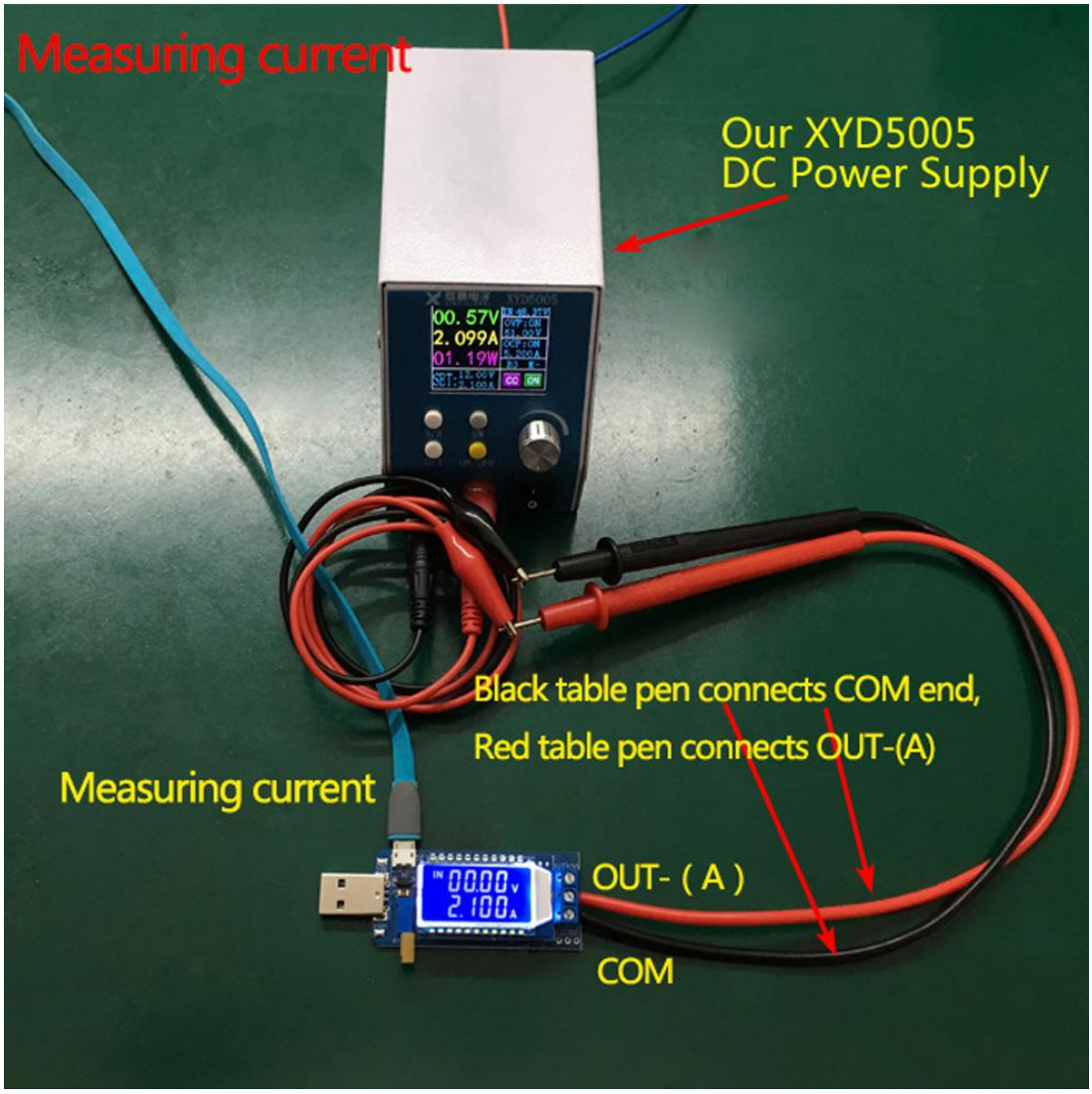
4>.For example:Change 12V to 12.5V:

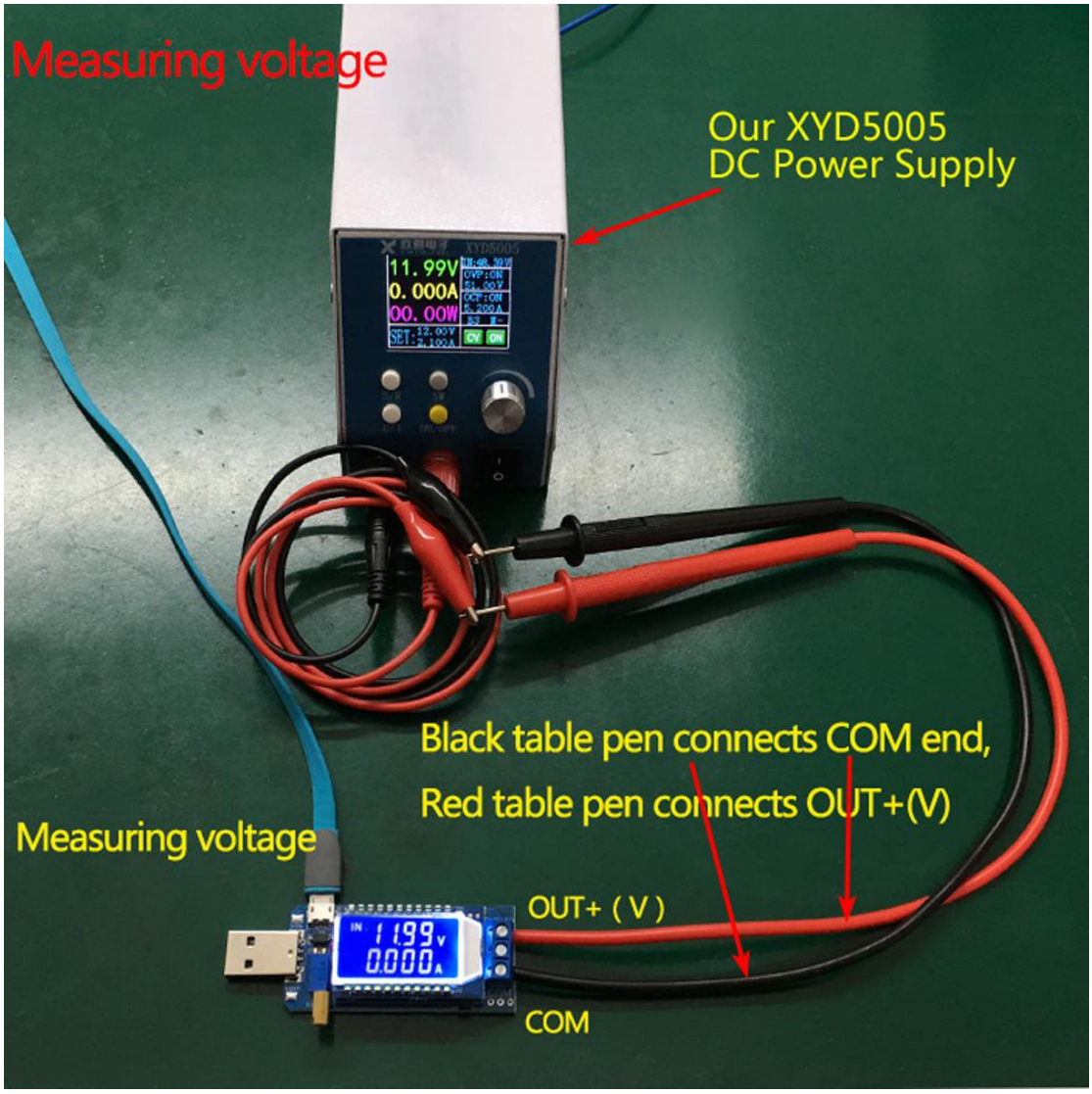
4.1>.First calibration:Change 12V to 12.2V

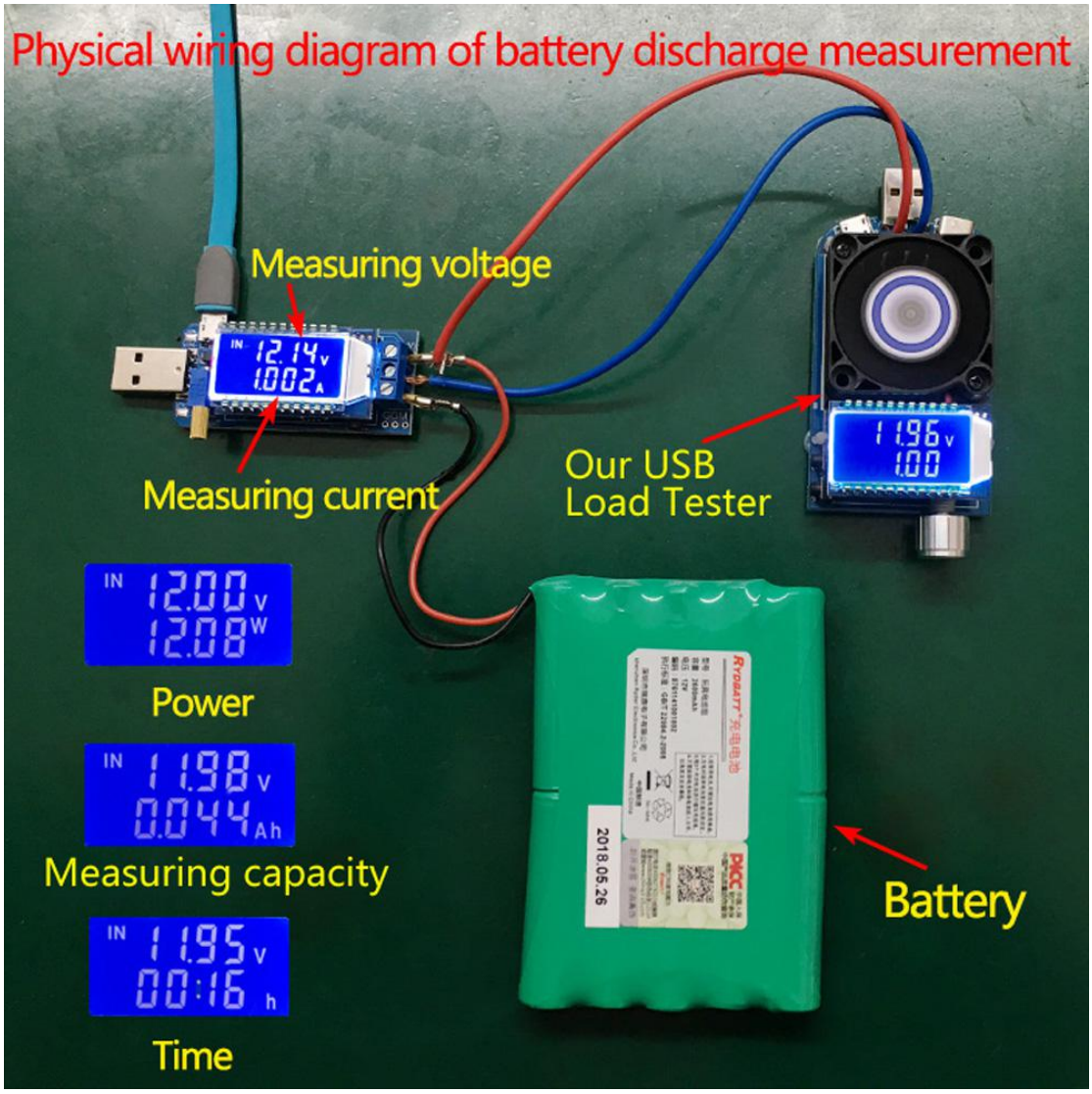
4.2>.Second calibration:Change 12.2V to 12.4V

4.3>.Third calibration:Change 12.4V to 12.5V


5mm
28mm
62mm
15mm
H:16mm
VIN+
XY-LUP
COM
ON/OFF


Measuring current
Our XYD5005
DC Power Supply
Black table pen connects COM end,
Red table pen connects OUT-(A)
Measuring current
OUT- (A)
COM


Measuring voltage
Our XYD5005
DC Power Supply
Black table pen connects COM end,
Red table pen connects OUT+(V)
Measuring voltage
OUT+ (V)
COM


Physical wiring diagram of battery discharge measurement
Measuring voltage
Measuring current
Our USB
Load Tester
Power
Measuring capacity
Time
Battery
2018.05.26


VIN-
VIN+
OUT
05.50
V
0.000
A
UT+(V)
COM