



1. Description:

XY-SK80H is a DC-DC 80W 5A CVCC Adjustable Automatic Buck Boost Power Supply Module with a new generation of larger LCD display screen.

It is a non-isolated converter which supports solar charging. It can convert DC 6V-36V to DC 0.6V-36V power supply and can provide stable output.

It can be used as ordinary buck power supply module, battery/solar charger or LED constant current drive and so on.



2. Features:

[Solar Charging]: It can output a stable voltage value when the input voltage changes which is very suitable for solar energy systems such as solar charging, solar power supply, solar voltage conversion.

[Adjust CVCC]: Constant voltage and constant current can not only stabilize the voltage, but also set the limit output current value to meet the current demand of the load. At the same time, it can also protect the load to avoid entering the over-current state.

[Larger HD LCD display screen]: It adopts an upgraded full view large screen,

which can display multiple parameters and working status at the same time. Experience more fluency.

[Programmable Multi Parameter]: It can set/display output voltage/current/power, work time, output electric energy, output capacity, input voltage and ON/OUT/CV/CC work status. You can also set default output state after power on.

[Multiple Protection Mechanisms]: Under-voltage, over-voltage, over-current, over-power protection, over-temperature, over-capacity, over energy protection and so on.

3.Parameters:

- 1>.Product Name: XY-SK80H 80W 5A CVCC Buck Boost Power Supply Module
- 2>.Work Voltage:DC 6V-36V
- 3>.Output Voltage: DC 0.6V-36V
- 4>.Output Current: 0~5A
- 5>.Output Power: 80W
- 6>.Voltage Display Precision:±0.5%+0.01V
- 7>.Voltage Display Resolution:0.01V
- 8>.Current Display Precision:±0.5%+0.003A
- 9>.Current Display Resolution:0.001A
- 10>.Conversion efficiency:About 88%
- 11>.Soft start:Yes
- 12>.Input Anti-reverse Protection:Yes
- 13>.Output Anti-backflow Protection:Yes
- 14>.Input Under-voltage Protection:Yes (4.7V-30V adjustable, default 4.7V)
- 15>.Output over-voltage Protection:Yes (0V-37V adjustable, default 37V)
- 16>.Output over-current Protection:Yes (0A-5.2A adjustable, default 5.2A)
- 17>.Output over-power Protection:Yes (0W-82W adjustable, default 82W)
- 18>.Over-temperature Protection:95℃
- 19>.Timeout Protection:Yes (0-100H adjustable, default OFF)
- 20>.Over-capacity Protection:Yes (0-9999AH adjustable, default OFF)
- 21>.Over-energy Protection:Yes (0-9999WH adjustable, default OFF)
- 22>.Work Temperature:-20℃~85℃
- 23>.Work Humidity:10%~85%RH
- 24>.Size:79*43*44mm

4.Potentiometer Function:

1>.Normal Display Status:

1.1>.Short(click) press: Switch display output power, output capacity, output energy, output time at the third line.

1.2>.Long(keep) press: ON/OFF parameter locking function. There is a lock symbol on left at the first line if turn ON parameter locking function. The parameter value cannot be changed at this status.It can be used to protect parameters from being modified by mistake.

1.3>.Rotate: Change output constant voltage value or constant current value or no function. Note:Parameters can be switched through 'V/A' button.

2>.Voltage/Current Set Status:

- 2.1>.There is a 'SET' and 'CV' or 'CC' symbol on left at the third line if enter Voltage/Current Set Status by rotate potentiometer.
- 2.2>.Short press:Switch the modified parameter bit.
- 2.3>.Long press: Not available.
- 2.4>.Rotate: Change output voltage value or constant current value or no function.

3>.Parameter Set Status:

- 3.1>.Short press:Switch the modified parameter bit.
- 3.2>.Long press: Not available.
- 3.3>.Rotate: Change parameter value.

5.V/A Button Function:

- 1>.Normal Display Status:
 - 1.1>.Short press:Enter the modified parameter voltage or current status.
 - 1.2>.Long press: Not available.

- 2>.Voltage/Current Set Status:
 - 2.2>.Short press:Switch the modified parameter voltage or current or save/exit.
 - 2.3>.Long press: Save voltage or current value and exit.

- 3>.Parameter Set Status:
 - Short press:Not available. Long press: Not available.

6.SW Button Function:

- 1>.Normal Display Status:
 - 1.1>.Short press: Switch display input voltage or output voltage at the first line. Note: There is a 'IN' symbol on left when display input voltage.
 - 1.2>.Long press: Enter parameter set interface.

- 2>.Voltage/Current Set Status:
 - 2.2>.Short press:Switch the modified parameter bit.
 - 2.3>.Long press: Not available.

- 3>.Parameter Set Status:
 - 3.1>.Short press:Switch the modified parameter.
 - 3.2>.Long press: Save parameter value and exit parameter set status.

7.ON/OFF Button Function:

- 1>.Normal Display Status:
 - 1.1>.Short press: Turn ON or OFF output voltage.
 - 1.2>.Long press: Clear statistical value at Power/Capacity/Energy/Time display interface.

- 2>.Voltage/Current Set Status:
 - 2.2>.Short press:Turn ON or OFF output voltage.
 - 2.3>.Long press: Not available.

3>.Parameter Set Status:

3.1>.Short press:Turn ON/OFF OAH/OPH/OHP function. Note: '----' means turn OFF this function.

3.2>.Long press: Switch the decimal point position to change the parameter unit for OAH/OPH. OAH range is 9.999Ah/99.99Ah/999.9Ah/9999Ah. OPH range is 9.999Wh/99.99Wh/999.9Wh/9999Wh.

8.Set Parameter:

1>.Set Output Voltage/Current.

1.1>.At Normal Display Status, short press 'V/A' button enter into voltage/current set interface.

1.2>.There is a 'SET' and 'CV' symbol on left at the third line and the bit keep flashing. It means to modify the voltage value first.

1.3>.Short press 'SW' button or Potentiometer can switch the modified bit.

1.4>.Rotating potentiometer changes the voltage value.

1.5>.Press 'V/A' button again to change current value and display 'CC' symbol and change value by the same method.

1.6>.Press 'V/A' button again to save and exit.

2>.Quickly Set Voltage or Current.

2.1>.This method is use to set voltage or current by rotary potentiometer without any other additional operations.However, it is not recommended, because as long as the potentiometer is turned, the output value can be changed which is easy to misoperate.

2.2>.Set parameter 'FET' to select 'CV' or 'CC' or 'OFF'.

2.3>. 'CV' means enable voltage quick setting at Normal Display Status by rotary potentiometer.

2.4>. 'CC' means enable current quick setting at Normal Display Status by rotary potentiometer.

2.5>. 'OFF' means disable quickly set voltage or current function. No change when rotary potentiometer at Normal Display Status. Recommend!

3>.Set Parameter.

3.1>.At Normal Display Status, keep press 'SW' button 2second enter into parameter set interface.

3.2>.Short press 'SW' button to switch parameter.

3.3>.Short press potentiometer to switch the modified bit.

3.4>.Rotating potentiometer changes the parameter value.

3.5>.Short press 'ON/OFF' button to turn ON/OFF Max-capacity OAH, Max-energy OPH, Max-running-time OHP function. '----' means turn OFF this function

3.6>.Keep press 'ON/OFF' button to set parameter unit at Max-capacity OAH, Max-energy OPH interface.Switch the decimal point position to change the parameter unit for OAH/OPH. OAH range is 9.999Ah/99.99Ah/999.9Ah/9999Ah. OPH range is 9.999Wh/99.99Wh/999.9Wh/9999Wh.

3.7>.Keep press 'SW' button 2second to save parameter and exit.

4>.Switch Display Input Voltage or Output Voltage.

4.1>.At Normal Display Status, short press 'SW' button to switch display input voltage or output voltage at the first line.

4.2>.Note: There is a 'IN' symbol on left when display input voltage.

5>.Query Parameter Power W, Capacity AH, Energy WH, Time H.

At Normal Display Status, short press potentiometer to switch display Power W, Capacity AH, Energy WH, Time H at the third line. Pay attention to unit change.

6>.Lock/Unlock Parameter.

6.1>.At Normal Display Status, keep press potentiometer 2second to lock or unlock parameter output voltage and current.

6.2>.There is a lock symbol on left at the first line.

6.3>.The parameter value cannot be changed at lock status.

6.4>.It can be used to protect parameters from being modified by mistake.Recommend!

9.Auxiliary Function:

1>.Statistics Capacity, Energy and Work Time.

1.1>.The statistics are started when turn ON output, and the statistics are stopped when the turn ON at next time.

1.2>.Stop statistics after turn OFF output.

1.3>.start the statistics again when the output power is turned on again.

1.4>.Keep press 'ON/OFF' button 2second to clear statistical value at Power, Capacity, Energy, Time display interface.

2>.Set Maximum Output Capacity OAH.

2.1>.It turns OFF output and LCD flashing display OAH when Statistics Capacity Value is more than set maximum value OAH if enabled OAH function.

2.2>.Automatically clear capacity statistics after the alarm is cleared.

2.3>.It will automatically count whether or not OAH is turn ON. But it will keep output if turn OFF OAH function.

3>.Set Maximum Output Energy OPH.

3.1>.It turns OFF output and LCD flashing display OPH when Statistics Energy Value is more than set maximum value OPH if enabled OPH function.

3.2>.Automatically clear energy statistics after the alarm is cleared.

3.3>.It will automatically count whether or not OPH is turn ON. But it will keep output if turn OFF OPH function.

4>.Set Maximum Running Time OHP.

4.1>.It turns OFF output and LCD flashing display OHP when Statistics Work Time is more than set maximum value OHP if enabled OHP function.

4.2>.Automatically clear work time statistics after the alarm is cleared.

4.3>.It will automatically count whether or not OHP is turn ON. But it will keep output if disabled OHP function.It is countdown mode if enabled OHP.

4.5>.This function can be used for timed power supply.

10.Protection mechanism:

1>.It supports reverse protection at input terminal.

2>.It supports soft start protection.

3>.It supports anti-backflow protection at output terminal.

4>.OVP over voltage protection.The default protection value is 37V. But user can modify the values as required. Screen will display OVP and flashing after start over voltage protection.

5>.OCP over current protection.The default protection value is 5.20A. But user can modify the values as required.Screen will display OCP and flashing after start over current protection.

6>.OPP over power protection. The default protection value is 82W. But user can modify the values as required.Screen will display OPP and flashing after start over power protection.

7>.OTP over temperature protection. The default protection value is 95°C. It can not be modified! Screen will display OTP and flashing after start over temperature protection.

8>.LVP under voltage protection. The default protection value is 4.7V. But user can modify the values as required.Screen will display LVP and flashing after start under voltage protection. In the battery discharge test, setting the appropriate LVP can effectively prevent the battery from being over-discharged, so as not to damage the battery.

11.Use steps:

- 1>.Connect right work voltage from VIN+ and VIN-.
- 2>.Set output voltage and output constant current.
- 3>.Set others parameters as require.
- 4>.Remove work power supply.
- 5>.Connect load at output terminal.
- 6>.Re-power ON and use this item.

12.Note:

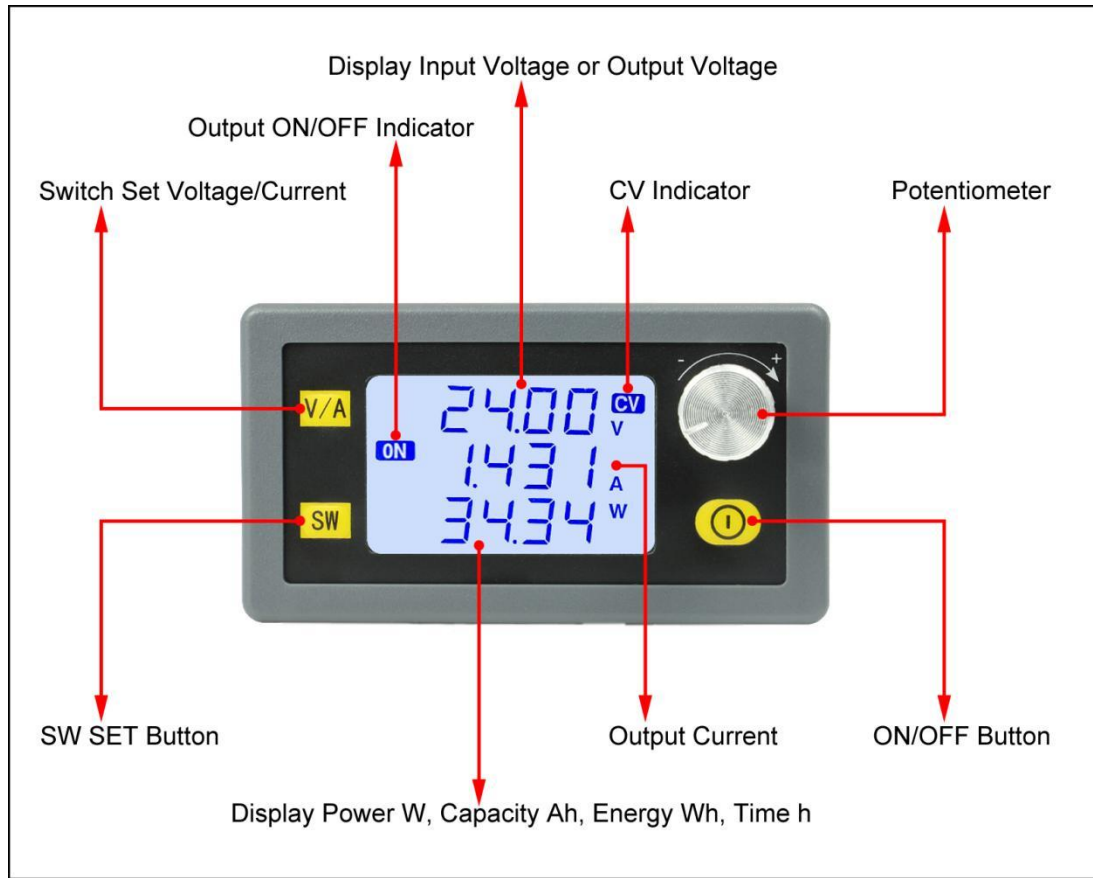
- 1>. It is a DC power module, so it can not connect to AC power.
- 2>. Please connect input before connect battery when use as charge and make sure output voltage is higher than battery voltage.
- 3>. Please make sure input power is more than load power.
- 4>. Please step down output power if module is hot.
- 5.> Please read use manual and description before use.

13.Application:

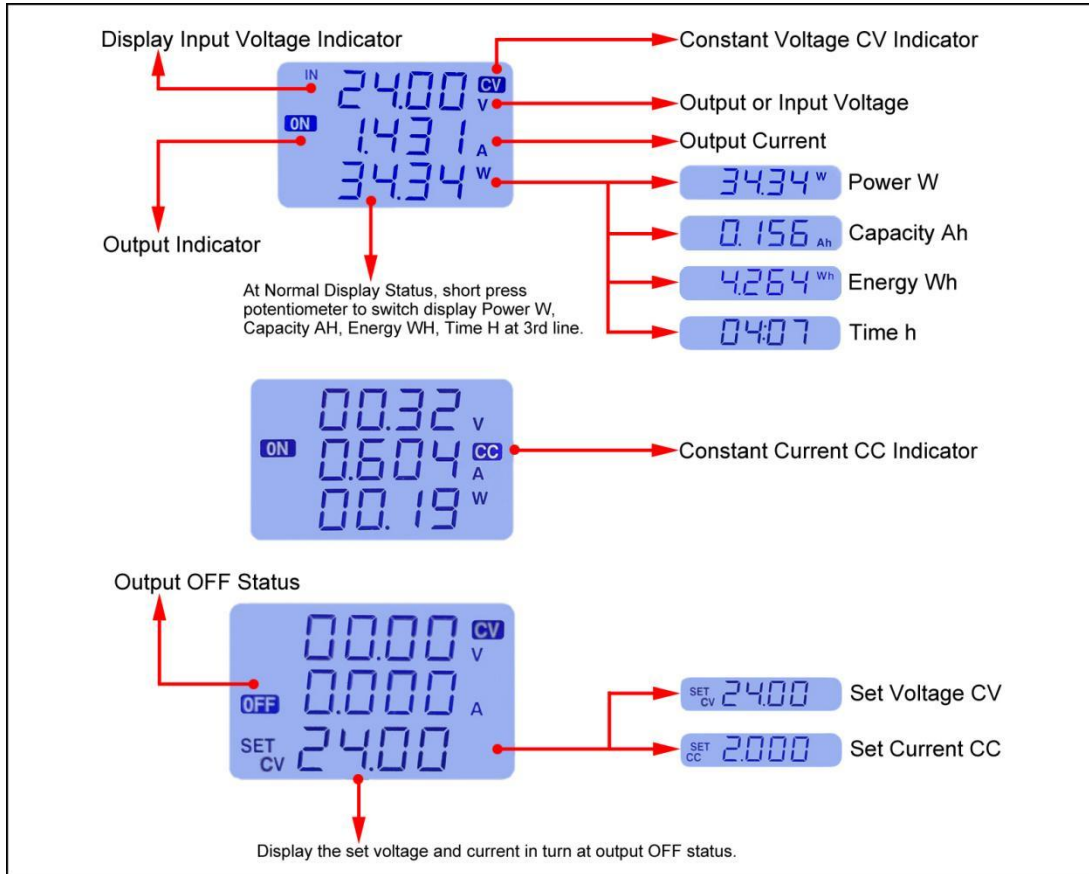
- 1>.High-power LED constant current drive
- 2>.Lithium battery charging
- 3>.Ni-Cd or Ni-MH battery charging
- 4>.Solar panel
- 5>.Wind Turbines
- 6>.Ordinary power supply
- 7>.Instrument voltage display
- 8>.Test meter
- 9>.Circuit test

XY-SK80H DC-DC 80W 5A Adjustable Buck Boost Power Supply Module

10>.Power conversion



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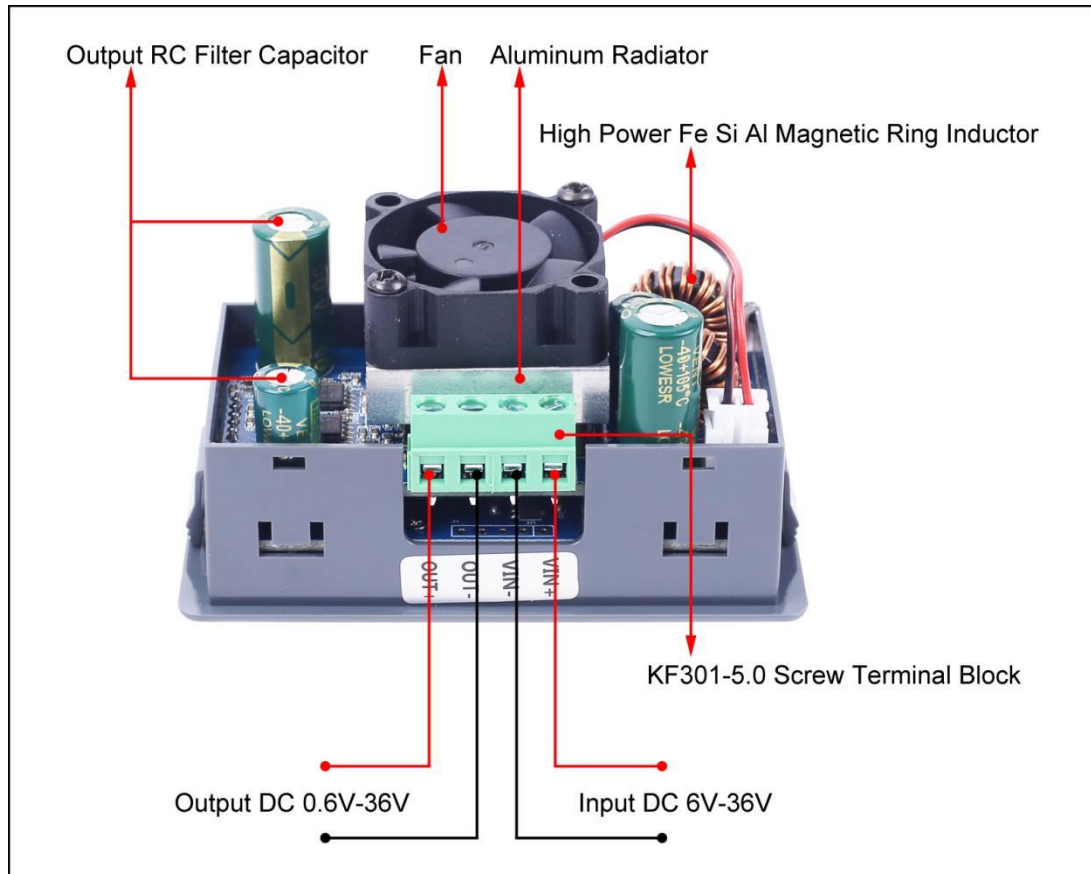
Keep press 'SW' button 2second enter into parameter set interface

Set Input Undervoltage LVP Default 4.7V 	Set Over-Voltage OVP Default 37V 	Set Over-Current OCP Default 5.2A 	Set Over-Power OPP Default 82W
Set Over-Capacity OAH Default OFF 	Set Over-Energy OPH Default OFF 	Set Over-Time OHP Default OFF 	Set Default Output Status after Power-ON
Set Default Parameter by Rotate Potentiometer CU Default set voltage CC Default set current OFF Default No Setting			On Default ON OFF Default OFF

Button/Potentiometer Operation Instructions

Interface	Normal Display Interface	Set Voltage/Current	Set Parameter Interface
Button V/A Button SW Button ON/OFF Button Potentiometer			
	Short press: Enter voltage/current set interface Long press: Not available.	Short press: Switch modified voltage or current or save/exit. Long press: Save value and exit.	Short press: Not available. Long press: Not available.
	Short press: Switch display input voltage or output voltage at the first line. Long press: Enter parameter set interface.	Short press: Switch parameter bit. Long press: Not available.	Short press: Switch parameter. Long press: Save and exit.
	Short press: Turn ON or OFF output. Long press: Clear statistical value at W/Ah/Aw/h display interface.	Short press: Turn ON or OFF output. Long press: Not available.	Short: ON/OFF OAH/OPH/OHP. Long: Switch unit for OAH/OPH.
	Short press: Switch display A/Ah/Wh/h. Long press: Lock/unlock parameter. Rotate: Change voltage/current/No-Set	Short press: Switch parameter bit. Long press: Not available. Rotate: Change voltage/current value.	Short press: Switch modified bit. Long press: Not available. Rotate: Change parameter value.

XY-SK80H DC-DC 80W 5A Adjustable Buck Boost Power Supply Module



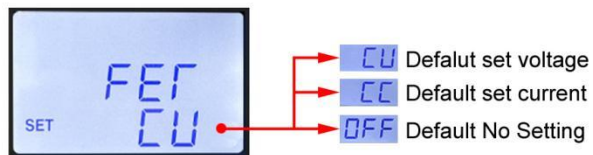
Instructions

1. Set Output Voltage/Current:



- 1.1>.At Normal Display Status, short press **V/A** button enter into voltage/current set interface.
- 1.2>.There is a 'SET' and 'CV' symbol on left at the third line and the bit keep flashing. It means to modify the voltage value first.
- 1.3>.Short press **SW** button or Potentiometer can switch the modified bit.
- 1.4>.Rotating potentiometer changes the voltage value.
- 1.5>.Press **V/A** button again to change current value and display 'CC' symbol and change value by the same method.
- 1.6>.Press **V/A** button again to save and exit.

2. Quickly Set Voltage or Current:



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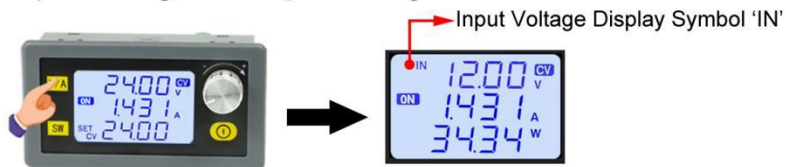
Instructions

3. Set Parameter:



- 3.1>.At Normal Display Status, keep press **SW** button 2second enter into parameter set interface.
- 3.2>.Short press **SW** button to switch parameter.
- 3.3>.Short press potentiometer to switch the modified bit.
- 3.4>.Rotating potentiometer changes the parameter value.
- 3.5>.Short press **ON/OFF** button to turn ON/OFF Max-capacity OAH, Max-energy OPH, Max-running-time OHP function. '----' means turn OFF this function
- 3.6>.Keep press **ON/OFF** button to set parameter unit at Max-capacity OAH, Max-energy OPH interface. Switch the decimal point position to change the parameter unit for OAH/OPH. OAH range is 9.999Ah/99.99Ah/999.9Ah/9999Ah. OPH range is 9.999Wh/99.99Wh/999.9Wh/9999Wh.
- 3.7>.Keep press **SW** button 2second to save parameter and exit.

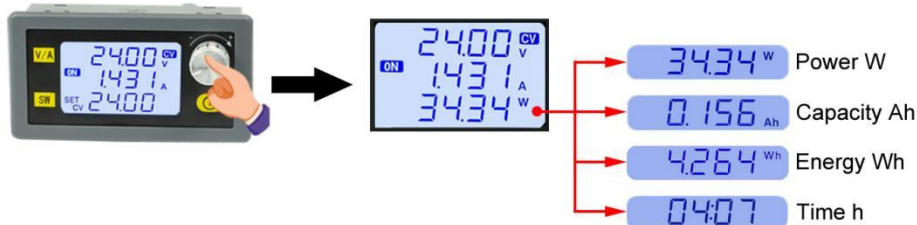
4. Switch Display Input Voltage or Output Voltage:



- 4.1>.At Normal Display Status, short press **SW** button to switch display input voltage or output voltage at the first line.
- 4.2>.Note: There is a 'IN' symbol on left when display input voltage.

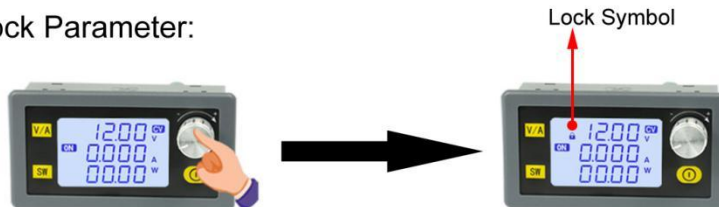
Instructions

5. Query Parameter Power W, Capacity AH, Energy WH, Time H:



- 5.1>.At Normal Display Status, short press potentiometer to switch display Power W, Capacity AH, Energy WH, Time H at the third line.
- 5.2>.Pay attention to unit change.

6. Lock/Unlock Parameter:



- 6.1>.At Normal Display Status, keep press potentiometer 2second to lock or unlock parameter output voltage and current.
- 6.2>.There is a lock symbol on left at the first line.
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7. Auxiliary Function:

1> Statistics Capacity, Energy and Work Time.

1.1>.The statistics are started when turn ON output, and the statistics are stopped when the turn ON at next time.

1.2>.Stop statistics after turn OFF output.

1.3>.start the statistics again when the output power is turned on again.

1.4>.Keep press 'ON/OFF' button 2second to clear statistical value at Power, Capacity, Energy, Time display interface.

2>.Set Maximum Output Capacity OAH.

2.1>.It turns OFF output and LCD flashing display OAH when Statistics Capacity Value is more than set maximum value OAH if enabled OAH function.

2.2>.Automatically clear capacity statistics after the alarm is cleared.

2.3>.It automatically count whether or not OAH is turn ON. But it will keep output if turn OFF OAH function.

3>.Set Maximum Output Energy OPH.

3.1>.It turns OFF output and LCD flashing display OPH when Statistics Energy Value is more than set maximum value OPH if enabled OPH function.

3.2>.Automatically clear energy statistics after the alarm is cleared.

3.3>.It automatically count whether or not OPH is turn ON. But it will keep output if turn OFF OPH function.

4>.Set Maximum Running Time OHP.

4.1>.It turns OFF output and LCD flashing display OHP when Statistics Work Time is more than set maximum value OHP if enabled OHP function.

4.2>.Automatically clear work time statistics after the alarm is cleared.

4.3>.It will automatically count whether or not OHP is turn ON. But it will keep output if disabled OHP function.It is countdown mode if enabled OHP.

4.5>.This function can be used for timed power supply.

