



Parameters

- Input voltage range: DC 3.5-15V
- Output voltage range: DC 0.60-30.0V
- Output current: 0.000-2.000A
- Output power: 15W
- Voltage resolution: 0.01V
- Current resolution: 0.001A
- Voltage precision:  $\pm 0.3\% + 1$  digit
- Current precision:  $\pm 0.5\% + 3$  digits
- Capacity: 0-999999AH
- Energy: 0-999999WH
- Time: 0-1000Hours
- Support fast charging protocol QC2.0/QC3.0, HUAWEI FCP/SCP, Samsung AFC.

Protection Function

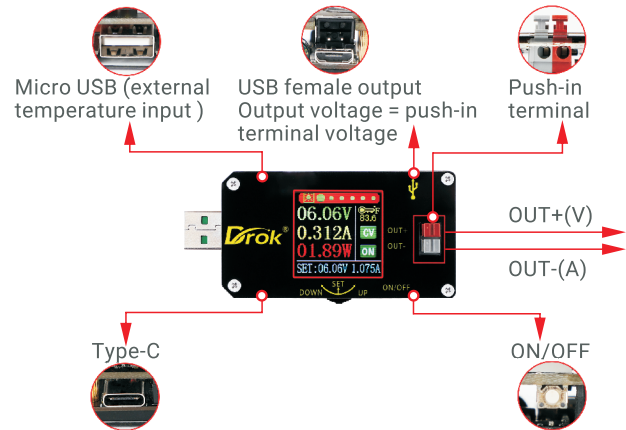
Hardware protection: input reverse connection protection, output current back feeding protection; can charge the rechargeable battery directly, no need to connect extra diode.

Software protection: over voltage protection (OVP), over current protection (OCP), over power protection (OPP), over temperature protection (OTP), input low voltage protection (LVP), On-Chip Protection (OEP).

Note

- The max output power is 15W, when the input current > 3A, it will hit the OTP if working for a long time, even though the output power is within 15W.
- When input voltage > 8V, it can run at full power within the voltage range.
- When input voltage < 5V, please lower the power, the lower the input voltage, the lower the output power.
- The normal 5v charging adapter is difficult to output 15w power, therefore, it is impossible for the normal 5v charging adapter to run the item at full power. If the charging adapter supports the fast charging function, it is recommended to activate the fast charging and output high voltage to get to run at full power.

Product Structure



Interface & Button Functions

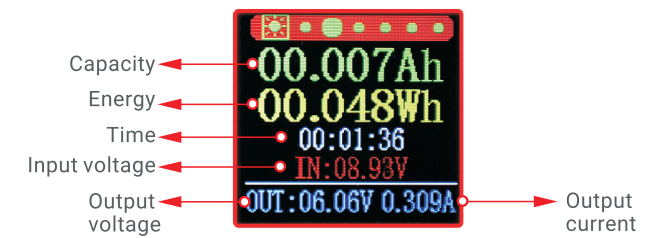
- ON/OFF: Short press ON / OFF button to turn on/off the power output.
- Screen Rotation: Hold press the ON / OFF button for 2s can rotate the screen. Support 360 ° in 4 directions.
- Next Page: Short press UP / DOWN button can move to the next page.
- Temperature Detection: If connect temp sensor probe, it will automatically switch to detect the external temperature, and temp value will be displayed in blue background.
- Theme Color Switch: 64 kinds of colors can be changed. Short press SET button, select the position to be changed, and the corresponding number will be display in blue background. Short press the UP/DOWN button to switch background color and foreground color.

Main Display Interface



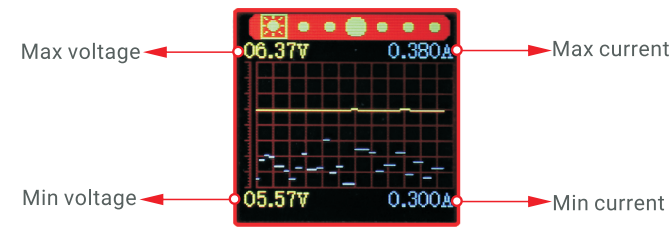
- Short press SET button to activate the parameter (voltage / current) to be set.
- Short press SET button to switch between full selection and bit selection.
- If all selected, all parameters will display in blue background, and use UP / DOWN button to switch to set voltage / current.
- If the bit is selected, the corresponding bit will display in blue background, then short press UP / DOWN button to set the value. Hold press UP / DOWN button to quickly increases / decreases the value.
- After the setting is completed, hold press SET button for 2s or no button operation for more than 6s, it will automatically exit the setting and save the parameters.

Capacity Recording Interface



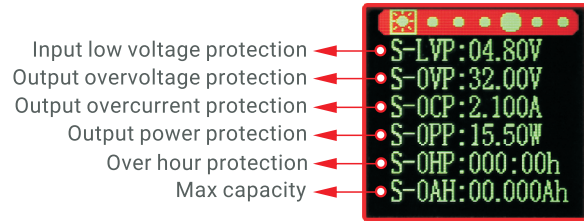
- Short press SET button to select all "capacity / energy / time", the corresponding parameters will display in blue background, and use UP / DOWN button to switch the parameter to be cleared.
- After selecting, short press SET button again to clear the corresponding parameter.
- After selecting, hold press the SET button for 2s or no button operation for more than 6s, it will automatically exit.

Voltage & Current Graph Interface



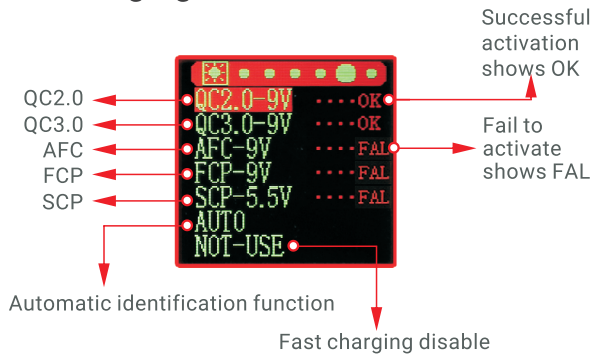
Each grid represents 0.1V / 0.01A  
SET button is disable at this interface

## Protection Setting Interface



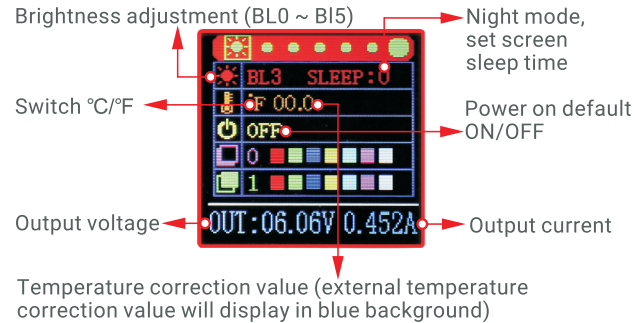
- Short press SET button to activate the parameter to be set.
- Short press SET button to switch between the parameter name and bit.
- After the parameter name is selected, the parameter name will display in blue background, and use the UP / DOWN button to switch the parameter to be set.
- After the bit is selected, the corresponding bit will display in blue background, short press UP / DOWN button to set the parameter. Hold press the UP / DOWN button to quickly increases / decreases the value.
- After the setting is completed, hold press SET button for 2s or no button operation more than 6s, it will automatically exit the setting and save the parameters.

## Fast Charging Activation Interface



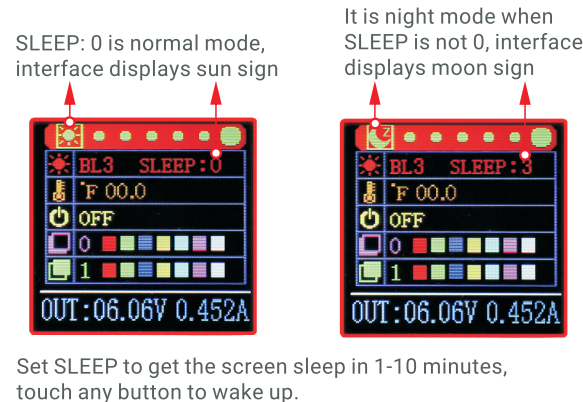
- Short press SET button to select the fast charging mode to be activated, and use the UP / DOWN button to switch the fast charging mode to be activated, the corresponding mode will display in blue background after selection.
- Short press the SET button to activate fast charging protocol, hold press SET button for 2 seconds or no button operation more than 6 seconds, it will automatically exit the setting and save the parameters, and trigger the selected mode again.
- AUTO: automatically identify the fast charging protocol the charging adapter supports. After identifying, the fast charging protocol will display in purple background.

## System Parameter Setting Interface



- Short press SET button to select / switch the parameter to be set. After selection, the parameter will display in green background, and set the parameter value by the UP / DOWN button.
- After the setting is completed, hold press SET button for 2s or no button operation more than 6s, it will automatically exit the setting and save the parameters.

## Screen Night Mode



Set SLEEP to get the screen sleep in 1-10 minutes, touch any button to wake up.



Set the OHP at night, when the time is up, the output will be automatically turned off. After setting the SLEEP, screen will automatically sleep when time is up.

## Application

- Used as a common buck-boost power supply with overvoltage / overcurrent / overpower / overtemperature / low voltage protection.
- With constant current function, can be used to charge within 15W for various small rechargeable 0.6V-30V batteries

Charging steps:

- (1) Confirm the float charge voltage and charge current of your rechargeable battery. (if the lithium battery parameter is 3.7V / 2200mAh, then the float charge voltage is 4.2V, if it is a 12V rechargeable battery, generally set the float charge voltage to 14V or so)
- (2) Under no-load condition, set the output voltage to reach the float charging voltage. (if the 3.7V lithium battery is charged, adjust the output voltage to 4.2V)
- (3) Set the charging current (constant current value).

Note: When setting the current, the power must be calculated, and the battery should be charged within the power range. If over power used, the item will enter the protection state.

- (4) Connect the battery to charge.

- With constant current function, which can directly drive 0.6-30V, 0-15W LED lights

Drive LED steps:

- (1) Confirm the operating current and max operating voltage you need to drive the LED.
- (2) Under no-load conditions, set the voltage value and current value to make the output voltage reach the max working voltage and working current of the LED (Note: When setting the current, calculate the power, charge within the power range, if over power used, the item will enter the protection state.)
- (3) Connect the LED and test.

Recommend product on Amazon:



USB Load

NO RISK. 30 Days Money Back Guarantee.

