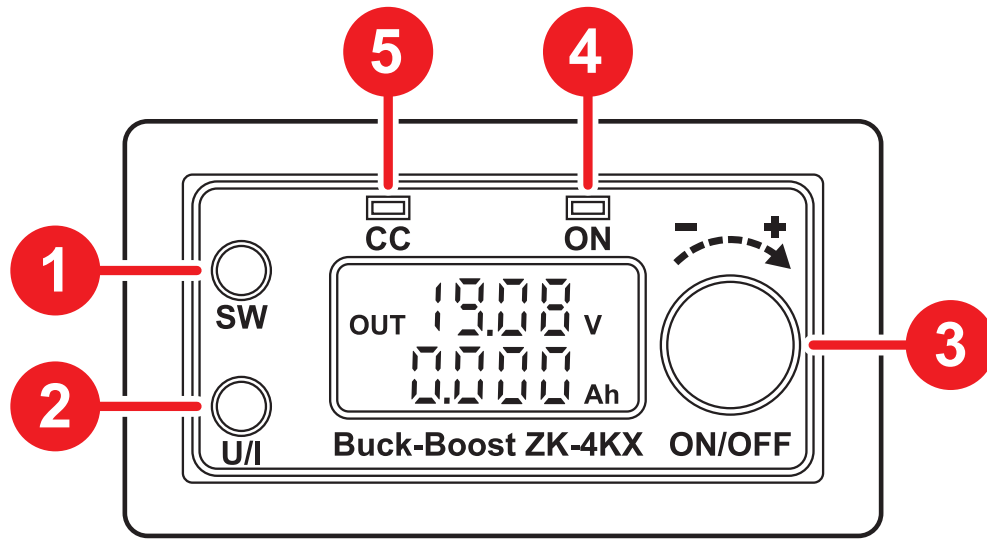


DC-DC Programmable Digital Control Buck-Boost Voltage 4A 5 to 30V In and 0.5 to 30V Out User Manual



1. SW button
2. U/I button

3. Rotary encoder knob
and power switch

4. Power On/Off indicator
5. Constant current indicator

Operating Instructions

1. Switching the display to show different parameters

- Short press the SW button to change the bottom display from Amperage (A), Watts (W), Amperage Hours (Ah), and In Use Timer (h).
- Long press the SW button to change the top display from Voltage Output, Voltage Input, and Board Temperature. These are the three main screens.

2. Setting Output Voltage

- Short press the U/I button while in the Output Voltage Display to change the output voltage setting. Rotate the knob to change setting. Press the knob to change the digits for quicker results. Press U/I twice to save the setting or wait 10 seconds and it saves automatically.

3. Set Current Value

- Use this setting if you want to limit the current draw from the power source. Press the U/I button twice to set the current limiter while in the voltage out screen. Rotate the knob or push the knob in to change the digit to increase the setting speed. Press the U/I button to save the setting or wait 10 seconds. The red CC LED lights up when reaching the current limit value.

4. Power On/Off Options

- Turn power on, if the green LED is not lit, by pressing the power knob. The buck converter has an option to turn on as soon as it receives power. This isn't recommended since the power output might not be set correctly. The default setting is "Open Off". To change the setting long press the U/I button when on one of the main three screens. Long press the knob to toggle between On and Off. Long press the U/I button to save.

5. Setting Protections

- Long press the U/I button when in one of the three main screens to start. Short press the SW button to select which protection setting you want to change. Rotate the knob to change values and long press U/I to save and return to the main screen.

- Low voltage protection (LUP)
- Maximum voltage protection (OUP)
- Over current protection (OCP) A

- Over power protection (OPP) W

- Ultra-capacity protection (OAP) Ah-Long press the knob to turn on and change setting to desired value or you can leave this setting off.
- Timeout protection (OHP) h-Long press the knob to turn on and change setting to desired value or you can leave this setting off. With this option you set how long you want the output voltage/power to last.
- Overtemperature protection (OTP) C°

6. Calibration if Needed

- Long press U/I button and short press the SW button until IN CAL (V) appears for input voltage calibration. Turn the knob to adjust. Long press the knob and if the digit stops flashing the calibration is saved. Short press the SW button to go to OUT CAL (V) for output voltage calibration. Turn the knob to adjust. Repeat the save procedure. Short press SW to go to OUT CAL (A) for output amperage calibration. Turn the knob to adjust. Repeat the save procedure. Long press the U/I to return to one of the main screens.

Note: Voltage calibration must start above 12V for accuracy. Current calibration must start above 1A for accuracy.

Tips:

- Do not short out the input and output connections, or the constant current function will fail.
- The input power supply's output wattage must be larger than the maximum wattage draw of the device connected to the buck converter.
- If the voltage output is 5 VDC the maximum output wattage is 15W. The maximum current value is 4A and can be reached with 12VDC, but a fan is needed for 35W or more of power output. When you need 17V output, maximum current value should stay under 2A.
- If minimum or maximum values are reached and the output shuts off, there's still live input voltage being supplied to the buck converter.
- Use default settings until you need a special application