

XL6009 LED DC-DC 4.5-32V to 5-35V Voltage Step Up Adjustable Boost Voltmeter Module 4A



Ultra-wide input voltage 4.5-32V (Normally operating below 5V, but the digital tube does not work), the optimal working voltage range is 5-32V. Ultra wide boost output voltage 5-55V to me...

The XL6009 DC-DC Boost Converter with Voltmeter Display is a high-efficiency, adjustable boost converter module designed to step up DC voltage from a lower level to a higher one. This module integrates a built-in voltmeter display for real-time voltage monitoring, making it ideal for use in various power supply applications, including battery-powered devices, LED drivers, and other electronic projects.

Key Features:

- DC-DC boost converter based on the XL6009 IC
- Integrated digital voltmeter display for monitoring output voltage
- Wide input voltage range for flexibility in power sources
- High efficiency with low power loss
- Adjustable output voltage with precision control
- Compact and durable design for various applications

Technical Specifications:

- **IC Type:** XL6009

- **Input Voltage Range:** 5V to 32V
- **Output Voltage Range:** Adjustable from 5V to 35V
- **Output Current:** Up to 4A (depending on cooling and input conditions)
- **Efficiency:** Up to 94% (depending on input/output conditions)
- **Display Type:** Digital voltmeter
- **Display Voltage Range:** 0V to 40V
- **Adjustable Output Voltage:** Yes, using a potentiometer
- **Operating Temperature Range:** -40°C to +85°C
- **Size:** Approximately 60mm x 35mm x 20mm

Applications:

- Power supply for battery-operated devices
- LED drivers
- DC-DC converters for custom electronic projects
- Powering electronic circuits requiring stable and adjustable voltage
- Voltage regulation in various electronic systems

Usage:

1. Connect the input terminals to the power source, ensuring correct polarity.
2. Use the onboard potentiometer to adjust the output voltage to the desired level.
3. Monitor the output voltage using the integrated voltmeter display.
4. Connect the load to the output terminals, ensuring the load does not exceed the maximum current rating of the module.
5. Verify that the module operates within its specified temperature range and conditions.

Caution:

- Ensure proper input and output connections to avoid damage or malfunction.
- Avoid exceeding the maximum input voltage or output current ratings.
- Use appropriate heat dissipation techniques if operating under high load conditions to prevent overheating.

Features:

Ultra-wide input voltage 4.5-32V (Normally operating below 5V, but the digital tube does not work), the optimal working voltage range is 5-32V.

Ultra wide boost output voltage 5-55V to meet your needs.

Built-in 4A high efficiency MOSFET switching tube for up to 94% efficiency.

The ultra-high switching frequency is 400KHz, which can achieve very good results with a small-capacity filter capacitor with smaller ripple and volume.

With power indicator, easy to know the working conditions.

Adopting more advanced voltage microprocessor, the voltmeter error is $\pm 0.05V$, and the range is 0-35V. And the voltmeter can display the data and self-calibrating. (Note: To ensure the accuracy of the voltmeter, please ensure that the input voltage is above 4.5V)

Touch the button to switch the measurement or input or output voltage.

An indicator light shows which voltage is being measured, and save the settings, even if it is powered off and then on.

The voltmeter can be turned off and easily tapped when the display is not needed.

With terminal block, no soldering iron can be used easily, and the wire bond point is retained. It has overheat protection and short circuit protection, safe to use.

Specification:

Model: XL6009

Material: Fiberglass board, Electronic component

Size: app.60 x 37mm/2.36 x 1.46in

Color: Blue

Quantity: 1 Pc

Product parameters

Module Feature: Non-isolation booster

Rectifier system: Not synchronous rectifier

Input Current: 4A(Max.), No load 18mA (5V input, 8V output, no load less than 18mA. The higher the voltage, the greater the no-load current.)

Output voltage: 5V-35V

Transfer Efficiency: 94% (The larger the pressure difference, the lower the efficiency)

Switching Frequency: 400KHz

Output Ripple: 50mV

Load Regulation: $\pm 0.5\%$

Voltage Regulation: $\pm 0.5\%$

Operating temperature:-40 - 85°C/-40 - 185°F°

Wiring Method:

IN+ : input positive

IN- : Input negative

OUT+: output positive

OUT-: output negative

Test Sample Reference:

Input 5V Output 12V 0.8A 9.6W

Input 7.4V Output 12V 1.5A 18W

Input 12V Output 15V 2A 30W

Input 12V Output 16V 2A 32W

Input 12V Output 18V 1.6A 28.8W

Input 12V Output 19V 1.5A 28.5W

Input 12V Output 24V 1A 24W

Input 3V Output 12V 0.4A 4.8W

Package Included:

1 x XL6009 LED DC-DC 4.5-32V to 5-35V Voltage Step Up Adjustable Boost Voltmeter Module 4A

Instructions/schematic are NOT included. We don't provide technical assistance please make sure that you are familiar with the product before purchasing.