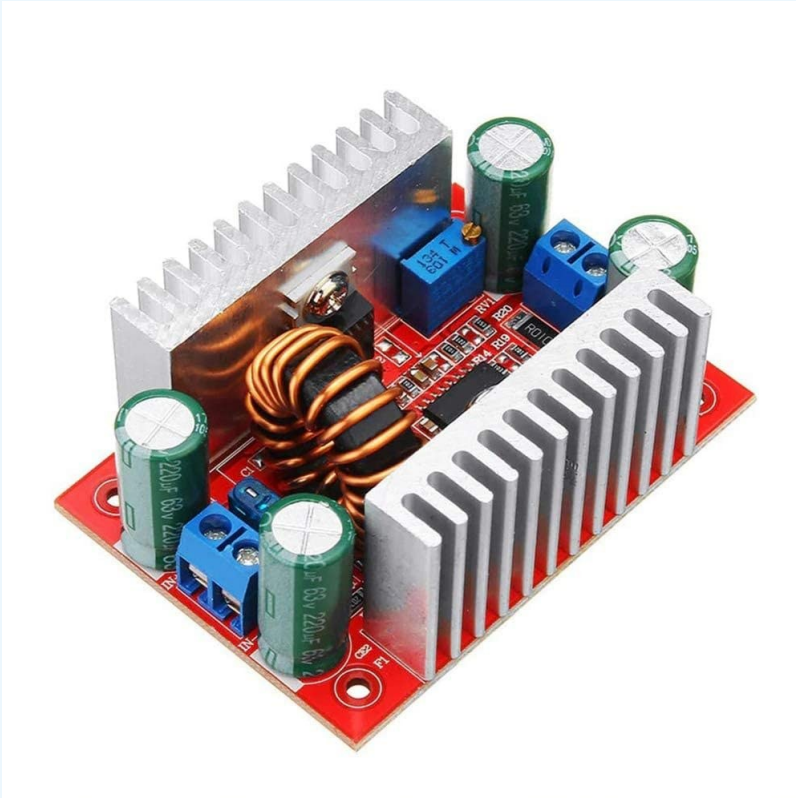


Boost low DC voltage, safely.

amiciSmart 400 W DC-DC boost (step-up) converter module · SKU 1xDC-DC-15A-N (store SKU 1xDC-DC-15A)



400 W

Input **8.5–50 V DC**

Output **10–60 V** adjustable

Max **15 A** input current

Voltage and current adjustment

For LED drivers, battery charging circuits and DIY electronics that need a higher voltage.

Step-up only. The output is always set higher than the input. Set the output with a multimeter **before** connecting the load.

Do not reverse the input polarity: it may damage the module. Keep within 400 W and 15 A input current, and add cooling for loads above 100 W.

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SKU 1xDC-DC-15A-N · Version 1.0

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This guide is based on the module instruction manual. Values from the product listing are marked. Store SKU: 1xDC-DC-15A.

Before you connect anything

Precautions from the instruction manual

Input polarity

Do not reverse polarity at the input: it may damage the module. Connect + to INPUT + and – to INPUT –.

Set the output first

Always set the output voltage before connecting sensitive devices. Check it with a multimeter.

Cooling

If driving loads above 100 W, ensure adequate cooling with the heatsinks and/or a fan (instruction manual). The listing advises active cooling for sustained currents above 8 A.

Current and power limits

Keep the output power within 400 W and the input current within 15 A (listing). In a boost converter the input current is always higher than the output current.

Environment

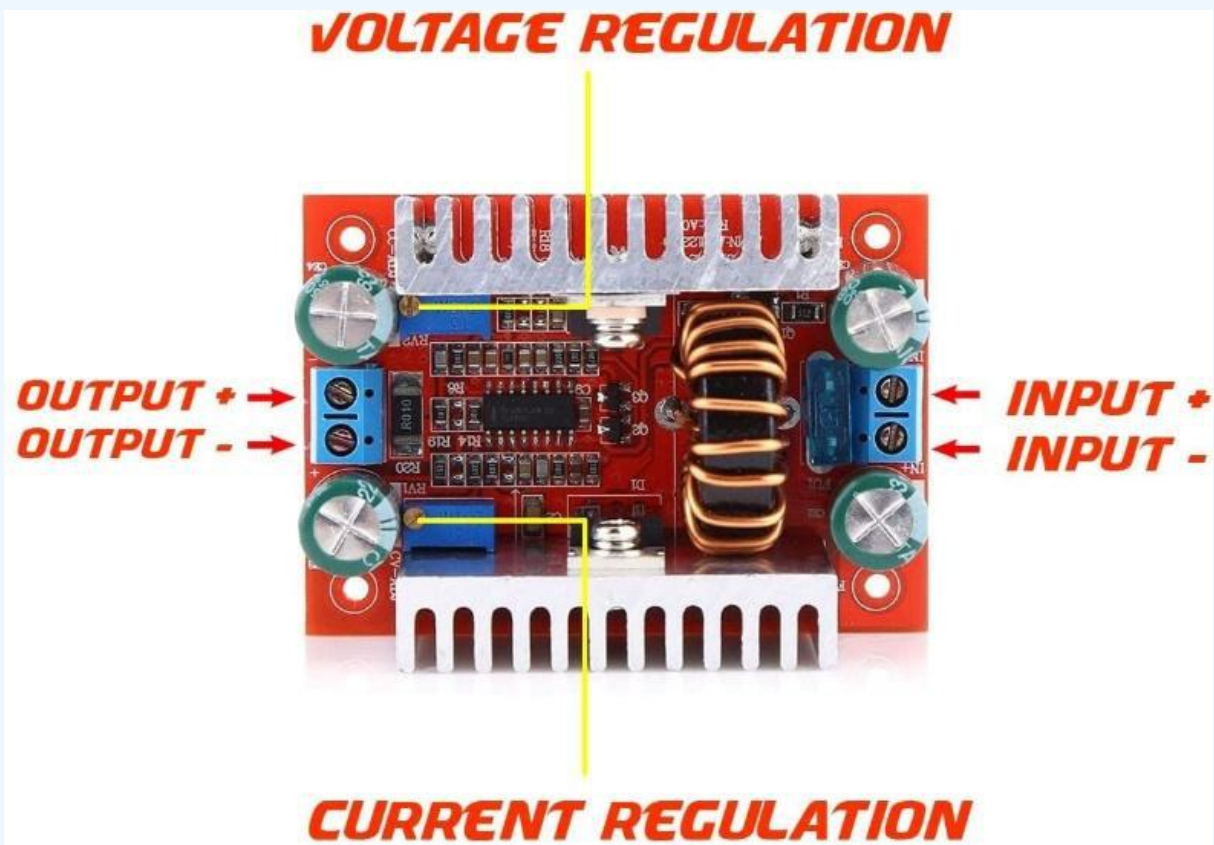
Avoid using the module in high-humidity or dusty environments. Use DC sources only.

Input reaches the output

In a boost converter, the input voltage reaches the output even when the module is not boosting. Treat the output as live whenever the input is connected.

Know the module

Pin configuration and adjusters from the instruction manual



Output (left side)

Blue screw terminal: **OUTPUT +** positive output voltage, **OUTPUT -** negative / ground.

Input (right side)

Blue screw terminal: **INPUT +** positive input voltage, **INPUT -** negative / ground.

Top adjuster: voltage

Near the top heatsink. Clockwise increases, anticlockwise decreases the output voltage.

Bottom adjuster: current

Near the bottom heatsink. Clockwise increases, anticlockwise decreases the current limit.

03 · WIRING

Input and output connections

Switch off the source before wiring

Terminal	Connect to
INPUT +	Positive (+) of the DC source (battery or adapter), 8.5–50 V
INPUT –	Negative (–) / ground of the DC source
OUTPUT +	Positive (+) of the load
OUTPUT –	Negative (–) / ground of the load

1 · Connect input power

Connect a DC source (battery, adapter) to the input terminals. Make sure the polarity is correct: + to +, – to –.

2 · Set the output

With no load connected, power the module and set the output voltage (page 6). The module ships set to about 19 V (listing).

3 · Connect your load

After adjustment, switch off, connect the load to the output terminals and switch on again.

4 · Watch the temperature

Monitor the temperature under load. Consider adding a fan if the heatsinks become too hot.

Cables

Use cable rated for the current you will draw, with the ends stripped neatly and the terminal screws tight.

04 · ADJUSTMENT

Setting voltage and current

From the instruction manual

Adjust output voltage

1. Without a load, power the module.
2. Connect a multimeter across the output terminals.
3. Turn the voltage adjuster (top) until the desired voltage is reached, between 10 V and 60 V and above the input voltage.

Set output current limit (recommended)

1. Connect a load or a dummy resistor.
2. Use a multimeter in series with the output to measure current.
3. Turn the current adjuster (bottom) to limit the current as needed.

Stay within the limits

Output power up to 400 W, with good heat dissipation. Input current up to 15 A (listing). At higher output voltages the 400 W limit is reached at a lower current.

Adjusters

The adjusters are small trimmers. Use a small screwdriver and turn them slowly.

Battery charging and LED drivers

Using the voltage and current adjustment

Battery charging

1. With no battery connected, set the output voltage to the battery maker's full-charge voltage.
2. Set the current limit to the charge current you want, within the battery's limit.
3. Connect the battery and monitor it and the module.

Battery voltage must be above the input

Only charge a battery whose voltage is always higher than the input voltage. If the battery is lower than the input, current flows from the input to the battery without control. Lithium batteries need a suitable BMS.

High-power LEDs

1. Set the current limit below the LED's rated current.
2. Set the voltage to the LED's maximum operating voltage.
3. Connect the LED and check the current with a meter.

Other uses

Powering DIY electronics, solar panel voltage boosting, and car or e-bike DC conversion (instruction manual), always within the limits on page 8.

Ratings and limits

Values from the instruction manual unless marked (listing)

Parameter	Value
Type	DC-DC boost (step-up) converter
Input voltage	8.5–50 V DC
Output voltage	10–60 V DC, adjustable (above input)
Current	Adjustable current limit; maximum input current 15 A (listing)
Output power	Max 400 W, with good heat dissipation
Efficiency	Up to 95 %
Short-circuit protection	Yes, with current regulation
Cooling	Large heatsinks for passive cooling; optional fan for high power. Cool above 100 W.
Factory setting	About 19 V output (listing)
Adjusters	Top: output voltage. Bottom: current limit.

The instruction manual describes the current as "up to 15 A (adjustable)"; the listing gives 15 A as the maximum input current. Because the input current is higher than the output current in a boost converter, keep the input current within 15 A. IP rating and reverse-polarity protection are not stated, so none are claimed.

07 · TROUBLESHOOTING

If something is not right

From the instruction manual

Problem	Possible cause	Solution
No output voltage	Wrong input polarity or no input	Check the connections.
Output voltage not changing	Adjuster at the end of travel or faulty	Rotate the voltage adjuster slowly.
Overheating	Exceeding power ratings or insufficient cooling	Use a fan or reduce the load.
Load not powering	Current limit too low	Increase the current limit gradually.
Output lower than set when loaded	Load too heavy, or output set below input	Reduce the load. Set the output above the input.

Still unsure? Contact amiciKart support with a photo of your wiring and the voltages you measured.

[Contact support](#)

[Product page](#)