

## Introduction

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Still bothered by how to correctly power your RGB LED strip or get smooth servo movement? No worries now, this 60W DC-DC buck converter takes care of all. This buck converter module converts high power 12V or lithium battery 11.1V to 5V output. 60W power can be available with only one such module! Featuring adjustable 0.6V-5.1V output voltage and up to 18A output current, the module can be used to drive a 5m WS2812 RGB LED strip or other device requiring low voltage and high current. In addition, the converter incorporate protective functions like short-circuit, overload, overheat, etc., to ensure stable performance.

## Specification

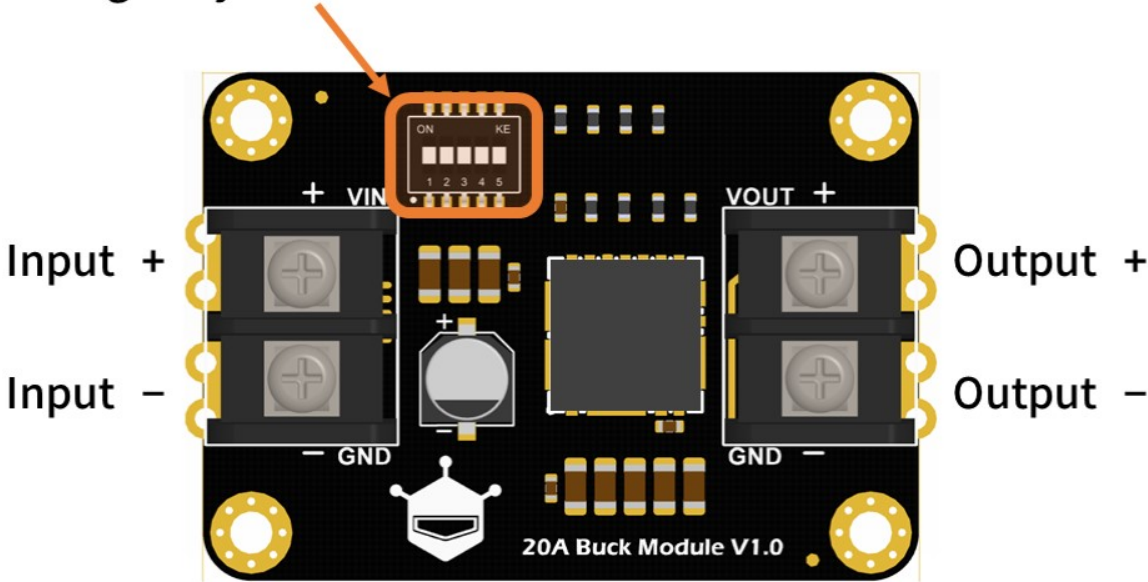
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- Input Voltage: 9V-15V
- Output Voltage: 0.6V-5.1V
- Output Current: 18A(Active dissipation)
- Output Power: 60W(Active Dissipation)
- Conversion Efficiency: 92%(Typical)
- Outline Dimension: 52×37mm/2.05×1.46"

## Board Overview

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# Voltage Adjustment Switch

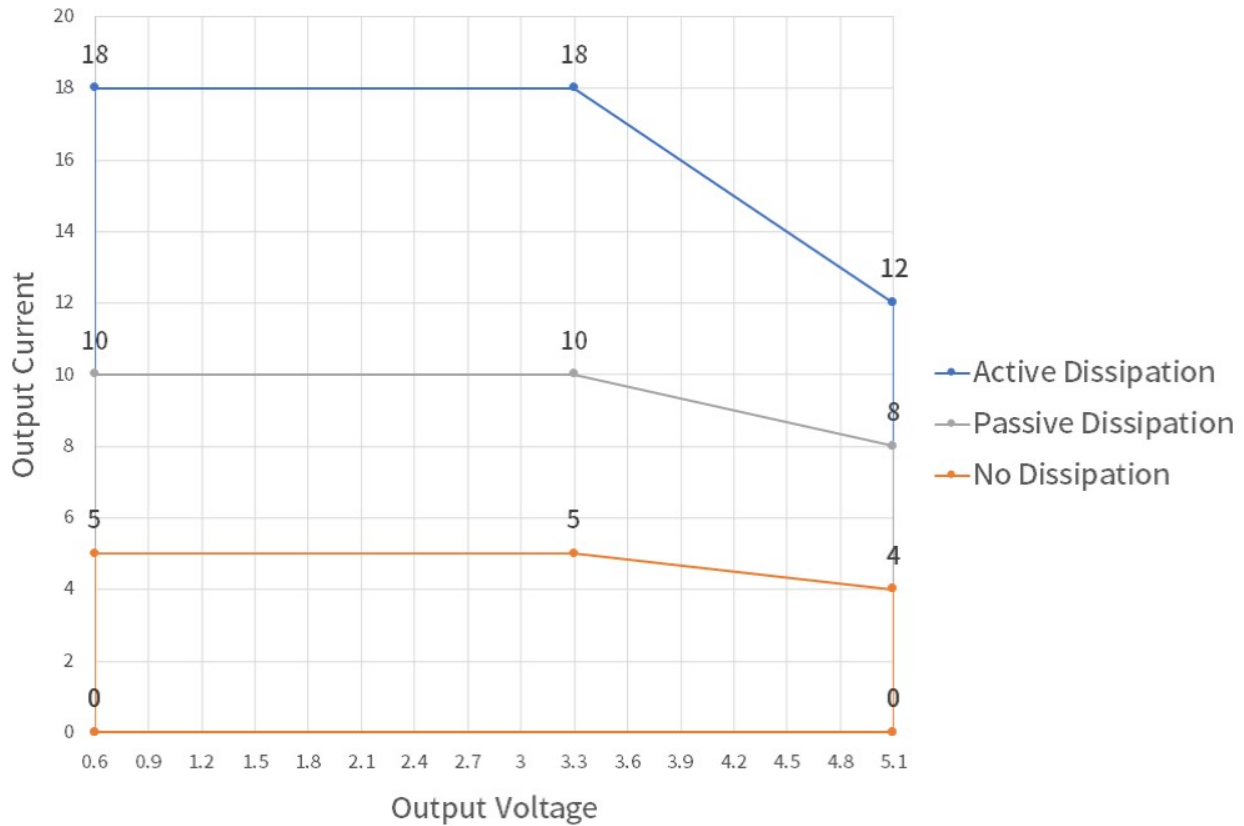


## Instruction

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### Safe Operating Range

## NAE12S20 Safe Operating Range



The parameters of the safe operating range are tested in typical experiment environments. It is recommended to measure the surface temperature of the buck converter to determine if the dissipation needs to be improved.

- Surface temperature < 80°C: the converter performs steadily
- Surface temperature in 80 - 90°C: dissipation improvement recommended
- Surface temperature >90°C: dissipation improvement is required since the overheat protection may be triggered at any time.

## Voltage Settings

Voltage Settings via DIP switch.

| 1  | 2 | 3 | 4 | 5  | Output Voltage |
|----|---|---|---|----|----------------|
| ON |   |   |   |    | 0.6V           |
| ON |   |   |   | ON | 0.9V           |

|          |          |          |          |          |                       |
|----------|----------|----------|----------|----------|-----------------------|
| ON       |          |          | ON       |          | 1.2V                  |
| ON       |          |          | ON       | ON       | 1.5V                  |
| ON       |          | ON       |          |          | 1.8V                  |
| <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> | <b>Output Voltage</b> |
|          |          | ON       |          | ON       | 2.1V                  |
|          |          | ON       | ON       |          | 2.4V                  |
|          |          | ON       | ON       | ON       | 2.7V                  |
|          | ON       |          |          |          | 3.0V                  |
|          | ON       |          |          | ON       | 3.3V                  |
|          | ON       |          | ON       |          | 3.6V                  |
|          | ON       |          | ON       | ON       | 3.9V                  |
|          | ON       | ON       |          |          | 4.2V                  |
|          | ON       | ON       |          | ON       | 4.5V                  |
|          | ON       | ON       | ON       |          | 4.8V                  |
|          | ON       | ON       | ON       | ON       | 5.1V                  |

1. Please disconnect the power first when adjusting voltage settings.
2. There may be  $\pm 10\%$  error in voltage, so it is recommended to use a multimeter to test and then select a suitable output voltage.

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