

## **XL4005 DC-DC 5-32V Adjustable Step Down 5A Buck Power Supply Module**

**This module features the adjustable XL4005 step-down (buck) switching regulator, capable of driving a 5A load with excellent line and load regulation.**

**This XL4005 DC-DC 5-32V Adjustable Step Down 5A Buck Power Supply Module has a multi-turn trim pot (potentiometer) that you can use to adjust the output voltage. Since the trim pot has 25 turns of adjustment you can easily adjust the output of the module to exactly the voltage you need.**

**The simplest way to reduce the voltage of a DC supply voltage is to use a linear voltage regulator (LDO), but linear regulators step down voltage by dissipating the excess energy as heat and do not yield any current step up. Buck converters, on the other hand, can be remarkably efficient and provide a step up in current output. Buck converters are one of the best ways to provide a regulated voltage from a battery since they don't waste near as much energy in the process of dropping the input voltage as a linear regulator would waste.**

### **Technical Details**

- **Model Type: Buck Converter Module**
- **Model No.: XL4005**
- **Length: 44mm**
- **Width: 21mm**
- **Height: 15mm**
- **Weight: 10g**

### **Features**

- **Wide 5V to 32V input voltage range**
- **Output adjustable from 0.8V to 30V**
- **Maximum duty cycle: 100%**
- **Minimum drop out: 0.6V**

- **Fixed 300kHz switching frequency**
- **5A constant output current capability**
- **Internal optimized power MOSFET**
- **High efficiency**

#### **Applications :**

- **Power supply for microcontrollers and embedded systems**
- **Battery-powered devices**
- **DC motor control circuits**
- **LED lighting systems**
- **Portable power packs**
- **Electric vehicles and drones**
- **Home automation systems**

#### **Physical Attributes**

- **L x W x H (mm): 44 x 21 x 15**
- **Weight (gm): 10**

#### **Package Includes**

- **1 x XL4005 DC-DC 5-32V Adjustable Step Down 5A Buck Power Supply Module**