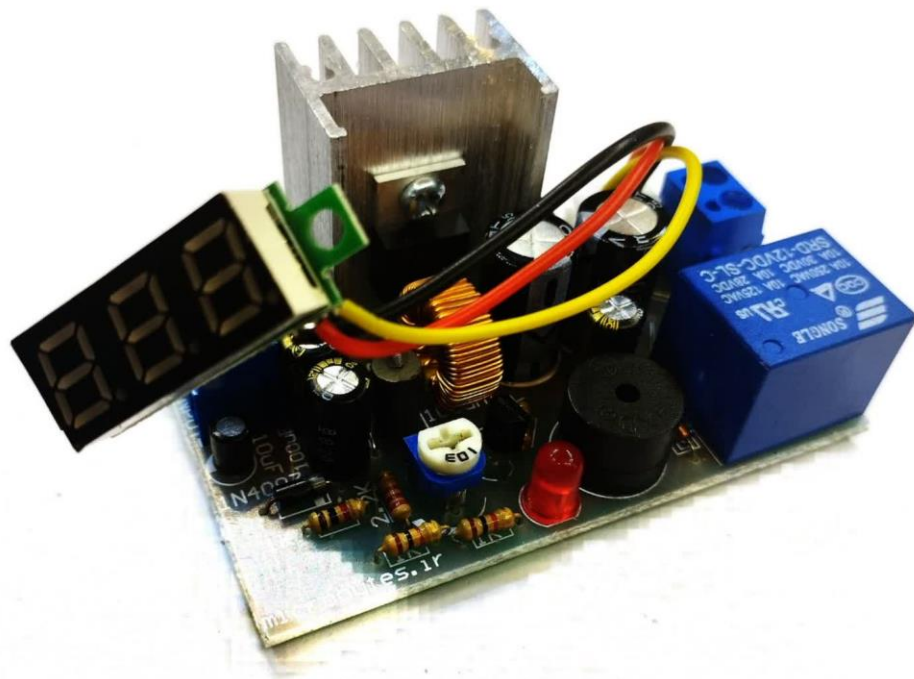


Charging module for all batteries

Lithium-Nickel Cadmium -Lead acid





With the advance of technology, we have introduced a product to the market that can easily charge all types of batteries available. This device has an adjustable output voltage range of 0 to 22 volts, which reaches zero as soon as the charging is complete, fully charging the battery. This charging kit is suitable for use with lithium, nickel-cadmium, and lead-acid batteries.

One of the advantages of this charging kit is its adjustable output voltage. This feature allows the user to optimize the output voltage based on the battery charging requirements. Additionally, this charger kit has short-circuit protection, which helps the user prevent damage to the battery and the charger kit.

Another advantage of this kit is that its output voltage is variable and can be used with most batteries available in the market. Moreover, the circuit operates in constant voltage mode and variable current mode, so that when you connect the battery to the circuit, the circuit starts charging. The circuit current is variable until the battery is fully charged, and as the battery is charged, the output current naturally decreases. When the battery is fully charged, the circuit keeps the battery in float mode, which is another advantage, as the chargers available in the market that use cut-off technology disconnect the battery current when the battery is fully charged, causing a voltage drop and gradual discharge of the battery over time.

To use this charging kit, you can use a switching adapter with a maximum voltage of 24 volts and a maximum current of 5 amps. When using this charging kit, you should pay attention to factors such as the type of battery and the required output voltage for charging it.

Specifications of rechargeable batteries

I	v-in	A-in	v-out	A-out
max	0to23	25	0to21	22
min	3to23	22	3to19	20

The charging voltage of the batteries should be 2.45 volts higher than the voltage of the batteries, so that the battery can be charged well.

Regulation voltages for rechargeable batteries

Battery voltage	1.2-V	3.7-V	4-V	6-V	12-V
Battery charging voltage	3.47- V	6.16-V	6.45- V	8.45- V	14.45- V

Other batteries, apart from the table, just need to be 2.45 volts higher than the battery's own voltage.



Working specifications of the board

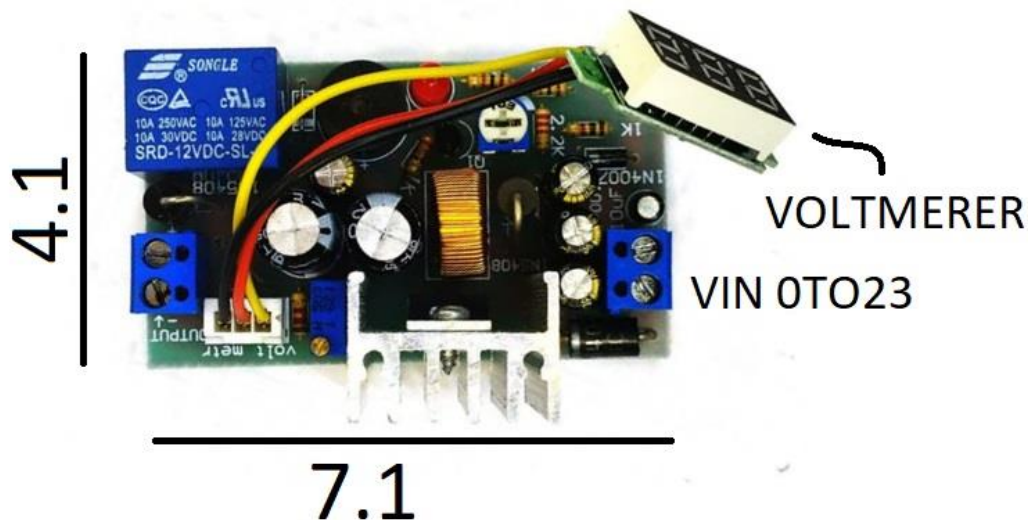
Circuit input voltage	22VIN	incoming current	5amps
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In this charger, due to its advanced charging technology, you only need 5 amps to charge the battery

Technical Specifications of the Charger Module:

1. Professional and cost-effective
2. An all-automatic charger for various types of batteries including acid, dry, atomic, lithium-ion, and lithium polymer.
3. Maximum charging current of 20 amps
4. Equipped with a short-circuit protection circuit at the output
5. Equipped with a warning LED and audio indicator
6. Equipped with an output cutoff switch in case of a short circuit
7. Can be used as a variable power supply
8. Ideal for charging motorcycle batteries
9. Capable of connecting a voltmeter module
10. Protected against reverse polarity connection at the input and output

The best type and brand of components have been selected for the assembly of this kit, including components such as regulator IC, high-amperage relay, synchronous diode, capacitor, terminal, and more. The dimensions of the board are 4.1 x 7.1 centimeters.



1. Obtain an adapter with the specified specifications and connect it to the input connector, making sure to observe the positive and negative poles.
2. Adjust the output voltage to the desired voltage using the blue multi-turn potentiometer (R1) on the left side of the heat sink.
3. Connect the circuit's output or "output" to the battery by connecting two wires to the circuit's output and charging the battery.

Note: If the relay is activated during the output voltage adjustment process, you can deactivate it by adjusting the potentiometer (pot1).

To connect a voltmeter to the circuit, use a three-wire male XH connector.

Voltmeter wire connection guide:

Yellow wire for voltage measurement

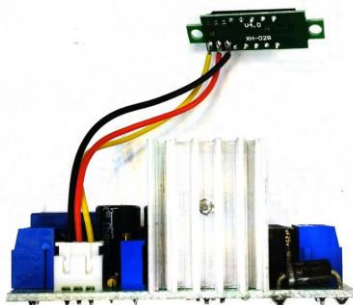
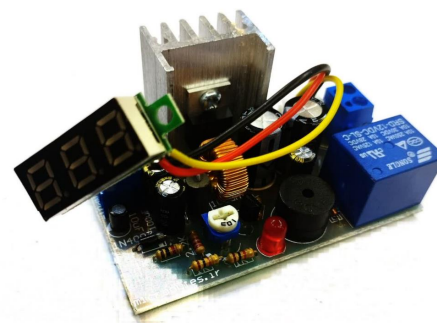
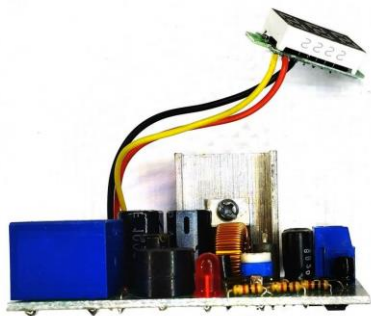
Red wire for positive power supply to the voltmeter module

Black wire for negative power supply to the voltmeter module

Product applications:

Charging lithium, nickel-cadmium, and lead-acid batteries

Can be used as a substitute for variable power sources (Note: To use it as a substitute for variable power sources, change the resistance next to the multi-turn potentiometer to 1 kilo-ohm).





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Charger module for all batteries BCM-PM1

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