Hyuduo Hyuduo5fykcewug2

Hyuduo Pulse Igniter Coil Module

Model: Hyuduo5fykcewug2

1. Introduction

This manual provides essential information for the safe and effective use of the Hyuduo Pulse Igniter Coil Module. This module is designed as a high voltage generator for small scientific projects and experiments, converting a low DC input voltage into a high voltage pulse output.

2. Safety Information

WARNING: This device generates high voltage. Improper handling can result in electric shock, burns, or other serious injury. Always exercise extreme caution when operating this module.

- Do not touch the output wires or the arc during operation.
- Ensure proper insulation and safety measures are in place before powering on.
- Keep the module away from flammable materials.
- Operate in a well-ventilated area.
- This module is not designed for continuous operation. Prolonged use can lead to overheating and damage.
- Supervision by an adult is recommended for users under 18 years of age.

3. Product Overview

The Hyuduo Pulse Igniter Coil Module is a compact high voltage generator. It features distinct input and output wiring for easy identification and connection.

Figure 3.1: Overview of the Hyuduo Pulse Igniter Coil Module.

The module has shorter input wires, typically brown, and thicker, red output wires. The input wires do not require polarity distinction, simplifying connection to your power source.

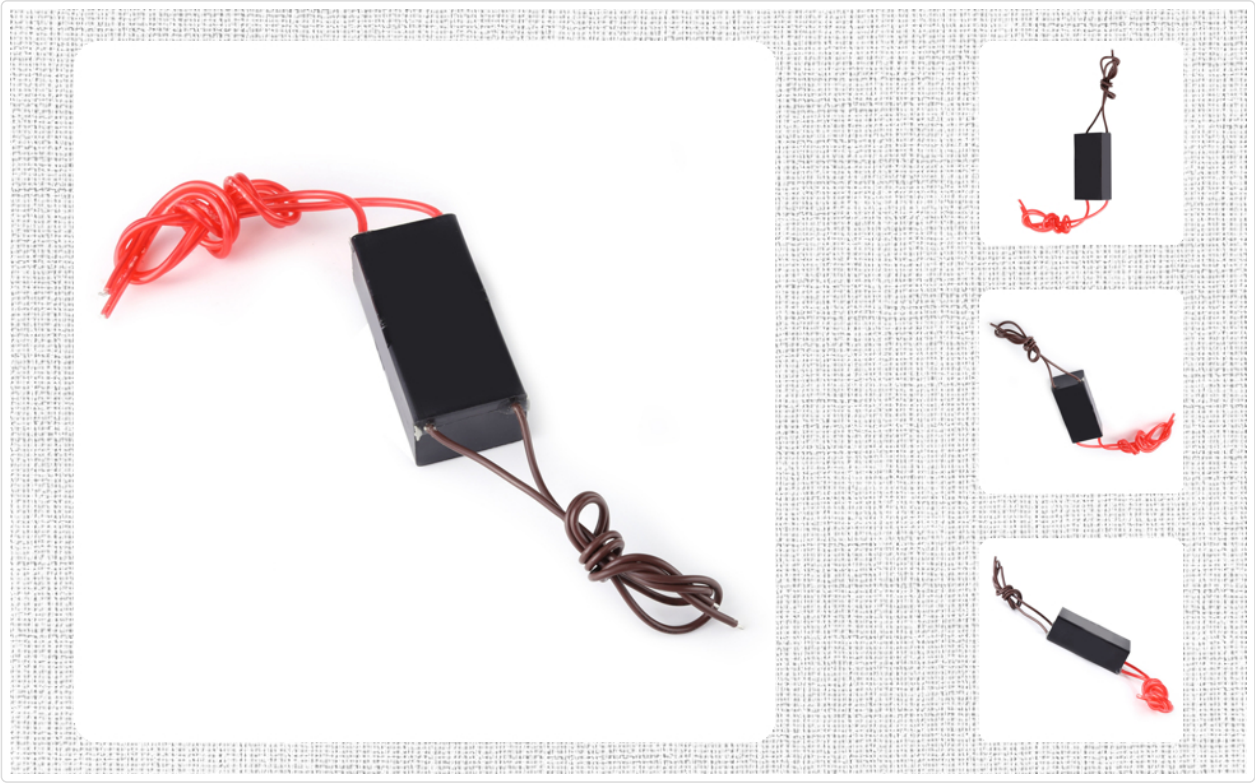

Figure 3.2: Detailed view of the module's wiring, highlighting the input (brown) and output (red) connections.

4. Specifications

Feature	Specification
Dimensions	70 x 30 x 24 mm (2.75 x 1.18 x 0.94 inches)
Input Voltage	DC 6V - 12V
Input Current	0.5A - 1A
Input Cable Length	Approx. 26 cm (10.23 inches)
High Voltage Type	Pulse DC
Output Voltage	Approx. 60KV
Output Current	0.5A - 1A
Output Cable Length	Approx. 48 cm (18.89 inches)
Arc Discharge Distance	1.5 cm (0.59 inches) to 2 cm (0.78 inches)
Recommended Power Supply	Ni-Cd/Ni-mh battery pack, 6V or 12V (12V is recommended for better performance)

5. Setup

Follow these steps to set up your Pulse Igniter Coil Module:

1. **Prepare Power Source:** Obtain a suitable DC power source, such as a Ni-Cd or Ni-mh battery pack, with an output voltage between 6V and 12V. A 12V source is recommended for optimal performance.
2. **Connect Input Wires:** Connect the two shorter input wires (typically brown) from the module to your

power source. Polarity does not need to be distinguished for these input wires.

3. **Prepare Output Wires:** The two thicker, red wires are the high voltage output. Ensure these wires are kept separate and insulated from other components and surfaces.
4. **Integrate a Switch:** For safe operation, it is highly recommended to integrate a switch between your power source and the module's input. This allows for controlled activation and deactivation of the high voltage output.

6. Operating Instructions

Once the module is set up, follow these instructions for operation:

1. **Adjust Output Ends:** Before applying power, ensure the output ends of the red cables are properly positioned. The arc discharge distance can be adjusted by varying the gap between these two ends.
2. **Initial Arc Distance:** When first testing, set the arc distance from short to long. Do not attempt to create the longest possible arc immediately, as this can damage the module.
3. **Apply Power:** Activate the switch connected to the module's input. The module will generate a high voltage pulse, creating an arc between the output ends if the distance is appropriate.
4. **Observe Arc:** The arc distance and intensity will depend on the battery voltage and capacity.
5. **Operating Duration:** Due to the module's high power and limited internal heat dissipation, it is not designed for long-term continuous operation. Use in short bursts to prevent overheating and potential damage.
6. **Power Off:** Deactivate the switch to turn off the module.

7. Maintenance

To ensure the longevity and proper functioning of your module:

- Keep the module clean and dry. Avoid exposure to moisture or corrosive substances.
- Store in a cool, dry place when not in use.
- Regularly inspect the wiring for any signs of damage or wear. Replace if necessary.
- Do not attempt to open or modify the module casing, as this may void any potential warranty and poses a safety risk.

8. Troubleshooting

If you encounter issues with your module, consider the following:

- **No Arc or Weak Arc:**
  - Check your power source: Ensure the battery is fully charged and provides sufficient voltage (6V-12V DC).
  - Verify battery capacity: To determine if your battery has enough capacity, measure its voltage while the module is attempting to produce an arc. If the measured voltage drops significantly (e.g., below 6V for a 12V battery), the battery capacity may be insufficient.
  - Adjust arc distance: Ensure the gap between the output wires is within the specified range (1.5 cm to 2 cm) and gradually increase it if starting from a very short distance.
  - Check connections: Ensure all input and output wires are securely connected.
- **Module Overheating:**

- This module is not designed for continuous operation. If it overheats, reduce the operating time and allow it to cool down between uses.

9. Warranty and Support

For warranty information or technical support, please refer to the retailer or manufacturer's official website. Keep your purchase receipt as proof of purchase.