

GODIYMODULES Voltage Reference Module

GODIYMODULES Precision Voltage Reference Module User Manual

Model: Voltage Reference Module

INTRODUCTION

The GODIYMODULES Precision Voltage Reference Module is designed for accurate voltage and resistance calibration. It features low-temperature drift components and is powered via a Type-C 5V port, eliminating the need for a battery. This module provides five distinct voltage reference levels and five resistance reference levels, making it suitable for verifying the accuracy and linearity of digital multimeters.

PRODUCT OVERVIEW

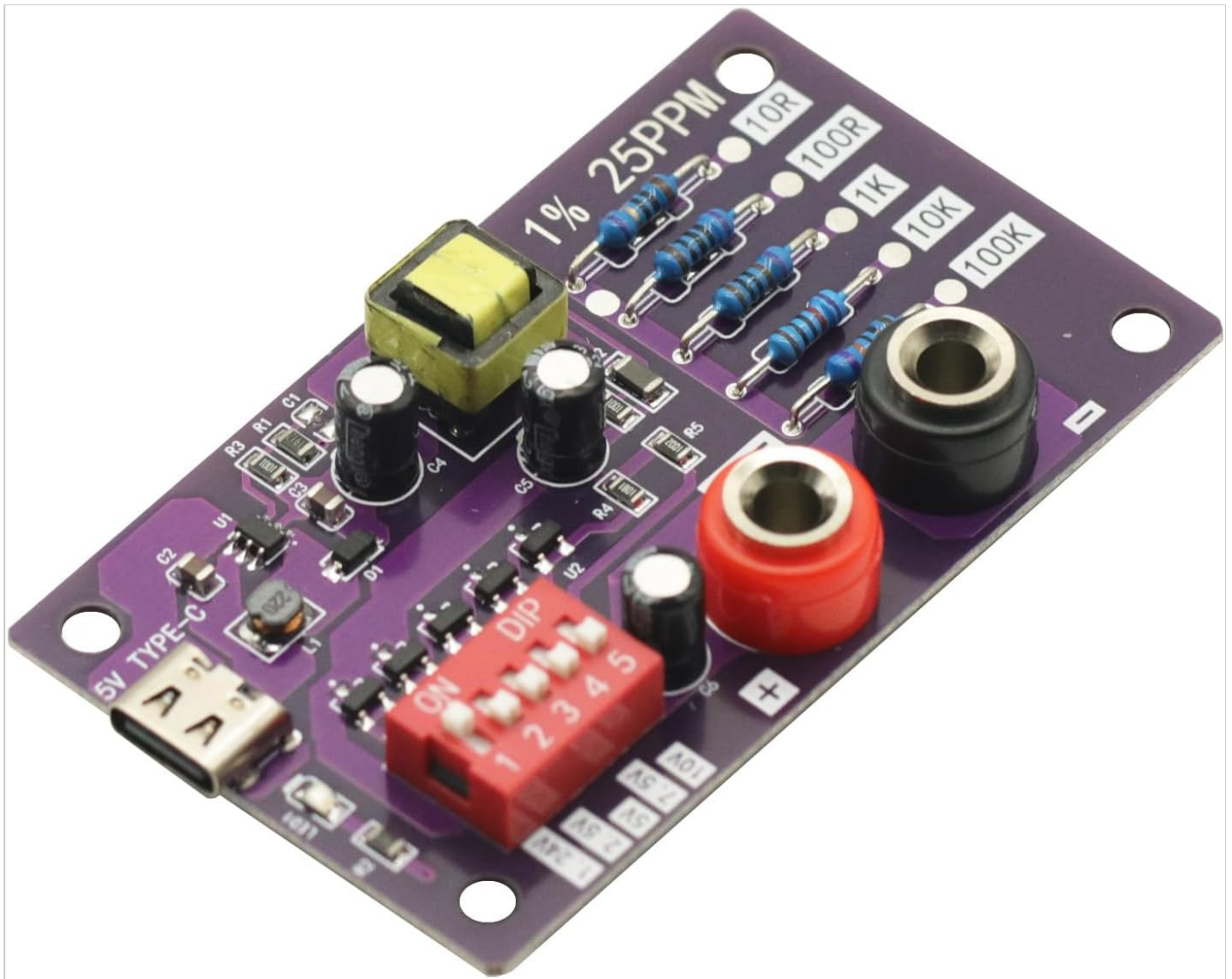


Figure 1: Top-down view of the GODIYMODULES Precision Voltage Reference Module. This image shows the overall layout of the module, including the Type-C power input, DIP switches for selecting voltage, and output terminals.

The module incorporates an EMI filter for a cleaner power supply. It includes a green LED to indicate power status. The compact design (85x55x25mm) makes it convenient for various applications.

SETUP AND CONNECTION

1. **Power Supply:** Connect a 5V Type-C power source (0.5A minimum) to the Type-C port on the module. The green LED will illuminate to indicate power.
2. **Output Connection:** Use appropriate test leads to connect your multimeter or device under test to the red (+) and black (-) output terminals on the module.
3. **Environment:** For optimal accuracy, especially when verifying 4 1/2 digit multimeters, ensure the working environment maintains a stable temperature (16-30°C) and humidity (RH≤70%). Avoid direct airflow from air conditioners, which can introduce errors.

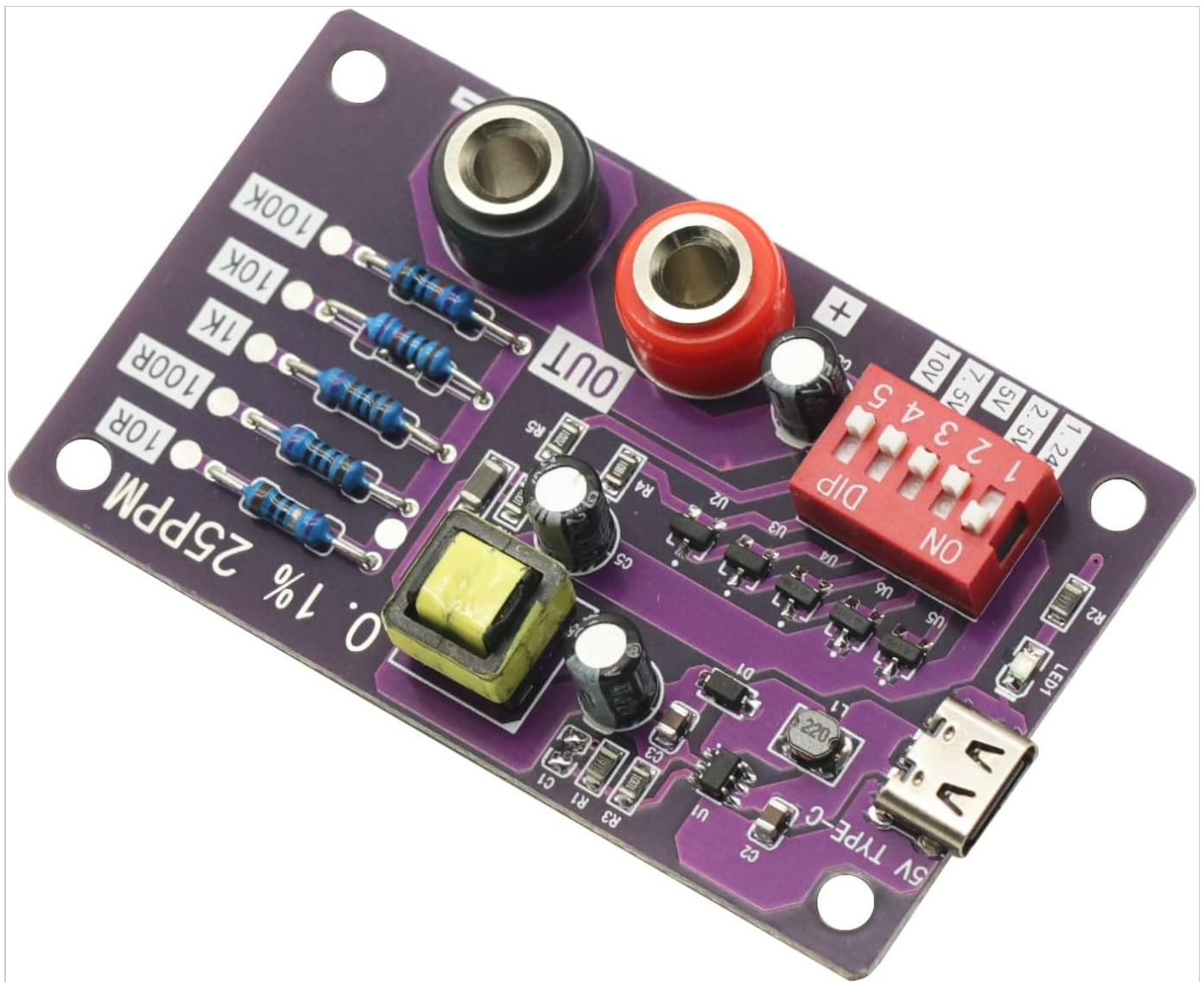


Figure 2: Close-up view of the module showing the Type-C power input and the DIP switches for selecting reference values.

OPERATING INSTRUCTIONS

Selecting Voltage Reference

The module provides five voltage reference levels: 1.24V, 2.5V, 5V, 7.5V, and 10V. These are selected using the DIP switches labeled 1 to 5. Each switch corresponds to a specific voltage level.

- **Switch 1:** 1.24V
- **Switch 2:** 2.5V
- **Switch 3:** 5V
- **Switch 4:** 7.5V
- **Switch 5:** 10V

Caution: Only one DIP switch for voltage selection should be in the "ON" position at any given time. Activating multiple voltage switches simultaneously is not permitted and may lead to incorrect readings or module damage.

Selecting Resistance Reference

The module provides five fixed resistance reference levels: 10 Ω , 100 Ω , 1K Ω , 10K Ω , and 100K Ω . These are available at dedicated terminals on the board. To measure a specific resistance, connect your multimeter to the corresponding resistance terminals.

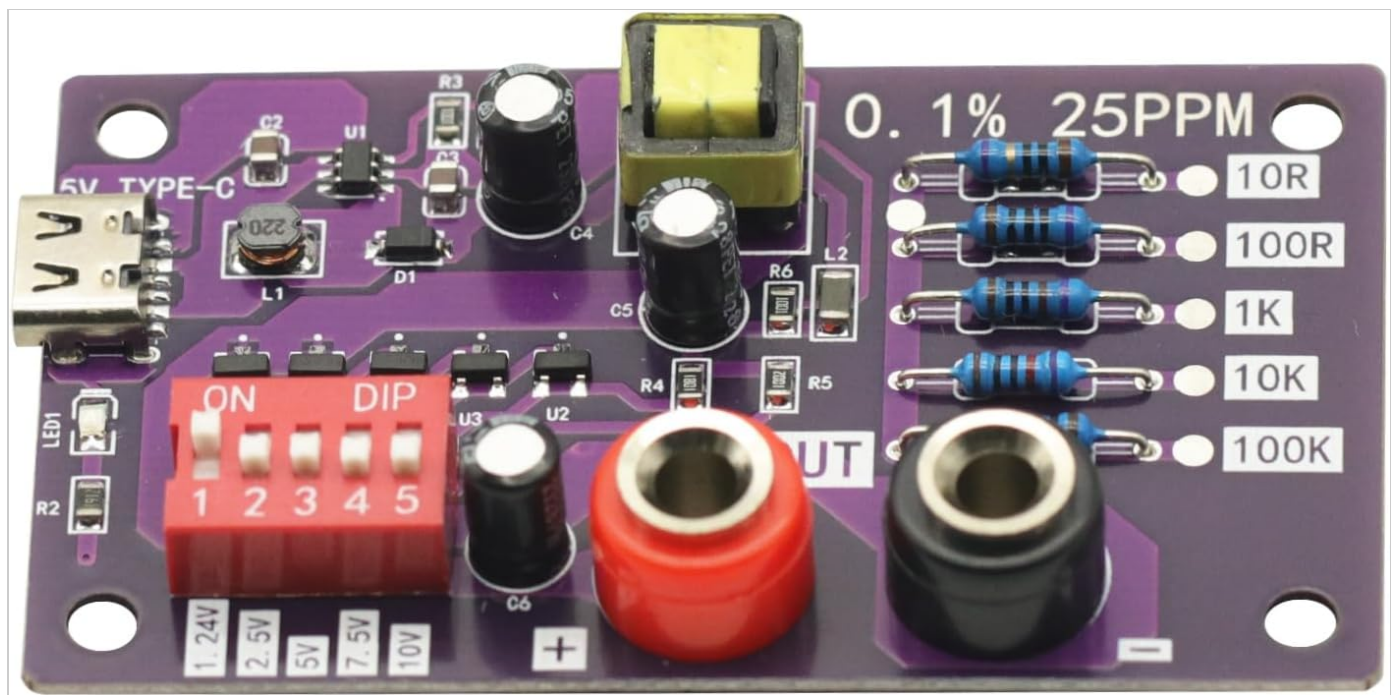


Figure 3: View of the module highlighting the fixed resistance output terminals (10R, 100R, 1K, 10K, 100K).

Usage for Multimeter Calibration

- **3 1/2 Digit Multimeters:** The module can be used to verify the accuracy and linearity of handheld 3 1/2 digit digital multimeters.
- **4 1/2 Digit Multimeters:** For 4 1/2 digit digital multimeters, it is crucial to maintain the same temperature and humidity conditions as specified in the multimeter's data sheet for accurate verification.

MAINTENANCE

- **Cleaning:** Keep the module clean and free from dust and debris. Use a soft, dry cloth for cleaning.
- **Storage:** Store the module in a dry environment, away from extreme temperatures and humidity.
- **Handling:** Handle the module with care to avoid physical damage to components or connections.

TROUBLESHOOTING

- **No Power Indication (Green LED Off):**
 - Ensure the Type-C power cable is securely connected.
 - Verify that the 5V Type-C power source is functional and provides at least 0.5A.
- **Incorrect Voltage Output:**
 - Check that only one voltage selection DIP switch is in the "ON" position.
 - Ensure proper connection to the multimeter.
 - Verify environmental conditions (temperature, humidity) for sensitive measurements.
- **Unstable Readings:**
 - Operate in a low airflow environment to prevent temperature fluctuations.
 - Avoid direct cold wind from air conditioners.

SPECIFICATIONS

Feature	Specification
Product Name	Voltage Reference Module
Brand	GODIYMODULES
Power Supply	Type-C 5V port, 0.5A
No-load Power Consumption	45mA
Power Indication	Green LED light
Reference Voltage Levels	1.24V, 2.5V, 5V, 7.5V, 10V (5 levels)
Reference Resistance Levels	10Ω, 100Ω, 1KΩ, 10KΩ, 100KΩ (5 levels)
Resistor Material	0.1% Metal film copper feet & TCR: 25PPM
Dimensions (Clear Box Size)	85mm x 55mm x 25mm
Net Weight	34g
Working Environment	16-30°C, RH≤70%

ADDITIONAL RESOURCES

For a visual demonstration of a voltage reference module (note: this video may feature a similar but not identical product), please refer to the video below:

Your browser does not support the video tag.






Video 1: Demonstration of a Voltage Reference Module. This video provides a general overview of how a voltage reference module might be used, including handling and basic operation. While the module shown may differ slightly from the GODIYMODULES model, it illustrates the general principles of such devices.

WARRANTY AND SUPPORT

Specific warranty information for the GODIYMODULES Precision Voltage Reference Module is not provided in the product details. For warranty claims or technical support, please contact your retailer or the manufacturer directly.



Related Documents - Voltage Reference Module

<div data-bbox="119 118 300 347"> <p>WRYTECH HANDHELD PRECISION DIGITAL VOLTAGE SOURCE</p> <p>PDVS 2 MINI v2</p> <p>A handheld DC source for a wide range of applications, featuring high accuracy and precision, designed for use in research, development, and industry.</p>  <p>Model: WRYTECH PDVS 2 MINI v2</p> </div>	<p>WRYTECH PDVS 2 Mini v2 Precision Digital Voltage Source User Manual</p> <p>Comprehensive user manual for the WRYTECH PDVS 2 Mini v2 handheld precision digital voltage source. Covers features, specifications, operation, settings, calibration, and troubleshooting for this versatile instrument used in research, development, and industry.</p>
<div data-bbox="119 432 306 669"> <p>DIGITAL MULTIMETER USER MANUAL</p> <p>ANENG</p> <p>directory</p> <ul style="list-style-type: none"> 1. statement.....1 2. an overview.....2 3. Safety Precautions.....2 4. Safety operation specification.....3 5. Electrical Symbols.....5 6. Instrument Description.....6 7. Measurement Method.....7 7.1 AC/DC voltage measurement.....7 7.2 Non-contact Voltage Detection.....8 8. General technical specifications.....9 9. Accuracy Index.....10 10.1 DC voltage.....10 10.2 AC voltage.....10 11. Resistance.....11 11.1 Resistance.....11 11.2 Capacitance.....12 12. Instrument Maintenance.....12 13. Replacing a Battery.....12 </div>	<p>ANENG M113 Digital Multimeter User Manual - Features, Specifications, and Operation</p> <p>Comprehensive user manual for the ANENG M113 digital multimeter, covering its features, safety precautions, measurement methods, technical specifications, accuracy indicators, and maintenance procedures.</p>
<div data-bbox="119 719 311 860"> <p>INSTRUCTION MANUAL</p> <p>Pocket digital multimeter</p>  <p>CE</p> </div>	<p>ANENG M113 Pocket Digital Multimeter Instruction Manual</p> <p>Comprehensive instruction manual for the ANENG M113 Pocket Digital Multimeter, covering safety precautions, instrument description, measurement methods, technical specifications, and maintenance.</p>
<div data-bbox="119 936 306 1055">  <p>64518000 笔式万用表</p> </div>	<p>HABOTEST HT122 Digital Pen Type Multimeter User Manual</p> <p>Comprehensive user manual for the HABOTEST HT122 Digital Pen Type Multimeter. Learn about its safety features, auto and manual modes, NCV detection, phase sequence measurement, technical specifications, and maintenance.</p>
<div data-bbox="119 1126 306 1344"> <p>UNI-T</p> <p>UT123</p> <p>Residential Smart Digital Multimeter</p>  </div>	<p>UNI-T UT123/UT123D Residential Smart Digital Multimeter User Manual</p> <p>Comprehensive user manual for the UNI-T UT123 and UT123D Residential Smart Digital Multimeters, covering features, safety instructions, operating procedures, specifications, and maintenance.</p>
<div data-bbox="119 1400 306 1503">  </div>	<p>Xhorse MK3 Digital Multimeter User Manual</p> <p>User manual for the Xhorse MK3 Digital Multimeter, covering its features, operation, safety warnings, and specifications for accurate electrical measurements.</p>