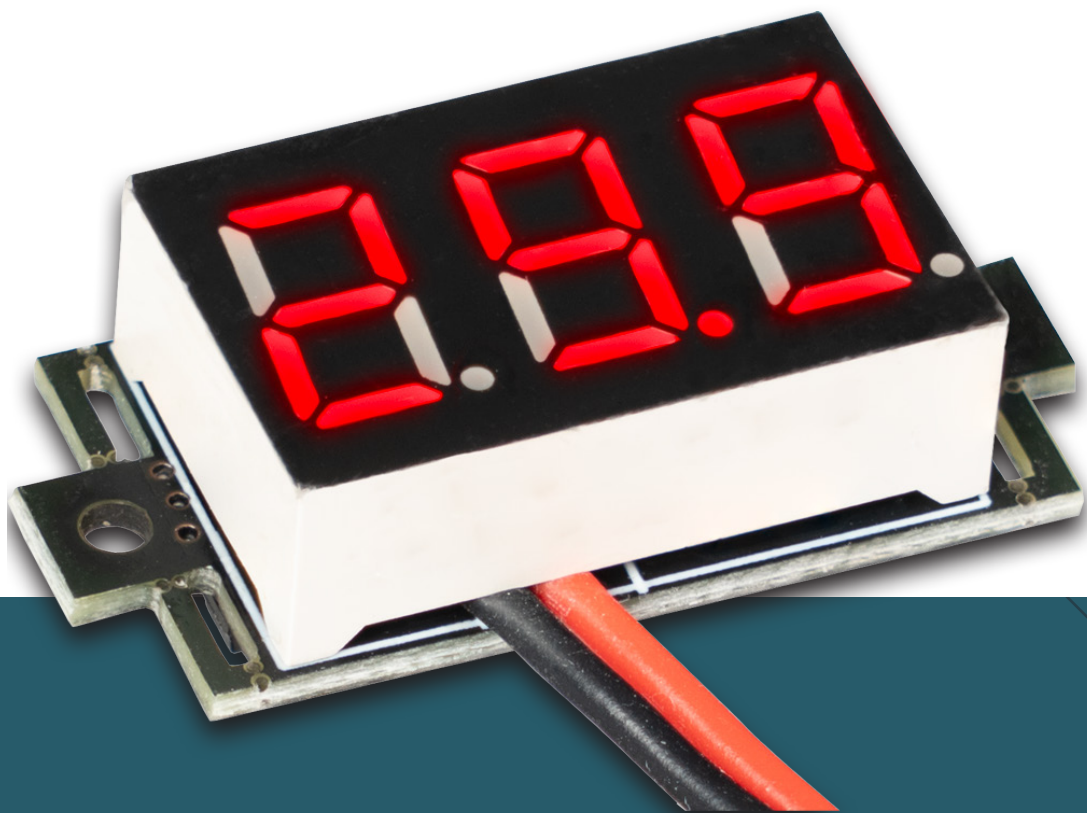




ULTRA COMPACT VOLT METER

COM-VM01

1. GENERAL INFORMATION

Dear Customer,

Thank you for choosing our product. Below, we will show you what you need to bear in mind when commissioning and using the product.

Should you encounter any unexpected problems during use, please do not hesitate to contact us.

The COM-VM01 is an ultra-compact digital voltmeter designed for quick and precise DC voltage measurements in electronic projects, prototypes, and monitoring applications. It features a bright red 3-digit 7-segment display with a digit height of 0.36", ensuring excellent readability even in low-light environments.

The module operates directly from the measured voltage, eliminating the need for an additional power source. It supports a wide measurement range from 3 V to 29.9 V DC with a high input resistance of over 100 k Ω , providing accurate readings without influencing the circuit under test. The integrated calibration potentiometer allows fine adjustment for optimal accuracy of up to ± 0.1 %.

Thanks to its compact dimensions (33 × 15 × 11 mm) and low weight of only 5 g, the COM-VM01 can be easily integrated into enclosures, control panels, or embedded systems. With a refresh rate of 300 ms, it provides fast and stable readings, ideal for voltage monitoring tasks in laboratories, vehicles, model building, and industrial equipment.

This mini voltmeter is particularly suitable for use in DIY electronics, battery-powered devices, and mobile measurement setups. Its straightforward two-wire connection (red = positive / black = negative) allows easy installation and immediate operation. Whether used for permanent voltage indication or temporary diagnostics, the COM-VM01 offers a reliable and efficient measurement solution in the smallest possible format.

2. SAFETY INSTRUCTIONS

Please read these safety instructions carefully before installing or operating the device. Improper use or incorrect wiring may lead to damage, malfunction, or personal injury.

This measuring instrument is designed exclusively for DC voltage measurement within the specified technical limits. Do not use it for AC applications or beyond its rated values. Operate the device only within the voltage range stated in the specifications. Connecting the instrument to higher voltages can cause permanent damage.

Disconnect all power sources before wiring or modifying connections. Ensure correct polarity of all terminals. Use properly dimensioned cables and connectors suitable for the expected current, and avoid loose connections, short circuits, and exposed conductors.

There is a risk of electric shock, which can result in serious injury or death. Work on high-voltage circuits or live electrical systems should only be performed by qualified electricians or trained professionals. Always ensure that the power supply is disconnected before performing any installation or maintenance work.

The instrument is intended for dry indoor environments. Protect it from moisture, condensation, high humidity, and direct sunlight. Do not touch the measuring terminals during operation. Ensure adequate ventilation and do not cover the display or heat-dissipating components. The module must not be operated near flammable materials or gases.

Before cleaning, disconnect the power supply. Use a dry, soft cloth only – never solvents or aggressive cleaners. The device contains no user-serviceable parts; repairs should only be carried out by the manufacturer or qualified personnel.

Dispose of the device according to local electronic waste regulations (WEEE). Do not dispose of it in household waste.

Incorrect wiring or use beyond the specified limits may lead to overheating, damage, fire, or electric shock. Always verify polarity, voltage, and proper wiring before connecting the device.

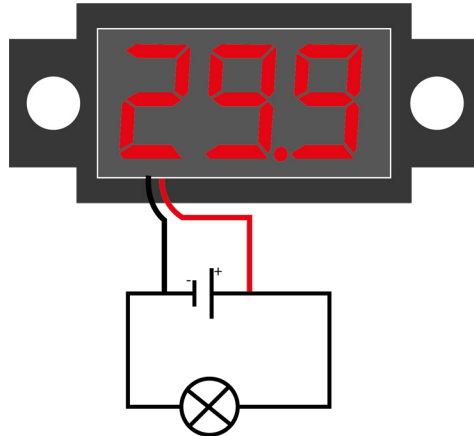
3. CONNECTION

Before connecting or changing the wiring, the system must be disconnected from the power supply.

Ensure that the power supply is completely disconnected before working on the device.

To connect the voltmeter, attach the red wire to the positive (+) terminal of the voltage source and the black wire to the negative (-) terminal.

Ensure the measured voltage does not exceed the specified input range of the device.



4. CALIBRATION

The measuring device is calibrated at the factory and does not need to be readjusted for normal operation.

Recalibration is only necessary if significant deviations are found when compared with a precise reference measuring device.

There is a trimming potentiometer on the bottom side of the module that can be used to fine-tune the display.

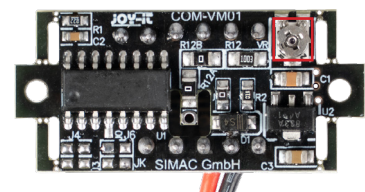
Connect the measuring device according to the connection diagram.

Apply a known reference voltage (or a defined current).

Compare the displayed value with the reference measuring device.

Carefully turn the calibration potentiometer with a small, **insulated screwdriver** until the display matches.

Perform the adjustment slowly and carefully, as even small turns can significantly change the display.



5. INFORMATION AND TAKE-BACK OBLIGATIONS

Our information and take-back obligations under the German Electrical and Electronic Equipment Act (ElektroG)



Symbol on electrical and electronic equipment:

This crossed-out wheellie bin symbol means that electrical and electronic equipment must not be disposed of with household waste. You must take old appliances to a collection point. Before disposal, you must remove any old batteries and accumulators that are not enclosed in the old appliance.

Return options:

As an end user, when purchasing a new device, you can return your old device (which essentially performs the same function as the new one purchased from us) for disposal free of charge. Small devices with external dimensions not exceeding 25 cm can be handed in in normal household quantities, regardless of whether you purchase a new device.

Option to return items to our company location during opening hours:

SIMAC Electronics GmbH, Pascal Street 8, D-47506 Neukirchen-Vluyn

Return option near you:

We will send you a parcel label so that you can return the device to us free of charge. To do so, please contact us by e-mail at Service@joy-it.net or by telephone.

Packaging information:

Please pack your old appliance securely for transport. If you do not have suitable packaging material or do not wish to use your own, please contact us and we will send you suitable packaging.

6. SUPPORT

We are also there for you after your purchase. If you still have questions or encounter any problems, we are also available to assist you via email, telephone and our ticket support system.

Email: service@joy-it.net

Ticket system: <https://support.joy-it.net>

Telephone: +49 (0)2845 9360 – 50

For further information, please visit our website:

www.joy-it.net