

Voltcraft DVM230W

VOLTcraft DVM230W Digital Installation Meter Module

USER MANUAL

1. Introduction

This manual provides essential information for the safe and effective use of your VOLTcraft DVM230W Digital Installation Meter Module. This module is designed for integration into laboratory devices and control panels, offering precise digital measurements with a clear white backlight display. Please read these instructions thoroughly before installation and operation.

2. Safety Information

- Always ensure the power supply is disconnected before installing or servicing the module.
- This device is intended for professional installation. Incorrect installation can lead to damage or injury.
- Do not expose the module to moisture, extreme temperatures, or corrosive environments.
- Only use the module within its specified electrical parameters.
- Refer to local electrical codes and regulations for proper installation procedures.

3. Product Overview

The VOLTcraft DVM230W is a compact digital meter module featuring a 10 mm digit height and a white backlight for enhanced readability. It is designed for recessed mounting with standard DIN dimensions.

Key Features:

- Recessed installation dimensions: 45 x 22 mm
- Module with DIN dimensions 48 x 24 mm
- 10 mm digit height
- White LED backlight for visibility in low light conditions
- Battery wear indicator
- Data-Hold function

- Display of units: °C, °F, V, A, μ , m, M, k, ohms
- Input resistance: 100 M Ω
- Measurement range extendable via external resistors (voltage splitter, shunt)

Product Components:



Figure 3.1: Front View

This image shows the front of the DVM230W module with its digital display active, showing a reading of '1.305 mV'. The white backlight is visible, enhancing the clarity of the digits and unit indicators.

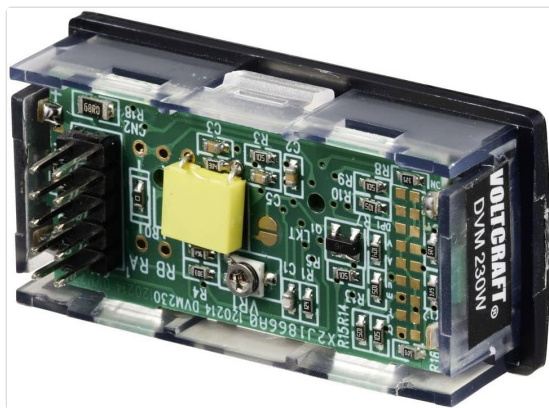


Figure 3.2: Rear View (Circuit Board)

This image displays the rear of the DVM230W module, revealing the internal circuit board with various electronic components, including resistors (RA, RB), capacitors, and the connection pins for integration into a system. The transparent casing allows visibility of the internal electronics.



Figure 3.3: Side View

This image presents a side profile of the DVM230W module, highlighting its compact and rectangular form factor. The transparent casing on the sides allows a partial view of the internal components and the 'VOLTcraft DVM 230W' branding on the side label.

4. Setup and Installation

The DVM230W module is designed for recessed mounting. Ensure the mounting surface has an opening of 45 x 22 mm.

1. **Mounting:** Carefully insert the module into the prepared opening. The module is designed to snap into place. Ensure a snug fit to prevent movement. If the fit is too tight, minor adjustments to the opening or the use of a small amount of adhesive may be necessary.
2. **Electrical Connections:** Connect the module to the male bars of your system. Refer to the wiring diagram provided with your specific application for correct polarity and signal connections.
3. **Extending Measurement Range (Optional):** To measure voltages or currents beyond the module's default range (e.g., 0-200 mV), external resistors (voltage splitter for voltage, shunt for current) must be connected in series.
4. **Internal Configuration for Extended Range:** If extending the measurement range, it is crucial to remove the 0 Ohm SMD resistor at position RA on the circuit board. Failure to do so before installing a voltage divider or shunt can damage the device. Consult the detailed circuit diagram for precise location of RA.
5. **Unit and Decimal Adjustment:** The module allows for adjustment of displayed units and decimal places. This is typically done via solder bridges or pin headers on the circuit board. Refer to the detailed internal diagram for specific configuration points.

5. Operating Instructions

Once installed and powered, the DVM230W module will display the measured value on its digital screen.

- **Reading the Display:** The 10 mm digits provide clear readings. The white backlight ensures visibility in various lighting conditions.
- **Unit Indication:** The display will show the configured unit (e.g., V, mV, A, mA, Ohms, kOhms, MOhms, °C, °F) alongside the numerical value.
- **Data-Hold Function:** If equipped with a data-hold feature (check your specific model's pinout/buttons), activate it to freeze the current reading on the display.
- **Battery Wear Indicator:** The module includes a battery wear indicator. If this indicator activates, it suggests the internal power source (if applicable) or the external power supply is insufficient or failing.

6. Maintenance

The VOLTcraft DVM230W module requires minimal maintenance.

- **Cleaning:** Use a soft, dry cloth to clean the display and casing. Do not use abrasive cleaners or solvents, as these can damage the plastic and display.
- **Inspection:** Periodically inspect the connections for any signs of corrosion or loose wiring.
- **Environmental Conditions:** Ensure the module operates within its specified temperature and humidity ranges to prolong its lifespan.

7. Troubleshooting

- **No Display/Incorrect Reading:**
 - Check power supply connections and ensure correct voltage.

- Verify input signal connections for correct polarity and range.
- If using an extended measurement range, confirm that the 0 Ohm SMD resistor at RA was correctly removed before installing external resistors. Incorrect configuration here can lead to erroneous readings or damage.
- **Flickering Display:**
 - Check for unstable power supply.
 - Ensure proper grounding to minimize electrical interference.
- **Battery Wear Indicator Active:**
 - If the module uses an internal battery, replace it.
 - If powered externally, check the stability and voltage of the external power source.




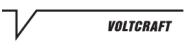


8. Specifications

Feature	Specification
Model Number	DVM230W (Manufacturer Part Number: 126567)
Installation Dimensions	45 x 22 mm
Module Dimensions (DIN)	48 x 24 mm
Digit Height	10 mm
Backlight	White LED
Input Resistance	100 MΩ
Power Source	Hand-operated (implies external power supply, not self-contained)
Item Weight	0.32 ounces
Package Dimensions	4.45 x 2.01 x 1.26 inches
Date First Available	September 19, 2014

9. Warranty and Support

For warranty information and technical support, please refer to the documentation provided at the time of purchase or visit the official Voltcraft website. Specific warranty terms may vary by region and retailer.

You can also visit the [Voltcraft Store on Amazon](#) for additional product information and support resources.

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 <p>Bedienungsanleitung SEM6000 Bluetooth Energiekosten-Messgerät User No. 155866</p> <p>Seite 2-14</p> <p>Operating Instructions SEM6000 Bluetooth Energy consumption meter User No. 155866</p> <p>Page 11-17</p> <p>CE</p>	<p>Voltcraft SEM6000 Bluetooth Energy Consumption Meter - Operating Instructions</p> <p>Comprehensive operating instructions for the Voltcraft SEM6000 Bluetooth energy consumption meter. Covers intended use, safety precautions, connection, operation, maintenance, technical specifications, and disposal.</p>
 <p>Bedienungsanleitung VC371 60A AC/DC Mini Zangenmessgerät User No. 200108</p> <p>Seite 2-14</p> <p>Operating Instructions VC371 60A AC/DC Mini Clamp Meter User No. 200108</p> <p>Page 11-17</p> <p>CE</p>	<p>VOLTcraft VC371 40A AC/DC Mini Clamp Meter Operating Instructions</p> <p>This document provides comprehensive operating instructions and safety guidelines for the VOLTcraft VC371 40A AC/DC Mini Clamp Meter. It details product features, measurement procedures for AC/DC current and voltage, resistance, capacitance, and includes troubleshooting and technical specifications.</p>
 <p>Bedienungsanleitung MF-100 Feuchtigkeitsmessgerät User No. 200108</p> <p>Seite 2-14</p> <p>Operating Instructions MF-100 Moisture Meter User No. 200108</p> <p>Page 11-17</p> <p>CE</p>	<p>VOLTcraft MF-100 Moisture Meter User Manual and Technical Specifications</p> <p>Detailed operating instructions, safety guidelines, technical specifications, and disposal information for the VOLTcraft MF-100 moisture meter. Learn how to accurately measure moisture levels in various building materials.</p>
 <p>Bedienungsanleitung SEM6503 Wi-Fi Energiekosten-Messgerät User No. 200108</p> <p>Seite 2-14</p> <p>Operating Instructions SEM6503 Wi-Fi Energy consumption meter User No. 200108</p> <p>Page 11-17</p> <p>CE</p>	<p>VOLTcraft SEM6503 Wi-Fi Energy Consumption Meter: User Manual and Technical Data</p> <p>Comprehensive operating instructions and technical specifications for the VOLTcraft SEM6503 Wi-Fi energy consumption meter, including safety guidelines, connection, and usage details. Learn about its features, technical data, and safe operation.</p>