PEAKMETER PM8225

PEAKMETER PM8225 Digital Multimeter Instruction Manual

Model: PM8225, PM8225B/C/D Series

Brand: PEAKMETER

1. Introduction

The PEAKMETER PM8225 series digital multimeter is a versatile and reliable tool designed for electricians and DIY enthusiasts. It offers a wide range of measurement functions including AC/DC voltage, AC/DC current, resistance, capacitance, frequency, diode, continuity, and non-contact voltage (NCV) detection. Equipped with a large digital display, backlight, and flashlight, it ensures clear readings and ease of use in various environments.

This manual provides essential information for the safe and effective operation of your PM8225 series digital multimeter. Please read it thoroughly before use and keep it for future reference.

Safety Information

Always adhere to safety precautions when using electrical testing equipment. Failure to do so may result in injury or damage to the meter.

- Do not exceed the maximum input values for any function.
- Do not use the meter if it is damaged or if the test leads are damaged.
- Exercise extreme caution when working with voltages above 30V AC RMS, 42V peak, or 60V DC. These voltages pose a shock hazard.
- Always turn off the circuit power and discharge all high-voltage capacitors before performing resistance, continuity, diode, or capacitance tests.
- Ensure the function switch is in the correct position for the desired measurement before connecting the test leads to the circuit.
- The Digital Multimeter Safety Rating is EN61010-1, EN61010-2-033, EN61326, CAT. III 600V.

2. What's in the Box

Upon opening the package, please verify that all items listed below are present and in good condition:

- PEAKMETER PM8225 Digital Multimeter (EC-PM8225)
- Test Leads (one pair)
- User Manual (this document)
- Lithium Polymer Battery (pre-installed or included separately)

Image: PEAKMETER PM8225 series digital multimeters.

3. Key Features

- **600V AC/DC Measurement:** Capable of measuring both alternating and direct current voltages up to 600V.
- **Flashlight and Black Light:** Integrated lighting for working in dimly lit conditions, enhancing visibility of the test area and display.
- **NCV (Non-Contact Voltage) Test:** Safely detect AC voltage without direct contact, ideal for identifying live wires.
- **4000 Counts Continuity:** Provides a quick audible indication for circuit continuity.
- **Auto Power Off:** Conserves battery life by automatically shutting down after a period of inactivity.
- **Low Battery Indication:** Alerts the user when the battery needs replacement or recharging.
- **Large-Screen Digital Display:** Clear and easy-to-read measurements.
- **Analog Bar Indication:** Provides a visual representation of fluctuating readings.
- **Multi-function Measurement:** Includes NCV, AC and DC voltage, AC and DC current, resistance, capacitance, frequency, diode, and continuity tests.

Image: Overview of the multimeter's full functioning capabilities.

Image: The multimeter features an oversized measurement range, designed to prevent damage from accidental overloads.

Image: The large 2.0-inch screen and smooth rotary dial ensure easy operation and clear readings.

Image: The multimeter is built with a high-quality PVC soft rubber protection cover and ABS fireproof material for enhanced durability and safety.

4. Product Components

Familiarize yourself with the different parts of your PM8225 digital multimeter:

Image: Labeled components of the PEAKMETER PM8225 Digital Multimeter.

- **NCV Inducing Area:** Top part of the meter used for non-contact voltage detection.
- **LCD Screen:** Displays measurement readings, function indicators, and battery status.
- **Backlight Button:** Activates or deactivates the screen backlight.
- **Flashlight:** Provides illumination for the work area.
- **Power Button:** Turns the multimeter on or off.
- **Data Hold Button:** Freezes the current reading on the display.
- **Function Range Switch:** Rotary dial to select the desired measurement function.
- **10A Jack:** Input terminal for measuring currents up to 10 Amperes.
- **COM Jack:** Common (negative) input terminal for all measurements.
- **VΩmA Jack:** Input terminal for voltage, resistance, capacitance, frequency, diode, continuity, and current measurements up to 400mA.

5. Setup and Initial Use

5.1 Battery Installation

The PM8225 series multimeter requires 1 Lithium Polymer battery (included). To install or replace the battery:

1. Ensure the multimeter is turned off and test leads are disconnected.
2. Locate the battery compartment on the back of the meter.
3. Unscrew the battery compartment cover and remove it.
4. Insert the Lithium Polymer battery, observing the correct polarity (+ and -).
5. Replace the battery compartment cover and secure it with the screw.

5.2 Connecting Test Leads

Always connect the black test lead to the **COM** jack. Connect the red test lead to the appropriate jack based on the measurement you intend to perform:

- For Voltage, Resistance, Capacitance, Frequency, Diode, and Continuity measurements: Connect the red test lead to the **VΩmA** jack.
- For Current measurements (up to 400mA): Connect the red test lead to the **VΩmA** jack.
- For High Current measurements (up to 10A): Connect the red test lead to the **10A** jack.

6. Operating Instructions

To begin, turn on the multimeter by pressing the Power button. Select the desired function using the rotary dial.

6.1 Voltage Measurement (AC/DC)

1. Set the rotary dial to the **V~** (AC Voltage) or **V-** (DC Voltage) position.
2. Connect the black test lead to the **COM** jack and the red test lead to the **VΩmA** jack.
3. Connect the test leads in parallel to the circuit or component you wish to measure.
4. Read the voltage value on the LCD screen.

6.2 Current Measurement (AC/DC)

1. Set the rotary dial to the appropriate current range (**A~** for AC, **A-** for DC). Choose between the mA or 10A range based on the expected current.
2. Connect the black test lead to the **COM** jack. Connect the red test lead to the **VΩmA** jack for mA range or the **10A** jack for 10A range.
3. Connect the test leads in series with the circuit.
4. Read the current value on the LCD screen.

6.3 Resistance Measurement

1. Set the rotary dial to the **Ω** (Resistance) position.
2. Connect the black test lead to the **COM** jack and the red test lead to the **VΩmA** jack.
3. Ensure the circuit is de-energized before connecting the test leads across the component.
4. Read the resistance value on the LCD screen.

6.4 Continuity Test

1. Set the rotary dial to the **Continuity** position (often shared with Diode/Resistance).
2. Connect the black test lead to the **COM** jack and the red test lead to the **VΩmA** jack.
3. Touch the test leads across the circuit or component. An audible beep indicates continuity (low resistance).

6.5 NCV (Non-Contact Voltage) Detection

The NCV function allows for safe detection of AC voltage without direct contact with the conductor.

1. Set the rotary dial to the **NCV** position.
2. Move the NCV inducing area (top of the meter) close to the conductor or outlet.
3. The meter will indicate the presence of AC voltage through visual (LEDs on screen) and/or audible (beeping) signals. The intensity of the signal may vary with voltage strength and proximity.

Your browser does not support the video tag.

Video: Demonstration of the PEAKMETER PM8225 Digital Multimeter's features, including NCV (Non-Contact Voltage) detection, and comparison with other models.

7. Specifications

7.1 Electrical Specifications (PM8225 / PM8225A / PM8225B)

SPECIFICATIONS

	RANG			ACCURACY		
	PM8225	PM8225A	PM8225B	PM8225	PM8225A	PM8225B
DC Voltage	400mV/4V/ 40V/400V	200mV/2V/ 20V	200mV/2V/ 20V/200V	± (0.8%+2)	± (0.8%+3)	± (0.5%+2)
	600V	200V/600V	600V	± (1.0%+2)	± (1.0%+5)	± (0.8%+2)
AC Voltage	40V/400V/600V	200mV/2V/ 20V/200V/ 600V	200mV/2V/ 20V/200V 600V	± (1.2%+10)	± (1.2%+5)	± (1.0%+3) ± (1.2%+3)
DC Current	400μA/4mA/ 40mA	200μA/ 2000μA/ 20mA/200mA/ 10A	200μA/ 2000μA/ 20mA/200mA/ 10A	± (1.0%+2)	± (1.0%+3)	± (1.5%+3)
	400mA			± (1.5%+2)		
	10A			± (3.0%+2)		
AC Current		200μA/ 2000μA/ 20mA/200mA/ 10A	200μA/ 2000μA/ 20mA/200mA/ 10A		± (1.2%+5)	± (1.5%+4)
Resistance	400Ω/4kΩ/ 40kΩ/400kΩ	200Ω/2kΩ/20kΩ/ 200kΩ/2MΩ/ 20MΩ	200Ω/2kΩ/20kΩ/ 200kΩ/2MΩ	± (0.8%+3)	± (0.8%+3)	± (0.8%+2)
	4MΩ		20MΩ	± (1.0%+3)		± (1.0%+2)
Capacitance		20nF/200nF/ 2uF/20uF/ 200uF/2mF	20nF/200nF/ 2uF/20uF/ 200uF/2mF		± (2.0%+5)	± (4.0%+5)
Frequency		10Hz~10MHz	10Hz~20kHz		± (0.5%+3)	± (1.5%+5)

FEATURE

	PM8225	PM8225A	PM8225B
Display	4000 Counts	2000 Counts	2000 Counts
Manual Range	✓	✓	✓
Auto Range		✓	✓
Bargraph Display	✓		✓
Data Hold	✓	✓	✓
Relative Measurement		✓	
MAX/MIN Measurement			✓
Diode Test	✓	✓	✓
Continuity	✓	✓	✓
NCV Non-Contact Voltage Detection	✓	✓	✓
Back Light	✓	✓	✓
Flashlight	✓	✓	✓

Image: Electrical specifications for PM8225, PM8225A, and PM8225B models.

SPECIFICATIONS	RANG (PM8225A)	ACCURACY (PM8225A)	RANG (PM8225B)	ACCURACY (PM8225B)	RANG (PM8225)	ACCURACY (PM8225)
DC Voltage	400mV/4V/40V/400V/600V	± (0.8%+3)	200mV/2V/20V/200V/600V	± (0.5%+2)	200mV/2V/20V/200V/600V	± (0.5%+2)
AC Voltage	40V/400V/600V	± (1.2%+10)	200V/600V	± (1.2%+5)	200V/600V	± (1.2%+3)
DC Current	400μA/4mA/40mA/400mA/10A	± (1.5%+2)	200μA/2000μA/20mA/200mA/10A	± (1.0%+3)	200μA/2000μA/20mA/200mA/10A	± (1.0%+3)
AC Current			200μA/2000μA/20mA/200mA/10A	± (1.2%+5)	200μA/2000μA/20mA/200mA/10A	± (1.5%+4)
Resistance	400Ω/4kΩ/40kΩ/400kΩ/4MΩ	± (0.8%+3)	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ	± (0.8%+2)	200Ω/2kΩ/20kΩ/200kΩ/2MΩ/20MΩ	± (1.0%+2)
Capacitance	20nF/200nF/2uF/20uF/200uF/2mF	± (2.0%+5)				
Frequency	10Hz-10MHz	± (0.5%+3)	10Hz-20KHz	± (1.5%+3)	10Hz-20KHz	± (1.5%+3)

7.2 Electrical Specifications (PM8225C / PM8225D)

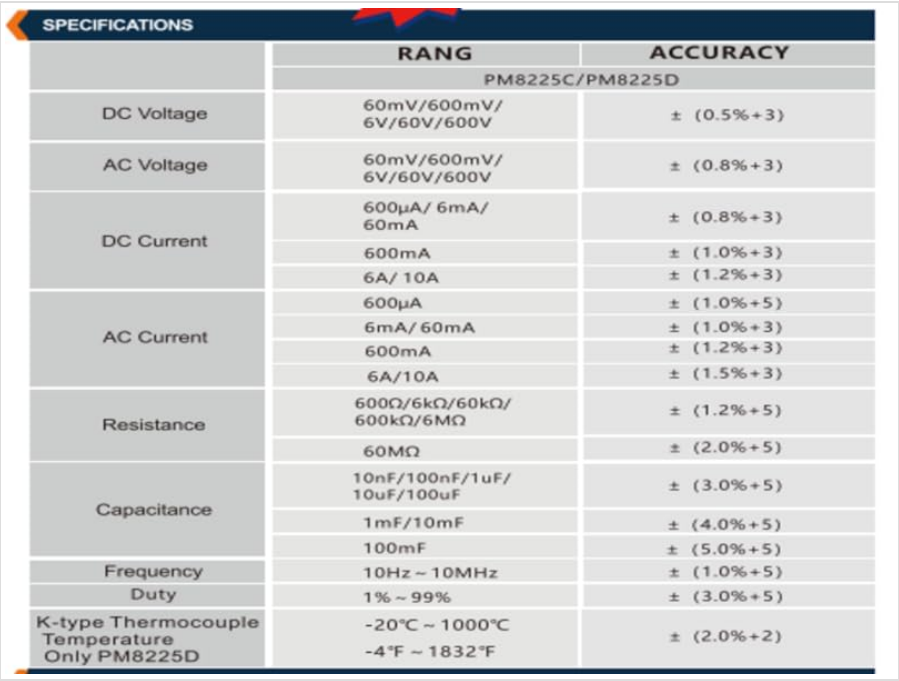

Image: Electrical specifications for PM8225C and PM8225D models.

SPECIFICATIONS	RANG (PM8225C/PM8225D)	ACCURACY
DC Voltage	60mV/600mV/6V/60V/600V	± (0.5%+3)
AC Voltage	60mV/600mV/6V/60V/600V	± (0.8%+3)
DC Current	600μA/6mA/60mA/600mA/6A/10A	± (0.8%+3) (for 600μA-60mA), ± (1.0%+3) (for 600mA), ± (1.2%+5) (for 6A/10A)
AC Current	600μA/6mA/60mA/600mA/6A/10A	± (1.0%+5) (for 600μA-60mA), ± (1.0%+3) (for 600mA), ± (1.5%+3) (for 6A/10A)
Resistance	600Ω/6kΩ/60kΩ/600kΩ/6MΩ/60MΩ	± (1.2%+5) (for 600Ω-6MΩ), ± (2.0%+5) (for 60MΩ)
Capacitance	10nF/100nF/1uF/10uF/100uF/1mF/10mF/100mF	± (3.0%+5) (for 10nF-100uF), ± (4.0%+5) (for 1mF-10mF), ± (5.0%+5) (for 100mF)
Frequency	10Hz ~ 10MHz	± (1.0%+5)
Duty Cycle	1% ~ 99%	± (3.0%+5)
K-type Thermocouple Temperature (Only PM8225D)	-20°C ~ 1000°C (-4°F ~ 1832°F)	± (2.0%+2)

7.3 General Specifications

- **Product Dimensions:** 5.91 x 3.94 x 7.09 inches
- **Item Weight:** 2.2 Pounds (approximately 1 Kilogram)
- **Power Source:** Battery Powered (1 Lithium Polymer battery included)
- **Color:** Orange
- **Safety Rating:** EN61010-1, EN61010-2-033, EN61326, CAT. III 600V

8. Maintenance

8.1 Cleaning

To clean the meter, wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Ensure the meter is completely dry before use.

8.2 Battery Replacement

When the low battery indicator appears on the display, replace the battery promptly to ensure accurate readings. Refer to section 5.1 for battery installation instructions.

8.3 Fuse Replacement

If the current measurement function stops working, the fuse may need replacement. This should only be performed by qualified personnel. Refer to the specifications for the correct fuse type and rating.

9. Troubleshooting

If you encounter issues with your multimeter, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Meter does not turn on or display is blank.	Dead or incorrectly installed battery.	Check battery polarity or replace the battery.
"OL" or "OVER" displayed.	Measurement exceeds the selected range.	Select a higher range or ensure the input is within the meter's capabilities.
Inaccurate readings.	Low battery, incorrect function selected, or damaged test leads.	Replace battery, verify function switch position, or inspect/replace test leads.
No current measurement.	Blown fuse.	Replace the fuse (refer to fuse replacement section).
NCV function not detecting voltage.	Voltage too low or not AC, or not close enough to the conductor.	Ensure the voltage is AC and within detectable range. Move the NCV area closer to the live wire.

10. Warranty and Support

PEAKMETER products are designed and manufactured to high-quality standards. For specific warranty details, please refer to the warranty card included with your product or contact the seller directly.

If you require technical assistance, have questions about product operation, or need to report a defect, please contact the Ecool Store, the seller of this product, through the Amazon platform or their provided contact information. Please have your product model number (PM8225) and purchase details ready when contacting support.

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