



User Manual

Product:

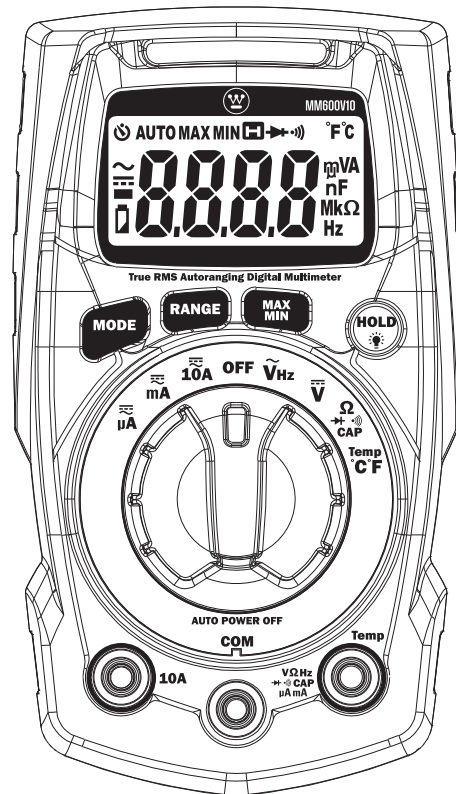
600V True RMS

Autoranging Multimeter

WPMDMM600V10

DO NOT RETURN THIS PRODUCT TO THE STORE

If you have questions
or need assistance, please call
customer service at 888-230-4260.



Safety

International Safety Symbols



This symbol adjacent to another symbol, terminal or operating device indicates that the operator must refer to an explanation in the operating instructions to avoid personal injury or damage to the meter.



This symbol adjacent to one or more terminals identifies them as being associated with ranges that may, in normal use, be subjected to particularly hazardous voltages, for maximum safety, the meter and its test leads should not be handled when these terminals are energized.



Double insulation.



MAX
600V

Indicates the terminal (s) so marked must not be connected to a circuit where the voltage with respect to earth ground exceeds the maximum safety rating of the meter.

WARNINGS

- Read, understand and follow safety rules and operating instructions in this manual before using this meter.
- The meter's safety features may not protect the user if not used in accordance with the manufacturer's instructions.
- Keep fingers away from the metal probe tips when taking measurements.
- Before changing functions using the selector switch, always disconnect the test leads from the circuit under test.
- Comply with all applicable safety codes, use approved personal protective equipment when working near live electrical circuits - particularly with regard to arc-flash potential.
- Use caution on live circuits, voltages above 30V AC rms, 42V AC peak, or 60V DC pose a shock hazard.
- Do not use if the meter or test leads appear damaged.
- Verify operation before using meter by measuring a known live voltage.
- Do not use the meter in wet or damp environments or during electrical storms.
- Do not use the meter or near explosive vapors, dust or gasses.
- Do not use the meter if it operates incorrectly, protection may be compromised.
- Do not operate meter while Low Battery warning is on, replace batteries immediately.
- Do not apply voltage or current that exceeds the meter's maximum rated input limits.

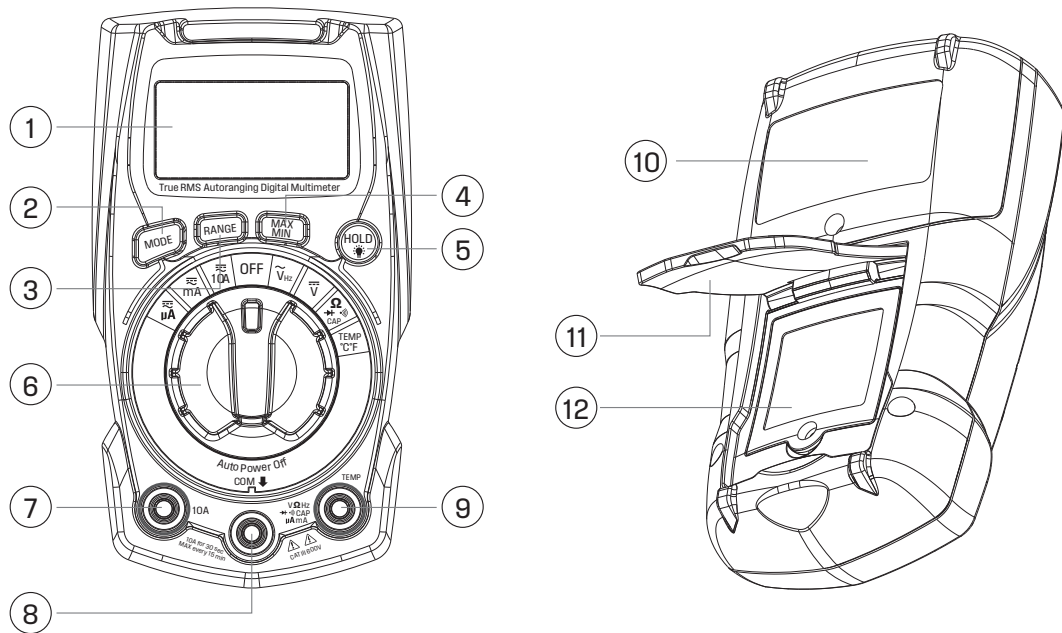
Input Limits

Function	Maximum Input
Voltage AC or DC	600V AC/DC
Frequency	600V AC/DC
Resistance, Capacitance, Continuity, Diode Test, Temperature	250V AC/DC
10A Current AC or DC	10A/600V fast acting Fuse
mA Current AC or DC	500mA/600V fast acting Fuse

Description

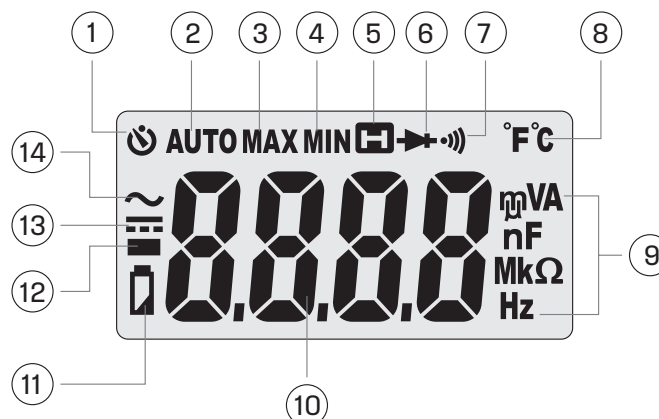
Meter Description

- | | | |
|--------------------------|------------------------------|------------------------|
| 1. LCD Display | 5. HOLD and Backlight Button | 9. Positive Input Jack |
| 2. MODE Button | 6. Function Switch | 10. Battery Cover |
| 3. RANGE Button | 7. 10A Input Jack | 11. Tilt Stand |
| 4. MAX/MIN Select Button | 8. COM Input Jack | 12. Fuse Cover |



Symbols Used on LCD Display

- | | | |
|--------------------|---|-------------------------|
| 1. Auto Power Off | 6. Diode Test | 10. Measurement Reading |
| 2. Auto Range Mode | 7. Continuity Test | 11. Low Battery |
| 3. Maximum | 8. Degree Celsius/
Degree Fahrenheit | 12. Minus Sign |
| 4. Minimum | 9. Units of Measure List | 13. Direct Current |
| 5. Data Hold | | 14. Alternating Current |



Function

MODE Button

Press the **MODE** Button to select AC Voltage, Frequency, AC/DC Current, Ohms, Diode Test, Continuity or Capacitance and Temperature.

RANGE Button

- When the meter is first turned on, it automatically goes into Auto Ranging.
- This automatically selects the best range for the measurements being made and is generally the best mode for most measurements.
- For measurement situations requiring that a range be manually selected, perform the following:
 1. Press the **RANGE** Button, the “**AUTO**” display indicator will turn off.
 2. Press the **RANGE** Button to step through the available ranges until you select the range you want.
 3. Press and hold the **RANGE** Button for 2 seconds to exit the Manual Ranging mode and return to Auto Ranging.

MAX/MIN Button

1. Momentarily press the **MAX/MIN** Button to activate the MAX/MIN mode, the “**MAX**” indicator will appear on the LCD display, the meter will display and hold the maximum reading and will update when a higher “max” occurs.
2. Momentarily press the **MAX/MIN** Button again to view the lowest reading, the “**MIN**” indicator meter will appear on the LCD display, the meter will display and hold the minimum reading and will update when a lower “min” occurs.
3. Press and hold the **MAX/MIN** Button to end MAX/MIN and return to normal operation.

Note: The meter does not autorange when the MAX/MIN mode is active, the display will read OL if the range is exceeded. When this occurs, exit MAX/MIN and use the **RANGE** Button to select a high range. MAX/MIN does not work on Frequency, Duty Cycle, Continuity and Capacitance.

HOLD/Backlight Button

- Press the **HOLD/Backlight** Button to turn on or off the HOLD function.
- Press the **HOLD/Backlight** Button for >2 second to turn on or off the Backlight function.

Auto Power Off

- The auto off feature will turn the meter off after 15 minutes.
- To disable the auto power off feature, hold down the **MODE** Button and turn the meter on.

Low Battery Indication

- The “” icon will appear in the lower left corner of the display when the battery voltage becomes low.
- Replace the battery when this appears.

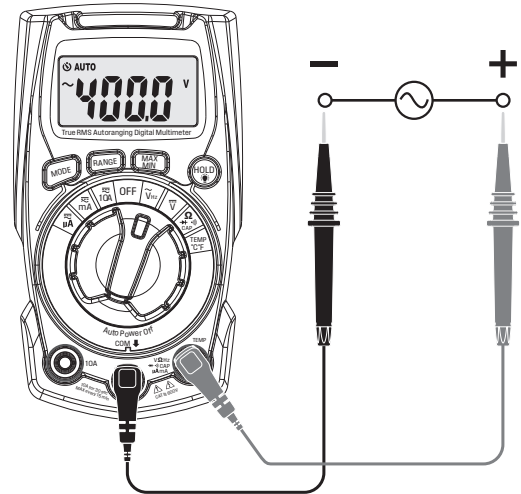
Operating Instructions

AC Voltage & Frequency Measurement

WARNING: Observe all safety precautions when working on live voltages.

CAUTION: Do not measure voltages if a motor on the circuit is being switched ON or OFF, large voltage surges may occur that can damage the meter.

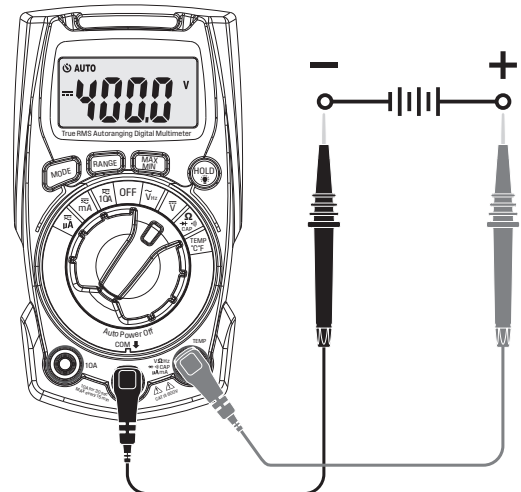
1. Set the rotatory function switch to the **VAC/Hz** Position.
2. Insert the black test lead banana plug into the negative **COM** Input Jack; Insert the red test lead banana plug into the **Positive** Input Jack.
3. Touch the test lead probes to the circuit under test.
4. Read the voltage on the LCD display.
5. Press the **MODE** Button to indicate "Hz".
6. Read the frequency on the LCD display.



DC Voltage Measurement

WARNING: Observe all safety precautions when working on live voltages.

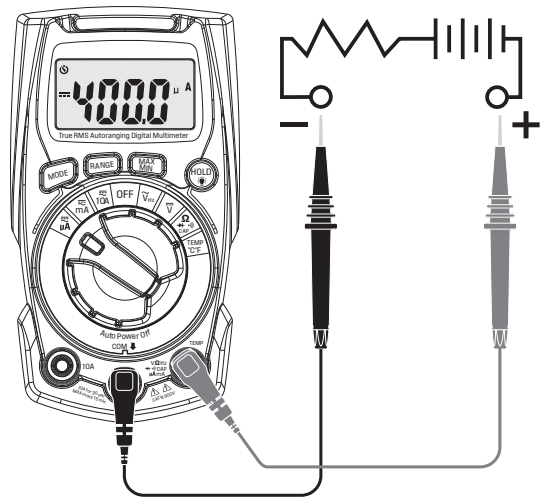
1. Set the rotatory function switch to the **VDC** Position.
2. Insert the black test lead banana plug into the negative **COM** Input Jack; Insert the red test lead banana plug into the **Positive** Input Jack.
3. Touch the test lead probes to the circuit under test. Touch the red probe to the positive side of the circuit and the black probe to the negative side of the circuit.
4. Read the voltage on the LCD display.



AC/DC Current Measurement

WARNING: Observe all safety precautions when working on live circuits. Measurements in the 10A range should be limited to 30 seconds maximum every 15 minutes.

1. Insert the black test lead banana plug into the negative **COM** Input Jack.
2. For current measurements up to **10A** AC/DC, set the rotary function switch to the **10A** Position and Insert the red test lead into the **10A** Input Jack.
3. For current measurements up to **400mA** AC/DC, set the rotary function switch to the **mA** Position and Insert the red test lead into the **Positive** Input Jack.
4. For current measurements up to **4000 μ A** AC/DC, set the rotary function switch to the **μ A** Position and Insert the red test lead into the **Positive** Input Jack.
5. Press the **MODE** Button to select AC or DC current, the “**===**” or “**~**” symbol will be shown on the LCD display.
6. Remove power from the circuit, then open up the circuit at the point where you wish to measure current.
7. Touch the black test probe tip to the neutral side of the circuit; Touch the red test probe tip to the “hot” side of the circuit.
8. Apply power to the circuit.
9. Read the current on the LCD display.

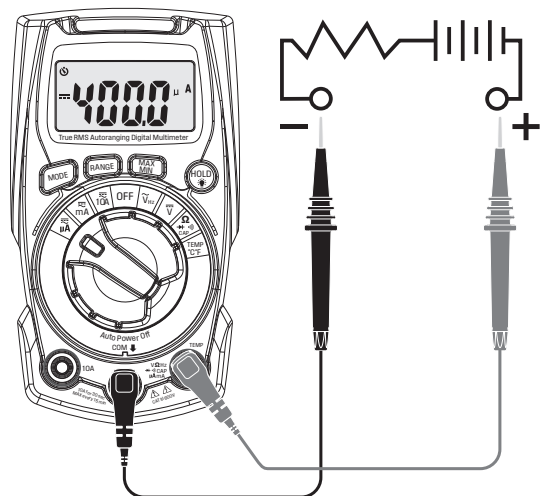


This drawing is for points #3 and #4

Resistance Measurement

WARNING: Never test resistance on a live circuit.

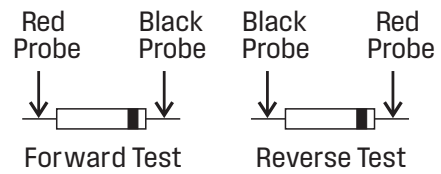
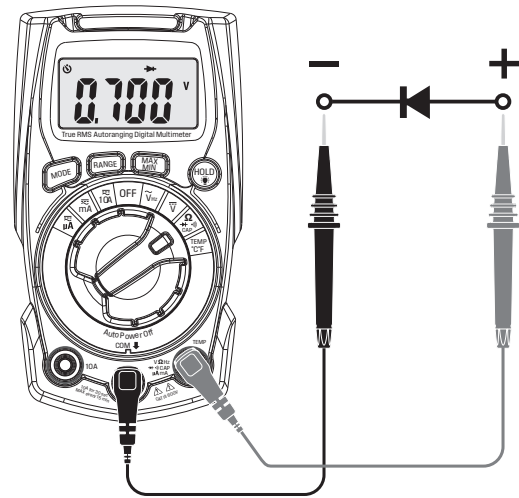
1. Set the rotatory function switch to the **Ω $\rightarrow$ ∞ CAP** Position.
2. Insert the black test lead banana plug into the negative **COM** Input Jack; Insert the red test lead banana plug into the **Positive** Input Jack.
3. Press the **MODE** Button until the “ **Ω** ” symbol appears on the LCD display.
4. Touch the test lead probes to the component under test, if the component is installed in a circuit, it is best to disconnect one side before testing to eliminate interference with other devices.
5. Read the resistance in on the LCD display.



Diode Test

WARNING: Never test diodes in a live circuit.

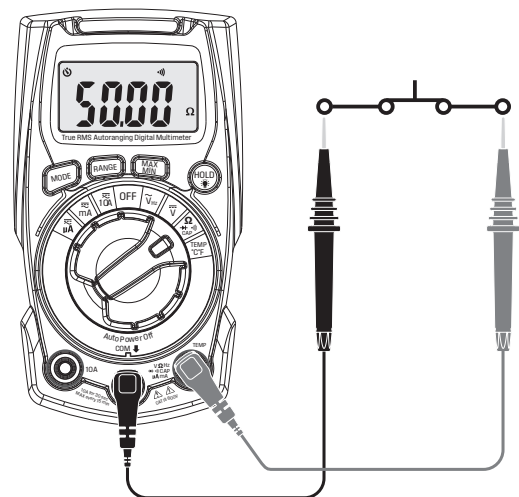
1. Set the rotatory function switch to the $\Omega \rightarrow + \rightarrow \infty$ **CAP** Position.
2. Insert the black test lead banana plug into the negative **COM** Input Jack; Insert the red test lead banana plug into the **Positive** Input Jack.
3. Press the **MODE** Button until “ $\rightarrow +$ ” appears in the display.
4. Touch the test probes to the diode under test, forward voltage will indicate 0.4V to 0.7V, Reverse voltage will indicate “OL”; Shorted devices will indicate near 0mV and an open device will indicate “OL” in both polarities.
5. Touch the test lead probes to the diode under test.
6. Forward voltage will indicate 0.4 to 0.7V on the LCD display; Reverse voltage will indicate “OL”; Shorted devices will indicate near 0 and an open device will indicate “OL” in both polarities.



Continuity Test

WARNING: Never test continuity on a live circuit.

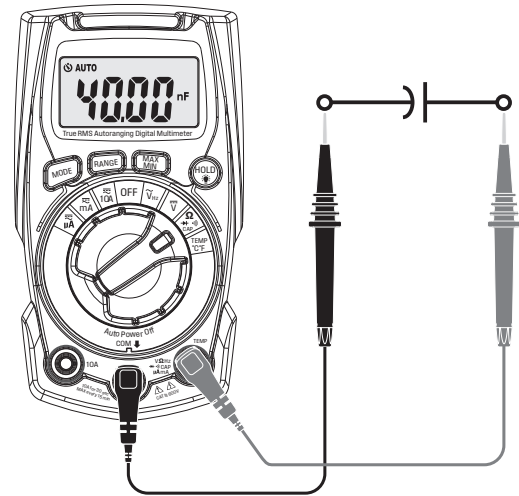
1. Set the rotatory function switch to the $\Omega \rightarrow + \rightarrow \infty$ Position.
2. Insert the black test lead banana plug into the negative **COM** Input Jack; Insert the red test lead banana plug into the **Positive** Input Jack.
3. Press the **MODE** Button until “ $\rightarrow +$ ” appears in the display.
4. Touch the test lead probes to the device or wire under test.
5. A beeper will sound if the resistance is approximately 50 ohms or less and the resistance reading will be shown on the LCD display.



Capacitance Measurement

WARNING: To avoid electric shock, disconnect power to the unit under test and discharge all capacitors before taking any capacitance measurements, remove the batteries and unplug the line cords.

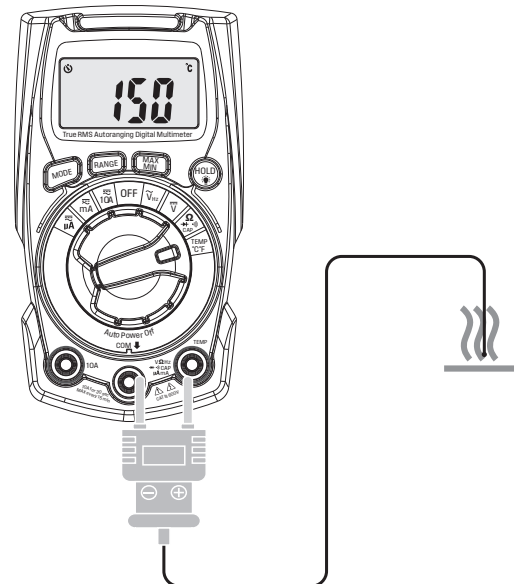
1. Set the rotatory function switch to the Ω $\rightarrow$ $\rightarrow$ Position.
2. Insert the black test lead banana plug into the negative **COM** Input Jack; Insert the red test lead banana plug into the Positive Input Jack.
3. Press the **MODE** Button until “nF” appears in the display.
4. Touch the test leads to the capacitor to be tested, wait until the readings settle before ending the test.
5. Read the capacitance value in the display.



Temperature Measurement

WARNING: Do not touch the temperature probe to live circuits.

1. Set the function switch to the **Temp** Position.
2. Press the **MODE** Button to indicate $^{\circ}\text{C}$ or $^{\circ}\text{F}$.
3. Connect the temperature probe to the meter, making sure the - side goes into the **COM** Input Jack and the + side goes into the **Positive** Input Jack.
4. Touch the tip of the temperature probe to the object being measured.
5. Read the temperature on the LCD display.



Replacing The Battery

WARNING: To avoid electric shock, disconnect the test leads from any source of voltage before removing the battery door.

1. Loosen the Phillips screws on the battery cover.
2. Remove the battery cover.
3. Replace old batteries with two “AAA” 1.5V batteries.
4. Observe correct polarity as shown inside battery compartment.
5. Attach the battery cover and secure the screws.

WARNING: To avoid electric shock, do not operate the meter until the battery door is in place and fastened securely.

Replacing The Fuses

WARNING: To avoid electric shock, disconnect the test leads from any source of voltage before removing the fuse cover.

1. Loosen the Phillips screws on the fuse cover.
2. Carefully remove the old fuse using a non-metallic tool to avoid damage or accidental contact.
3. Gently remove the old fuse and install the new fuse into the holder.
4. Insert the new fuse into the holder, ensuring it is securely in place and matches the specified type and rating.
5. Replace and secure the fuse cover.

WARNING: To avoid electric shock, do not operate your meter until the fuse cover is in place and fastened securely.

Care and Maintenance

- Do not immerse the instrument in water.
- Ensure the multimeter is powered off, then clean it gently using a dry, lint-free cloth
- Do not use aggressive cleaning agents or solutions.
- Do not mix different types of batteries such as alkaline, carbon-zinc, or rechargeable batteries.
- Handle the instrument with care.
- Please take out the battery when the instrument is not used for a long time.
- * Keep it away from high temperatures and humidity. If the meter has been stored in extreme conditions beyond the limits specified in the General Specifications section, allow it to stabilize under normal operating conditions before use.

Specifications

Technical Specifications

Function	Range	Resolution	Accuracy
AC True RMS Voltage	4.000V	0.001V	±(1.2% + 5 digits)
	40.00V	0.01V	
	400.0V	0.1V	
	600V	1V	

All AC voltage ranges are specified from 5% of range to 100% of range.
AC Voltage Bandwidth: 50Hz to 60Hz (All wave); 50Hz to 1kHz (Sine wave).

Function	Range	Resolution	Accuracy
DC Voltage	400.0mV	0.1mV	±(0.5% + 8 digits)
	4.000V	0.001V	
	40.00V	0.01V	
	400.0V	0.1V	
	600V	1V	

Function	Range	Resolution	Accuracy
AC True RMS Current	400.0µA	0.1µA	±(1.2% + 5 digits)
	4000µA	1µA	
	40.00mA	0.01mA	
	400.0mA	0.1mA	±(1.2% + 8 digits)
	4.000A	0.001A	±(2.0% + 3 digits)
	10.00A	0.01A	±(2.0% + 5 digits)

All AC Current ranges are specified from 5% of range to 100% of range.
AC Current Bandwidth: 50Hz to 60Hz (All wave); 50Hz to 400Hz (Sine wave).

Function	Range	Resolution	Accuracy
DC Current	400.0µA	0.1µA	±(1.0% + 5 digits)
	4000µA	1µA	
	40.00mA	0.01mA	
	400.0mA	0.1mA	±(1.0% + 8 digits)
	4.000A	0.001A	±(2.0% + 3 digits)
	10.00A	0.01A	±(2.0% + 5 digits)

Function	Range	Resolution	Accuracy
Resistance	400.0Ω	0.1Ω	±(1.2% + 5 digits)
	4.000kΩ	0.001kΩ	
	40.00kΩ	0.01kΩ	
	400.0kΩ	0.1kΩ	
	4.000MΩ	0.001MΩ	±(2.5% + 8 digits)
	40.00MΩ	0.01MΩ	±(3.0% + 8 digits)

Function	Range	Resolution	Accuracy
Capacitance	40.00nF	0.01nF	±(3.5% + 10 digits)
	400.0nF	0.1nF	
	4.000μF	0.001μF	±(4.0% + 5 digits)
	40.00μF	0.01μF	
	400.0μF	0.1μF	±(3.5% + 5 digits)
	4.000mF	0.001mF	

Frequency (Electrical)	10.00Hz~10kHz	±(1.2% + 5 digits)
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Sensitivity: >15V RMS

Function	Range	Resolution	Accuracy
Temperature	-18 to 760°C	1°C	±(1.5% + 5°C)
	0 to 1400°F	1°F	±(1.5% + 9°F)

Note: Accuracy is stated at 18 to 28°C (65 to 83°C) and less than 75% RH.

Note: Accuracy specifications consist of two elements:

- (% reading)-This is the accuracy of the measurement circuit.
- (+ digits)-This is the accuracy of the analog to digital converter.

General Specifications

Insulation	Class 2, Double Insulation
Over Voltage	CAT III 600V
Diode Test	Test current 1mA max., open circuit voltage of 2V typical
Continuity Test	Audible signal if the resistance is <50
Low Battery Indication	“  ” is displayed
Display	4000 count LCD
Over Range Indication	“OL” is displayed

Polarity	Minus symbol “-” is displayed for negative polarity
Measurement Rate	3 readings per second, nominal
Auto Power Off	approx. 15 minutes
Input Impedance	10M AC and DC Voltage
AC Response	True RMS
AC Voltage Bandwidth	50Hz to 1kHz
AC Current Bandwidth	50Hz to 400Hz
Batteries	Two AAA 1.5V batteries
Fuse	10A/600V fast acting Fuse; 500mA/600V fast acting Fuse
Operating Environment	5 to 40°C (41 to 104°F)
Storage Environment	-10 to 50°C (14 to 122°F)
Operating Humidity	Max 80% upto 31°C (87°F) decreasing linearly to 50% at 40°C (104°F)
Storage Humidity	<80%
Operating Altitude	7000ft(2000) meters maximum
Safety	For indoor use and in accordance with the requirements for double insulation to IEC61010-1 (2001); EN61010-1(2001) Overvoltage Category III 600V, Pollution Degree 2. Safety Requirements For Electrical Equipment For Measurement, Control, And Laboratory Use Part 1: General Requirements [UL 61010-1:2012 Ed.3] Safety Requirements For Electrical Equipment For Measurement, Control, And Laboratory Use Part 1: General Requirements [CSA C22.2#61010-1-12:2012 Ed.3] Safety Requirements For Electrical Equipment For Measurement, Control, And Laboratory Use - Part 2-030: Particular Requirements For Testing And Measuring Circuits [UL 61010-2-030:2012 Ed.1] Safety Requirements For Electrical Equipment For Measurement, Control, And Laboratory Use - Part 2-030: Particular Requirements For Testing And Measuring Circuits (R2016) [CSA C22.2#61010-2-030:2012 UL 61010-2-033 Issued: 2014/08/08 Ed:1 Safety Req. for Electrical Equipment for Measurement, Control And Laboratory Use - Part 2-033: Particular Requirements for Hand-held Multimeters & Other Meters, for Domestic & Professional Use, Capable of Measuring Mains Voltage CSA C22.2#61010-2-033 Issue: 2014/12/01 Electrical equipment for measurement, control, and laboratory use — Part 2-033: Particular requirements for HAND-HELD MULTIMETERS and other METERS, for domestic and professional use, capable of measuring MAINS voltage.

2-Year Warranty

If your product fails due to defects in materials or workmanship, we will replace it. This warranty is valid only for the original end-user purchaser of the product.

Exclusions:

- The warranty is non-transferable.
- For details, contact Customer Care at (888) 230-4260 or send us a mail at support@pmd.westinghouse.com
- This warranty applies exclusively to products purchased directly from us or our authorized sellers. Products bought from unauthorized sellers, including unapproved online platforms, may not be covered unless prohibited by law.
- We reserve the right to deny warranty claims for items purchased from unauthorized sellers.

Legal Rights:

This warranty provides you with specific legal rights, and you may have additional rights that vary by state or country. Proof of purchase indicating the date and place of purchase may be required.

Limitations:

This limited warranty replaces all other express warranties. Any implied warranties, including merchantability or fitness for a particular purpose, are limited to the duration of this warranty. We are not liable for incidental or consequential damages.

Note: Some states or countries do not allow limitations on the duration of implied warranties or exclusions of certain damages, so these limitations may not apply to you.

This guarantee applies only to products purchased from us or authorized sellers unless prohibited by law. We may reject claims for items bought from unauthorized sellers, including unapproved online platforms.

For more details or to confirm if a seller is authorized, contact Customer Care at (888) 230-4260 or email us at support@pmd.westinghouse.com

Disposal / Recycle

Do not dispose of the equipment and its accessories in the trash. Ensure proper disposal in compliance with local regulations. For more information, visit www.epa.gov/recycle.



www.westinghouse.com
Service Number 888-230-4260

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