

# MM39 MULTIMETER

## INSTRUCTION MANUAL



**MARTINDALE**  
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### SPECIFICATIONS

**Display:** 3½ digit liquid crystal display (LCD) with a maximum reading of 1999

**Polarity:** Automatic, positive implied, negative polarity indication

**Overrange:** (OL) or (-OL) is displayed

**Zero:** Automatic

**Low battery indication:** The "⎓" is displayed when the battery voltage drops below the operating level

**Measurement rate:** 2 times per second, nominal

**Auto power off:** Approx. 10 minutes

**Operating environment:**  
0°C to 50°C at < 70% relative humidity

**Storage temperature:**  
-20°C to 60°C at < 80% relative humidity

**Accuracy:**  
Stated accuracy at 23°C ± 5°C, <75% relative humidity

**Temperature Coefficient:** 0.1 × (specified accuracy)  
per °C. (0°C to 18°C, 28°C to 50°C)

**Altitude:** 6561.7 Feet (2000m)

**Power:** 1.5V batteries x2, R03/SIZE AAA

**Battery life:** 200 hours typical with carbon-zinc

**Dimensions:** 145mm (H) × 70mm (W) × 34mm (D)

**Weight:** Approx. 11.1 oz. (315g) including holster

**Accessories:** One pair test leads, 1.5V battery x2 (installed) and Operating Instructions

## DC VOLTS

**Ranges:** 200mV, 2V, 20V, 200V, 600V

**Resolution:** 0.1mV

**Accuracy:**  $\pm(1.0\% \text{ rdg} + 2 \text{ dgts})$

**Input impedance:** 200mV:  $>100M\Omega$ ; 2V:  $10M\Omega$   
20V ~ 600V:  $9.1M\Omega$

**Overload protection:** 600VDC or AC rms

## AC VOLTS (50Hz - 500Hz)

**Ranges:** 200mV, 2V, 20V, 200V, 600V

**Resolution:** 0.1mV

**Accuracy:**

$\pm(2.0\% \text{ rdg} + 5 \text{ dgts})$  50Hz ~ 100Hz on 200mV range

$\pm(2.0\% \text{ rdg} + 5 \text{ dgts})$

**Input impedance:** 200mV:  $>100M\Omega$ ; 2V:  $10M\Omega$   
20V ~ 600V:  $9.1M\Omega$

**Overload protection:** 600V DC or AC rms

## CURRENT

**Ranges:** 10A

**Resolution:** 0.01A

**DC accuracy:**  $\pm(3.0\% \text{ rdg} + 3 \text{ dgts})$

**AC accuracy:** (50Hz ~ 500Hz)  $\pm(3.5\% \text{ rdg} + 5 \text{ dgts})$

**Voltage burden:** 0.2V

**Input protection:** 10A/500V fast blow ceramic fuse

## RESISTANCE

**Ranges:** 200 $\Omega$ , 2k $\Omega$ , 20k $\Omega$ , 200k $\Omega$ , 2M $\Omega$ , 20M $\Omega$

**Resolution:** 0.1 $\Omega$

**Accuracy:**

$\pm(1.5\% \text{ rdg} + 4 \text{ dgts})$  on 200 $\Omega$  to 200k $\Omega$  ranges

$\pm(2.5\% \text{ rdg} + 4 \text{ dgts})$  on 2M $\Omega$  range

$\pm(5.0\% \text{ rdg} + 5 \text{ dgts})$  on 20M $\Omega$  range

**Open circuit volts:** -0.45Vdc (-1.2Vdc on 200 $\Omega$  range)

**Overload protection:** 500V DC or AC rms

## DIODE TEST

**Test current:** 1.0mA (approximate)

**Accuracy:**  $\pm(3.0\% \text{ rdg} + 3 \text{ dgts})$

**Resolution:** 10mV

**Audible indication:**  $<0.25V$

**Open circuit volts:** 3.0Vdc typical

**Overload protection:** 500VDC or AC rms

## CONTINUITY

**Audible indication:** Less than 25 $\Omega$

**Response time:** 500ms

**Overload protection:** 500VDC or AC rms