Pro'sKit®

# MT-3109
# AC/DC Digital Clamp Multimeter

CE




**User's Manual**

1st Edition 2011

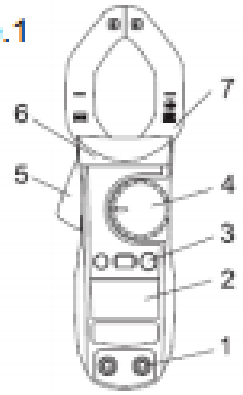
**MT-3109 AC/DC Digital Clamp Multimeter**

**International Electrical Symbols**

| | |
|---|---|
| ~ | AC (Alternating Current) |
| ⎓ | DC (Direct Current) |
| ≂ | AC or DC |
| ⏚ | Grounding |
| ⧈ | Double Insulated |
| ⚠ | Warning. Refer to the Operating Manual |
| | Deficiency of Built-In Battery |
| •)) | Continuity Test |
| ⊣◁ | Diode |
| ⊣⊢ | Capacitance Test |
| ▭ | Fuse |
| CE | Conforms to Standards of European Union |

**The Meter Structure (see figure 1)**

figure.1




1. Input Terminals
2. LCD Display
3. Functional Buttons
4. Rotary Switch
5. Trigger: press the lever to open the transformer jaw
6. Hand Guards: to protect user's hand from touching the dangerous area.
7. Transformer Jaw: designed to pick up the AC and DC current flowing through the conductor. It could transfer current to voltage. The tested conductor must vertically go through the Jaw center.

**MT-3109 AC/DC Digital Clamp Multimeter**

**Accurate Specifications**

Accuracy: +(a% reading + b digits).
Operating temperature: 23℃±5℃
Relative humidity: ( 85%R.H)
Temperature coefficient: 0.1x (specified accuracy)1℃

A. DC Voltage

| Range | Resolution | Accuracy | Overload protection |
|---|---|---|---|
| 400.0mV | 0.1mV | +(1 %+3) | 600V DC/AC |
| 4.000V | 1mV | +(1 %+1) | |
| 40.00V | 10mV | | |
| 400.0V | 100mV | | |
| 600V | 1V | + (1 %+5) | |

Remarks: Input impedance: 10MΩ

B_ AC Voltage

| Range | Resolution | Accuracy | Overload protection |
|---|---|---|---|
| 4.000V | 1mV | + (1.2%+5) | 600V DC/AC |
| 40.00V | 10mV | | |
| 400.0V | 100mV | | |
| 600V | 1V | +( 1 .5 %+5) | |

Remarks:

- Input impedance: 10MΩ// less than 100pF
- Frequency response: 40Hz-400Hz.
- Change to AC: Change to AC by using average response method. Input sine wave, then adjust the reading until it is same as the effective value.

C. Resistance

| Range | Resolution | Accuracy | Overload protection |
|---|---|---|---|
| 400.0Ω | 100mΩ | +(1.2%+5) | 600Vp |
| 4.000kΩ | 1Ω | +(1 %+5) | |
| 40.00kΩ | 10Ω | | |
| 400.0kΩ | 10Ω | | |
| 4.000MΩ | 1kΩ | +(1.2%+5) | |
| 40.00MΩ | 10kΩ | +(1.5%+5) | |

D. Diode Test

| Range | Resolution | Accuracy | Overload protection |
|---|---|---|---|
|  | 1mV | Display forward voltage drop nearest value | 600Vp |

Remark: Open circuit voltage approximate 1.48V.

E. Continuity Test

| Range | resolution | accuracy | Overload protection |
|---|---|---|---|
|  | 100mΩ | Arounds≤50Ω The buzzer beeps | 600Vp |

Remark:
Open circuit voltage approximate 0.45V.

- The buzzer may or may not beeps when the resistance of a circuit under test is between 50Ω~1OOΩ
- The buzzer will not beep when the resistance of a circuit under test is > 1OOQ.