

OVERVIEW

This is a 6000 Counts T-RMS Multimeter with a large, back-lit LCD display. It has a large Capacitance measurement range up to 100mF with fast response time of less than 12S. Both the Non-contact Voltage Detection and Continuity have alarm as well as visual indication. It has LIVE function to detect live and neutral lines and is equipped with automatic fast-blown fuse detection and high voltage detection.

GENERAL SPECIFICATIONS

Max Voltage between the input Terminal and the Ground : 1000V RMS

⚠ **20A Terminal :** 16A H 250V fast-acting fuse (Φ6x32mm)

⚠ **mA/μA Terminal :** 600mA H 250V fast-acting fuse (Φ6x32mm)

Max Display : 6099, “OL” appears when over range is detected, refresh rate is 3~4 times/s.

Measuring Range Selection : Manual

Backlight : Turn on manually and turns off automatically after 30 seconds.

Polarity : If negative polarity is input, the “-” symbol will be displayed.

Data Hold Function: The bottom left corner of the LCD displays “”

Low Battery Indication : The bottom left corner of the LCD displays “”

Acousto-optic Indication : The continuity and NCV measurement are accompanied by the beep and LED illumination indication.

Internal Battery : AAA battery 1.5Vx2

Operating Temperature : 0°C ~ 40°C (32°F ~ 104°F)

Storage Temperature : -10°C ~ 50°C (14°F ~ 122°F)

Relative Humidity : 0°C ~ below 30°C ≤75%, 30°C ~ 40°C ≤50%

Operating Altitude : 0 ~ 2000m

Dimensions : 183mm x 88mm x 56mm

Weight : About 346g (including batteries)



FEATURES

- Large LCD, 6000 Counts display, True-RMS measurement and fast ADC(3 times/s)
- Full-featured false detection protection for up to 1000V over-voltage surge, over-voltage and over-current alarm functions and automatic detection and alarm for blown fuse.
- Extended measuring range, especially for capacitance (compared with similar products).
The $\leq 100\text{mF}$ response time is within 12s
- With non-contact voltage measurement (NCV), frequency measurement, Live wire identification measurement and temperature measurement.
- The max measurable voltage for AC is 750V/1kHz and for DC is 1000V. The max measurable current is 20A.
- Measurable high voltage frequency : 10Hz ~ 10kHz (5V ~ 750V)
- Supports transistor measurement.
- With back light, which enables the multimeter to be used in dark conditions.
- The power consumption of the multimeter is about 1.8 mA. The circuit has automatic power saving function. The micro power consumption in sleep state is only about 17 μA . which effectively extends the battery life to 500 hours.
- With current (AC/DC) mode memory function.

TECHNICAL SPECIFICATIONS

Accuracy : \pm (a% of reading+ b digits), 1 year warranty

Ambient Temperature : 23°C \pm 5°C (73.4°F \pm 9°F)

Relative Humidity : $\leq 75\%$

 **Note:**

To ensure measurement accuracy, operating temperature should be within 18°C ~ 28°C and the fluctuation range should be within $\pm 1^\circ\text{C}$.
Temperature $< 18^\circ\text{C}$ or $> 28^\circ\text{C}$: Add temperature coefficient error 0.1 x (specified accuracy)/ $^\circ\text{C}$.

DCV Measurement

Range	Resolution	Accuracy
600.0mV	0.1mV	\pm (0.5%+5)
6.000V	0.001V	\pm (0.7%+3)
60.00V	0.01V	\pm (0.7%+3)
600.0V	0.1V	
1000V	1V	

 **Note:**

- **Input Impedance** : About 10M Ω (The reading might be unstable at mV range when no load is connected, and it becomes stable once the load is connected, $\leq \pm 3$ digits)
- **Max Input Voltage** : $\pm 1000\text{V}$
Input Voltage $\geq 1010\text{V}$: "OL" appears on the display.
- **Overload Protection** : 1000V RMS (DC/AC)

ACV Measurement

Range	Resolution	Accuracy
6.000V	0.001V	± (1.0%+3)
60.00V	0.01V	± (0.8%+3)
600.0V	0.1V	
750V	1V	± (1.0%+10)

 **Note:**

- **Input Impedance** : About 10MΩ
 - **Frequency Response** : 40Hz ~ 1000Hz, sine wave RMS (mean response)
 - **Max Input Voltage** : AC 750V
- Input Voltage ≥761V** : "OL" appears on the display.

- **Measuring High Voltage Frequency**: 10Hz ~ 10kHz (5V ~ 750V)

High voltage Frequency >12kHz: "OL" appears on the display.

- **Overload Protection** : 1000V RMS (DC/AC)

For the non-sinusoidal AC crest factor, the additional error is increased as follows:

- Add 33% when crest factor is 1 ~ 2
- Add 5% when crest factor is 2 ~ 2.5
- Add 7% when crest factor is 2.5 ~ 3



Resistance Measurement

Range	Resolution	Accuracy
600.0Ω	0.1Ω	± (0.8%+5)
6.000kΩ	0.001kΩ	± (0.8%+3)
60.00kΩ	0.01kΩ	
600.0kΩ	0.1kΩ	
6.000MΩ	0.001MΩ	
60.00MΩ	0.01MΩ	± (3.0%+10)

 **Note:**

- **Measurement Result** : Reading of resistance - reading of shorted test leads
- **Overload Protection** : 1000V RMS (DC/AC)

Continuity and Diode Measurement

Range	Resolution	Remark
	0.1Ω	Open Circuit : Resistance >50Ω, no beep Well-connected Circuit : Resistance ≤10Ω consecutive beep
	0.001V	Open Circuit Voltage : About 3V (test current is about 1.0mA) Silicon PN junction Normal Voltage : About 0.5 ~ 0.8V

 **Note:**

- **Overload Protection** : 1000V RMS (DC/AC)

Digital T-RMS Multimeter | 6030A+

Capacitance

Range	Resolution	Accuracy
6.000nF	0.001nF	In REL mode : $\pm(4.0\%+10)$
60.00nF	0.01nF	$\pm(4\%+10)$
600.0nF	0.1nF	
6.000 μ F	0.001 μ F	$\pm(3\%+10)$
60.00 μ F	0.01 μ F	
600.0 μ F	0.1 μ F	
6.000mF	0.001mF	$\pm(5.0\%+10)$
60.00mF	0.01mF	$\pm(10.0\%)$
100.0mF	0.1mF	

⚠ Note:

- **Ovarload Protection** : 1000V RMS (DC/AC)
- **Measured Capacitance** : $\leq 100\text{nF}$: It is recommended to select relative measurement (REL mode) for ensuring accuracy.

Temperature Measurement

Range		Resolution	Accuracy
°C	-40 ~ 1000°C	-40 ~ 40°C	$\pm 3^\circ\text{C}$
		>40 ~ 500°C	$\pm (1.0\%+3)$
		>500 ~ 1000°C	$\pm (2.0\%+3)$
°F	-40 ~ 1832°F	-40 ~ 104°F	$\pm 5^\circ\text{F}$
		>104 ~ 932°F	$\pm (1.5\%+5)$
		>932 ~ 1832°F	$\pm (2.5\%+5)$

⚠ Note:

- **Ovarload Protection** : 1000V RMS (DC/AC)
- The measured temperature should be less than 250°C/482°F

DC Measurement

Range	Resolution	Accuracy
60.00 μ A	0.01 μ F	$\pm (0.8\%+8)$
600.0 μ A	0.1 μ F	
6.000mA	0.001mA	
60.00mA	0.01mA	$\pm (1.2\%+5)$
600.00mA	0.1mA	
20.00A	0.01A	$\pm (2.0\%+5)$

⚠ Note:

- Input $\geq 20\text{A}$: Alarm sound
 Input $> 20.1\text{A}$: "OL" appears on LCD.
Overload Protection: 1000V RMS

AC Measurement

Range	Resolution	Accuracy
60.00 μ A	0.01 μ F	$\pm (1.0\%+12)$
600.0 μ A	0.1 μ F	
6.000mA	0.001mA	
60.00mA	0.01mA	$\pm (2.0\%+3)$
600.00mA	0.1mA	
20.00A	0.01A	$\pm (3.0\%+5)$

⚠ Note:

- **Frequency Response** : 40Hz ~ 1000Hz
- **Display**: RMS.
- **Accuracy Guarantee Range**: 5~100% of range, short Circuit allows least significant digit <2.
- Input $\geq 20\text{A}$: Alarm sound
- Input $> 20.1\text{A}$: "OL" appears on LCD.
- **Ovarload Protection** : Reference the overload protection of DC measurement.

Frequency Measurement

Range	Resolution	Accuracy
9 999Hz ~ 9 999MHz	0.001 Hz ~ 0001MHz	$\pm (0.1\%+5)$

⚠ Note:

- **Ovarload Protection** : 1000V RMS (DC/AC)
- **Input Amplitude** :
 $\leq 100\text{kHz}$: 100mV RMS \leq input amplitude $\leq 30\text{V RMS}$
 $> 100\text{kHz} \sim 1\text{MHz}$: 200mV RMS \leq input amplitude $\leq 30\text{V RMS}$
 $> 1\text{MHz}$: 600mV RMS \leq input amplitude $\leq 30\text{V RMS}$

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