


INTRODUCTION

The Models 6030 & 6030A are handheld 3-5/6 digit 6000 Counts with backlit LCD Display, True RMS Digital Multimeter featuring stable performance and high reliability. Its whole circuit design utilizes a large scale integrated circuit that uses Σ/Δ ADC converter as its core and is further equipped with full function overload protection, making it an ideal tool for users to measure the followings: DC and AC Voltage, Electric Current, Resistance, Capacitance, Frequency, Temperature (6030A only), Diode, Transistor and Continuity test.

This unit is designed and produced in strict accordance with GB4793, Safety Requirements for Electronic Measuring Instrument and Safety Standards coded as IEC61010-1 and IEC1010-2-032. It complies with safe standards, such as double insulation, over voltage (CAT II 1000V, CAT III 600V) and class of pollution.

CHARACTERISTICS

- More than 30 functional ranges are available.
- LCD display, visible area 63x29mm.
- Over range display "OL".
- Maximum displayed value 5999.
- Overload protection for all ranges.
- Auto Power Off.
- Working temperature: 0°C ~ 40°C (32°F ~ 104°F)
- Storage temperature: -10°C ~ 50°C (14°F ~ 122°F)
- Low battery indicator: The symbol "  " will be displayed at top left of the LCD.
- Backlit LCD display.
- Data hold to freeze displayed data.
- Max-Min record function.

TECHNICAL INDEXES

Accuracy: $\pm(\alpha\%$ reading plus figure), 1 year warranty period

Environment Temperature: 23°C \pm 5°C

Relative humidity: <75%

DC Voltage

Range	Resolution	Accuracy
600mV	0.1mV	$\pm (0.5\%+4)$
6V	0.001V	$\pm (0.5\%+2)$
60V	0.01V	
600V	0.1V	
1000V	1V	$\pm (0.7\%+10)$

Input impedance: 1G Ω for the range of 600mV while 10M Ω for all other ranges.

Overload protection: 750Vrms or at a peak value of 1000Vp-p.



AC Voltage (T-RMS)

Range	Resolution	Accuracy
6V	0.001V	$\pm (0.8\%+3)$
60V	0.01V	
600V	0.1V	
750V	1V	$\pm (1.0\%+10)$

Input impedance: 10M Ω for all the ranges.

Frequency scope: 40Hz – 1KHz (Only applicable to sine wave and triangular wave, but only being referable for other waves whose frequencies are equal or higher than 200Hz.)

Guaranteed Accuracy: within 5~100% of its range and allow less than 5 figures of remaining reading in case of short circuit.

Overload Protection: 750Vrms or at a peak value of 1000Vp-p.

Display: True RMS

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DC Current

Range	Resolution	Accuracy
60µA	0.01µA	± (0.8%+8)
6mA	0.001mA	
60mA	0.01mA	
600mA	0.1mA	± (1.2%+5)
20A	0.01A	± (2.0%+5)

Overload Protection: Fuse F1-630mA/250V, F2-20A/250V
 Maximum input current: 20A (measuring electric current between 5A and 20A, testing time ≤10 seconds, Interval≥15 mins).
 Measuring voltage drop: 600mV when at its full range.

AC Current (T-RMS)

Range	Resolution	Accuracy
6mA	0.001mA	± (1.0%+12)
60mA	0.01mA	
600mA	0.1mA	± (2.0%+3)
20A	0.01A	± (3.0%+5)

Overload Protection: Fuse F1-630mA/250V, F2-20A/250V
 Frequency scope: 40Hz – 1KHz (Only applicable to sine wave and triangular wave, but only being referable for other waves whose frequencies are equal or higher than 200Hz).
 Guaranteed Accuracy: within 5~100% of its range and allow less than 2 figures of remaining reading in case of short circuit.
 Maximum input current: 20A (measuring electric current between 5A and 20A, testing time ≤10 seconds, Interval≥15 mins).
 Measuring voltage drop: 600mV when at its full range.
 Display: True RMS

Resistance

Range	Resolution	Accuracy
600Ω	0.1Ω	± (0.8%+5)
6kΩ	0.001kΩ	
60kΩ	0.01kΩ	± (0.8%+3)
600kΩ	0.1kΩ	
6MΩ	0.001MΩ	± (1.0%+25)
60MΩ	0.01MΩ	

Range of 600Ω: measured value=displayed value - value shown when test leads are short connected Open circuit voltage: About 1V
 Overload Protection: 600Vrms.

Capacitance

Range	Resolution	Accuracy
9.999nF	0.001nF	± (5.0%+35)
99.99nF ~ 999.9µF	0.01nF ~ 0.1µF	± (2.5%+20)
9.999mF	1µF	± (5.0%+10)
99.99mF	10µF	10mF ≤ C ≤ 20mF: ± (10.0%+5) >20mF: reading is for reference only

Overload Protection: 600Vrms.

Frequency

Range	Resolution	Accuracy
9.999Hz ~ 10.00MHz	0.001Hz ~ 0.01MHz	± (0.1%+5)

Range : Auto
 Input frequency:
 ≤100KHz: 100mVrms≤Input frequency≤30Vrms;
 >100kHz~1MHz: 200mVrms≤Input frequency≤30Vrms;
 >1MHz: 600mVrms≤Input frequency≤30Vrms;
 Overload Protection: 600Vrms.

Diode & Buzzer Continuity Test

Range	Description
	Display forward voltage of the diode under test (approximate value) and the range scope is ?
	If it is equal or less than 10Ω, the buzzer beeps, indicating circuit is closed; if it is equal or more than 100Ω, the buzzer remain silence, indicating open circuit with a voltage of approximately 1V.

Overload Protection: 600Vrms.

hFE Test for Transistors

Range	Description	Test Condition
hFE	It can be used to test hFE specifications for Transistors of NPN or PNP type. Display range: 0-1000β	Base current is about 10µA, Vce is about 1.2V

Temperature (Only for 6030A)

Function	Range	Resolution	Accuracy
Temperature °C	-40 ~ 0°C	1°C	± 3
	>0 ~ 100°C		± (1.0%+3)
	>100 ~ 1000°C		± (2.0%+3)
Temperature °F	-40 ~ 32°F	1°F	± 5
	>32 ~ 212°F		± (1.5%+5)
	>212 ~ 1832°F		± (2.5%+5)



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