

## 4½ DIGIT DIGITAL MULTIMETER WITH TERMINAL BLOCKING PROTECTION MODEL-KM 6050

18 FUNCTIONS 29 RANGES

**20Amps  
FUSED**



### FEATURES :

- Low power consumption CMOS double integration, A/D transform integrated circuit
- Auto zero Calibration
- Auto polarity display
- Data hold
- Low battery and Over - range indication.
- Test lead jack mechanical protection function and full range over - load protection function.
- Auto power off function.

### ACCESSORIES :

Test lead pair, Carrying case, Holster & User's Manual

### OPTIONAL ACCESSORIES :

Current Clamp CA 300, Current Clamp Adaptor CA500, CA1000, CA2000, High Voltage Probe PD-28.

### GENERAL SPECIFICATIONS :

- \* Sensing : Average Sensing.
- \* Basic Accuracy :  $\pm 0.05\%$
- \* Capacitance measurement : 0-200 $\mu$ F
- \* Display : 4½ digit 19999 counts Large LCD display
- \* Display Size : 70 x 48mm
- \* Digit Size : 28mm
- \* Low battery indication : "BAT" will occur on the left top of the LCD.
- \* Operation Temperature : 0°C ~ 50°C; <85% R.H.
- \* Storage Temperature : -10°C ~ 60%; <85% R.H.
- \* Power : Standard 9V battery.
- \* Dimension : 192(L) x 88(W) x 42(H)mm
- \* Weight : approx.400g (including battery and holster)

### ELECTRICAL SPECIFICATIONS - KM 6050

Accuracy :  $\pm$  (%reading + digit) Environment Temperature : 23°C  $\pm$  5°C. Relative Humidity : <75%

#### DC VOLTAGE

Range	Resolution	Accuracy
200 mV	10 $\mu$ V	$\pm(0.05\%rdg + 5dpts)$
2 V	100 $\mu$ V	$\pm(0.05\%rdg + 5dpts)$
20 V	1 mV	$\pm(0.05\%rdg + 5dpts)$
200 V	10 mV	$\pm(0.05\%rdg + 5dpts)$
1000 V	100 mV	$\pm(0.1\%rdg + 5dpts)$

Input Impedance : 10M $\Omega$

Overload Protection : 250V (for 200mV) DC or AC peak value. 1000V (for other ranges)

#### DC CURRENT

Range	Resolution	Accuracy
2 mA	100 nA	$\pm(0.5\%rdg + 2dpts)$
20 mA	1 $\mu$ A	$\pm(0.5\%rdg + 2dpts)$
200 mA	10 $\mu$ A	$\pm(0.75\%rdg + 5dpts)$
20 A	1 mA	$\pm(2\%rdg + 10dpts)$

Overload Protection : 0.2A / 250V fuse  
20A / 250V fuse

Maximum input current : 20A (15 second max.)

Voltage drop measurement :  
Full-scale Voltage drop : 200mV

#### RESISTANCE

Range	Resolution	Accuracy
200 $\Omega$	10 m $\Omega$	$\pm(0.2\%rdg + 5dpts)$
2 K $\Omega$	100 m $\Omega$	$\pm(0.2\%rdg + 1dpts)$
20 K $\Omega$	1 $\Omega$	$\pm(0.2\%rdg + 1dpts)$
200 K $\Omega$	10 $\Omega$	$\pm(0.2\%rdg + 1dpts)$
2 M $\Omega$	100 $\Omega$	$\pm(0.2\%rdg + 1dpts)$
20 M $\Omega$	1 K $\Omega$	$\pm(0.5\%rdg + 5dpts)$
200 M $\Omega$	10 K $\Omega$	$\pm(0.5\%rdg + 10dpts)$

Overload Protection : 250V DC or AC peak value

Open circuit Voltage : <1V (2.8V in the 200M $\Omega$  range).

Note : It is normal if the test lead short-circuit displays approx. 10 digits in the 200M $\Omega$  position. Please deduct these 10 digits when measuring.

#### AC VOLTAGE

Range	Resolution	Accuracy
2 V	100 $\mu$ V	$\pm(0.8\%rdg+10dpts)$
20 V	1 mV	$\pm(0.8\%rdg+10dpts)$
200 V	10 mV	$\pm(0.8\%rdg+10dpts)$
750 V	100 mV	$\pm(1.2\%rdg+15dpts)$

Input Impedance : 2M $\Omega$

Frequency range : 40Hz - 400Hz

Overload Protection : 250V, (for 200mV) DC or AC peak value. 750 V (for other ranges)

Display : Average value (Sine RMS)

#### AC CURRENT

Range	Resolution	Accuracy
2 mA	100 nA	$\pm(0.8\%rdg + 10dpts)$
20 mA	1 $\mu$ A	$\pm(0.8\%rdg + 10dpts)$
200 mA	10 $\mu$ A	$\pm(1.5\%rdg + 10dpts)$
20 A	1 mA	$\pm(2\%rdg + 10dpts)$

Overload Protection : 0.2A / 250V fuse  
20A / 250V fuse

Maximum input current : 20A (15 second max.)

Voltage drop measurement :  
Full-scale Voltage drop : 200mV

Frequency Range : 40Hz ~ 400Hz

Display : Average value (Sine RMS)

#### CAPACITANCE

Range	Resolution	Accuracy
20 nF	1 pF	$\pm(2.5\%rdg + 10dpts)$
200 nF	10 pF	$\pm(2.5\%rdg + 10dpts)$
2 $\mu$ F	100 pF	$\pm(2.5\%rdg + 10dpts)$
200 $\mu$ F	10 nF	$\pm(5\%rdg + 3dpts)$

Frequency measurement : approx. 400Hz

Voltage drop measurement : approx. 40mV

#### FREQUENCY

Range	Resolution	Accuracy
20 kHz	1 Hz	$\pm(2\%rdg + 5dpts)$

Overload Protection : 250V DC or AC peak value.

Input sensitivity : 150 mV RMS.

#### TRIODE hFE PARAMETER MEASUREMENT

Range	Description
hFE	It can measure NPN or PNP type transistor triode hFE parameter. Indication range: 0-1000 $\beta$

Test Condition: 1b approx 10 $\mu$ A  
Vce approx 2.8V

#### DIODE & CONTINUITY MEASUREMENT

Range	Description
	Indicate forward Voltage drop of diode
<b>Test Condition</b>	
Forward-way current is approx 1mA, contry-way voltage is approx 2.8V	
	The buzzer will beep when resistance approx <30 $\Omega$
<b>Test Condition</b>	
Open circuit voltage is approx 2.8V	

Overload Protection : 250V, DC or AC peak value.

All Specifications are subject to change without prior notice