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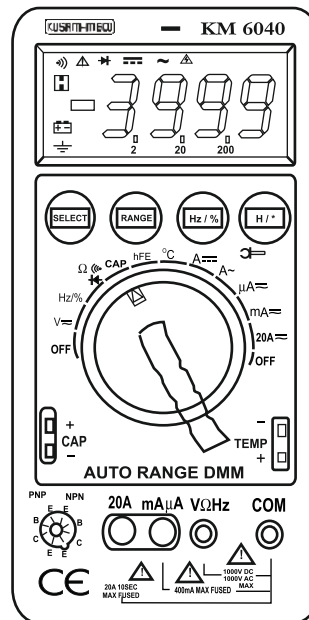
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**KUSAM-MECO**

## AUTORANGING DIGITAL MULTIMETER MODEL- KM 6040



**TAKE MEASUREMENT CAREFULLY AND YOU'LL  
SPARE YOUR METER AND YOURSELF, SOME PAIN**

Nearly every electrical engineer has a hand held Multimeter. We sometimes take them for granted, until we damage them or "burn them out". If you incorrectly connect your DMM to a circuit or have the DMM on wrong setting, you damage the meter and possibly hurt yourself. You can also get into trouble if you try to measure the voltage across a charged capacitor.

DMM users frequently burn their meters by trying to measure current the same way as they measure voltage. Remember, you measure voltage across a circuit, and current through a circuit. When you use the current input, your DMM becomes a lower impedance circuit element. If you accidentally connect this low impedance path across your circuit, you'll effectively short-circuit it. You can, therefore send high current through your meter and severely damage it. Unless the meter has a fused input, you can even get an explosion or fire.

Even if you correctly insert your DMM into the circuit, you can still damage your meter. Don't try to measure current in excess of your meter's capacity. Handheld DMMs usually have a maximum current rating of 10A or 20A.

If you are measuring current in industrial environment, you can easily exceed those ratings. The best way to avoid damage is to use a clamp meter or to connect a clamp attachment to your DMM.

To prevent excess current from flowing through your meter, always disconnect the test leads from the circuit under test whenever you change DMM functions. Set your meter to the correct function, say current and its highest range for the setting, say 20A. Next, connect the test leads before you apply power to the circuit. To be safe, start by setting your meter to its highest range first.

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## Overview


### **Warning**

To avoid electric shock or personal injury, read the “Safety Information” and “Rules for Safe Operation” carefully before using the Meter.

Digital Multimeter Model-KM6040 (hereafter referred to as “the Meter”) is a 3¾ digits Autoranging Multimeter with steady operations, and highly reliable hand-held measuring instrument having different measurement functions. The Multimeter not only can measure AC/DC Voltage, AC/DC Current, Resistance, Capacitance, Frequency, Temperature, Transistor hFE Test, Diode Test, but also has Data Hold function.

## Terms in this manual

 **Warning** : Identifies conditions and actions that could result in serious injury or even death to the user.

 **Caution** : Identifies conditions and actions that could cause damage or Malfunction in the instrument.

## Unpacking Inspection

Open the package case and take out the Multimeter. Check the following items carefully to see any missing or damaged part :


Item	Description	Qty.
1	English Operating Manual	1 piece
2	Test Lead	1 pair
3	Temperature Probe	1 piece

In the event you find any Part missing or damaged, please contact your dealer immediately.

## FEATURES :

- Low power consumption CMOS double integration, A/D transform integrated circuit, Auto Zero Calibration, Auto Polarity display, Data Hold, Low Battery & Over range indication.
- **Display** : 4000 counts DMM with digit height 28mm and function/units sign annunciators.
- **Selected Range displayed on LCD.**
- **Test lead jack mechanical protection function & full Range over-load protection function.**
- **Polarity** : Automatic (-) negative polarity indication.
- **Auto Power Off** : The meter will shut off automatically about 15 minutes after power is ON if the meter is not in use.
- **High Accuracy - Digital Reading.**
- **Instant Continuity Buzzer.**
- **Overload Protection in all Ranges.**
- **Recessed Safety Designed Input Jacks.**
- **“ DATA - HOLD ” switch freezes reading.**

## GENERAL SPECIFICATIONS :

- Display** : Maximum reading 3999 with automatic sign annunciators.
- Display Digit** : 28mm(H)
- Overrange indication** : Highest digit of (1) or (-1) is displayed.
- Low battery** : The "  " sign is Displayed when the battery Voltage drops below the operating Voltage.
- Measurement rate** : 2.5 measurements per Second, nominal.
- Operating temperature** : 0°C to + 50°C, <70% RH.
- Storage temperature** : -20°C to 60°C, <80% RH with battery removed.
- Accuracy** : Accuracy specifications at 23 ± 5°C less than 75% RH.
- Power** : Single 9 V Battery.
- Dimension** : 192mm (L), 88mm(W), 42mm(H)
- Weight** : Approx (600 grams) including battery
- Accessories** : Test leads, Operators Manual, Battery, Carrying Case, Protective Holster, Temp, Probe.

## ELECTRICAL SPECIFICATION :

### DC VOLTAGE

Range	Resolution	Accuracy
400 mV	0.1 mV	±(0.5% rdg + 2dgts)
4 V	1 mV	±(0.5% rdg + 5dgts)
40 V	10 mV	±(0.5% rdg + 5dgts)
400 V	0.1 V	±(0.5% rdg + 5dgts)
1000 V	1 V	±(0.5% rdg + 5dgts)

### AC VOLTAGE

Range	Resolution	Accuracy
4 V	1 mV	±(0.8% rdg + 3dgts)
40 V	10 mV	±(0.8% rdg + 3dgts)
400 V	0.1 V	±(0.8% rdg + 3dgts)
750 V	1 V	±(0.8% rdg + 3dgts)

**Input Impedance** : 10MΩ

**Frequency range** : 40 to 400 Hz

**Response** : Average, calibrated in rms of sine wave

### AC CURRENT

Range	Resolution	Accuracy
400 μA	0.1 μA	±(1.5% rdg + 5dgts)
4000 μA	1 μA	±(1.5% rdg + 5dgts)
40 mA	10 μA	±(1.5% rdg + 5dgts)
400 mA	0.1 mA	±(1.5% rdg + 5dgts)
20 A	10 mA	±(3.0% rdg + 7dgts)

**Overload Protection**: 400 mA fuse for μA and mA ranges.

20A range Test time<15 seconds.

**Frequency Range** : 40 to 400Hz.

**Response** : Average Calibrated in rms of sine wave.

### DC CURRENT

Range	Resolution	Accuracy
400 $\mu$ A	0.1 $\mu$ A	$\pm(1.2\% \text{ rdg} + 3\text{dgts})$
4000 $\mu$ A	1 $\mu$ A	$\pm(1.2\% \text{ rdg} + 3\text{dgts})$
40 mA	10 $\mu$ A	$\pm(1.2\% \text{ rdg} + 3\text{dgts})$
400 mA	0.1 mA	$\pm(1.2\% \text{ rdg} + 3\text{dgts})$
20 A	10 mA	$\pm(2.0\% \text{ rdg} + 5\text{dgts})$

**Overload Protection:** 400 mA fuse for  $\mu$ A & mA range  
20 A has no fuse,  
Test time < 15 sec.

### Electricity Clamp for Testing High Current

Measuring Range	Resolution	Accuracy
DC 2000A	1A	1.5%
AC 2000A	1A	1.5%

Use CA2000 Clamp Adaptor (1A / 1mV)

### RESISTANCE

Range	Resolution	Accuracy
400 $\Omega$	0.1 $\Omega$	$\pm(0.8\% \text{ rdg} + 3 \text{ dgts})$
4 K $\Omega$	1 $\Omega$	$\pm(0.8\% \text{ rdg} + 1 \text{ dgts})$
40 K $\Omega$	10 $\Omega$	$\pm(0.8\% \text{ rdg} + 1 \text{ dgts})$
400 K $\Omega$	100 $\Omega$	$\pm(0.8\% \text{ rdg} + 1 \text{ dgts})$
4 M $\Omega$	1 K $\Omega$	$\pm(0.8\% \text{ rdg} + 1 \text{ dgts})$
40 M $\Omega$	10 K $\Omega$	$\pm(1.2\% \text{ rdg} + 2 \text{ dgts})$

**Maximum Open Circuit Voltage :** about 1.3V

### CAPACITANCE

Range	Resolution	Accuracy
400 nF	0.1 nF	$\pm(4.0\% \text{ rdg} + 5 \text{ dgts})$
40 $\mu$ F	10 nF	$\pm(4.0\% \text{ rdg} + 5 \text{ dgts})$

**Maximum open circuit Voltage:** about 3Vp-P

### TEMPERATURE

Range	Resolution	Accuracy
-40°C~400°C	1°C	$\pm(1.0\% \text{ rdg} + 3\text{dgts})$
400°C~1000°C		$\pm(1.5\% \text{ rdg} + 3\text{dgts})$

### FREQUENCY

Range	Resolution	Accuracy
40 KHz	10 Hz	$\pm(1.2\% \text{ rdg} + 3\text{dgts})$
150 KHz	100 Hz	$\pm(2.5\% \text{ rdg} + 3\text{dgts})$

**Sensitivity :** 500 mV rms up to 40.0 Hz,  
1V rms for 150kHz.

### TRANSISTOR hFE MEASUREMENT

Range	Description	
hFE	It can measure NPN or PNP type of transistor triode hFE parameter. Indication range : 0~1000	1b approx. 10 $\mu$ A, Vec approx. 2.8 V

### DIODE AND CONTINUITY MEASUREMENT

Description	
Indicate approx forward-way voltage drop of diode	Forward-way current is approx. 1mA conray-way voltage is approx. 2.8 V. Open circuit voltage is approx. 2.8V.
The buzzer inside sounds when continuity resistance is about <50 $\Omega$	

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

## Rules For Safe Operation (1)



**To avoid possible electric shock or personal injury, and to avoid possible damage to the Meter or to the equipment under test, adhere to the following rules :**

- Before using the Meter inspect the case. Do not use the Meter if it is damaged or the case (or part of the case) is removed. Look for cracks or missing plastic. Pay attention to the insulation around the connectors.
- Inspect the test leads for damaged insulation or exposed metal. Check the test leads for Continuity. Replace damaged test leads with identical electrical Specifications before using the Meter.
- Do not apply more than the rated voltage, as marked on the Meter, between the terminals or between any terminal and grounding.
- The rotary switch should be placed in the right position and no any changeover of range shall be made while measurement is conducted to prevent damage of the Meter.
- When measurement is taken at an effective voltage over 60V in DC or 30V rms in AC, special care should be taken for there is danger of electric shock.
- Use the proper terminals, function, and range for your measurements.
- Do not use or store the Meter in an environment of high temperature, humidity, explosive, inflammable and strong magnetic field. The performance of the Meter may deteriorate after the meter is dampened.
- When using the test leads, keep your fingers behind the finger guards.

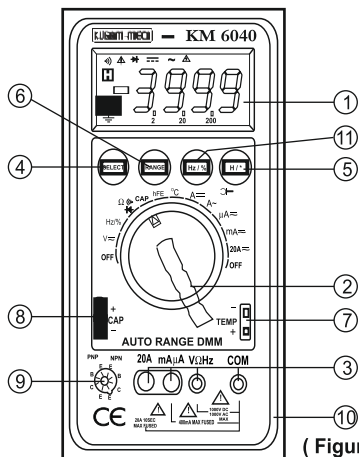
## Rules For Safe Operation (2)

- Disconnect circuit power and discharge all high-voltage capacitors before testing resistance, continuity, diodes, or current.
- Replace the battery as soon as the battery indicator appears. With a low battery, the Meter might produce false readings that can lead to electric shock and personal injury.
- Turn the Meter power off when it is not in use and take out the battery when not using for a long time.
- Constantly check the battery as it may leak when it has not been used for some time, replace the battery as soon as leaking appears. A leaking battery will damage the Meter.

## INTERNATIONAL ELECTRICAL SYMBOLS

	AC (Alternating Current).
	DC (Direct Current).
	Both DC & AC.
	Grounding.
	Double Insulated.
	Deficiency of Built-In Battery.
	Continuity Test.
	Diode.
	Fuse.
	Warning ! Refer to the Operating Manual.
	Caution ! Risk of Electric Shock.
	Electricity Clamp

# THE MULTIMETER STRUCTURE (see figure 1)



( Figure 1)

- 1) **LCD DISPLAY :**  
A 3 1/4 digit display (maximum reading 3999) indicates measured values, and features symbols indicating function, Low Battery, Continuity, Diode.
- 2) **FUNCTION SELECTOR :**  
To Select ACV, DCV, ACA, DCA, Resistance, Capacitance, Temperature, Frequency, Diode, Continuity & Transistor Test.
- 3) **INPUT JACKS (VΩ, mA, A and COM) :**  
Test leads are inserted into these jacks for Voltage, Resistance, Current measurements, Continuity & Diode Checks.
- 4) **POWER SWITCH :**  
A push button (ON/OFF) POWER switch will switch ON or switch OFF the multimeter.
- 5) **DATA HOLD SWITCH :**  
A push button ( ON/OFF) Data-Hold switch will freeze reading when pressed.

## 6) FUNCTION SELECTOR:

To select various functions

## 7) INPUT SOCKET FOR TEMPERATURE MEASUREMENT :

Temperature Probes are inserted into these jacks and the other end is connected to the point where the temperature is to be measured.

## 8) INPUT SOCKET FOR CAPACITANCE MEASUREMENT :

Probes are inserted into these jacks and the other end is connected to the point where the capacitance is to be measured.

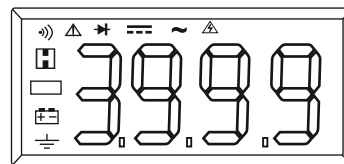
## 9) INPUT SOCKET FOR TRANSISTOR TEST.

## 10) PROTECTIVE HOLSTER :

Prevents the instrument from damage if it falls from the hand while in use.

## 11) H/ \* Key (reading Hold / Backlight Control)

## DISPLAY SYMBOLS (see figure 2)



( Figure 2)

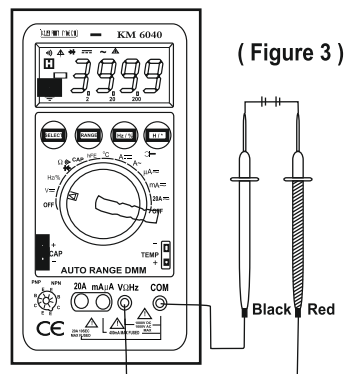
## FUNCTIONAL BUTTONS

No.	Symbol	Meaning
1		Dangerous Voltages.
2		The battery is low. ⚠ Warning : To avoid false readings, which could lead to possible electric shock or personal injury, replace the battery as soon as the battery indicator appears.
3		Indicator for AC voltage or current, The displayed value is the mean value.
4		Indicates negative reading.
5		Test of diode.
6		Data Hold is active.
7		The continuity buzzer is on.
8	<b>mA, A</b>	A : Amperes (amps). The unit of current.
9	<b>mV, V</b>	V : Volts. The unit of voltage.
10	<b>Hz</b>	Hz : The unit of frequency.
11	$\Omega$ , k $\Omega$ ,	$\Omega$ : Ohm. The unit of resistance. K $\Omega$ : kilohm. $1 \times 10^3$ or 1000 ohms.
12	$^{\circ}\text{C}$	$^{\circ}\text{C}$ : The unit of temperature.
13	$\mu\text{F}$ , nF	The unit of capacitance.

## MEASUREMENT OPERATION

- Make sure the Low Battery display is not on, otherwise false readings may be provided.
- Pay extra attention to the symbol which is located besides the input terminals of the Meter before carrying out measurement.

### A. DC VOLTAGE MEASUREMENT (see figure 3)



( Figure 3 )



**Warning**  
To avoid harm to you or damages to the Meter from electric shock, please do not attempt to measure voltages higher than 1000VDC or 700V rms although readings may be obtained.

The DC Voltage ranges are : 400mV, 4V, 40V, 400V & 1000V. These ranges are auto selected. There is provision for manual selection of each range.

To measure DC voltage, connect the Meter as follows :

- 1) Set the rotary switch to the **V** range.
- 2) Insert the red test lead into the **VΩ** input terminal and the black test lead into the **COM** input terminal
- 3) Connect the test leads across with the object being measured.

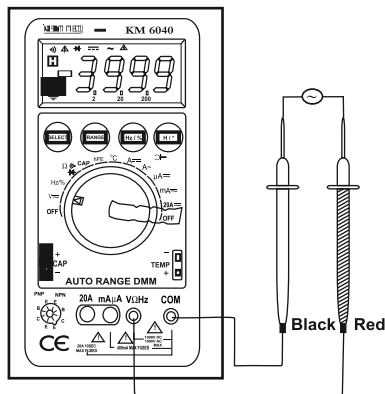
The measured value is shown on the display.



**⚠ Caution :**

- If the value of voltage to be measured is unknown, use the maximum measurement position (1000V) in manual mode and reduce the range step by step until a satisfactory reading is obtained.
- The LCD displays “1” indicating the existing selected range is overloaded, it is required to select a higher range in order to obtain a correct reading.
- In each range, the Meter has an input impedance of approx.  $10M\Omega$ . This loading effect can cause measurement errors in high impedance circuits. If the circuit impedance is less than or equal to  $10k\Omega$ , the error is negligible (0.1% or less).
- When DC voltage measurement has been completed, disconnect the connection between the testing leads and the circuit under test.

**B. AC VOLTAGE MEASUREMENT (see figure 4)**



**⚠ Warning :**

**To avoid harm to you or damages to the Meter from electric shock, please do not attempt to measure voltages higher than 1000V or 750V rms although readings may be obtained.**

The AC Voltage measurement has 4 measurement positions: 4V, 40V, 400V and 750V. These ranges are auto selected. There is provision in the meter to select the ranges manually.

**To measure AC Voltage, connect the Meter as follows :**

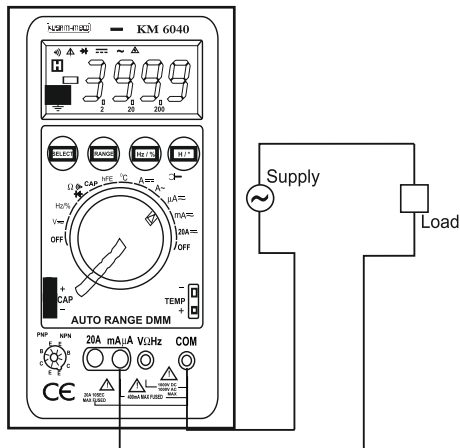
- 1) Set the rotary switch to an appropriate measurement position in V~ range.
- 2) Insert the red test lead into the  $V\Omega$  terminal and the black test lead into the COM terminal.
- 3) Connect the test leads across with the object being measured.

The measured value is shown on the display, which is effective value of sine wave (mean value response).

**⚠ Caution :**

- If the value of voltage to be measured is unknown, use the maximum measurement position (750V) if in manual selection mode and reduce the range step by step until a satisfactory reading is obtained.
- The LCD displays “1” indicating the existing selected range is overloaded, it is required to select a higher range in order to obtain a correct reading.
- When AC Voltage measurement has been completed, disconnect the connection between the testing leads and the circuit under test.

### C. AC CURRENT MEASUREMENT (see figure 5)



#### **Warning :**

Never attempt an in - circuit current measurement where the open circuit voltage between terminals and ground is greater than 60V DC or 30V rms. If the fuse burns out during measurement, the Meter may be damaged or the operator himself may be hurt. Use proper terminals, function, and range for the measurement. When the testing leads are connected to the current terminals, do not parallel them across any circuit.

The AC Current measurement has 5 measurement positions on the rotary switch : 400 $\mu$ A, 4000 $\mu$ A, 40mA, 400mA & 20A.


#### **To measure AC Current, connect the meter as follows :**

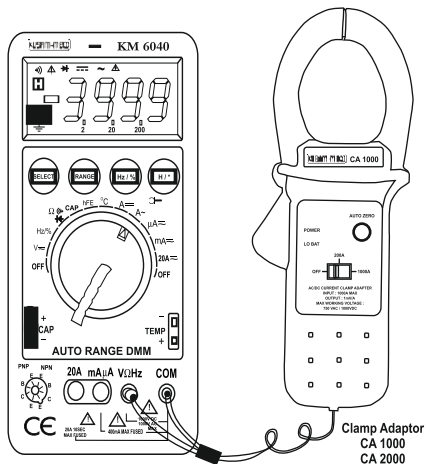
- 1) Turn off power to the circuit. Discharge all High-Voltage capacitors.
- 2) Set the rotary switch to an appropriate measurement position in Current range.
- 3) Insert the red test lead into the mA or 20A terminal and the black test lead into the COM terminal.
- 4) Break the current path to be tested. Connect the red test lead to the positive side of the path and the black test lead to the negative side of the path.
- 5) Turn on power to the circuit. The measured value is shown on the display.

#### **Caution**

- If the value of current to be measured is unknown, use the maximum measurement position (20A) and 20A terminal, and reduce the range step by step until a satisfactory reading is obtained.
- When current measurement has been completed, disconnect the connection between the testing leads and the circuit under test.

### E. Use Electricity Clamp Testing High Current

- Rotate function knob to  position. There are two positions "DCA" and "ACA". When need to test DC high current rotate function knob to DCA position and use 100mV DC Clamp Adaptor. LCD will display tested current value and unit. When need to test AC high current, rotate function knob to ACA position, and use 100A / 100mV AC Clamp Adaptor, LCD displays tested current value and unit.
- Select good electricity clamp(100A/100mV AC/DC Clamp Adaptor) output plug, directly insert the plug in COM and VΩHz terminals.
- Open electricity clamp, put test lead in jaw, close the jaw and can read the tested current value.

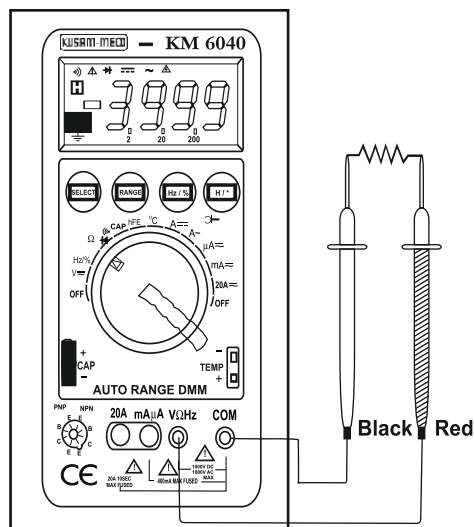


### F. RESISTANCE MEASUREMENT (see figure 7)



#### Warning

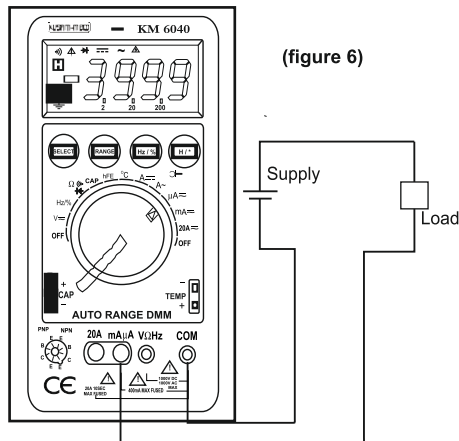
To avoid damages to the Meter or to the devices under test, disconnect circuit power and discharge all the high-voltage capacitors before measuring resistance.



(figure 7)

The resistance range has 6 measurement ranges in manual selection range : 400Ω, 4KΩ, 40KΩ, 400KΩ, 4MΩ & 40MΩ.

# D.DC CURRENT MEASUREMENT (see figure 6)



(figure 6)

## **Warning :**

Never attempt an in - circuit current measurement where the open circuit voltage between terminals and ground is greater than 60V DC or 30V rms. If the fuse burns out during measurement, the Meter may be damaged or the operator himself may be hurt. Use proper terminals, function, and range for the measurement. When the testing leads are connected to the current terminals, do not parallel them across any circuit.

The DC current measurement has 5 measurement positions on the rotary switch : 400μA, 4000μA, 40mA, 400mA & 20A.

## To measure DC Current, connect the meter as follows :

- 1) Turn off power to the circuit. Discharge all High - Voltage capacitors.
- 2) Set the rotary switch to an appropriate measurement position in Current range.
- 3) Insert the red test lead into the mA or 20A terminal and the black test lead into the **COM** terminal
- 4) Break the current path to be tested. Connect the red test lead to the positive side of the path and the black test lead to the negative side of the path.
- 5) Turn on power to the circuit.

The measured value is shown on the display.

## **Caution**

- If the value of current to be measured is unknown, use the maximum measurement position (20A) and 20A terminal, and reduce the range step by step until a satisfactory reading is obtained.
- When current measurement has been completed, disconnect the connection between the testing leads and the circuit under test.

**To measure resistance, connect the meter as follows:**

- 1) Set the rotary switch to an appropriate measurement position in  $\Omega$  range.
- 2) Insert the red test lead into the V $\Omega$  terminal and the black test lead into the C.
- 3) Connect the test leads across with the resistance being measured. The measured value is shown on the display.

**Note :**

- The test leads can add  $0.1\Omega$  to  $0.3\Omega$  of error to the Resistance measurement. To obtain precision readings in low-resistance, that is the range of  $200\Omega$ , short-circuit the input terminals beforehand and record the reading obtained (call this reading as X). (X) is the additional resistance from the test lead. Then use the equation :  
Measured resistance value (Y) - (X) = precision Reading of resistance.
- When there is no input, for example in open circuit condition, the Meter displays " 1"  
When resistance measurement has been completed, disconnect the connection between the testing leads and the circuit under test.

**⚡ Caution :**

- 1) Never connect high voltage to the input sockets with the switch in Resistance range.
- 2) Using Resistance measurement function in a Live circuit will produce false results and may damage the instrument. In many cases the suspect component must be disconnected from the circuit to obtain an accurate reading.

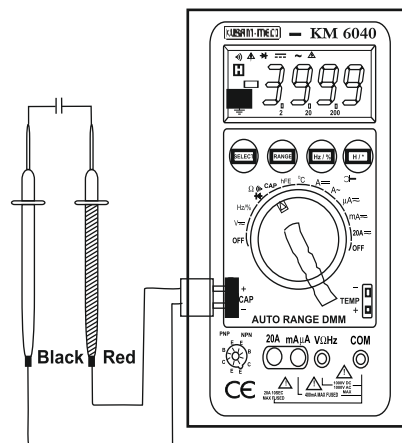
## G. CAPACITANCE MEASUREMENT

(see figure 8)

**⚠ Warning**

To avoid damages to the Meter or to the equipment under test, disconnect circuit power and discharge all high-voltage capacitors before measuring capacitance. Use the DC voltage function to confirm that the capacitor is discharged. Never attempt to input over 60V in DC or 30V rms in AC to avoid personal injury.

(figure 8)



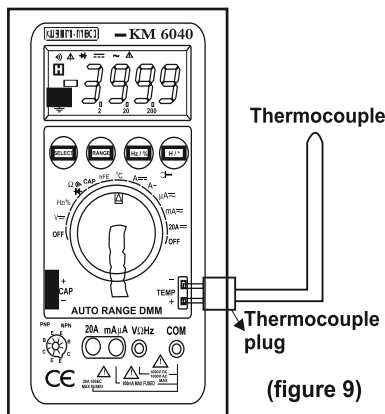
Capacitance measurement has 2 measurement positions on the rotary switch : 400nF & 40 $\mu$ F

To measure capacitance, connect the Meter as follows

- 1) Set the function/range switch on the range position needed.
- 2) Insert the capacitance into the "Cx" jack.

The measured value shows on the display.

## H. TEMPERATURE MEASUREMENT (see figure 9)



Temperature measurement range is from -40°C to 1000°C.

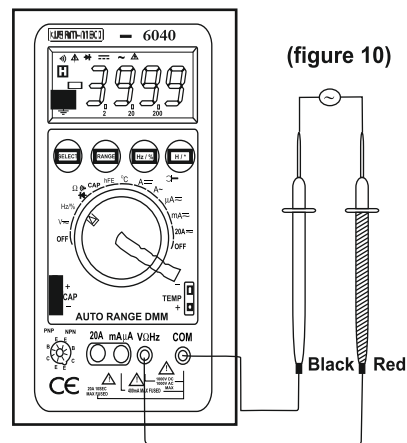
To measure temperature, connect the Meter as follows:

- 1) Set the function switch on the "°C" measurement position.
- 2) Insert the thermocouple plug into the meter's temperature socket.

## I. FREQUENCY MEASUREMENT (See figure 10)

### ⚠ Warning :

To avoid harm to you or damages to the Meter, do not attempt to measure voltages higher than 60V in DC or 30V rms in AC although reading may be obtained. When the frequency signal to be tested is higher than 30V rms, the Meter cannot guarantee accuracy of the measurement.



### ⚠ Caution :

- 1) Never connect high voltage to the input Sockets with the switch in Capacitance range.
- 2) Using Capacitance measurement function in a Live circuit will produce false results and may damage the instrument. In many cases the suspect component must be disconnected from the circuit to obtain an accurate reading.

3. Insert the plug with the positive polarity in the positive socket and the negative polarity in the negative socket.
4. Set the measurement end of the thermocouple on the temperature measurement point.  
The measured value is shown on the display.

**NOTE :** The Thermocouple supplied with the DMM can measure upto 250°C.

The frequency measurement range is 40 KHz & 150 kHz

To measure frequency, connect the Meter as follows :

- 1) Set the rotary switch in the frequency range.
- 2) Insert the red test lead into the **V $\Omega$**  terminal and the black test lead into the **COM** Terminal.
- 3) Connect the test leads across with the signal being measured.

The measured value is shown on the display.



**Caution :**

- When Hz measurement has been completed, disconnect the connection between the testing leads and the circuit under test.

**J. MEASURING DIODES & CONTINUITY**  
(See figure 11)



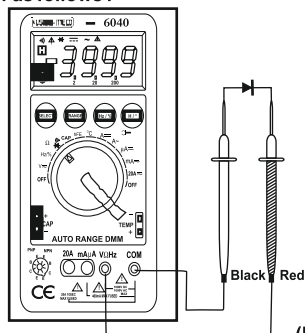
**Warning**

To avoid damage to the Meter or to the equipment under test, disconnect circuit power and discharge all high-voltage capacitors before measuring diodes and continuity.

**Testing Diodes**

Use the diode test function to check diodes, The diode test sends a current through the Semiconductor junction, and then measures the voltage drop across the junction. A good silicon junction drops between 0.5V and 0.8V.

**To test a diode out of a circuit, connect the Meter as follows :**



(Figure 11)

1. Set the rotary switch to  $\rightarrow \rightarrow \rightarrow$  position
2. Insert the red test lead into **VΩ** terminal and the black test lead into the **COM** terminal.
3. For forward voltage drop reading on any Semiconductor component, place the red test lead on the component's anode and place the black test lead on the component's cathode. The measured value is shown on the display.

**⚠ Caution :**

- In a circuit, a good diode will produce a forward voltage drop reading of 0.5V to 0.8V; However ; the reverse voltage drop reading can vary depending on the resistance of other pathways between the probe tips.
- Connect the test leads to the proper terminals as said above, to avoid error display. The LCD will display "1" indicating open-circuit for wrong connection. The unit of diode is Volt (V), displaying the positive connection voltage-drop Value.

- When diode testing has been completed, disconnect the connection between the testing Leads and the circuit under test.

**Testing for Continuity**

To test for continuity, connect the Meter as below :

1. Set the rotary switch to  $\rightarrow \rightarrow \rightarrow$  position
2. Insert the red test lead into **VΩ** terminal and the black test lead into the **COM** terminal.
3. Connect the test leads across with the object being measured.  
The buzzer sounds if the resistance of a circuit under test is less than 50Ω.  
The LCD displays the resistance value of a circuit under test.

**⚠ Caution :**

- The LCD displays "1" indicating the circuit being tested is open.
- When continuity testing has been completed, disconnect the connection between the testing leads and the circuit under test.


**K. Transistor Testing**

To test the Transistors, connect the Meter as below :

1. Insert the transistor (NPN or PNP) in the sockets provided.
2. The measured value is shown on the LCD Display.

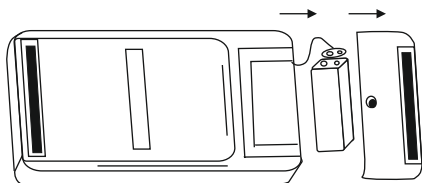


**MAINTENANCE****⚠ Warning**

To avoid false reading, replace the battery as soon as the battery indicator  appears.

**To replace battery :**

- Disconnect the connection between the testing leads and the circuit under test, and remove the testing leads away from the input terminals of the Meter.
- Turn the Meter OFF.
- Remove the screws from the battery compartment, and separate the battery compartment from the case bottom
- Remove the battery from the battery compartment.
- Replace the battery with a new Standard 9V Battery.
- Rejoin the battery compartment and the case bottom, and install the screw.

**MUMBAI****TEST CERTIFICATE****DIGITAL MULTIMETER**

This Test Certificate guarantees that the product has been inspected and tested in accordance with the published specifications.

The instrument has been calibrated by using equipment which has already been calibrated to standards traceable to national standards.

MODEL NO. **KM 6040**

SERIAL NO. \_\_\_\_\_

DATE: \_\_\_\_\_

**ISO 9001  
REGISTERED**



## **WARRANTY**

Each "KUSAM-MECO" product is warranted to be free from defects in material and workmanship under normal use & service. The warranty period is one year (12 months) and begins from the date of despatch of goods. In case any defect occurs in functioning of the instrument, under proper use, within the warranty period, the same will be rectified by us free of charges, provided the to and fro freight charges are borne by you.

This warranty extends only to the original buyer or end-user customer of a "KUSAM-MECO" authorized dealer.

This warranty does not apply for damaged Ic's, fuses, disposable batteries, carrying case, test leads, or to any product which in "KUSAM-MECO's" opinion, has been misused, altered, neglected, contaminated or damaged by accident or abnormal conditions of operation or handling.

"KUSAM-MECO" authorized dealer shall extend this warranty on new and unused products to end-user customers only but have no authority to extend a greater or different warranty on behalf of "KUSAM-MECO".

"KUSAM-MECO's" warranty obligation is limited, at option, free of charge repair, or replacement of a defective product which is returned to a "KUSAM-MECO" authorized service center within the warranty period.