LIST OF PRODUCTS

- ✶ Digital Multimeter
- ✶ AC Clamp Adaptor
- ✶ Thermo Anemometer
- ✶ Distance Meter
- ✶ Network Cable Tester
- ✶ Earth Resistance Tester
- ✶ DC Power Supplies
- ✶ Calibrators
- ✶ Frequency Counter
- ✶ Phasing Sticks
- ✶ Waterproof Pen Testers
- ✶ EMF Detector
- ✶ Digital AC & AC/DC Clampmeter
- ✶ AC/DC Current Adaptor
- ✶ Thermo Hygrometer
- ✶ Digital Lux Meter
- ✶ Power Factor Regulator
- ✶ Digital Panel Meters
- ✶ High Voltage Detector
- ✶ Gas Analysers
- ✶ Function Generator
- ✶ Battery Tester
- ✶ Solar Power Meter
- ✶ Wood, Paper & Grain Moisture Meter
- ✶ Transistorised Electronic Analog & Digital Insulation Resistance Testers(upto 10 KV)
- ✶ Digital Sound Level Meter & Sound Level Calibrator
- ✶ Digital contact & Non-contact Type Tachometer
- ✶ Digital Non-contact (infrared) Thermometer
- ✶ Maximum Demand Controller/Digital Power Meter
- ✶ Digital Hand Held Temperature Indicators

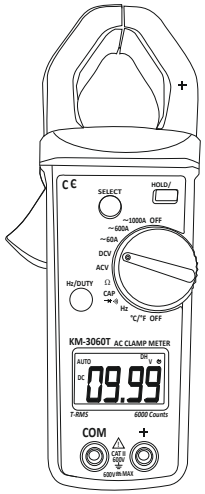
KUSAM-MECO®

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AN ISO 9001:2015 COMPANY

1000A AC DIGITAL CLAMPMETER MODEL - KM 3060-T



OPERATION MANUAL

I.SAFETY INFORMATION

- Read the following safety information carefully before attempting to operate or service the meter.
- To avoid damages to the instrument, do not exceed the maximum limits of the input values shown in the technical specification tables.
- Never measure current while the test leads are inserted into the input jacks.
- Do not use the meter or test leads if they lock damaged. Use with extreme caution when working around bare conductors or bus bars.
- Accidental contact with the conductor could result in electric shock.
- Use the meter only as specified in this manual; otherwise, the protection provided by the meter may be impaired.
- Read the operating instructions before use and follow all safety information.
- Be cautious when working with voltages above 60V DC or 30V AC RMS. Such voltages pose a shock hazard.
- Before taking resistance measurements or testing acoustic continuity. disconnect circuit from main power supply and all loads from circuit.

II) FEATURES:

- Measurement CAT II 600V AC/DC
- Pollution Degree 2
- Altitude upto 2000 meters
- Indoor use only
- Relatively humidity 80% max.

Maintenance & Clearing:

1. Repairs or servicing not covered in this manual should only be performed by qualified personnel.
2. Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on this instrument.

Maximum voltage between any terminal and earth ground 750 Vrms

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GENERAL SPECIFICATIONS:

- **Display :** 3-5/6 digits liquid crystal display (LCD) Max. Rading 5999. Automatic indication of functions and symbols.
- **Jaw Size :** Cables Φ36mm
- Maximum Voltage between any terminal & Earth ground 750 Vrms.
- **Operating Temperature :** 0~40°C
- **Operating Principle :** Dual slope integration
- **Over Range Indication :** LCD will show a “OL” in the highest position accompanied. (except for ranges of 1000A AC, and 1000VDC or 750VAC)
- **Low Battery Indication :** The is displayed when the battery voltage drops below the operating voltage.
- **Sampling rate :** 2.5times/sec (Digital Display).
- **Battery Life :** 60hrs approx.(Alkaline)
- **Polarity :** Automatic polarity “-” display for negative input
- **Auto Power Off :** The meter is powered off 15 minutes later after the last operating was made. To bringe back the display please turn rotary switch to more positions or push any button
- **Operating Temperature & Humidity :** 0°C to 40°C (R.H.<80%)
- **Storage Temperature & Humidity :** -10°C to 60°C (R.H.<80%)
- **Power Supply :** 1.5V AA x 2 Alkaline Battery.
- **Dimension :** 228(L) x 75(W) x 36(H)mm
- **Weight :** Approx. 465 gms. (including battery).

ACCESSORIES :

Test leads set, Users Manual, Battery & Carrying Case.

2-2 Measurement Specifications:

Accuracy are ± (% of reading + number of digits) at 18ºC to 28ºC (64ºF to 82ºF) with relative humidity to 80%. The current error is specified within the largest circle, which can be drawn inside the jaw.

AC CURRENT

Range	Resolution	Accuracy
60 A	0.01 A	± (2%rdg + 5dgts)
600 A	0.1 A	
1000 A	1 A	

Overload Protection : 1100A
Frequency Response : 40 ~ 65Hz

AC VOLTAGE

Range	Resolution	Accuracy
600 mV	0.1 mV	± (1.8%rdg + 5dgts)
6 V	0.001 V	± (1.0%rdg + 3dgts)
60 V	0.01 V	
600 V	0.1 V	
750 V	1 V	± (1.5%rdg + 3dgts)

AC Voltage respond Frequency :
50Hz ~ 400Hz for 600V & below, 50Hz ~ 100Hz for 750V
Overload Protection : 600mV range 500V RMS,
the rest 1000V DC or AC 750V RMS
Input Resistance : 10MΩ.

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DC VOLTAGE

Range	Resolution	Accuracy
600 mV	0.1 mV	± (1.0%rdg + 2dgts)
6 V	0.001 V	± (0.8%rdg + 2dgts)
60 V	0.01 V	
600 V	0.1 V	
1000 V	1 V	

Overload Protection : 600mV range 500V RMS,
the rest 1000V DC or AC 750V RMS
Input Resistance : 10MΩ.

RESISTANCE

Range	Resolution	Accuracy
600 Ω	0.1 Ω	± (1.2%rdg + 2dgts)
6 kΩ	0.001 kΩ	± (1.0%rdg + 2dgts)
60 kΩ	0.01 kΩ	
600 kΩ	0.1 kΩ	
6 MΩ	0.001 MΩ	
60 MΩ	0.01 MΩ	± (2.0%rdg + 2dgts)

Overload Protection : 250V RMS

CAPACITANCE

Range	Resolution	Accuracy
10 nF	0.01 nF	± (2.5%rdg + 10dgts)
100 nF	0.1 nF	
1 µF	0.001 µF	± (2.0%rdg + 4dgts)
10 µF	0.01 µF	
100 µF	0.1 µF	
1 mF	0.001 mF	± (2.5%rdg + 10dgts)
10 mF	0.01 mF	
100 mF	0.1 mF	

Overload Protection : 250V RMS

FREQUENCY (Hz) & DUTY

Range	Accuracy	Sensitivity
10Hz	Unspecified	0.7V RMS
100Hz~1MHz	±(0.5%rdg+3dgts)	
10MHz	Unspecified	
DUTY Range : 0.1% to 99.9%		

Overload Protection : 250V RMS

DIODE / AUDIBLE CONTINUITY

Range	Description
→	Display read approx. Forward voltage of diode. Accuracy : ±(3.0%rdg + 3)
•))	If the resistance is less than 50Ω, the beeper sounds continuously.

Overload Protection : 250V rms

TEMPERATURE

Unit	Range	Accuracy
°C	-40°C~ 1000°C	±(2.5%rdg+3°C)
°F	-40°F~ 1832°F	±(2.5%rdg+3°F)

III. PUSH BUTTON

1. Select Button

When switch at →+ •)) CAP test position, press this button to select →+ or •)) CAP mode. When switch at °C or °F mode test position, press this button to select °C or °F mode .

2. Data Hold button

Press it once to hold the measured value and store the value in memory. Press again to release the hold function. When press and hold over 2 seconds, the backlight will be on. In the backlight on status, press the key over 2 seconds the backlight will be off.

3.Hz/DUTY button

When switch at DCV, ACV test position, press this button to select V Or Hz or DUTY mode.
When switch at Hz test position, press this button to select Hz or DUTY mode.

IV. OPERATING INSTRUCTION

4-1. Measurement Procedure operating instructions

1. Make sure that the selected range is suitable for the measurement to be taken.
2. If the current under measurement is higher than the selected value for a long period,
   Overheating may take place, compromising the safety and operation of inner circuits.
3. Do not measure currents on high voltage conductors (>1000V DC or 750V AC) to avoid risks of discharge and/or incorrect readings.

4-2 AC Current measurements

WARNING
Make certain that all test leads are disconnected from the meter terminals.

1. Set the function/range switch to the A range. (~60A, ~ 600A or ~ 1000A)
2. Clamp the sensor jaw around one of the conductors under test. Make sure that the clamp jaw be perfectly closed.
3. Read the displayed value.

4-3 DC Voltage Measurements

WARNING

Maximum input voltage of DC VOLT Range is 1100V DC or 750V rms. Do not attempt to take any voltage measurement that exceeds 750Vrms to avoid electrical shock hazard or damage to the instrument.

1. Set the function switch to the DC V range.
2. Connect the black and red test leads to the COM and + terminals respectively.
3. Connect the test leads to the circuit being measured and read the displayed value.

4-4 AC Voltage Measurements

Warning

Maximum input voltage of AC VOLT Range is 600Vrms. Do not attempt to take any voltage measurement that exceeds 750Vrms to avoid electrical shock hazard of damage to the instrument.

1. Set the function / range switch to the ACV range.
2. Connect the black and red test leads to the COM and + terminals respectively.
3. Connect the test leads to the circuit being measured and read the displayed value.

4-5 Resistance Measurement

WARNING

Before taking any in circuit resistance measurement, remove power from the circuit being tested and discharge all capacitors.

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1. Before taking resistance measurements, make sure the circuit is not live and discharge any capacitors present in the circuit.
2. Set the function switch to Ω range.
3. connect the black test lead to the COM terminal and the red test lead to the + terminal
4. Connect the test leads to the circuit being measured and read the displayed value.

4-6 Diode test / Continuity Measurement

WARNING

Before taking any in circuit resistance measurement, remove power from the circuit being tested and discharge all capacitors.

Diode test

1. Connect red test lead to the “+” terminal and black test lead to the “COM” terminal.
2. Set range switch to the diode test position “CAP →|–))))” Press **SELECT** to select “ →|– “ test mode.
3. Connect the red test to the anode side and black test lead to the cathode side of the diode being tested.
4. Read forward voltage (Vf) value on LCD.
   If the test lead is connected rather than procedure(3), the digital reading should nearly equal to the reading in the open circuit condition. This can be used for distinguishing anode and cathode poles of a diode.

CONTINUITY MEASUREMENT

1. Connect red test lead to the “+” terminal and black test lead to the “COM” terminal.

2. Set range switch to the "CAP →|- ·))) " position. Press **SELECT** to select " ·))) " test mode. Remove power from the circuit being tested and discharge all capacitors.
3. Connect the resistance in the circuit being measured.
4. When the resistance is below 50Ω, it will indicate by a continuous beeping.

NOTE: Continuity test is available to check open/short of the circuit.

4-7 Capacitance measurement

CAUTION

To avoid damage to the meter or to the equipment under test, disconnect circuit power and discharge all high-voltage.

Disconnect before measuring capacitance. Use the DC voltage function to confirm that the capacitor is discharged.

1. Set the function switch to "CAP →|- ·))) " position.
2. Press **SELECT** to select "CAP" test mode.
3. Connect the black test lead to "COM" terminal and red test lead to "V Ω Hz" terminal.
4. Touch the probes to test point, if the capacitor is a polarity, the red test lead to position leg and black test lead to minus leg.

4-8 Frequency Measurements

According to applications, both the ammeter and the voltmeter can be used.

1. Set the function switch to the Hz range.
2. The voltmeter detects the frequency of the voltage applied to the leads.
3. Read the frequency value on the display.

4-9 Temperature Measurement

1. Set the rotary switch to " °C/°F" position.
2. Press SELECT to select " °C" or "°F" test mode.
3. Insert the cold terminal (free terminal) of the thermocouple sensor into the temperature test jack and put the working terminal (the temperature testing terminal) onto or into the object under test. Then the reading of temperature will be directly displayed.

V. MAINTENANCE

5-1 Battery Replacement

WARNING

To prevent electrical hazard or shock, turn off clamp meter and disconnect test leads before removing back cover.

1. As battery power is not sufficient, LCD will display ..... Replacement with two new batteries type AA is required.
2. Set Range Switch to OFF position.
3. Use a screwdriver to unscrew the screw secured on back cover. Take out the batteries and replace with two new batteries Type AA.
4. Place back the cover and secure by a screw.

5-2 MAINTENACE WARNING

WARNING

To avoid electrical shock or damage to the meter, do not get water inside the case. Remove the test leads and any input signals before opening the case.

Periodically wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents.

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TEST CERTIFICATE

DIGITAL CLAMP MULTIMETER

This Test Certificate warrantees 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 3060-T**

SERIAL NO. _____

DATE: _____

ISO 9001:2015
REGISTERED

QC
KUSAM-MECO
PASS

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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, burnt PCB's, 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.

THIS WARRANTY IS BUYER’S SOLE AND EXCLUSIVE REMEDY AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. “KUSAM-MECO” SHALL NOT BE LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, INCLUDING LOSS OF DATA, ARISING FROM ANY CAUSE WHATSOEVER.

All transaction are subject to Mumbai Jurisdiction.