



An ISO 9001:2008 Company

# AC/DC TRMS LEAKAGE CLAMPMETER

## Model KM 2006

### FEATURES :

- 0.1 mA Current Resolution.
- True RMS Measurement for all applications.
- LED Backlight function.
- MAX MIN measurement function.
- Data Hold function & Zero function.
- CAT IV 300V.
- Auto Power Off.
- Autoranging.

### GENERAL SPECIFICATIONS :

- **Display :** 4 Digit 5000 counts liquid crystal LCD display.
- **Jaw size :** 23mm.
- **Sampling rate :** 2 times/sec.
- **Operating Temperature & Humidity :** 0 ~ 40°C (32 ~ 104°F); < 80% RH.
- **Storage Temperature & Humidity :** -10 ~ 60°C (14 ~ 140°F); < 80% RH.
- **Low battery indication.**
- **Continuity < 100Ω.**
- **Auto power off 30 minute.**
- **Power Supply :** 1.5V AAA battery x 2.
- **Dimension :** 206(L) x 76(W) x 33.5(H)mm
- **Weight :** Approx. 270g.
- **Accessories :** Test lead, User manual, Batteries & Carrying case.

### ELECTRICAL SPECIFICATIONS :

#### DC CURRENT

Range	Resolution	Accuracy
300.0 mA	0.1 mA	± (1%rdg + 10dgts)
3000 mA	1 mA	
10.00 A	0.01 A	

#### AC CURRENT

Range	Resolution	Accuracy
300.0 mA	0.1 mA	± (1%rdg + 5dgts)
3000 mA	1 mA	
20.00 A	0.01 A	

#### DC VOLTAGE

Range	Resolution	Accuracy
50 V	0.01 V	± (1%rdg + 2dgts)
300 V	0.1 V	

#### AC VOLTAGE

Range	Resolution	Accuracy
50 V	0.01 V	± (1%rdg + 5dgts)
300 V	0.1 V	

#### OHM

Range	Resolution	Accuracy
500 Ω	0.1 Ω	± (1%rdg + 2dgts)
5 KΩ	1 Ω	
50 KΩ	10 Ω	
500 KΩ	100 Ω	



Preliminary Data

All Specifications are subject to change without prior notice.



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### LIST OF PRODUCTS

- \* Digital Multimeter
- \* Digital AC & AC/DC Clampmeter
- \* AC Clamp Adaptor
- \* AC/DC Current Adaptor
- \* Transistorised Electronic Analog & Digital Insulation Resistance Testers
- \* Digital Sound Level Meter & Sound Level Calibrator
- \* Digital contact & Non-contact Type Tachometer
- \* Digital Non-contact (infrared) Thermometer
- \* Thermo Hygrometer
- \* Thermo Anemometer
- \* Wood Moisture Meter
- \* Distance Meter
- \* Digital Hand Held Temperature Indicators
- \* Digital Lux Meter
- \* Network Cable Tester
- \* Power Factor Regulator
- \* Maximum Demand Controller/Digital Power Meter

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**KUSAM-MECO**

**MILLIAMP CLAMP  
METER**

**KM-2006**

**OPERATION  
MANUAL**

**KUSAM-MECO**

### 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 guarantee 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.

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 transactions are subject to Mumbai Jurisdiction.

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## MILLIAMP CLAMP METER

### KM 2006



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**1. ⚠ SAFETY INFORMATION**


Do not operate the tester if the body of meter or the test lead look broken.

Check the main function dial and make sure it is at the correct position before each measurement.

Do not perform resistance and continuity test on a live power system.

Do not apply voltage between the test terminals and test terminal to ground that exceed the maximum limit record in this manual.

Keep the fingers after the protection ring when measuring through the test lead.

Change the battery when the  symbol appears to avoid incorrect data.


**Environment Conditions**


Operation Temperature : 0°C to 40°C (32°F to 104°F); <80%RH

Storage Temperature : -10°C to 60°C (14°F to 140°F); <80%RH

**Explanation Symbols**

⚠ Attention refer to operation Instructions.


 Dangerous voltage may be present at terminals.

 This instrument has double insulation.

Approvals: C E En61010 300V CAT IV

**2. GENERAL SPECIFICATIONS**

**Digital Display** : 4 digital liquid crystal (LCD), Maximum reading 5000.

**Polarity** : When a negative signal is applied, the  signal appears.

**Low Battery Indication :** When the battery is under the proper operation range,  will appear on the LCD display.

**Sample Rate :** 2 times/sec for digital data.

**Power Source:** 1.5V size AAA battery X 2  
 Typical battery Life: (without buzzer, backlight)  
 Type: 15 hours at DCA function;  
 60 hours at ACA and ACV function;  
 100 hours at DCV and Ohm function.

**Auto Power Off :** If there is no key or dial operation for 30 minutes, the meter will power itself off to save battery consumption. This function can be disabled by press and hold the HOLD " button then power the unit on

**Over Load:** When the signal larger than the maximum will be show .

**Maximum jaw opening:**  $\varnothing$  23mm

**Dimensions:** 206 x 76 x 33.5 mm

**Weight :** 262g (with battery)

**Accessories:** Carrying case. Batteries, Test Lead & Instruction Manual.

**3. ELECTRICAL SPECIFICATION**

The accuracy specification is defined as  $\pm$  ( percent of reading + digit ) At  $23\pm 5^{\circ}\text{C}$ ,  $\leq 80\% \text{RH}$ .

**3.1 Direct Voltage**

Range	Resolution	Accuracy
50V / 300V	0.01V/0.1V	1.0% + 2dgts

Input impedance: 1 M $\Omega$

**3-2 Alternating Voltage (True RMS)**

Range	Resolution	Accuracy(40~1KHz)
50V / 300V	0.01V/0.1V	1.2% $\pm$ 5dgts

Input impedance: 1 M $\Omega$

**3-3 Direct Current**

Range	Resolution	Accuracy
300.0mA	0.1mA	1.0% + 10dgts
3.000A	0.001A	3.0% + 10dgts
10.00A	0.01A	

Influence of terrestrial magnetism : Less than  $\pm 1.0\text{mA}$   
 Influence of CT opening & closing : Less than  $\pm 1.0\text{mA}$

**3-4 Alternating Current (True RMS)**

Range	Resolution	Accuracy
300.0mA	0.1mA	1.0% + 5dgts
3.000A	0.001A	
20.00A	0.01A	

**3-5 Resistance ( $\Omega$ )**

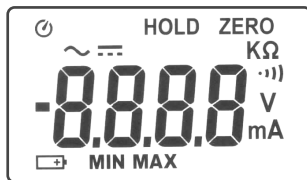
Range	Resolution	Accuracy
500 $\Omega$	0.1 $\Omega$	1.0% + 2dgts
5K $\Omega$	1 $\Omega$	
50K $\Omega$	10 $\Omega$	
500K $\Omega$	100 $\Omega$	

**3-6 Continuity **

Range	Buzzer Function
	Ohm < 100 $\Omega$

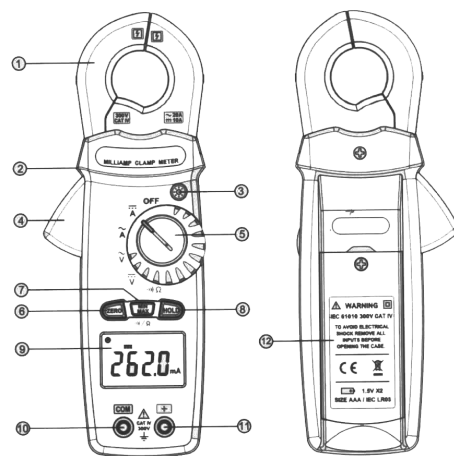
**4. DESCRIPTION OF THE INSTRUMENT**

**4-1 Description of The Display**



	Auto power off indication
	Polarity indication
	Low battery indication
	Alternative source indication
	Direct source indication
<b>A</b>	Current measurement indication
<b>V</b>	Voltage measurement indication
<b>ZERO</b>	ZERO indication
<b>HOLD</b>	Data hold indication
<b>MAX</b>	Maximum indication
<b>MIN</b>	Minimum indication
	Continuity test indication
<b>K</b>	Measurement unit
<b>Ω</b>	Resistance measurement indication
<b>m</b>	Measurement unit

**4-2 Description of Front And Rear**



1. Current Sensing Clamp
2. Safety protection ring
3. Backlight button
4. Clamp opening handle
5. Function select dial
6. ZERO button
7. Max/Min button
8. Data hold button
9. LCD display
10. COM input terminal
11. Positive input terminal
12. Battery cabinet

**5. BUTTON INSTRUCTION**

**5-1. HOLD Function**

It is possible to freeze the value displayed by pressing on the “**HOLD**” button.

Press the “**HOLD**” button again to exit the Hold mode.

**5-2. MAX/MIN Function**

When the “**MAX/MIN**” button is pressed, the meter enter MAX/MIN mode.

Press the button, to read MAX, MIN sequence. Press the button for 1 sec. or more to exit the MAX/MIN mode.

When you turn the rotary switch on the Continuity Test.

Press the “**MAX/MIN**” button to select Resistance measurement,

Press the “**MAX/MIN**” button again to select continuity test with buzzer.

**5-3. ZERO Function**

Press “**ZERO**” button to enter the Zero mode, ZERO Annunciate will appear and Zero the display. The reading is stored as reference value for subsequent measurement.

**5-4 BACKLIGHT Function**

When the “☼” button is pressed, the backlight will be turned on.

To disable the function, the button is pressed again. The backlight will be automatically turned off about 30 seconds after it turned on.

**6. MEASURING INSTRUCTION**

6-1 ACA Measurement : With the clamp disconnected from any conductor, switch the function selector to  $\bar{A}$  range.

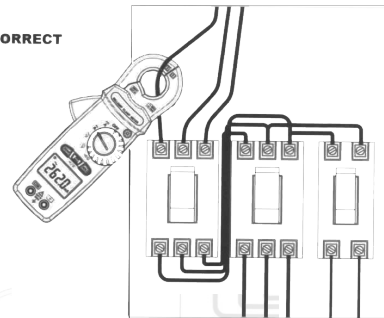
Open the clamp by pressing the jaw-opening handle and insert the Cable to be measured into the jaw. Close the clamp and get the reading from the LCD panel.

**Note :**

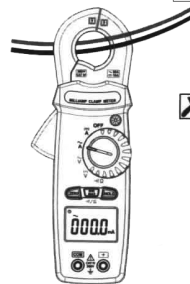
Before this measurement, disconnect any test lead with the meter for safety.

In some cases where reading is difficult, press the **HOLD** button and read the result later.

**CORRECT**



**INCORRECT**





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### 6.2 DCA Measurement :

With the clamp disconnected from any conductor, switch the function selector to  $\bar{A}$  range.

Press "ZERO" button to enter the zero reading.

Open the clam by pressing the jaw-opening handle and insert the cable to be measured into the jaw. close the clamp and get the reading from the LCD panel.



Note : Before this measurement, disconnect any test lead from the meter for safety.

In some cases where reading is difficult, press the "HOLD" button and read the result later.

### 6-3 ACV Measurement :

#### **⚠ WARNING !**

Maximum Input Voltage is 300V AC/DC. Do not attempt to Take any voltage measurement that may exceed this maximum to avoid Electrical shock hazard and/or damage to this instrument.

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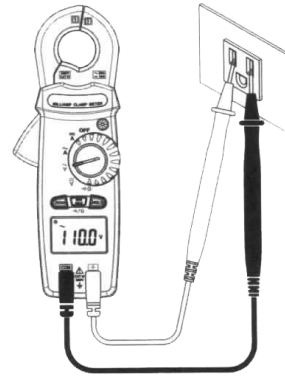
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Switch the main function selector to  $\bar{V}$  range.

Connect red test lead to "+" terminal and black one to the "COM" terminal.

Measure the voltage by touch the test lead tips to the test circuit where the value of voltage is needed.

Read the result from the LCD panel.



### 6-4 DCV Measurement :

Switch the main function selector to  $\bar{V}$  range.

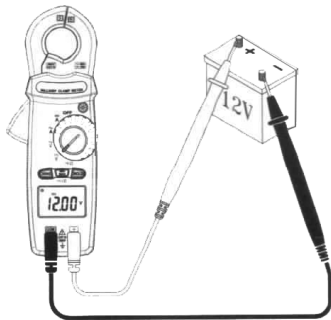
Connect red test lead to "+" terminal and black one to the "COM" terminal.

Measure the voltage by touch the test lead tips to the test circuit where the value of voltage is needed.

Read the result from the LCD panel.

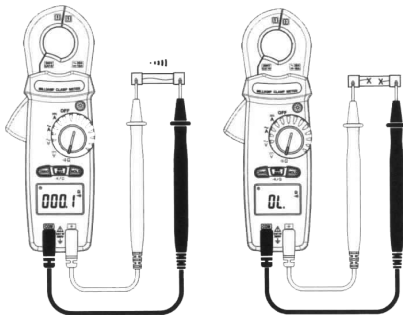
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**6-5 Continuity Test With Buzzer :**

Switch the main function to  $\Omega$  range.  
 Connect red test lead to "+" terminal and black one to the "COM" terminal.  
 Connect tip of the test leads to the point where the conduction condition needed.  
 If the resistance is under  $100\Omega$ , the beeper will sound continuously.

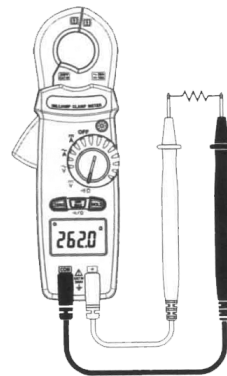


Short circuit

Open circuit

**6-6 Resistance Measurement**

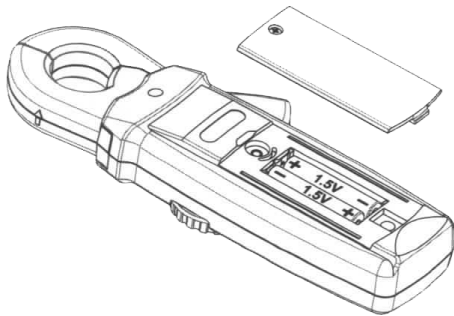
Switch the main function to  $\Omega$  range.  
 Connect red test lead to "+" terminal and black one to the "COM" terminal.  
 Connect tip of the test leads to the point where the value of the resistance is needed.  
 Read the result from the LCD panel.



**7. BATTERY CHANGING**

When the battery voltage drop below proper operation range the symbol will appear on the LCD display and the battery needs to be changed.  
 Before changing the battery, switch the main dial to "OFF" and disconnect test leads.  
 Open the back cover by a screwdriver.  
 Replace the old batteries with two new 1.5V (AAA size) battery.  
 Close the back cover and fasten the screw.

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#### 8. MAINTENANCE

##### ⚠ WARNING !

Before open the meter, disconnect both test lead & never uses the meter before the cover is closed.

##### CAUTION !

To avoid contamination or static damage, do not touch the circuit board without proper static protection.

##### 8-1 REMARK :

- If the meter is not going to be used for a long time, take out the battery and do not store the meter in high temperature or high humidity environment.
- When take current measurement, keep the cable at the center of the clamp will get more accurate test result.
- Repairs or servicing not covered in this manual should be performed only by qualified personal.

##### 8-2 CLEANING :

Periodically wipe the case with a dry cloth. Do not use abrasives or solvents on these instruments.

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MUMBAI

## **TEST CERTIFICATE**

### **MILLIAMP CLAMP METER**

This Test Certificate warranties 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 2006**

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

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

ISO 9001  
REGISTERED



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