LIST OF PRODUCTS

* Digital Multimeter
* Digital AC & AC/DC Clampmeter
* AC Clamp Adaptor
* AC/DC Current Adaptor
* 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 & Portable Infrared Calibrator
* Thermo Hygrometer / Anemometer Digital Absolute pressure meter
* Wood, Paper & Grain Moisture Meter
* Distance Meter & Network Cable Tester
* Digital Hand Held Temperature Indicators
* Digital Lux Meter
* Thermal Imaging Camera
* Power Factor Regulator
* Maximum Demand Controller/Digital Power Meter
* Earth Resistance Tester
* Digital Panel Meters & DC Power Supplies
* Digital Storage / Analog Storage Oscilloscope.
* Coating Thickness Guage
* Process Calibrators & Multifunction Calibrators
* Gas Analysers & Waterproof Pen Testers
* Frequency Counter / Function Generator
* Phasing Sticks & High Voltage Detector
* Transducer & Transmitter
* Digital Milli Ohm Meter
* Solar Power Meter
* EMF/ELF Detector / RF Field Strength Meter

KUSAM-MECO®

Email : sales@kusam-meco.co.in
Website : www.kusamelectrical.com

KUSAM-MECO®

An ISO 9001:2015 Company

EARTH RESISTANCE TESTER

MODEL KM 1520A

OPERATION MANUAL

KUSAM-MECO®

1. INTRODUCTION

This meter has been designed and tested in accordance with the CE safety requirement for electronic measuring apparatus, EN61010-1, EN61326-1, EN61557-1, EN61557-5 and other safety standards. Follow all warnings to ensure safe operation.

2. SAFETY NOTES

- Read the following safety information carefully Before attempting to operate or service the meter.
- Use the meter only as specified in this manual. Otherwise, the protection provided by the meter may be impaired.
- Rated environmental conditions:
  (1) Indoor and Outdoor use.
  (2) Installation Category IV 400V
  (3) Pollution Degree 2.
  (4) Altitude up to 2000 meters.
  (5) Relative humidity 80% max.
  (6) Ambient temperature 0~40°C.
- Observe the International Electrical Symbols listed below :


Meter is protected throughout by double insulation or reinforced insulation.


Warning ! Risk of electric shock.


Cautions ! Refer to this manual before using the meter.

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 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, Burn't PCB's, fuses, disposable batteries, carrying case, electrodes probes,Clamps. cables 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.

KUSAM-MECO®

MUMBAI

TEST CERTIFICATE

EARTH RESISTANCE TESTER

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

MODEL NO. **KM 1520A**

SERIAL NO. _____

DATE: _____

ISO 9001:2015
REGISTERED

QC
KUSAM-MECO
PASS

KUSAM-MECO®

3. APPLICATION:

(1) Measure earth resistance of a single rod or small ground grids.

(2) Check compliances with Electrical Code specifications.

(3) Check lightning protection, remote tower, and electrode equipment.

4. FEATURES

- Microprocessor - Controlled
- Measure earth resistance in three ranges. (40Ω / 400Ω / 4kΩ)
- Capable of measuring earth voltage.
- 3 3/4 digit (4000counts).
- LCD backlight display.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current circuit breakers in the circuit.
- Data Hold function.
- Relative function.
- Auto power-off function.
- Battery - operated
- Low battery indication
- Small, lightweight, and easy-to-use.
- To disable the auto-off function (APO), press the "HOLD" key and turn on the multimeter at the same time.
- Meets EN61010-1 CATIV 400V
  EN61326-1 EN61557-1 EN61557-5

5. ELECTRICAL SPECIFICATIONS

Measuring Ranges	Earth Resistance 0~40Ω/ 0~400Ω/0~400Ω/0~4kΩ Earth Voltage 0~400V (40~500Hz)
Accuracy	Earth Resistance ±(2%rdg + 3dgt) Earth Voltage ±(2%rdg + 3dgt)
Earth Resistance Resolution	0~40Ω : 0.01Ω 0~400Ω : 0.1Ω 0~4kΩ :1Ω
Measurement System	Earth resistance by constant current inventer 820 Hz approx. 2mA
Low Battery Indication	" - + " symbol appears on the display
Data Hold Indication	" HOLD " symbol appears on the display
Over Range Indication	"OL"
Open Circuit Indication	LED will be flash LCD shows "----------"
Display LCD	3 3/4 digit (4000 counts)
Power Source	1.5V (AA) x 6
Dimensions	163(L) x 102(W) x 50(D)mm
Weight	440g approx. (batteries included)
Accessories	Test leads (AL-36: red-15m yellow-10m green-5m) Auxilliary earth spikes. Heavy -duty case instruction manual batteries

8. MAINTENANCE

- Battery replacement:
  When the symbol " - + " appears on the display, replace with new batteries as follow
  1) Disconnect the test leads from the instrument and turn off the power.
  2) Use a screwdriver to unscrew the screw on back cover then slide the cover, take out the batteries and replace with new batteries type (AA).
  3) Place back cover and secure by a screw.
- Cleaning and storage:

⚠ WARNING ⚠

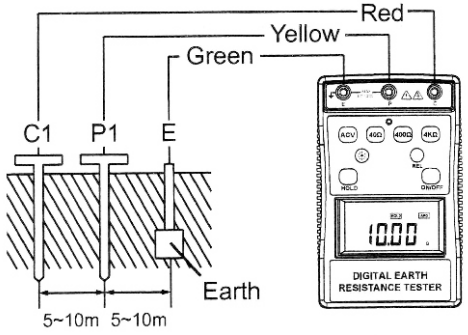
To avoid electrical shock or damage to the meter, do not get water inside the case.

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

If the meter will not used for periods of longer than 60 days, remove the batteries and store them separately.

d. Test Leads Connection:

Connect E (green), P (yellow), C (red) test leads with auxiliary earth spikes P1, C1, staked into the earth "IN A STRAIGHT LINE"

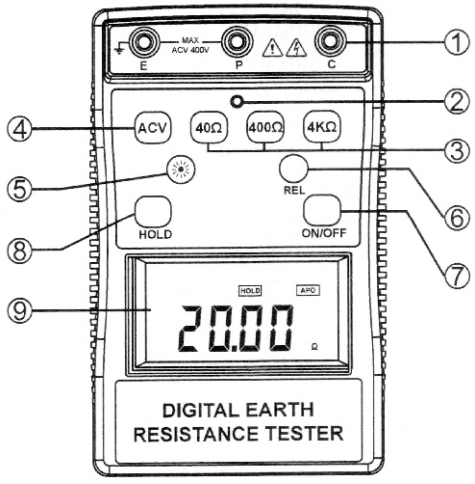


e. Press the "ON / OFF" button to turn on the tester than press the appropiate button to select the resistance level range. (40Ω, 400Ω or 4KΩ)

⚠ The LED will glow if the connection is proper, if, not, the LED will flash.

f. Take the reading on the LCD.

6. INSTRUMENT LAYOUT



1) Terminal
2) LED indicator
3) Earth resistance selection button
4) ACV test button
5) Backlight button
6) REL button
7) Power ON/OFF button
8) Data Hold button
9) LCD

7. MEASURE METHODS

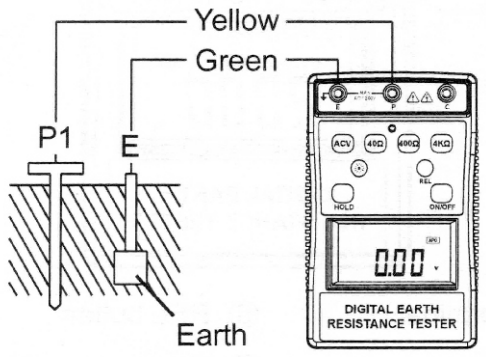
1) Battery voltage check

a. before testing, press the "ON/OFF" button. When the "⊟+" appears on the display, replace with new batteries.

b. Prior to measuring, if "⊟+ " appears on the display, replace with new batteries.

2) Earth Voltage Check

a. Test Leads Connection.



b. Press the "ON/OFF" button, then the "ACV" button. The earth voltage will be displayed on the LCD. When the earth voltage is more than 10V. It may result in errors in earth resistance measurement. Make sure that the indicated value is less than 10V.

3) Earth resistance mesaurement

⚠ CAUTION ⚠

The measured results may be influenced by induction if measurement are made with the Test Leads twisted or connected to each other. When connecting the probes, they should be separated.

a. Connect green, yellow and red test leads to instrument terminals E.P.C.

b. Short - Circuit the alligators of the test leads. Press the "ON/OFF" button, then the "40Ω" button and the "REL" button.

c. The LCD display "0.000Ω"

