KUSAM-MECO®
An ISO 9001:2015 Company

15KV HIGH VOLTAGE INSULATION RESISTANCE TESTER

THINK SAFETY
THINK KUSAM-MECO®

APPLICATION

For Testing The Insulation Resistance Of Cables, Motors, Generators, Transformers, Insulators, High-pressure Switches, Wiring Installations.... etc.

MODEL KM 7016IN

CAT IV 600V

Short Circuit Current 5mA



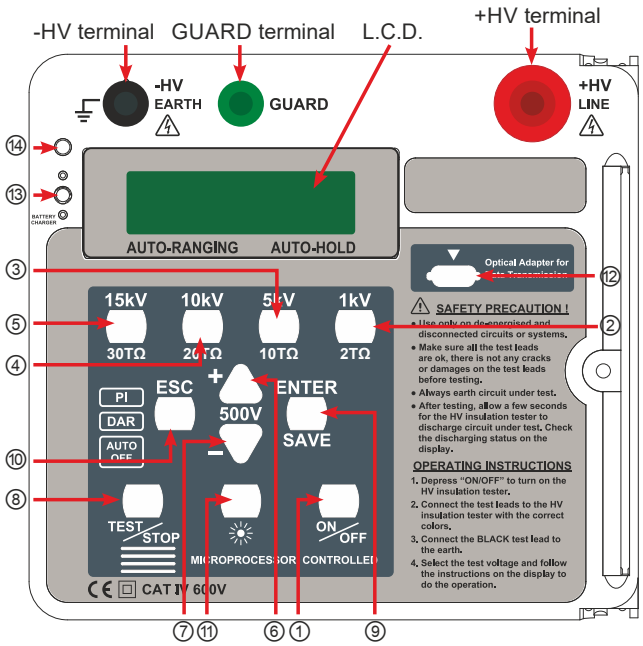
Preliminary Data

FEATURES :

- Microprocessor controlled Menu Driven.
- Test Insulation Resistance upto 30TW (30000GW)
- Test Insulation Voltage upto 15kV.
- Short circuit current upto 5mA.
- Measuring 30 Insulation Test Voltage Ranges:
  500V, 1kV, 1.5kV, 2kV, 2.5kV, 3kV, 3.5kV, 4kV, 4.5kV, 5kV, 5.5kV, 6kV, 6.5kV, 7kV, 7.5kV, 8kV, 8.5kV, 9kV, 9.5kV, 10kV, 10.5kV, 11kV, 11.5kV, 12kV, 12.5kV, 13kV, 13.5kV, 14kV, 14.5kV, 15kV.
- AC / DC Voltage : 600V.
- PI & DAR indication.
- Auto-ranging on all insulation ranges.
- 2 Lines X 16 Characters large LCD Backlight display.
- Bargraph indicates test Voltage, rise & decay can be observed.
- Visual & audible warning if external voltage is present. (≥30Vac or ≥30Vdc)
- Auto-hold function to freeze the reading.
- Overload Protection
- Adjustment for testing time (duration) :1 ~ 30 minutes
- Auto-off.
- Calendar
- Optical USB to RS-232 data transmission.
- 200 measurement results can be saved in the memory & recalled on the display.
- Safety Standard : EN61010-1 CAT IV 600V
  EN61010-2-030; EN61326-1

INSTRUMENT LAYOUT

1. Power ON/OFF Button
2. Insulation Resistance Test at 1kV button
3. Insulation Resistance test at 5kV button
4. Insulation Resistance test at 10kV button
5. Insulation resistance test at 15kV button
6. To add (+500V) button to the selected test voltage
7. To subtract (-500V) button to the selected test voltage
8. TEST / STOP Button
9. ENTER & SAVE Button
10. ESC button
11. BACKLIT button
12. CA-232 connection socket
13. Battery-charge socket
14. Charge indicator



Note: All Specification are Subject to change without prior notice.

✳ ELECTRICAL SPECIFICATIONS :

- **Test voltage :** From 500Vdc to 15kVdc
  Adjustable in 500V steps
- **Preset buttons :** 1kV, 5kV, 10kV, 15kV
- **Insulation resistance :** 1000GΩ/0.5kV
  1000GΩ at 0.5kV ~ 30TΩ at 15kV
- **Accuracy :**
  1kV: 0~200GΩ
  5kV: 0~1TΩ
  10kV: 0~2TΩ
  15kV: 0~3TΩ
  ±(5%rdg+5dgt)

  1kV: 200GΩ~2TΩ
  5kV: 1TΩ~10TΩ
  10kV: 2TΩ~20TΩ
  15kV: 3TΩ~30TΩ
  ±20%
- **Resolution :**
  1GΩ : 0.001GΩ
  10GΩ : 0.01GΩ
  100GΩ : 0.1GΩ
  1000GΩ : 1GΩ
  10TΩ : 10GΩ
  30TΩ : 100GΩ
- **Short circuit current :** up to 5mA
- **PI (Polarization Index) :** yes
- **DAR (Dielectric Absorption Ratio) :** Yes
- **Voltmeter :**
  ACV : 30~600V (50/60Hz)
  DCV : 30~600V
  Accuracy : ±(2.0%rdg+3dgt)
  Resolution : 1V
- **Current :** 0.5nA ~ 0.55mA
- **Measurement :** (Depending on the insulation resistance)
- **Power source :** Rechargeable battery
- **Adapter :**
  Input : 100-240Vac, 0.4A, 50-60Hz
  Output : 24Vdc, 0.62A
- **Dimensions :** 430(L) x 324(W) x 127(D)mm
- **Weight :** Approx : 6.56kg

✳ SPECIAL FUNCTIONS

Voltmeter

When testing insulation resistance while there is a presence of voltage (whether ACV or DCV) on the measured object, conventional insulation testers are highly susceptible to damage. With this new line of insulation testers, it has the ability to switch to voltage detection mode without damaging the instrument once it detects the presence of voltage. It will also display the voltage finding on the LCD screen. With this new and unique function, it will allow the user to safely rule out the possibility of any presence of voltage on the measured object prior to measuring its insulation.

DAR = Dielectric Absorption Ratio

The dielectric absorption ratio is the ratio of the insulation resistance measured at 1 min divided per the insulation resistance measured at 30 seconds. after starting a test, the tester will beep, indicating the operator that the resistance value measured at 30 seconds now has been saved internally. 1 minute after starting a test, the tester will beep again, indicating the user that the DAR result is now computerd, and change the display the DAR result.

$$\text{DAR} : \frac{\text{1-min insulation resistance}}{\text{30-sec insulation resistance}}$$

PI = Polarization Index

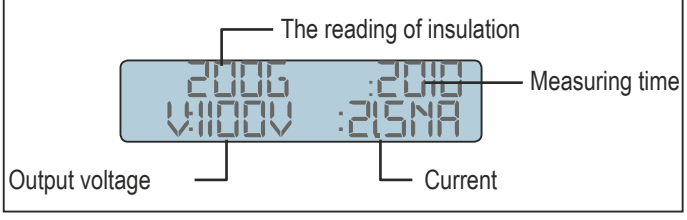
The polarization index or PI is the ratio of the insulation resistance measured at 10 minutes divided per the insulation resistance measured at 1 minute. 10 minutes after starting a test, the tester will beep again, indicating the user that the PI result is now computed, and change the display format to now display format to now display the PI result.

$$\text{PI} : \frac{\text{10-min insulation resistance}}{\text{1-min insulation resistance}}$$

> Lower insulation resistance tested takes longer test time, which would deteriorate the specimen. Thus, higher DAR or PI (as close to 1) would create better insulation grade of specimen.

Display

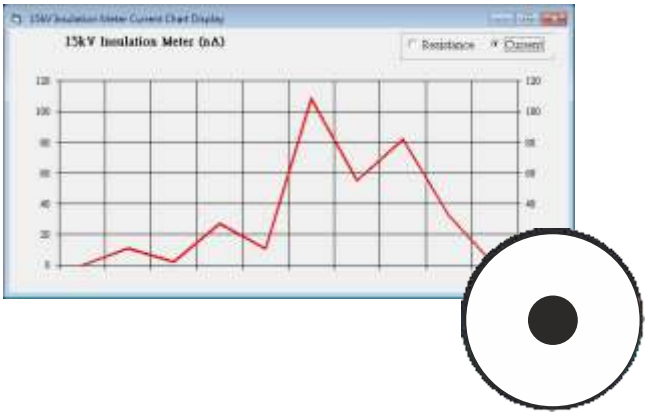
2 Lines x 16 characters, large intelligent LCD module.



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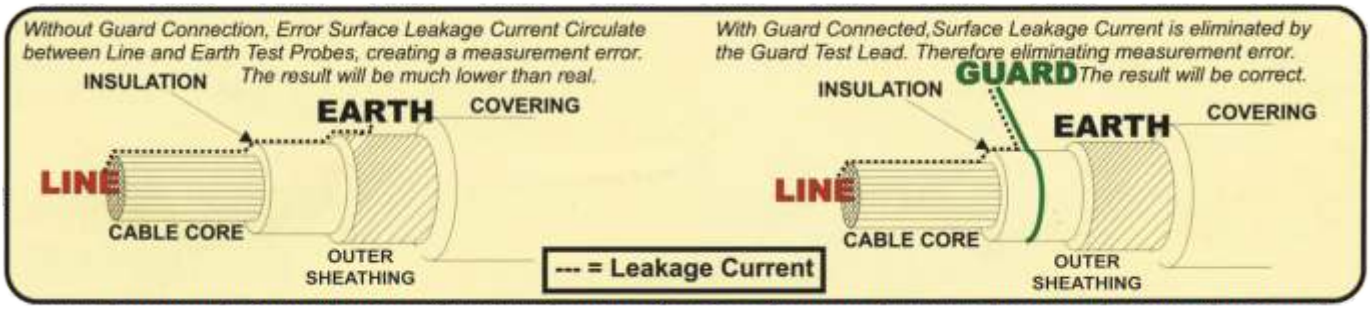
Data Communication Function

- Downloading saved data to a PC.
- Transferring and showing real-time data to a PC.
- 200 measurement results can be saved in the memory and recalled on the display.





Measure the insulation of cable





A COMPLETE SET OF ACCESSORIES :

H.V test leads (AL - 30AG AL - 30HB),

Alligator clip (AL - 23CA).

H.V. Line probe with (AL - 58),

Data transmission cable (CA - 232),

Charger (CHA -7015),

Software CD (for pc interface)

Instruction manual.

Accessories



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