KUSAM-MECO®

An ISO 9001:2015 Company

5KV HIGH VOLTAGE DIGITAL INSULATION TESTER

THINK SAFETY
THINK KUSAM-MECO®

Model KM 6305AIN

GENERAL SPECIFICATIONS :

- **Microprocessor-controlled.**
- 2 Lines x 16 characters LCD
- Tests insulation resistance up to 10 TΩ
- 4 Insulation test voltages : 500V, 1000V, 2500V, 5000V.
- AC / DC Voltmeter.
- Short-circuit current up to 5mA
- PI (Polarization Index) indication.
- DAR (Dielectric Absorption Ratio) indication.
- Auto-ranging on all insulation ranges.
- **Optical USB to RS-232 data transmission**
- Well isolated from contact
- Well protected from surges.
- 2 built-in optical LEDs for data transfer.
- Visual & audio warning of external voltage presence (>30Vac or >30Vdc)
- Auto-hold function to freeze reading
- Overload protection
- Adjustable testing duration : 1 ~ 30 minutes.
- Internal memory for data storage.
- Displays testing duration for insulation measurement.
- Auto-off function.
- 200 measurement results can be saved in memory & recalled on display.
- **Power Supply :** 1.5V "C" x 8 Alkaline Batteries.
- **Dimension :** 330(L) x 260(W) x 160(D)mm
- **Weight :** Approx.4268g. (battery included)
- **Accessories :** User Manual, Test leads, Data transmission cable CA-232, Alligator clip, PC interface CD , Batteries & Carrying case..



CE

Preliminary Data

SAFETY :

- EN61010-1 CAT IV 600V; EN61010-2-030; EN61326-1

ELECTRICAL SPECIFICATIONS :

TEST VOLTAGE	500V	1000V	2500V	5000V
INSULATION RESISTANCE	1TΩ	2TΩ	5TΩ	10TΩ
ACCURACY	±(5.0%rdg + 5dgts)			
	0 ~ 100GΩ	0 ~ 200GΩ	0 ~ 500GΩ	0 ~ 1000GΩ
	± 12%rdg			
	100G ~ 1TΩ	200G ~ 2TΩ	500G ~ 5TΩ	1000G ~ 10TΩ

- **RESOLUTION :** 1000MΩ : 1MΩ; 10GΩ : 0.01GΩ
  100GΩ : 0.1GΩ; 1TΩ : 1GΩ
  10TΩ : 10GΩ
- **VOLTMETER :** AC Voltage : 30 ~ 600V (50/60Hz); DC Voltage : 30 ~ 600V
  Accuracy : ±(2.0%rdg + 3dgts); Resolution : 1V
- **CURRENT MEASUREMENT :** 0.5nA ~ 0.55mA (Depending on the insulation resistance)

All Specifications are subject to change without prior notice.

DATA COMMUNICATION FUNCTION

- Data can be downloaded & saved to a PC.
- Data can also be transferred to a PC for real-time display.
- 200 measurement results can be saved in the memory & recalled on the display.



ACCESSORIES

Instruction manual
CD



AL-50H | AL-30AG AL-30HB | AL-23CA | CA-232 | CHA-7015 ISL-6237

SPECIAL FEATURES :

Voltmeter :

Conventional insulation testers are highly susceptible to damage when testing insulation resistance while voltage is present on the measured object (whether ACV or DCV). To safely prevent damage, this new line of testers has the unique ability to sense voltage on a measured object. If any voltage is sensed, the tester will automatically switch to voltage detection mode & display the voltage finding on the LCD screen. This allows the user to prevent damage caused by attempting to measure insulation resistance while voltage is present.

DAR : Dielectric Absorption Ratio

The Dielectric Absorption Ratio is the ratio of the insulation resistance measured at 1 minute divided by the insulation resistance measured at 30 seconds. Thirty seconds after starting a test, the tester will beep, indicating that the resistance value measured at 30 seconds has been saved. One minute after starting a test, the tester will beep again, indicating that the DAR result has been computed. The display format then changes to display the DAR result.

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

PI : Polarization Index

The Polarization Index is the ratio of the insulation resistance measured at 10 minutes divided by the insulation resistance measured at 1 minute. One minute after starting a test, the resistance value is saved & the DAR is displayed. The test then continues, & after 10 minutes, the tester will beep again, indicating that the PI result has been computed. The display format changes to display the PI result.

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

Tests on lower insulation resistance take longer, which tends to deteriorate the trest specimen. Thus, higher DAR or PI readings (closer to 1) would indicate a better grade of insulation.

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