



Preliminary Data

### GENERAL SPECIFICATIONS :

- 2 Lines × 16 Characters LCD
- Microprocessor-controlled
- Tests insulation resistance up to 20 TΩ
- 4 Insulation test voltages : 1000V, 2500V, 5000V, 10000V
- AC / DC Voltmeter (30~600V)
- 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 and audio warning of external voltage presence ( $\geq 30V_{ac}$  or  $\geq 30V_{dc}$ )
- 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 and recalled on display
- **Power Supply** : 1.5V "C" × 8 Alkaline batteries
- **Dimension** : 330(L) × 260(W) × 160(D)mm
- **Weight** : Approx. 4284g (battery included)
- **Accessories** : Instruction Manual, Test leads, Data transmission cable CA-232, Compact disk (CD) for PC interface, Alligator clip, Batteries, Test report

### SAFETY :

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

### ELECTRICAL SPECIFICATIONS :

TEST VOLTAGE	1000V	2500V	5000V	10000V
INSULATION RESISTANCE	2TΩ / 1000V	5TΩ / 2500V	10TΩ / 5000V	20TΩ / 10000V
ACCURACY	$\pm(5.0\%rdg + 5dpts)$			
	0 ~ 200GΩ / 1000V	0 ~ 500GΩ / 2500V	0 ~ 1000GΩ / 5000V	0 ~ 2000GΩ / 10000V
	$\pm 20\%rdg$			
	200G ~ 2TΩ / 1000V	500G ~ 5TΩ / 2500V	1000G ~ 10TΩ / 5000V	2000G ~ 20TΩ / 10000V

- **Resolution** : 1000MΩ : 1MΩ; 10GΩ : 0.01GΩ  
100GΩ : 0.1GΩ; 1TΩ : 1GΩ  
10TΩ : 10GΩ 20TΩ : 100GΩ
- **Short Circuit Current** : up to 5mA
- **Polarization Index & Dielectric Absorption Ratio**
- **Voltmeter** : AC Voltage : 30 ~ 600V (50/60 Hz); DC Voltage : 30 ~ 600V  
Accuracy :  $\pm(2.0\%rdg + 3dpts)$ ; 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 and 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 and recalled on the display.



Test leads

Alligator Clips  
Data transmission cable

### 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 test specimen. Thus, higher DAR or PI readings (closer to 1) would indicate a better grade of insulation.

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