

# SEW

# DIGITAL 5kV HIGH VOLTAGE INSULATION TESTER



CE

## 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 report  
Instruction manual  
CD

- **High contrast OLED display**
- **Microprocessor-controlled**
- 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 surge protected
- 2 built-in optical LEDs for data transfer
- Visual and audio warning if external voltage is present ( $\geq 30\text{Vac}$  or  $\geq 30\text{Vdc}$ )
- Auto-hold function to freeze the reading
- Overload protection
- Adjustment for testing time (duration):  
1~30 minutes
- Internal memory for data storage
- Indication of testing time (duration) for insulation measurement
- Auto-off function
- 200 measurement results can be saved in the memory and recalled on the display

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Model  
**6305 IN**

## SPECIAL FUNCTIONS

### 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 and 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 and the DAR is displayed. The test then continues, and after 10 minutes, the tester will beep again, indicating that the PI result 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 would deteriorate the specimen. Thus, higher DAR or PI (as close to 1) would create better insulation grade of specimen.



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## SPECIFICATIONS

Test voltage	500V, 1000V, 2500V, 5000V	
Insulation resistance	1TΩ / 500V 2TΩ / 1000V 5TΩ / 2500V 10TΩ / 5000V	
Accuracy	0~100GΩ / 500V 0~200GΩ / 1000V 0~500GΩ / 2500V 0~1000GΩ / 5000V	±(5.0%rdg + 5dgt)
	100G~1TΩ / 500V 200G~2TΩ / 1000V 500G~5TΩ / 2500V 1000G~10TΩ / 5000V	±12%rdg
Resolution	1000MΩ : 1MΩ 10GΩ : 0.01GΩ 100GΩ : 0.1GΩ 1TΩ : 1GΩ 10TΩ : 10GΩ	
Short circuit current	up to 5mA	
PI (Polarization Index)	√	
DAR (Dielectric Absorption Ratio)	√	
Voltmeter	ACV: 30~600V DCV: 30~600V Accuracy: ±(2.0%rdg + 3dgt) Resolution: 1V	
Current measurement	0.5nA ~ 0.55mA (Depending on the insulation resistance)	
Power source	Rechargeable battery	
Adapter	Input: 100-240Vac, 0.4A, 50-60Hz Output: 24Vdc, 0.62A	
Dimensions	330(L) × 260(W) × 160(D)mm	
Weight	Approx. 3760g	
Safety standard	EN 61010-1 CAT IV 600V EN 61010-2-030 EN 61326-1	
Accessories	Instruction manual Test leads Data transmission cable CA-232 Compact disk (CD) for PC interface Alligator clip Charger Test report	