Model 6305 IN

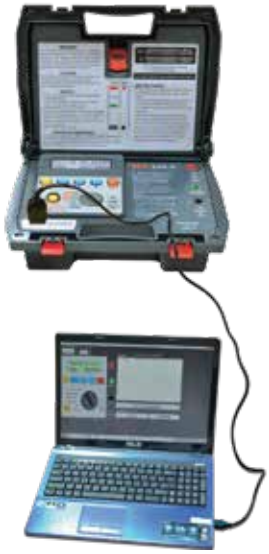
Digital 5kV High Voltage Insulation Tester

Features

- **High contrast OLED display**
- **Microprocessor-controlled**
- Tests insulation resistance up to 10 TΩ
- 4 Insulation test voltages: 500V, 1000V, 2500V, 5000V
- 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 (≥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 and recalled on display

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

Accessories

Instruction manual
Test leads
Data transmission cable CA-232
Compact disk (CD) for PC interface
Alligator clips
Charger
Test report

Alligator cilps

CHA-7015 ISL-6237

Test leads

Data transmission cable

Hoyt Electrical Instrument Works, Inc.
23 Meter Street
Penacook, NH 03303

Phone: (800) 258-3652
Fax: (603) 753-9592
Email: sales@hoytmeter.com

www.hoytmeter.com

Model 6305 IN

Digital 5kV High Voltage Insulation Tester

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 min divided per the insulation resistance measured at 30 seconds. 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 computed, and change the display format to now 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 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.

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 (50/60Hz) 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	

Hoyt Electrical Instrument Works, Inc.
23 Meter Street
Penacook, NH 03303
Phone: (800) 258-3652
Fax: (603) 753-9592
Email: sales@hoytmeter.com
www.hoytmeter.com