SEW

12kV HIGH VOLTAGE INSULATION TESTER

IP66

- **Protection class: IP66 (Lid closed)**
- Test insulation resistance up to 20TΩ (20000GΩ).
- Short-circuit current up to 5mA
- Microprocessor controlled.
- 24 insulation test voltages :

  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
- AC/DC voltmeter (600V).
- PI (Polarization Index) indication.
- DAR (Dielectric Absorption ratio) indication.
- Auto-ranging on all insulation ranges.
- Backlight function.
- Menu driven.
- Visual and 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 and recalled on the display.
- Safety standard : EN 61010-1 CAT IV 600V
  EN 61010-2-030
  EN 61326-1

- **Insulation test voltage up to 12kV.**
- **Test Insulation Resistance up to 20 TΩ (20000GΩ).**
- **Short circuit current up to 5mA.**

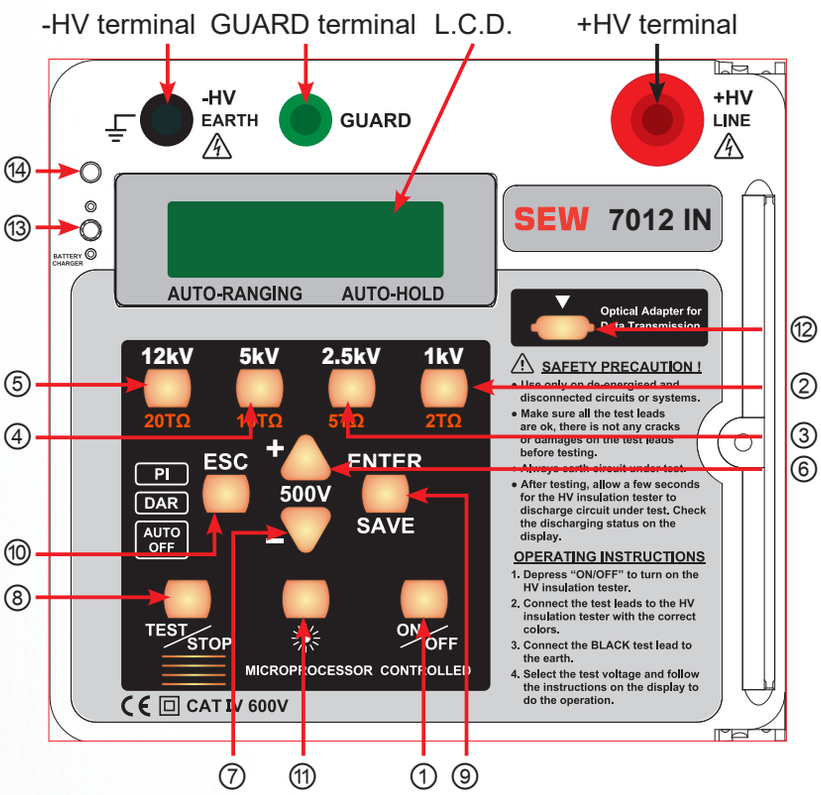
STANDARD ELECTRIC WORKS CO., LTD.
www.sew.com.tw

Model
7012 IN
V 01

APPLICATIONS

For testing the insulation resistance of cables, motors, generators, transformers, insulators, high-pressure switches, wiring installations.....etc.

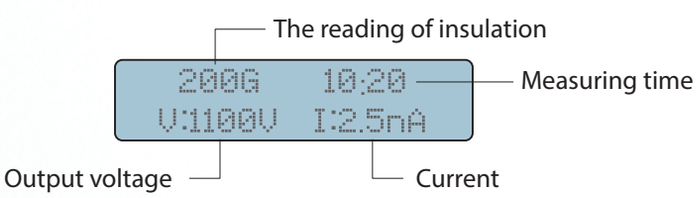
Instrument Layout



① Power ON/OFF button
② Insulation resistance test at 1kV button
③ Insulation resistance test at 2.5kV button
④ Insulation resistance test at 5kV button
⑤ Insulation resistance test at 12kV 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

Display

2 Lines x 16 characters, large intelligent LCD module.



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. 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.

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

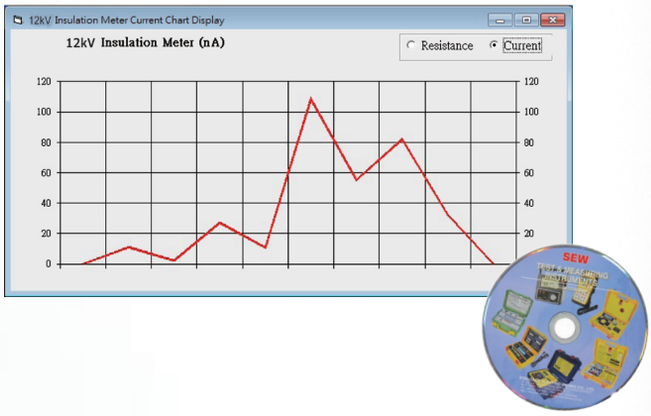
Lower insulation resistance tested takes longer test time, which would deteriorate the specimen. Thus, higher DAR or PI (as close to 1) would create better insulation grade of specimen.

SPECIFICATIONS

Test voltage	From 500Vdc to 12kVdc Adjustable in 500V steps	
Preset buttons	1kV, 2.5kV, 5kV, 12kV	
Insulation resistance	1TΩ/0.5kV 1TΩ at 0.5kV ~ 20TΩ at 10kV to 12kV	
Accuracy	1kV: 0~200GΩ 5kV: 0~1TΩ 10kV~12kV: 0~2TΩ	±(5%rdg+5dgt)
	1kV: 200GΩ~2TΩ 5kV: 1TΩ~10TΩ 10kV~12kV: 2TΩ~20TΩ	±20%
Resolution	1GΩ : 0.001GΩ 10GΩ : 0.01GΩ 100GΩ : 0.1GΩ 1TΩ : 1GΩ 10TΩ : 10GΩ 20TΩ : 100GΩ	
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	430(L) x 324(W) x 127(D)mm	
Weight	Approx : 6.56kg	
Accessories	Instruction manual Test leads (AL-58HV, AL-30AG,AL-30HB) Data transmission cable CA-232 Compact disk (CD) for PC interface Alligator clip (AL-23CA) Charger (CHA-7015) Test report	

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.**



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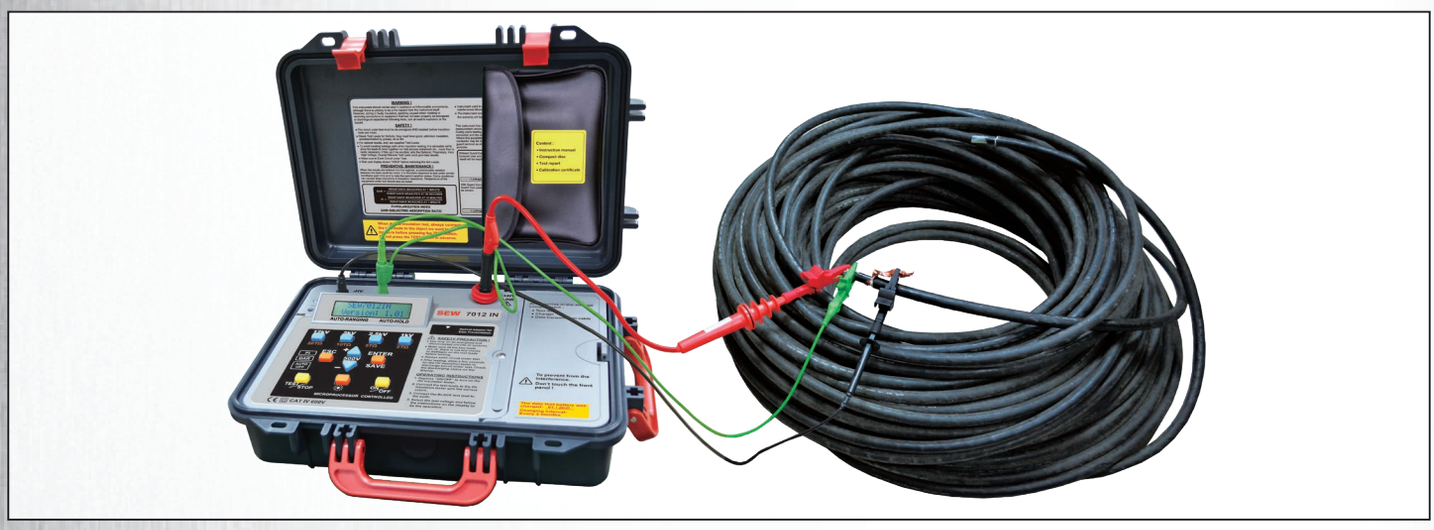
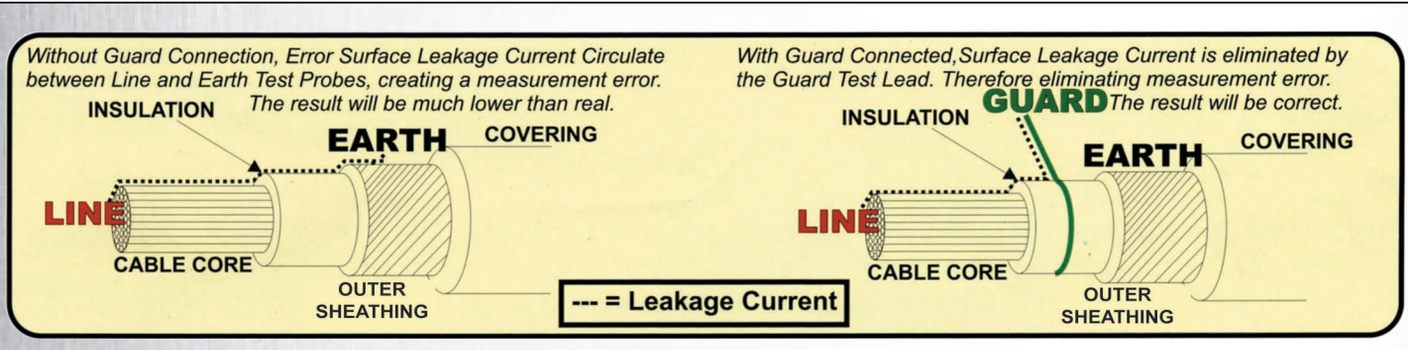
Measure the insulation of cable





Accessories

A complete set of accessories : H.V test leads (AL-30AG AL-30HB), Alligator clip (AL-23CA).H.V Line probe with (AL-58HV), Data transmission cable (CA-232), Charger (CHA-7015), Compact disk(CD), Instruction manual, Test report.

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Model
7012 IN

V 01