

CE

- EN 61010-2-030
EN 61326-1

- V 04

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

The diagram shows the front panel of the SEW 7015 IN HV Insulation Tester. At the top, there are three terminals: a black terminal labeled '-HV terminal' with an 'EARTH' symbol, a green terminal labeled 'GUARD', and a red terminal labeled '+HV terminal' with a 'LINE' symbol. Below these is a digital display labeled 'L.C.D.' and 'SEW 7015 IN'. The display shows 'AUTO-RANGING' and 'AUTO-HOLD'. To the left of the display are two sockets labeled 'BATTERY CHARGER' (13) and a charge indicator (14). The main control area has a grid of buttons: '15kV', '10kV', '5kV', '1kV' (top row); '6TΩ', '4TΩ', '2TΩ', '400GΩ' (second row); 'PI', 'ESC', '+500V', 'ENTER' (third row); 'DAR', '500V', 'SAVE' (fourth row); 'TEST/STOP' (bottom left), 'MICROPROCESSOR CONTROLLED' (bottom center), and 'ON/OFF' (bottom right). A 'SAFETY PRECAUTION!' section on the right includes instructions on using only one energized and disconnected circuit, checking test leads for damage, always earthing the circuit under test, and allowing time for discharge after testing. An 'OPERATING INSTRUCTIONS' section lists steps from turning the unit on to selecting the test voltage. Numbered callouts 1-14 point to specific features: 1 (ON/OFF), 2 (1kV), 3 (5kV), 4 (10kV), 5 (15kV), 6 (+500V), 7 (ESC), 8 (TEST/STOP), 9 (ENTER/SAVE), 10 (DAR), 11 (BACKLIT), 12 (CA-232 socket), 13 (Battery charger), and 14 (Charge indicator).

① Power ON/OFF button

② Insulation resistance test at 1kV button

③ Insulation resistance test at 5kV button

④ Insulation resistance test at 10kV button

⑤ Insulation resistance test at 15kV 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

2 Lines x 16 characters, large intelligent LCD module.

The diagram shows a rectangular LCD module with a blue background. It displays four data points in a 2x2 grid. The top-left value is '200G', the top-right is '10:20', the bottom-left is 'V:1100V', and the bottom-right is 'I:2.5nA'. Four lines with labels point to each value: 'The reading of insulation' points to '200G', 'Measuring time' points to '10:20', 'Output voltage' points to 'V:1100V', and 'Current' points to 'I:2.5nA'.

Label	Value
The reading of insulation	200G
Measuring time	10:20
Output voltage	V:1100V
Current	I:2.5nA

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.

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.

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

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.

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

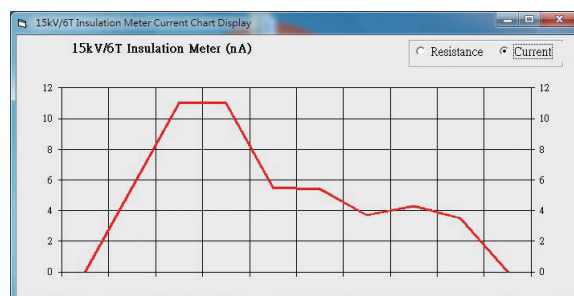
Lower insulation resistance tested takes longer test time, which would deteriorate the specimen. Thus, higher DAR or PI (as close to 1) would create better insulation grade of specimen.

SPECIFICATIONS

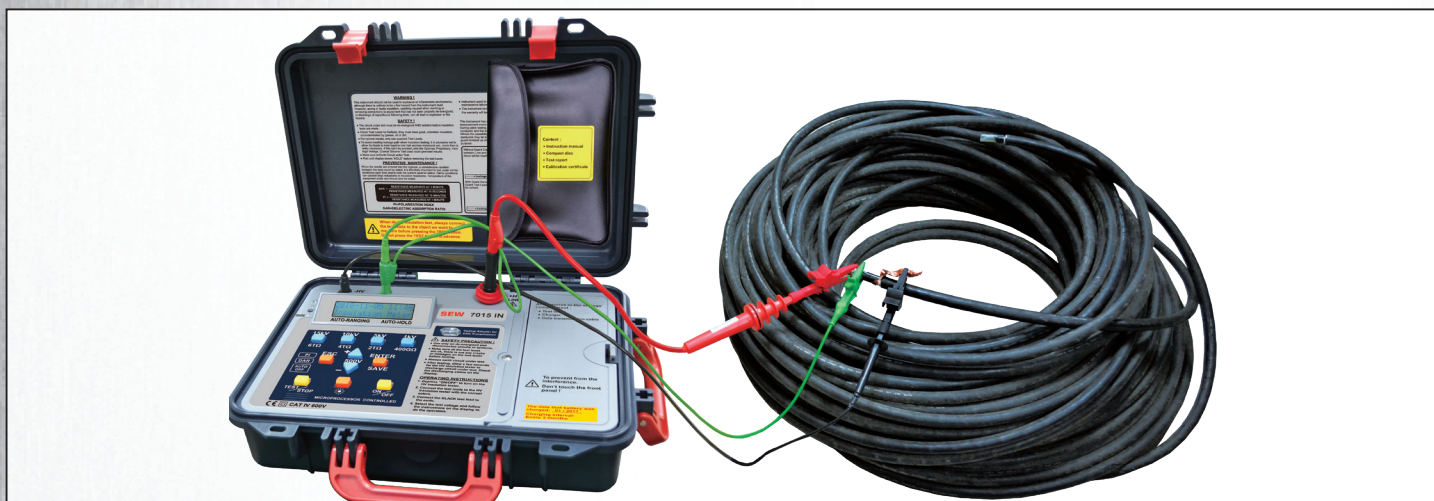
Test voltage	From 500Vdc to 15kVdc Adjustable in 500V steps	
Preset buttons	1kV, 5kV, 10kV, 15kV	
Insulation resistance	200GΩ / 0.5kV 200GΩ at 0.5kV ~ 6TΩ at 15kV	
Accuracy	1kV: 0~400GΩ 5kV: 0~1TΩ 10kV: 0~1TΩ 15kV: 0~1TΩ	±(5%rdg+5dgt)
	5kV: 1TΩ~2TΩ 10kV: 1TΩ~4TΩ 15kV: 1TΩ~6TΩ	±15%
Resolution	1GΩ : 0.001GΩ 10GΩ : 0.01GΩ 100GΩ : 0.1GΩ 1TΩ : 1GΩ 6TΩ : 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	430(L) x 324(W) x 127(D)mm	
Weight	Approx : 6.56kg	
Accessories	Instruction manual Test leads (AL-58HV, AL-30AG, AL-30H B HV) Data transmission cable CA-232 Software for PC interface Alligator clip (AL-23CA) Charger (CHA-7015) Test report	

Data Communication Function

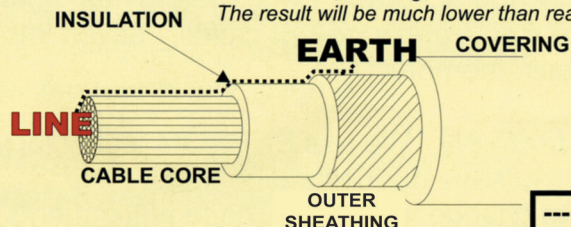
- Downloading saved data to a PC.
- Transferring and showing real-time data to a PC.
- 200 measurement results can be saved in the memory and recalled on the display.



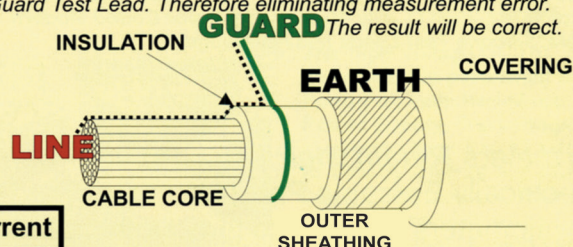
Measure the insulation of cable



Without Guard Connection, Error Surface Leakage Current Circulate between Line and Earth Test Probes, creating a measurement error. The result will be much lower than real.



With Guard Connected, Surface Leakage Current is eliminated by the Guard Test Lead. Therefore eliminating measurement error. The result will be correct.



Accessories



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