



Model 7012 IN

12kV High Voltage Insulation Tester

IP66



CE

Features

- 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. ($\geq 30V_{ac}$ or $\geq 30V_{dc}$)
- 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

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



Test report
Instruction manual
CD



AL-58



AL-30AG
AL-30HB



AL-23CA



CA-232



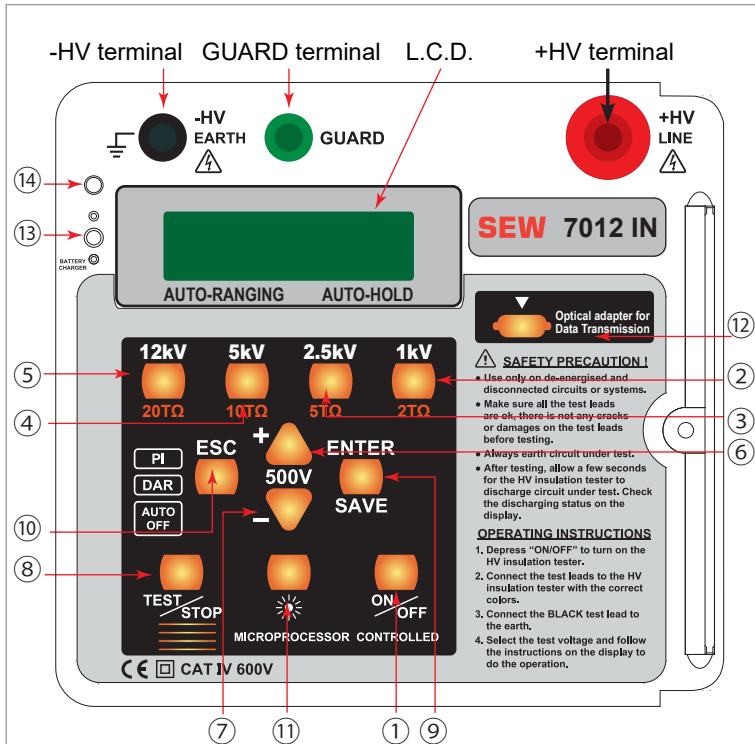
CHA-7015
ISL-6237



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Instrument Layout



- | | |
|--|---|
| (1) Power ON/OFF button | (7) To subtract (-500V) button to the selected test voltage |
| (2) Insulation resistance test at 1kV button | (8) TEST/STOP button |
| (3) Insulation resistance test at 2.5kV button | (9) ENTER & SAVE button |
| (4) Insulation resistance test at 5kV button | (10) ESC button |
| (5) Insulation resistance test at 12kV button | (11) BACKLIT button |
| (6) To add (+500V) button to the selected test voltage | (12) CA-232 connection socket |
| | (13) Battery-charge socket |
| | (14) Charge indicator |

Applications

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

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.

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

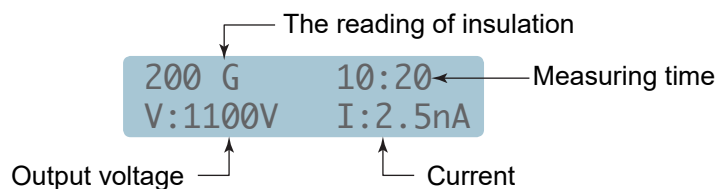
PI = Polarization Index

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.

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

Display

2 Lines x 16 characters, large intelligent LCD module.



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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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	±(5%rdg+5dgt)
	5kV: 0~1TΩ	
	10kV~12kV: 0~2TΩ	
Accuracy	1kV: 200GΩ~2TΩ	±20%
	5kV: 1TΩ~10TΩ	
	10kV~12kV: 2TΩ~20TΩ	
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	

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

