



Hoyt Insulation Testers

Part 2 - Digital Insulation Testers

Digital (1kV up) H.V. Insulation Testers

2803 IN	1
2804 IN	1
4103 IN	2
4104 IN	3
4305 IN	4
4310 IN	5
6210A IN	6

Digital (1kV up) H.V. Insulation Testers

6211A IN	6
6212A IN	7
6213A IN	8
6304 IN	9
6305 IN	10
6305A IN	11
6310 IN	12
7012 IN	13
7015 IN	14
7016 IN	15

Digital (1kV below) Insulation Testers

1160 IN	16
1161 IN	17
1651 IN	18
1851 IN	19
2151 IN	20
2751 IN	21
2801 IN	22
8005 IN	23
8010 IN	24

H.V. Insulation Testers (OLED Display 1kV up)

6213 IN-M	25
-----------------	----

Telecommunication & Electrical Insulation - Continuity - Voltage - Mov Testers

1165 IN	26
---------------	----

Digital (1kV up) H.V. Insulation Testers

2803 IN (Up to 5kV) and 2804 IN (Up to 10kV) Digital Insulation Testers

2803 IN



2804 IN



CE



AL-50

AL-30B
AL-30AG

AL-23CA R
AL-23CA B

Features

- Microprocessor-controlled.
- Four insulation test voltages.
- Insulation resistance; auto ranging on all ranges.
- Bargraph indicates test voltage; rise and decay can be observed during tests.
- Visual and audible warning if external voltage is present.
- EnerSave™ feature to extend battery life.
- 2 Lines × 16 characters large LCD.
- Low battery consumption.
- Low battery indicator.
- Overload protection.
- Auto-off.
- Show test time duration (up to 99.9s) for easy comparison.
- EEPROM calibration.
- Built-in carry case and test leads in separate pouch.

Specifications

2803 IN

Test voltage (DC V)	0.5kV / 1kV / 2.5kV / 5kV
Measuring ranges*	0-25GΩ / 0-50GΩ / 0-125GΩ / 0-250GΩ
Accuracy	0-50GΩ : ±3% rdg 50-250GΩ : ±5% rdg

2804 IN

Test voltage (DC V)	1kV / 2.5kV / 5kV / 10kV
Measuring ranges*	0-50GΩ / 0-125GΩ / 0-250GΩ / 0-500GΩ
Accuracy	0-50GΩ : ±3% rdg 50-500GΩ : ±5% rdg

* - Auto-Ranges

General

Dimensions	170(L) × 120(W) × 95(D)mm
Weight	Approx. 1030g (battery included)
Power source	1.5V(AA) × 8 Alkaline batteries
Safety standard	EN 61010-1, EN 61326-1

Accessories

- Instruction manual
- Test leads
- Shoulder belt
- Batteries

4103 IN Digital (Up to 5kV) Insulation Tester

Features

- Microprocessor-controlled.
- Four insulation test voltages.
- Insulation resistance; auto ranging on all ranges.
- Measures insulation time test.
- Bargraph indicates test voltage; rise and decay can be observed during tests.
- Visual and audible warning if external voltage is present.
- EnerSave™ feature to extend battery life.
- 2 Lines × 16 characters large LCD.
- Low battery consumption.
- Low battery indicator.
- Overload protection.
- Auto-off.
- Show test time duration (up to 99.9s) for easy comparison.
- EEPROM calibration.

Specifications

Test voltage (DC V)	0.5kV / 1kV / 2.5kV / 5kV
Measuring ranges (Auto-Ranges)	0-25GΩ / 0-50GΩ / 0-125GΩ / 0-250GΩ
Accuracy	±5% rdg
Output power limit	1W
Sealed with gasket	√
Insulation resistance between electrical circuit and housing: 2000MΩ / 2000V	√
Withstand voltage: 7000 Vac for one min. between electrical circuit and case.	√

General

Operation temperature	-15°C to 55°C
Operation-humidity	80% Max. relative humidity
Dimensions	205(L) × 190(W) × 110(D)mm
Weight (battery included)	Approx. 1670g
Power source	1.5V(AA) × 8 Alkaline batteries
Safety standard	EN 61010-1, EN 61326-1

Accessories

Instruction manual
Test leads
Shoulder belt
Batteries..



AL-50

AL-30B
AL-30AG

AL-23CA R
AL-23CA B

Digital (1kV up) H.V. Insulation Testers

4104 IN Digital ((Up to 10kV) Insulation Tester



CE

Features

- Microprocessor-controlled.
- Four insulation test voltages.
- Insulation resistance; auto ranging on all ranges.
- Measures insulation time test.
- Bargraph indicates test voltage; rise and decay can be observed during tests.
- Visual and audible warning if external voltage is present.
- EnerSave™ feature to extend battery life.
- 2 Lines × 16 characters large LCD.
- Low battery consumption.
- Low battery indicator.
- Overload protection.
- Auto-off.
- Show test time duration (up to 99.9s) for easy comparison.
- EEPROM calibration.

Specifications

Test voltage (DC V)	1kV / 2.5kV / 5kV / 10kV
Measuring ranges (Auto-Ranges)	0-50GΩ / 0-125GΩ / 0-250GΩ / 0-500GΩ
Accuracy	±5% rdg
Output power limit	1W
Sealed with gasket	√
Insulation resistance between electrical circuit and housing: 2000MΩ / 2000V	√
Withstand voltage: 7000 Vac for one min. between electrical circuit and case.	√



AL-50

AL-30B
AL-30AG

AL-23CA R
AL-23CA B

General

Operation temperature	-15°C to 55°C
Operation-humidity	80% Max. relative humidity
Dimensions	205(L) × 190(W) × 110(D)mm
Weight (battery included)	Approx. 1900g
Power source	1.5V(AA) × 8 Alkaline batteries
Safety standard	EN 61010-1, EN 61326-1

Accessories

Instruction manual
Test leads
Shoulder belt
Batteries..

4305 IN Digital (5kV) Insulation Tester

Features

- 2 Lines × 16 Characters LCD
- Microprocessor-controlled
- Tests insulation resistance up to 1 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
- 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

Specifications

Test Voltage	500V, 1000V, 2500V, 5000V
Insulation resistance	100GΩ / 500V 200GΩ / 1000V 500GΩ / 2500V 1TΩ / 5000V
Accuracy	±(5.0%rdg + 5dgt)
Resolution	1000MΩ: 1MΩ 10GΩ: 0.01GΩ 100GΩ: 0.1GΩ 1TΩ: 1GΩ
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)

General

Power source	1.5V "C" × 8 Alkaline batteries DC3V (CR2032) × 1
Dimensions	250(L) × 190(W) × 127(D)mm
Weight Approx.	2070g
Safety standard	IEC / EN 61010-1 CAT IV 600V IEC / EN 61010-2-030 EN 61326-1

Accessories

Instruction manual	Carry case
Test leads	Alligator clips
Batteries	Shoulder belt



CE

Carry case



Test leads

AL-58

AL-30AG

AL-30HB



Alligator clips

AL-23CA



BET-2800

4310 IN Digital (10kV up) Insulation Tester

Features

- 2 Lines × 16 Characters LCD
- Microprocessor-controlled
- Tests insulation resistance up to 2 TΩ
- 4 Insulation test voltages: 1000V, 2500V, 5000V, 10000V
- 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
- 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

Specifications

Test Voltage	1000V, 2500V, 5000V, 10000V
Insulation resistance	200GΩ / 1000V 500GΩ / 2500V 1TΩ / 5000V 2TΩ / 10000V
Accuracy	±(5.0%rdg + 5dgt)
Resolution	1000MΩ: 1MΩ 10GΩ: 0.01GΩ 100GΩ: 0.1GΩ 1TΩ: 1GΩ 2TΩ: 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)

General

Power source	1.5V "C" × 8 Alkaline batteries DC3V (CR2032) × 1
Dimensions	250(L) × 190(W) × 127(D)mm
Weight	Approx. 2120g
Safety standard	IEC / EN 61010-1 CAT IV 600V IEC / EN 61010-2-030 EN 61326-1

Accessories

Instruction manual	Carry case
Test leads	Alligator clips
Batteries	Shoulder belt



CE

Carry case



Test leads

AL-58
AL-30AG
AL-30HB



Alligator clips
AL-23CA



BET-2800



6210A IN ((Up to 5kV) and 6211A IN (Up to 10kV) Digital Insulation Testers

6210A IN



6211A IN



AL-50

AL-30B
AL-30AG

AL-23CA R
AL-23CA B

Features

- Microprocessor-controlled.
- Four insulation test voltages.
- Insulation resistance; auto ranging on all ranges.
- Bargraph indicates test voltage; rise and decay can be observed during tests.
- Visual and audible warning if external voltage is present.
- Fully protected: crow bar.
- Carry case.
- EEPROM calibration.

Specifications

6210A IN

Test voltage (DC V)	0.5kV / 1kV / 2.5kV / 5kV
Measuring ranges*	0-25GΩ / 0-50GΩ / 0-125GΩ / 0-250GΩ
Accuracy	±3% rdg
Output power limit	50uA to 100uA (1W)
Live warning	> 500V AC

6211A IN

Test voltage (DC V)	1kV / 2.5kV / 5kV / 10kV
Measuring ranges*	0-50GΩ / 0-125GΩ / 0-250GΩ / 0-500GΩ
Accuracy	±3% rdg
Output power limit	50uA to 100uA (1W)
Live warning	> 500V AC

* - Auto-Ranges

General

Operation temperature	0°C to 40°C
Operation-humidity	80% Max. relative humidity
Dimensions	330(L) × 260(W) × 160(D)mm
Weight	Approx. 3500g (battery included)
Power source	1.5V(AA) × 8 Alkaline batteries
Safety standard	EN 61010-1, EN 61326-1

Accessories

Instruction manual
Test leads
Shoulder belt
Batteries.

Digital (1kV up) H.V. Insulation Testers

6212A IN Digital (Up to 10kV) Insulation Tester



Features

- Microprocessor-controlled.
- 2 × 16 characters; large intelligent LCD module.
- 20 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.
- Ener-Save™ feature to extend battery life.
- Bargraph indicates test voltage; rise and decay can be observed.
- Visual and audible warning if external voltage is present (>500Vac or Vdc.)
- Insulation resistance; auto-ranging on all ranges.
- Overload protection.
- Low battery indicator (read time battery voltage measurement).
- Measures insulation time duration of the test.
- Low battery consumption.
- Better than 10% accuracy on all ranges.
- Auto-off.

Special Features

The 6212A IN is a variable high voltage Insulation meter from 500V to 10kV in 500V steps. The meter is menu driven and uses Dynamic Current auto ranging technology.

It has a Bar-Graph which displays the voltage stressing the insulation while the test is in progress and the voltage decay during the automatic discharge of the tested circuit.

The top line of the display shows the elapsed time at the start of the test. Digital readout of the total time will remain displayed even after testing has ceased. A 6 digit digital display is showing the actual Insulation resistance.

The instrument displays a voltage warning and sounds when AC or DC is present before injecting the test voltage.

It can only detect when voltages is higher than 500V.

It will buzz intermittently when high voltage is generated and this will remain until the circuit under test is fully discharged

Specifications

Test voltage (DC V)	0.5kV to 10kV (0.5kV increment steps)
Insulation resistance (Auto ranging)	25GΩ / 0.5kV 25GΩ at 0.5kV → 500GΩ at 10kV
Accuracy	± 3% rdg ± 1 dgt
Output current limit	50uA to 100uA (1W)
Live warning	> 500V AC

General

Operating-temperature	0°C ~ 40°C
Operating-humidity	85% Max. relative humidity
Dimensions	330(L) × 260(W) × 160(D)mm
Weight (battery included)	Approx. 3600g
Power source	1.5V "C" × 8 Alkaline batteries
Safety standard	EN 61010-1 CAT III 300V, EN 61326-1

Accessories

Instruction manual
Test leads
Shoulder belt
Batteries.



6213A IN Digital (Up to 10kV) Insulation Tester



Features

- Microprocessor-controlled.
- 2 × 16 characters; large intelligent LCD module.
- 20 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.
- Ener-Save™ feature to extend battery life.
- Bar-graph indicates test voltage; rise and decay can be observed.
- Visual and audible warning if external voltage is present (>500Vac or Vdc.)
- Insulation resistance; auto-ranging on all ranges.
- Overload protection.
- Low battery indicator (read time battery voltage measurement).
- Measures insulation time duration of the test.
- Low battery consumption.
- Better than 10% accuracy on all ranges.
- Auto-off.
- Calculates Dielectric Absorption Ratio (DAR) automatically.
- Calculates Polarization Index (PI) automatically.

Special Features

• **DAR (Dielectric Absorption Ratio)** is the ratio of the Insulation Resistance measured at 1 min divided per the Insulation Resistance measured at 30 sec.. 30 Sec. after starting a test (with Ener-Save™ disabled), 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 (with Ener-Save™ disabled), 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.

• **PI (Polarization Index)** is the ratio of the Insulation Resistance measured at 10 min. divided per the Insulation Resistance measured at 1 minute. 10 min. after starting a test (with Ener-Save™ disabled), 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. The tester will Auto-Stop at 10 minutes.

• **Digital Display.** The digital Liquid Crystal Display is large. It measures 98mm(W) × 24mm(D) and has a 2 Lines of 16 characters. Language can be changed on demand, as an option. Dutch / French / German etc... (factory fitted at order)

• **Automatic Battery Test.** When the tester starts, it test its batteries by drawing a heavy current from the batteries. During that heavy current, it measures the battery voltage and displays it for a few seconds on the display. During normal use, the tester monitors the battery voltage, but without drawing a battery test current. It just measures the battery while in normal use.

• **Automatic Discharge of Capacitive and Inductive Circuits.** This tester will discharge automatically all circuits charged by the tester, after a test is done, again, this will only be activated if the test leads make contact at any time before, during and after the test.

It's your responsibility to ensure proper contact of the leads at all Times.

Once a test is finished, the testers will automatically discharge capacitive or inductive circuit of their charge. The discharge can be observed on the display, in the form of a bar-graph. Again, do not disconnect the leads while discharging. Wait until completion of the discharge before removing any lead. During discharge, the Buzzer will beep and the bar-graph will show some voltage. With some high charges, this may take some time. Be patient and let the instrument discharge completely before proceeding to removing the leads.

Specifications

Test voltage	From 500Vdc to 10kVdc. Adjustable in 500V steps
Preset buttons	1kV / 2.5kV / 5kV / 10kV
Measuring ranges	800kΩ-500GΩ (auto-ranging)
Accuracy	± 5% ± 2 digits
Output power limit	1W
Voltage regulation	Selected voltage +20%-5% of nominal value unless current limited. Meaning that if output current is too high, the voltage will be lowered automatically.

General

Dimensions	330(L) × 260(W) × 160(D)mm
Weight	Approx. 3600g (battery included)
Power source	1.5V "C" × 8 Alkaline batteries
Safety standard	EN 61010-1 CAT III 300V, EN 61326-1

Accessories

- Instruction manual
- Color coded flexible silicone test leads
- Batteries

6304 IN Digital (5kV) Insulation Tester

Features

- 2 Lines × 16 Characters LCD.
- 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 1.9mA.
- 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 ($\geq 30V_{ac}$ or $\geq 30V_{dc}$).
- 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.

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%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 1.9mA	
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)	

General

Power source	1.5V "C" × 8 Alkaline batteries
Dimensions	330(L) × 260(W) × 160(D)mm
Weight	Approx. 4268g (battery included)
Safety standard	EN 61010-1 CAT IV 600V EN 61010-2-030 EN 61326-1



CE

Test leads



Alligator clips



Data transmission cable

Accessories

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

6305 IN Digital (5kV) 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 ($\geq 30V_{ac}$ or $\geq 30V_{dc}$).
- 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.

Specifications

Test Voltage	500V, 1000V, 2500V, 5000V	
Insulation resistance	1TΩ / 500V	
	2TΩ / 1000V	
	5TΩ / 2500V	
	10TΩ / 5000V	
Accuracy	0~100GΩ / 500V	±(5%rdg+5dgt)
	0~200GΩ / 1000V	
	0~500GΩ / 2500V	
	0~1000GΩ / 5000V	
Resolution	100G~1TΩ / 500V	±12%rdg
	200G~2TΩ / 1000V	
	500G~5TΩ / 2500V	
	1000G~10TΩ / 5000V	
Short circuit current	1000MΩ: 1MΩ	1TΩ: 1GΩ
	10GΩ: 0.01GΩ	10TΩ: 10GΩ
	100GΩ: 0.1GΩ	
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)	

General

Power source:	Rechargeable battery
AC 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



CE

Test leads



Alligator clips



CA-232



CHA-7015 ISL-6237



Accessories

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

6305A IN Digital (5kV) Insulation Tester

Features

- 2 Lines × 16 Characters LCD.
- 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 ($\geq 30V_{ac}$ or $\geq 30V_{dc}$).
- 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.

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%rdg+5dgt)
	100G~1TΩ / 500V 200G~2TΩ / 1000V 500G~5TΩ / 2500V 1000G~10TΩ / 5000V	±12%rdg
Resolution	1000MΩ: 1MΩ	1TΩ: 1GΩ
	10GΩ: 0.01GΩ 100GΩ: 0.1GΩ	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).

General

Power source:	1.5V "C" × 8 Alkaline batteries
Dimensions:	330(L) × 260(W) × 160(D)mm
Weight:	Approx. 4268g (battery included)
Safety standard:	EN 61010-1 CAT IV 600V EN 61010-2-030 EN 61326-1



CE

Test leads



Alligator clips



Data transmission



Accessories

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

6310 IN Digital (10kV) Insulation Tester

Features

- 2 Lines × 16 Characters LCD.
- Microprocessor-controlled.
- Tests insulation resistance up to 20 TΩ.
- 4 Insulation test voltages: 1000V, 2500V, 5000V, 10000V.
- 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 the display.

Specifications

Test Voltage	1000V, 2500V, 5000V, 10000V	
Insulation resistance	2TΩ / 1000V 5TΩ / 2500V 10TΩ / 5000V 20TΩ / 10000V	
Accuracy	0~200GΩ / 1000V 0~500GΩ / 2500V 0~1000GΩ / 5000V 0~2000GΩ / 10000V	±(5%rdg+5dgt)
	200G~2TΩ / 1000V 500G~5TΩ / 2500V 1000G~10TΩ / 5000V 2000G~20TΩ / 10000V	±20%rdg
Resolution	1000MΩ: 1MΩ	1TΩ: 1GΩ
	10GΩ: 0.01GΩ	10TΩ: 10GΩ
	100GΩ: 0.1GΩ	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)	

General

Power source:	1.5V "C" × 8 Alkaline batteries
Dimensions:	330(L) × 260(W) × 160(D)mm
Weight:	Approx. 4724g (battery included)
Safety standard:	EN 61010-1 CAT IV 600V
	EN 61010-2-030
	EN 61326-1



CE

Test leads



Alligator clips



Data transmission cable



Accessories

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

7012 IN Digital (12kV) Insulation Tester

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. (≥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.

Specifications

Test voltage	From 500Vdc to 12kVdc, Adjustable in 500V steps	
Preset buttons	1kV, 5kV, 10kV, 15kV	
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	1TΩ : 1GΩ
	10GΩ : 0.01GΩ	10TΩ : 10GΩ
	100GΩ : 0.1GΩ	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)	

General

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
Safety standard :	EN 61010-1 CAT IV 600V EN 61010-2-030 EN 61326-1



CE



Instruction manual
Test report CD



AL-58



AL-30AG
AL-30HB



AL-23CA



CA-232



CHA-7015 ISL-6237

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

7015 IN Digital (15kV) Insulation Tester

Features

- Protection class: IP66 (Lid closed)
- Microprocessor controlled.
- 2 Lines x 16 characters, large intelligent LCD module.
- 30 insulation test voltages: from 500Vdc to 15kVdc.
- AC/DC Voltmeter.
- PI (Polarization Index) indication.
- DAR (Dielectric Absorption ratio) indication.
- Auto-ranging on all insulation ranges.
- Current measurement.
- Backlight function.
- Menu driven.
- Visual and audible warning if external voltage is present ($\geq 30\text{Vac}$ or $\geq 30\text{Vdc}$)
- Short-circuit current up to 5mA
- Auto-hold function to freeze the reading.
- Overload protection.
- Adjustment for testing time (duration) : 1~30 minutes.
- Calendar.
- Indication memory for data storage.
- Optical USB to RS-232 data transmission.
- Auto-off.
- 200 measurement results can be saved in the memory and recalled on the display.

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)

General

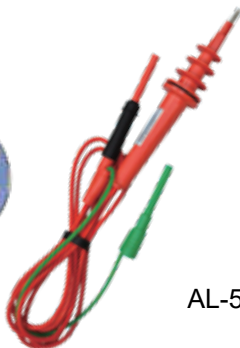
Power source	Rechargeable battery
Adapter	Input : 100-240Vac, 0.4A, 50-60Hz Output : 24Vdc, 0.62A
Dimensions	430(L) x 324(W) x 127(D)mm
Weight	Approx : 6.56kg
Safety standard :	EN 61010-1 CAT IV 600V EN 61010-2-030 EN 61326-1



CE



Instruction manual
Test report CD



AL-58



AL-30AG
AL-30HB



AL-23CA



CA-232



CHA-7015 ISL-6237

Accessories

Instruction manual
Test report.
Test leads (AL-30AG AL-30HB)
Alligator clip (AL-23CA)
H.V Line probe with (AL-58)
Data transmission cable (CA-232)
Charger (CHA-7015)
Compact disk(CD).

7016 IN Digital (15kV) Insulation Tester



CE

Features

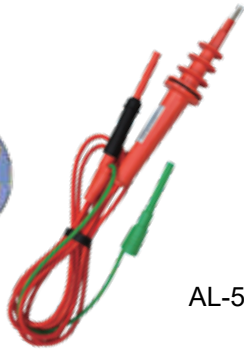
- Protection class: IP66 (Lid closed)
- Test insulation resistance up to 30TΩ (30000GΩ).
- Short-circuit current up to 5mA.
- Microprocessor controlled.
- 30 insulation test voltages from 500Vdc to 15kVdc, adjustable in 500V steps.
- AC/DC voltmeter (600V).
- PI (Polarization Index) indication.
- DAR (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.

Specifications

Test voltage	From 500Vdc to 15kVdc, Adjustable in 500V steps	
Preset buttons	1kV, 5kV, 10kV, 15kV	
Insulation resistance	1000GΩ / 0.5kV 1000GΩ at 0.5kV~30TΩ at 15kV	
Accuracy	1kV : 0~200GΩ 5kV : 0~1TΩ 10kV : 0~2TΩ 15kV : 0~3TΩ	±(5%rdg+5dgt)
	1kV : 200GΩ~2TΩ 5kV : 1TΩ~10TΩ 10kV : 2TΩ~20TΩ 15kV : 3TΩ~30TΩ	±20%
Resolution	1GΩ : 0.001GΩ 10GΩ : 0.01GΩ 100GΩ : 0.1GΩ	1TΩ : 1GΩ 10TΩ : 10GΩ 30TΩ : 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)	



Instruction manual
Test report CD



AL-58



AL-30AG
AL-30HB



AL-23CA



CA-232



CHA-7015 ISL-6237

Accessories

Instruction manual
Test report.
Test leads (AL-30AG AL-30HB)
Alligator clip (AL-23CA)
H.V Line probe with (AL-58)
Data transmission cable (CA-232)
Charger (CHA-7015)
Compact disk(CD).

General

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
Safety standard : EN 61010-1 CAT IV 600V
EN 61010-2-030
EN 61326-1

1160 IN Digital (1kV below) Insulation Tester

Features

- Measures insulation (MΩ), Continuity (Ω) and AC voltage.
- Three insulation test voltages(DC V) : 250V, 500V, 1000V.
- 3½ digital LCD (2000 counts).
- 68 × 34mm (2.677" × 1.338") large LCD display.
- LCD backlight display.
- Automatic circuit discharge.
- Test insulation at rated voltage into a 1mA load.
- 200mA short circuit testing current for continuity.
- Auto ranging.
- Fuse protection.
- Data hold function.
- BS 16 edition.

Specifications

Insulation Resistance

Test voltage	250V / 500V / 1000V	
Measuring ranges (Auto ranging)	0-20MΩ / 0-200MΩ / 0-2000MΩ	
Output voltage open circuit	+10%	
Accuracy	0-20MΩ :	±(1.5%rdg+5dgt)
	0-200MΩ :	±(2.5%rdg+3dgt)
	0-2000MΩ :	±(5%rdg+5dgt)
Resolution	0-20MΩ :	10kΩ
	0-200MΩ :	100kΩ
	0-2000MΩ :	1MΩ
Output current	1mA DC	

AC Voltage

Range	0-600V
Resolution	1V
Line frequency range	40-120 Hz
Accuracy	±(1.5%rdg+3dgt)

Current for continuity

Measuring range	0-200Ω
Resolution	0.1Ω
Short circuit terminal current	200mA DC min.
Open circuit terminal voltage	4V DC min.
Accuracy	±(1.5%rdg+3dgt)

General

Impedance	10MΩ
Dimensions	175(L) × 85(W) × 75(D) mm
Weight (battery included)	Approx. 600g
Power source	1.5V (AA) × 8
Safety standard	EN 61010-1 CAT III 600V, EN 61326-1



CE



AL-28-5



AL-25C-4

Accessories

Instruction manual
Test leads
Soft pouch
Shoulder belt
Batteries

Digital (1kV below) Insulation Testers

1161 IN Digital (1kV below) Insulation Tester

Features

- Microprocessor-controlled.
- Measures insulation ($M\Omega$), Continuity (Ω) and AC voltage.
- Three insulation test voltages(DC V) : 250V, 500V, 1000V.
- 3½ digital LCD (2000 counts).
- 68 × 34mm (2.677" × 1.338") large LCD display.
- Waterproof design, protection class : IP54.
- Automatic circuit discharge.
- Test insulation at rated voltage into a 1mA load.
- 200mA short circuit testing current for continuity.
- Auto ranging.
- Fuse protection.
- Data hold function
- BS 16 edition.

Specifications

Insulation Resistance

Test voltage	250V / 500V / 1000V
Measuring ranges (Auto ranging)	0-20M Ω / 0-200M Ω / 0-2000M Ω
Output voltage open circuit	+10%
Accuracy	0-2M Ω : $\pm(5\%rdg+5dgt)$ 0-20M Ω : $\pm(1.5\%rdg+5dgt)$ 0-200M Ω : $\pm(2.5\%rdg+3dgt)$ 0-2000M Ω : $\pm(5\%rdg+5dgt)$
Resolution	0-2M Ω : 1k Ω 0-20M Ω : 10k Ω 0-200M Ω : 100k Ω 0-2000M Ω : 1M Ω
Output current	1mA DC

AC Voltage

Range	0-600V
Resolution	1V
Line frequency range	40-120 Hz
Accuracy	$\pm(1.5\%rdg+3dgt)$

Current for continuity

Measuring range	0-200 Ω
Resolution	0.1 Ω
Short circuit terminal current	200mA DC min.
Open circuit terminal voltage	4V DC min.
Accuracy	$\pm(1.5\%rdg+3dgt)$

General

Impedance	10M Ω
Dimensions	175(L) × 85(W) × 75(D) mm
Weight (battery included)	Approx. 600g
Power source	1.5V (AA) × 8
Safety standard	EN 61010-1 CAT III 600V, EN 61326-1



CE



AL-28-5



AL-25C-4

Accessories

Instruction manual
Test leads
Soft pouch
Shoulder belt
Batteries

1651 IN Digital (1kV below) Insulation Tester

Features

- Microprocessor-controlled.
- ACV auto-detection function on 3 insulation ranges (250/500/1000V) and low Ω range before pressing the TEST button.
- 68 x 34mm large LCD display.
- 3½ digital LCD (2000 counts) a LCD indicated instrument for insulation(M Ω), continuity (Ω) and AC voltage.
- Three insulation test voltages(DC V) : 250V, 500V, 1000V.
- Auto ranging.
- Auto power off function.
- Auto data hold function.
- Rel function (ohm only)
- Continuity buzzer.
- External AC voltage warning.
- Automatic circuit discharge.
- BS 16th edition.

Specifications

Insulation Resistance

Test voltage	250V / 500V / 1000V
Measuring ranges (Auto ranging)	0-20M Ω / 0-200M Ω / 0-2000M Ω

Output voltage open circuit Rated test voltage +10%

Accuracy	20M Ω :	$\pm(1.5\%rdg+2dgt)$
	200M Ω :	$\pm(2.5\%rdg+2dgt)$
	2000M Ω :	$\pm(5\%rdg+3dgt)$

Resolution	0-20.00M Ω :	10k Ω
	0-200.0M Ω :	100k Ω
	0-2000M Ω :	1M Ω

Output current	1mA DC
----------------	--------

AC Voltage

Range	0-600V
Resolution	1V
Accuracy	$\pm(1.5\%rdg+3dgt)$

Continuity

Ranges	20 Ω / 200 Ω / 2000 Ω	
Resolution	0-20 Ω :	0.01 Ω
	0-200 Ω :	0.1 Ω
	0-2000 Ω :	1 Ω
Short circuit terminal current	> 200mA DC	
Accuracy	20 Ω :	$\pm(2\%rdg+4dgt)$
	200 Ω :	$\pm(1.5\%rdg+2dgt)$
	2000 Ω :	$\pm(1.5\%rdg+2dgt)$

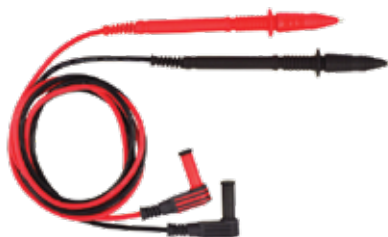
Buzzer sounds	Below 10 Ω
---------------	-------------------

General

Dimensions	163(L) x 102(W) x 50(D)mm
Weight (battery included)	Approx. 470g
Power source	1.5V (AA) x 6
Safety standard	EN 61010-1 CAT III 600V EC 61557-1 IEC 61557-2, EN 61326-1



CE



AL-24-5



AL-21C2-4



AL-21C2-4

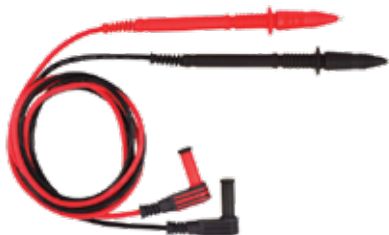
Accessories

Instruction manual
Test leads
Carry case
Batteries

1851 IN Digital (1kV below) Insulation Tester



CE



AL-24-5



AL-21C2-4



BET-1800

Accessories

Instruction manual
 Test leads
 Shoulder belt
 Fuse (0.5A 250V) 5×20mm
 Batteries

Features

- Measures insulation (MΩ), Continuity (Ω) and AC voltage.
- Three insulation test voltages(DC V) : 250V, 500V, 1000V.
- 3½ digital LCD (2000 counts).
- 68 × 34mm (2.677" × 1.338") large LCD display.
- Automatic circuit discharge.
- Test insulation at rated voltage into a 1mA load.
- 210mA short circuit testing current for continuity.
- External voltage warning indication.
- Fuse protection.
- BS 16th edition.

Specifications

Insulation Resistance

Test voltage (DC V)	250V / 500V	1000V
Measuring ranges	0-200MΩ	0-2000MΩ
Resolution	1 count / 100kΩ	1 count / 1MΩ
Accuracy	±(1.5%rdg+5dgt)	±(3%rdg+3dgt) (under 1GΩ/2000MΩ) ±(5%rdg+3dgt) (under 2GΩ/2000MΩ)
Output voltage on open circuit	Rated test Voltage +10%	
Output current	1mA DC	
Power consumption	250mA	

AC Voltage

Range	0-600V
Resolution	1V
Accuracy	±(1.5%rdg+3dgt)
Line frequency range	40-120 Hz

Continuity

Ranges	0-20Ω	0-2kΩ
Resolution	0.01Ω	1Ω
Accuracy	±(1.5%rdg+5dgt)	±(1.5%rdg+3dgt)
Buzzer sounds	Below 10Ω	
Open circuit terminal voltage	4V DC min.	
Short circuit terminal current	210mA DC min.	
Power consumption	Approx.160mA	

General

Display	3½ digit (2000 counts)
Dimensions	170(L) × 165(W) × 92(D)mm
Weight (battery included)	Approx. 1040g
Power source	1.5V (AA) × 8
Safety standard	EN 61010-1 CAT III 600V EN 61326-1

2151 IN Digital (1kV below) Insulation Tester

Features

- Microprocessor-controlled.
- 68 × 34mm(2.677" × 1.338") large LCD display.
- 3½ digital LCD(2000 counts) a LCD indicated instrument for insulation(MΩ), continuity(Ω) and AC voltage.
- Three insulation test voltages(DC) : 250V, 500V, 1000V.
- Automatic circuit discharge.
- Test insulation at rated voltage into a 1mA DC load.
- >200mA short circuit testing current for a resistance tests.
- Auto ranging.
- REL function.
- Auto power OFF.
- Fuse protection.
- Auto data hold.
- BS 16 edition.

Specifications

Insulation Resistance

Test voltage (DC V)	250V / 500V / 1000V
Measuring ranges (Auto ranging)	0-2MΩ / 0-20MΩ / 0-200MΩ / 0-2000MΩ
Output voltage on open circuit	+10%

Accuracy	0-2MΩ :	±(5%rdg+5dgt)
	0-20MΩ :	±(1.5%rdg+5dgt)
Accuracy	0-200MΩ :	±(2.5%rdg+3dgt)
	0-2000MΩ :	±(5%rdg+5dgt)

Resolution	0-2MΩ :	1kΩ
	0-20MΩ :	10kΩ
	0-200MΩ :	100kΩ
	0-2000MΩ :	1MΩ

Output current	1mA DC
----------------	--------

AC Voltage

Range	0-600V
Resolution	1V
Accuracy	±(1.5%rdg+3dgt)
Line frequency range	40-120 Hz

Continuity

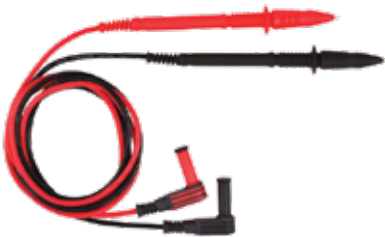
Measuring range	20Ω / 200Ω / 2000Ω
Resolution	0.01Ω / 0.1Ω / 1Ω
Accuracy	±(1.5%rdg+3dgt)
Open circuit terminal voltage	12V DC
Short circuit terminal current	>200mA DC

General

Impedance	10MΩ
Dimensions (with housing front cover)	210(L) × 210(W) × 100(D)mm
Weight (battery included)	Approx. 1040g
Power source	1.5V (AA) × 8
Safety standard	EN 61010-1 CAT III 600V IEC 61557-1 IEC 61557-2, EN 61326-1



CE



AL-24-5



AL-21C2-4



BET-1800

Accessories

Instruction manual
Test leads
Shoulder belt
Batteries

2751 IN Digital (1kV below) Insulation Tester

Features

- Timer for test function (count 3-5 minutes).
- Three insulation test voltages(DC V) : 250V, 500V 1000V.
- 3½ digital LCD (2000 counts).
- 68 × 34mm (2.677" × 1.338") large LCD display.
- Automatic circuit discharge.
- Test insulation at rated voltage into a 1mA load.
- 200mA short circuit testing current for continuity.
- External voltage warning indication.
- Fuse protection.
- Data hold function
- Auto power off function.
- BS 16th edition.

Specifications

Insulation Resistance

Test voltage (DC V)	250V / 500V / 1000V
Measuring ranges (Auto ranging)	0-20MΩ / 0-200MΩ / 0-2000MΩ
Output voltage on open circuit	+10%
Accuracy	0-20MΩ: ±(1.5%rdg+5dgt) 0-200MΩ: ±(2.5%rdg+3dgt) 0-2000MΩ: ±(5%rdg+5dgt)
Output voltage on open circuit	Rated test Voltage +10%
Output current	1mA DC
Power consumption	250mA

AC Voltage

Range	0-600V
Resolution	1V
Accuracy	±(1.5%rdg+3dgt)
Line frequency range	40-120 Hz

Continuity

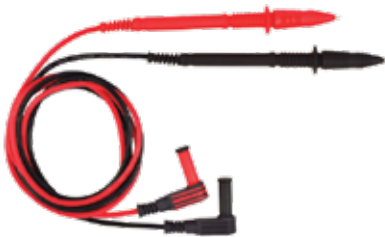
Measuring range	0-20Ω / 0-200Ω / 0-2000Ω
Resolution	0.01Ω / 0.1Ω / 1Ω
Accuracy	±(1.5%rdg+3dgt)
Open circuit terminal voltage	4V DC min.
Short circuit terminal current	200mA DC min.
Power consumption	300mA max

General

Display	3½ digit (2000 counts)
Impedance	10MΩ
Dimensions (with housing front cover)	205(L) × 90(W) × 55(D)mm
Weight (battery included)	Approx. 550g
Power source	1.5V (AA) × 6
Safety standard	EN 61010-1 CAT III 600V EN 61326-1



CE



AL-24-5



AL-21C2-4



BET-1800

Accessories

- Instruction manual
- Test leads
- Shoulder belt
- Batteries

Digital (1kV below) Insulation Testers

2801 IN Digital (1kV below) Insulation Tester

Features

- Microprocessor-controlled with advanced safety features.
- Three test voltages : 250 / 500 / 1000V.
- Displays and sound warning if external voltage present.
- Ener-Save™ feature to extend battery life.
- Continuous battery monitoring.
- Auto ranging / auto-null / auto-off.
- Insulation tested at 1mA.
- Built-in carry case, test leads in separate pouch.
- Real-time barg-raph display of test voltage and voltage decay during discharge.
- Audible and visual message displayed if external voltage is present.
- Large LCD.
- Display can be customized for special orders.
- Continuity buzzer.
- Show test time duration (up to 99.9s) for easy comparison.
- BS 16 edition.



CE



Specifications

Insulation Resistance

Test voltage (DC V)	250V / 500V / 1000V
Measuring ranges (Auto ranging)	0-1000MΩ / 0-2000MΩ / 0-3000MΩ
Accuracy	±3%rdg
Output current	1mA DC min at 0.25MΩ(250V) 1mA DC min at 0.5MΩ(500V) 1mA DC min at 1MΩ(1000V)

Continuity

Low-resistance	0-500Ω
Resolution	0.001Ω
SC current	220mA
Accuracy	±1.0% rdg

General

Dimensions	170(L) × 120(W) × 95(D)mm
Weight (battery included)	Approx. 850g
Power source	1.5V (AA) × 8 Alkaline batteries
Safety standard	EN 61010-1, 61326-1



AL-30



AL-23CA R
AL-23CA B

Accessories

- Instruction manual
- Test leads
- Shoulder belt
- Batteries

8005 IN Digital (1kV below) Insulation Tester



Features

- Microprocessor controlled.
- Four insulation test voltages (DC) : 50V, 100V, 250V, 500V
- The maximum insulation measurement range is 200G ohm @500V.
- Large LCD (78 × 67mm)
- Auto-ranging.
- Bar-graph indication.
- Backlight function.
- REL(Auto-null) function.
- Auto AC/DC voltmeter.
- Capacitor test.
- Auto-test stop & smart hold.
- Supplied with high quality test leads.
- Safety standard : EN 61010-1 CAT III

Specifications

Insulation Resistance(GΩ)

Test voltage (DC V)	50V / 100V / 250V / 500V
Measuring ranges	0-20GΩ/0-40GΩ/0-100GΩ/0-200GΩ
Output voltage open circuit	Rated test voltage +10%
Output short-circuit current	≥ 1.0mA

AC/DC Voltage

Measuring ranges	200.0mV / 2000mV / 200.0V / 600V
Accuracy	± (3%rdg+5dgt)

Resistance

Measuring ranges	20.00kΩ/200.0kΩ/2000kΩ/20.00MΩ
Accuracy	± (3%rdg+3dgt)

Continuity

Measuring ranges	20.00Ω / 200.0Ω / 2000Ω
Buzzer	under 10Ω
Open circuit voltage	5V±1V
Short circuit current	>210mA
Accuracy	± (3%rdg+5dgt)

Capacitor

Measuring ranges	200.0nF / 2000nF / 20.00uF
Accuracy	± (3%rdg+5dgt)

8010 IN Digital (1kV below) Insulation Tester



Features

- Microprocessor controlled.
- Four insulation test voltages (DC) : 125V, 250V, 500V, 1000V
- The maximum insulation measurement range is 200G ohm @1000V.
- 1mA test current on insulation test at nominal voltage.
- With a hand strap for easier holding.
- Large LCD (78 × 67mm)
- Auto-ranging.
- Bar-graph indication.
- Backlight function.
- REL(Auto-null) function.
- Auto AC/DC voltmeter.
- Capacitor test.
- Auto-test stop & smart hold.
- Supplied with high quality test leads.
- Safety standard:
EN 61010-1 CAT III 600V, IEC 61557-1 IEC 61557-2, EN 61326-1

Specifications

Insulation Resistance(GΩ)

Test voltage (DC V)	125V / 250V / 500V / 1000V
Measuring ranges	0-25GΩ/0-50GΩ/0-100GΩ/0-200GΩ
Output voltage open circuit	Rated test voltage +10%
Accuracy	± (3%rdg+5dgt)
Output short-circuit current	≥ 1.0mA

AC/DC Voltage

Measuring ranges	200.0mV / 2000mV / 200.0V / 600V
Accuracy	± (3%rdg+5dgt)

Resistance

Measuring ranges	20.00kΩ/200.0kΩ/2000kΩ/20.00MΩ
Accuracy	± (3%rdg+3dgt)

Continuity

Measuring ranges	20.00Ω / 200.0Ω / 2000Ω
Buzzer	under 10Ω
Open circuit voltage	5V±1V
Short circuit current	>210mA
Accuracy	± (3%rdg+5dgt)

Capacitor

Measuring ranges	200.0nF / 2000nF / 20.00uF
Accuracy	± (3%rdg+5dgt)



With a hand strap for easier holding.

6213A IN-M OLED Display (Up to 10kV) Insulation Tester



CE

Features

- High contrast OLED display
- Designed for viewing in the dark, for mining industry.
- Wide viewing angle.
- Smart microprocessor-controlled.
- 2 x 16 characters, large, High Contrast, Intelligent OLED Display.
- Automatically calculates Dielectric Absorption Ratio (DAR).
- Automatically calculates Polarization Index (PI).
- Insulation resistance; Auto-ranging on all ranges.
- Ener-Save
- Bar graph indicates test voltage. Rise and decay can be observed.
- External voltage presence warning (>500Vac or Vdc)
- Overload protection
- Low battery indicator (real time battery voltage measurement)
- Measures insulation time duration of the test
- Better than 10% accuracy on all ranges
- Auto-off

Specifications

Test voltage	From 500Vdc to 10kVdc, Adjustable in 500V Steps
Preset buttons	1kV, 2.5kV, 5kV, 10kV
Measuring range	800kΩ-500GΩ (auto-ranging)
Accuracy	±5% ± 2 digits
Output power limit	1W
Voltage regulation	Selected Voltage +20%-5% of nominal value unless current limited. Meaning that if output current is too high, the voltage will be lowered automatically.

General

Dimensions	330(L) × 260(W) × 160(D)mm
Weight	Approx. 3600g (battery included)
Power source	1.5V "C" × 8 Alkaline batteries
Safety standard	EN 61010-1 CAT III 300V, EN 61326-1

Accessories

Instruction manual
Color coded flexible silicone test leads
Batteries

1165 IN Telecommunication & Electrical Insulation - Continuity - Voltage - Mov Tester



Features

- Measures insulation (MΩ), Continuity (Ω) , AC and DC voltage
- 6 insulation test voltages (DCV): 50V, 100V, 125V, 250V, 500V, 1000V
- 68x34 mm (2.677x1.338 inch) large LCD
- Function rotary switch design for easier operation
- Intuitive operation for users
- User friendly interface
- Auto ACV/DCV detection
- Audible voltage warning
- DAR/PI indication
- Backlight function
- Automatic circuit discharge
- Test insulation at rated voltage into a 1mA load
- Auto ranging
- Fuse protection
- EnerSave function
- MOV test function



Specifications

Insulation Resistance(GΩ)

Test voltage (DC V)	50V	100V	125V	250V	500V	1000V
Measuring ranges (Auto ranging)	50kΩ~400MΩ	100kΩ~800MΩ	125kΩ~1GΩ	250kΩ~2GΩ	500kΩ~4GΩ	1MΩ~8GΩ
Resolution	1kΩ~1MΩ	1kΩ~1MΩ	1kΩ~1MΩ	1kΩ~10MΩ	1kΩ~10MΩ	10kΩ~10MΩ
Accuracy	50kΩ~4GΩ: ±3%rdg				4GΩ~8GΩ: ±5%rdg	
Output voltage open circuit	+10%					
Output current	Up to 1mA DC					

DC Voltage

Range	0~ ±600V
Resolution	±1V
Accuracy	±1.5%rdg

Continuity

Measuring range	100Ω / 200Ω
Resolution	0.01Ω / 0.1Ω
Accuracy	±1.5%rdg
Short circuit terminal current	≤ 100mA DC min.
Open circuit terminal voltage	≥ 2.5V DC min

General

Dimensions	Dimensions 175(L) x 85(W) x 75(D) mm
Weight (battery included)	Approx. 665 g
Power source	1.5V alkaline (AA) x 8 batteries
Safety standard	IEC/EN 61010-1 CAT III 600V EN 61326-1

AC Voltage

Range	0~600V
Resolution	1V
Line frequency range	50Hz / 60Hz
Accuracy	±1.5%rdg

MOV Test

Test Voltage	90 ~ 1080Vdc
Voltage Results Accuracy	±3%

Accessories

- Instruction manual
- Test leads
- Soft pouch
- Shoulder belt
- Batteries