



## **Hoyt Loop Testers & Electrical Network Analyzers**

### **Loop Testers**

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# Loop Testers

## 1824 LP LOOP / PSC / EARTH Tester

### Features

- Microprocessor-controlled.
- Measures Earth Resistance without the need for poles in the ground or external measuring wires.
- Earth measurement uses the real earth current path and the current generated by the electric network, without the need for any disconnection.
- The Earth Resistance displayed is exactly the earth resistance that the earth current will need to go through if an earth fault occurs. (you do not need to add all the bonding points and connection paths)
- Displays voltage supply at the transformer (Line to Neutral), without loading the transformer.
- Single one smart push button operation; ON, Scroll through results and menus.
- Checks wiring integrity (LEDs).
- Auto-off / Auto-ranging (software range).
- Color-coded test leads.
- Combined prospective short circuit current, loop, and earth tester.
- Loop test for L-E and PSC between L-N.
- Voltage test L-N.
- Display can be customized for large orders.



CE

The 1824 LP is a new generation of instruments for the testing of electrical installations.

It has a built-in Earth tester which does not require the use of poles or long wires.

This instrument is useful for fault-finding or commissioning of electrical installations.

This new instrument uses a three-wire unique principle of operation.

It displays the main system voltage of the power utility, without loading the wiring.

### Specifications

Loop impedance range L-E	0.03-2000Ω (software ctrl)
Test currents in each loop	11.76A at 230V / 50Hz
Voltage measurement	50 to 280V AC (Sine)
Earth wire/path return resistance	0.01-2000Ω (software ctrl)
Neutral wire resistance	(Not available, see 1826 NA)
Line wire resistance & transformer windings	(Not available, see 1826 NA)
PSC current (L-N) max	6kA at 230Vac supply
PSC current (L-E) max	(Not available, see 1826 NA)
Operating voltage	230V±20V at 50Hz Sine
Typical Accuracy	
Loop impedance	±4%rdg ± 2dgt
PSC current	±10%rdg ± 5dgt
Voltage	±2%rdg ± 1dgt

### General

Operating temperature / humidity	-10°C to +40°C 80% Max. relative humidity
Dimensions	170(L) x 165(W) x 92(D)mm
Weight (battery included)	Approx. 970g
Power source	1.5V (AA) x 8
Safety standard	EN 61010-1 CAT III 300V, EN 61326-1

### Accessories

Instruction manual  
Test leads  
Shoulder belt  
Batteries

## 1825 LP LOOP / PSC / LOAD Tester

### Features

- Microprocessor-controlled.
- Measures the voltage drop as if 16A was flowing between Line and Neutral.
- Displays voltage without current (V at 0A).
- Display voltage as if 16A flowing between Line and Neutral (V at 16A).
- Loop test for L-E
- PSC between L-N.
- Single one smart push button operation; ON, Scroll through results and menus.
- Checks wiring integrity (LEDs).
- Auto off/auto ranging (software range).
- Combined prospective short circuit current, loop and load tester.
- Display can be customized for large orders.



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1825 LP is the instrument which display the main system voltage (V at 0A) of the power utility and calculates the volt drop between Line and Neutral as if 16A flowing between Line to Neutral.

1825 LP displays the system voltage minus the voltage losses into the Line and Neutral impedances (losses due to the current circulating into these impedances).

The result of this dropped voltages is displayed as if you had a 16A load (V at 16A).

This instrument is useful for fault-finding or commissioning of electrical installations.



AL-34B



BET-1800

### Specifications

Loop impedance range L-E	0.03-2000Ω (software ctrl)
Test currents in each loop	11.76A at 230V / 50Hz
Voltage measurement L-N	50 to 280V AC (Sine)
Load current for volt drop (L-N)	16A (Calculation)
Neutral wire resistance	(Not available, see 1826 NA)
Line wire resistance & transformer windings	(Not available, see 1826 NA)
PSC current (L-N) max	6kA at 230Vac supply
PSC current (L-E) max	(Not available, see 1826 NA)
Operating voltage	230V±20V at 50Hz Sine

### Typical Accuracy

Loop impedance	±5%rdg ± 2dgt
PSC current	±12%rdg ± 5dgt
Voltage	±3%rdg ± 1dgt

### General

Operating temperature / humidity	-10°C to +40°C 80% Max. relative humidity
Dimensions	170(L) x 165(W) x 92(D)mm
Weight (battery included)	Approx. 970g
Power source	1.5V (AA) x 8
Safety standard	EN 61010-1 CAT III 300V, EN 61326-1

### Accessories

- Instruction manual
- Test leads
- Shoulder belt
- Batteries

## 2811 LP LOOP / PSC / EARTH Tester

### Features

- Microprocessor-controlled.
- Displays and sound warning if external voltage present.
- Displays mains voltage, scroll trough menus.
- Checks wiring integrity (LEDs and display).
- Single button operation.
- Auto-off/auto-ranging.
- Combined prospective short circuit current, PSC and LOOP tester.
- Built-in carry case, test leads in separate pouch.
- Loop test for L-E and L-N and PSC.
- Voltage test L-N and L-E.
- Enables analysis of constituent components in L-E and L-N loops giving resistance of earth, neutral wire, live wire and transformer winding.
- Display can be customized for special orders.
- 60Hz available on request.

### Specifications

Loop impedance range L-E, L-N	20/200/2000Ω (auto-range)
Loop impedance test current	12A at 230V / 50Hz
Voltage measurement L-N, L-E	80 to 250V AC/50Hz
Earth wire/path return resistance	20/200/2000Ω (auto-range)
Neutral wire return resistance	20/200/2000Ω (auto-range)
Line wire return resistance & transformer windings	20/200/2000Ω (auto-range)
PSC current (L-N)	max 3kA
Operating voltage	230V±20V / 50Hz

### Typical Accuracy

Loop impedance	±5%rdg ± 2dgt
PSC current	±20%rdg ± 5dgt
Voltage	±1%rdg ±1dgt

### General

Operating-temperature/humidity	-10°C to +40°C / 80% Max.
Dimensions	170(L) x 120(W) x 95(D)mm
Weight (battery included)	Approx. 780g
Power source	1.5V (AA) x 8
Safety standard	EN 61010-1 CAT II 250V, EN 61326-1

### Accessories

- Instruction manual
- Test leads
- Shoulder belt
- Batteries



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AL-34B



BET-1800

## 8025 LP Digital LOOP / PSC Tester

### Features

- Battery is not used.
- 3 ½ digit LCD (2000-count).
- Backlight function.
- 15mA loop measurement which will not trip ELCBs.
- Convenient and easier for users to measure the loop impedance directly without bypassing the wires.
- Wiring check function.
- Over temperature protection.
- Over voltage protection.
- Built-in voltmeter.
- Built-in earth tester.
- Built-in loop/psc tester.
- Safety standard : EN 61010-1 CAT III 300V  
EN 61326-1

### Specifications

#### Loop Impedance

Range	Measuring range	Nominal test current at 0 Ω external loop	Accuracy
20 Ω	0.00~19.99 Ω	23A / 40ms	(2%rdg + 4dgt)
200 Ω	0.0~199.9 Ω	2.3A / 40ms	
2000 Ω	0~1999 Ω	15mA / 400ms	

#### Prospective Short-circuit Current

Range	Measuring range	Nominal test current at 0 Ω external loop	Accuracy
20 KA	0.00~4.00 KA	23A / 40ms	Consider accuracy of loop impedance
2000 A	0~1999 A	23A / 40ms	
200 A	0.0~199.9 A	2.3A / 40ms	

#### Voltage Display

Measuring range	Accuracy	Remark
150~260 V	(2%rdg + 4dgt)	at 0 Ω external loop

#### General

Temperature:	0 ~ 40 °C
System voltage:	230V: +13% / -15%
System frequency:	50Hz
None Battery system voltage:	150V ~ 260V
Over Temperature Protection:	When overheating, the "H" symbol will show on the LCD, and the 8025LP stop measuring.
Wiring check P-E / P-N	LEDs illuminate when the wiring polarity of circuit under test is correct
Wiring check N-E	LED is light when P and N are reversed or the Earth is not connected.
15mA Loop measurement	Loop impedance 2000Ω range measurement is carried out with low test current (15mA). The current will not cause tripping out for ELCBs



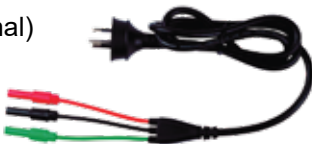
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AL-8025



TEL-EL (Optional)



### Accessories

- Instruction manual
- Test leads
- Carry case





## 1826 NA Electrical Network Analyzer

### Features

- Microprocessor-controlled.
- Measures Earth Resistance without the need for poles in the ground or external measuring wires.
- Earth measurement uses the real earth current path and the current generated by the electric network, without the need for any disconnection.
- The Earth Resistance displayed is exactly the earth resistance that the earth current will need to go through if an earth fault occurs. No need to add all the bonding points and connection paths resistances.
- Voltage test L-N and L-E.
- Loop test for L-E and L-N and PSC.
- Checks wiring integrity (LEDs).
- Auto off/auto ranging (software ranging).
- Combined prospective short circuit current, loop, individual wire and Earth Tester.
- Enables analysis of constituent components in L-E and L-N loops giving resistance of earth, neutral wire, live wire and transformer winding.
- Measures the impedance of the line itself so you can analyze and differentiate between the multiples paths of the wiring.
- Measures the Neutral Impedance. Single one smart push button operation; ON, Test, Scroll trough results and menus.
- Displays voltage supply at the transformer (Line to Neutral), without loading the transformer.
- Displays voltage between Line (Phase) and Earth (Ground), without drawing any current.
- Display can be customized for large orders.

### Specifications

Loop impedance range L-E, L-N	0.03-2000Ω (software ctrl)
Test currents in each loop	11.76A at 230V / 50Hz
Voltage measurement L-N, L-E	50 to 280V AC (Sine)
Earth wire/path return resistance	0.01-2000Ω (software ctrl)
Neutral wire resistance	0.01-2000Ω (software ctrl)
Line wire resistance & transformer windings	0.01-2000Ω (software ctrl)
PSC current (L-N) max	6kA at 230Vac supply
PSC current (L-E) max	6kA at 230Vac supply
Operating voltage	230V±20V at 50Hz Sine
Loop impedance	±4%rdg ± 2dgt
PSC current	±10%rdg ± 5dgt
Voltage	±2%rdg ±1dgt

### General

Operating-temperature / humidity	0°C to +40°C 80% Max.
Dimensions	170(L) × 165(W) × 92(D)mm
Weight (battery Included)	Approx. 970g
Power source	1.5V (AA) × 8
Safety standard	EN 61010-1 CAT III 300V, EN 61326-1

The 1826 NA is a portable electrical network analyzer. It has a built-in Earth tester which does not require the use of poles or long wires. This instrument is useful for fault-finding or commissioning of electrical installations.

Differentiation between the Line (hot), Neutral and Earth (ground) path by reading their values has never been so easy. Bad contacts, old wiring or bad earth path are quickly identified.

Faulty electrical network can be resolved in a fraction of the time normally required using conventional equipment.

Down time due to a faulty electrical network is minimal as the fault can be identified and diagnosed quickly. Find which wire need to be attended to and why (find those old wires with high impedance before a fire starts, and replace them).

The complete electrical network can be analyzed by scrolling through the results.

### Accessories

Instruction manual  
Test leads  
Shoulder belt  
Batteries

## 2126 NA Electrical Network Analyzer

### Features

- Microprocessor-controlled.
- Built-in earth tester.
- Built-in loop/psc tester. 0.03-2000Ω (software ctrl).
- Built-in voltmeter.
- Built-in wiring checker.
- One push button smart control.
- Display L-N and L-E voltages. 50 to 280Vac (sine).
- Display line path impedance. 0.01-2000Ω (software ctrl).
- Display earth path impedance. 0.01-2000Ω (software ctrl).
- Display neutral path impedance. 0.01-2000Ω (software ctrl).
- Display psc line to neutral. 6kA@230Vac supply.
- Display psc line to earth. 6kA@230Vac supply.
- Re-scroll through previous results.
- Bat. ok/low battery indicator.
- Auto off function.
- Color-coded test leads.
- Rugged case.
- Ultra low power consumption.



The 2126 NA is a portable real electrical network analyzer. It has a built-in earth tester which does not requires the use of poles or long wires.

This instrument is useful for fault-finding or commissioning of electrical installations.

Differentiating between the line (hot), neutral and earth (ground) path by reading their values has never been easier. Bad contacts, old wiring or bad earth path are quickly identified.

Faulty electrical network can be resolved in a fraction of the time normally required using conventional equipment.

Down time due to a faulty electrical network is minimal as the fault can be identified and diagnosed quickly.

Find which wire need to be attended to and why (find those old wires with high impedance before a fire starts and replace them).

The complete electrical network can be analyzed by scrolling through the results.

Of course, it has a built-in loop impedance and prospective short circuit tester as well as a voltmeter.

### Specifications

Loop / Earth / Wires	0.03-2000Ω (auto-ranging)
Prospective short circuit	0~6kA at 230Vac
Operating voltage	50V~275Vac (50Hz)
Best performance at rated voltage	230Vac ± 20V Max.10A
Accuracy of voltage	±1%(210~250V) ±3% otherwise
Accuracy of loops / earth	±2% (0.05~50Ω) / ±3% (50~500Ω)
Accuracy of wires impedances	±15% (above 500Ω)

### General

Operating-temperature	0°C to +40°C
/ humidity	80% Max.
Dimensions	210(L) × 210(W) × 100(D)mm
Weight (battery Included)	Approx. 1445g
Power source	1.5V (AA) × 6
Safety standard	EN 61010-1 CAT III 270V, EN 61326-1

### Accessories

Instruction manual  
Test leads  
Shoulder belt  
Batteries

## 2726 NA Electrical Network Analyzer

### Features

- Microprocessor-controlled.
- Built-in earth tester.
- Built-in loop/psc tester. 0.03-2000Ω (software ctrl).
- Built-in voltmeter.
- Built-in wiring checker.
- One push button smart control.
- Display L-N and L-E voltages. 50 to 280Vac (sine).
- Display line path impedance. 0.01-2000Ω (software ctrl).
- Display earth path impedance. 0.01-2000Ω (software ctrl).
- Display neutral path impedance. 0.01-2000Ω (software ctrl).
- Display psc line to neutral. 6kA@230Vac supply.
- Display psc line to earth. 6kA@230Vac supply.
- Re-scroll through previous results.
- Bat. ok/low battery indicator.
- Auto-off function.
- Color coded test leads.
- Rugged Case.
- Ultra low power consumption.

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The 2726 NA is a portable real electrical network analyzer. It has a built-in earth tester which does not require the use of poles or long wires.

This instrument is useful for fault-finding or commissioning of electrical installations.

Differentiating between the line (hot), neutral and earth (ground) path by reading their values has never been easier. Bad contacts, old wiring or bad earth path are quickly identified.

Faulty electrical network can be resolved in a fraction of the time normally required using conventional equipment.

Down time due to a faulty electrical network is minimal as the fault can be identified and diagnosed quickly.

Find which wire needs to be attended to and why (find those old wires with high impedance before a fire starts and replace them).

The complete electrical network can be analyzed by scrolling through the results.

Of course, it has a built-in loop impedance and prospective short circuit tester as well as a voltmeter.

### Specifications

Loop / Earth / Wires	0.03-2000Ω (auto-ranging)
Prospective short circuit	0~6kA at 230Vac
Operating voltage	50V~275Vac (50Hz)
Best performance at rated voltage	230Vac ± 20V Max. 10A
Accuracy of voltage	±1%(210~250V) ±3% otherwise
Accuracy of loops / earth	±2% (0.05~50Ω) / ±3% (50~500Ω)
Accuracy of wires impedances	±15% (above 500Ω)

### General

Operating-temperature	0°C to +40°C
/ humidity	80% Max.
Dimensions	205(L) × 90(W) × 55(D)mm
Weight (battery Included)	Approx. 570g
Power source	1.5V (AA) × 6
Safety standard	EN 61010-1 CAT IV 300V, EN 61326-1

### Accessories

Instruction manual  
Test leads  
Carry Case  
Batteries



# Electrical Network Analyzers

## 4126 NA Electrical Network Analyzer

### Features

- Microprocessor-controlled.
- 2 Lines × 16 Characters LCD.
- Auto-ranging / Auto-off.
- One Push Button Operation.
- Low Consumption.
- Better than 3% Accuracy(0.05-50Ω).
- Wiring Integrity Check(display + LEDs).
- Over temperature protection and indication.
- Stores previous readings.
- Measures : L-E and L-N AC voltages.  
L-E and L-N Loop Impedance.  
Prospective short circuits L-E and L-N.  
Earth Spike, Line and Neutral Impedances.



CE

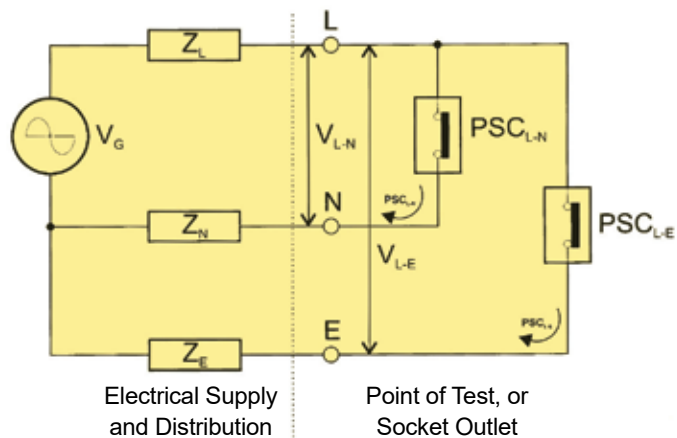
VG = Voltage of the generator (supply transformer)  
(internal impedance of transformer = X-Form)

ZL = Impedance of the line wire from the transformer, up to the test point (ZL displayed by Instrument also includes X-Form). If this impedance is too high, check the connections of the line wiring, check the quality of the line wiring and the switches / contacts in the line circuit.

ZN = Impedance of the neutral wire from the transformer, up to the test point. If this impedance is too high, check the connections of the neutral wiring, check the quality of the line wiring and the switches or contacts in the neutral circuit.

ZE = Impedance of the earth wire, including the earth impedance itself, as seen by the protection system, similar checking, specially at the bounding points should be done is this path impedance is too high.

Fault Finding And Analyzing  
The Electrical Network



### Specifications

Loop / Earth / Wires	0.03-2000Ω (auto-ranging)
Prospective short circuit	0~6kA at 230Vac
Operating voltage	50V~275Vac (50Hz)
Best performance at rated voltage	230Vac ± 20V Max. 10A
Accuracy of voltage	±1%(210~250V) / ±3% otherwise
Accuracy of loops / earth	±2% (0.05~50Ω) / ±3% (50~500Ω)
Accuracy of wires impedances	±15% (above 500Ω)

### General

Operating-temperature / humidity	0°C to +40°C 80% Max.
Dimensions	205(L) × 90(W) × 110(D)mm
Weight	Approx. 1500g (battery Included)
Power source	1.5V (AA) × 8
Safety standard	EN 61010-1 CAT III 300V EN 61326-1

### Accessories

Instruction manual	AL-34B
Test leads	
Carry Case	
Batteries	BET-2800

