



Hoyt Earth Resistance Testers

4 Wire Earth Resistance Testers

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4234 ER	2

4 Wire Earth Resistance & Resistivity Testers

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3 Wire (Analogue) Earth Resistance Testers

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4 Wire Earth Resistance Testers

2734 ER 4 Wire Earth Resistance Tester

Features

- Microprocessor-controlled with advanced safety features.
- 4-wire testing only.
- Automatic C spike check.
- Auto power-off.
- Auto data hold.
- Large LCD (2000 counts).
- Protective terminal cover.

Specifications

Measuring ranges

Earth Resistance:	0-20Ω / 0-200Ω / 0-2000Ω
Earth Voltage:	0-200V AC

Accuracy

Earth Resistance:	±2%rdg±3dgt
Earth Voltage:	±2%rdg±3dgt

Earth resistance resolution	0-20Ω : 0.01Ω 0-200Ω : 0.1Ω 0-2000Ω : 1Ω
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General

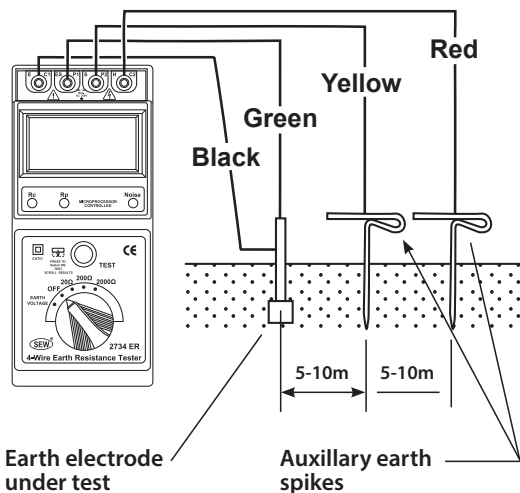
Operating Temp. & Humidity	0°C~40°C ≤80% R.H.
Storage Temp. & Humidity:	-10°C~50°C ≤80% R.H.
Dimensions	205(L) x 90(W) x 55(D)mm
Weight (battery included)	Approx. 380g
Power source	1.5V (AA) x 6
Safety standards	EN 61010-1 CAT IV 200V EN 61326-1 EN 61557-1 EN 61557-5

Accessories

- Test leads (red-15m, black-10m, yellow 10m, green-5m)
- Auxillary spike
- Carrying case
- Batteries
- Instruction Manual



Connection Diagram



Test lead & reel x4



Auxillary spike x2



Carrying case

4 Wire Earth Resistance Testers

4234 ER 4 Wire Earth Resistance Tester

Features

- Microprocessor-controlled.
- Earth testing at 2Ω, 20Ω, 200Ω, 2kΩ.
- Earth voltage measuring : 0-300V AC.
- Automatic C spike check.
- Automatic P spike check.
- 2-Wire test
- 3-Wire test.
- 4-Wire test.
- LCM display.
- Auto ranging.
- Auto power OFF.
- Data hold.
- Robust, compact and easy-to-carry.

Specifications

Measuring ranges

Earth Resistance:	0-2Ω/ 0-20Ω/ 0-200Ω/ 0-2kΩ
Earth Voltage:	0-300V AC

Accuracy

Earth Resistance:	0-2Ω: $\pm(2\%rdg+0.1\Omega)$ 0-20Ω,0-200Ω,0-2kΩ: $\pm(2\%rdg+3dgt)$
Earth Voltage:	$\pm 2\%rdg\pm 3dgt$

Earth resistance resolution	0-2Ω : 0.01Ω 0-20Ω : 0.1Ω 0-200Ω : 1Ω 0-2kΩ : 10Ω
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General

Operating Temp. & Humidity	0°C~40°C ≤80% R.H.
Storage Temp. & Humidity:	-10°C~50°C ≤80% R.H.
Dimensions	250(L) x 190(W) x 110(D)mm
Weight (battery included)	Approx. 1500g
Power source	1.5V (AA) x 8
Safety standards	EN 61010-1 CAT IV 300V EN 61326-1 EN 61557-1 EN 61557-5

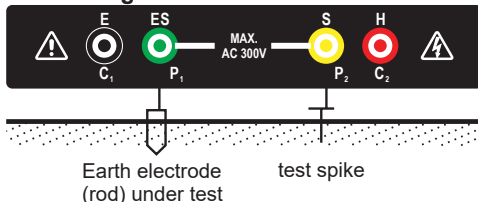
Accessories

- Test leads
 - red-15m
 - black-10m
 - yellow10m
 - green-5m
- Auxiliary earth spikes
- Carrying case
- Shoulder belt
- Batteries
- Instruction Manual

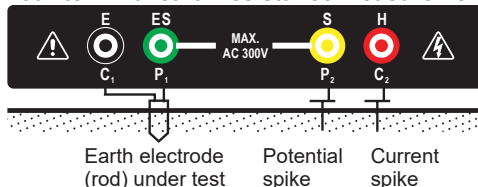


CE

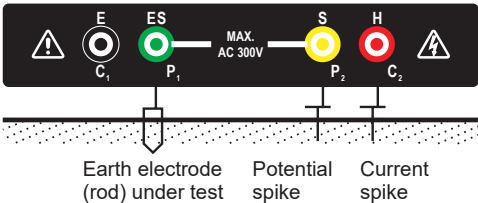
Earth Voltage measurement



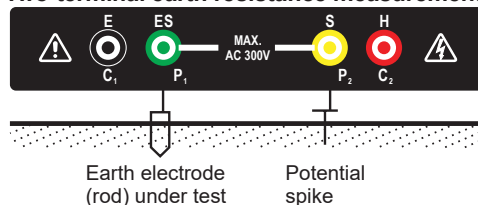
Four-terminal earth resistance measurement



Three-terminal earth resistance measurement



Two-terminal earth resistance measurement



4 Wire Earth Resistance & Resistivity Testers

4235 ER 4-Wire Earth Resistance / Earth Resistivity Tester



CE

Features

- Microprocessor-controlled.
- Earth resistivity (ρ) test.
- Earth testing at 20 Ω , 200 Ω , 2k Ω .
- Earth voltage measuring : 0-300V AC.
- Automatic C spike check.
- Automatic P spike check.
- 2-Wire test, 3-Wire test, 4-Wire test.
- LCM display.
- Auto ranging.
- Auto power OFF.
- Data hold.
- 200 measurement results can be saved in the memory and recalled on the display.
- Interval between auxiliary earth spikes is 1.0~50.0m.

Specifications

Measuring ranges

Earth Resistance:	0-20 Ω / 0-200 Ω / 0-2k Ω
Earth Voltage:	0-300.0V AC
Earth Resistivity	0.06~6.28k Ω .m
($\rho=2 \times \pi \times L \times R$):	0.62~62.8k Ω .m 6.28~628k Ω .m

Accuracy

Earth Resistance:	0-20 Ω : $\pm(2\%rdg+0.1\Omega)$ 0-200 Ω , 0-2k Ω : $\pm(2\%rdg+3dgt)$
Earth Voltage:	$\pm(2\%rdg+3dgt)$

Earth resistance resolution	0-20 Ω : 0.01 Ω 0-200 Ω : 0.1 Ω 0-2k Ω : 1 Ω
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Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA
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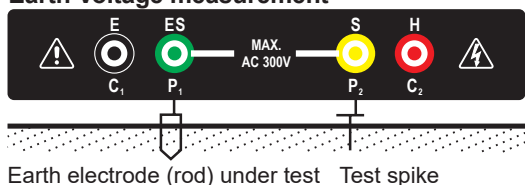
General

Operating Temp. & Humidity	0 $^{\circ}$ C~40 $^{\circ}$ C \leq 80% R.H.
Storage Temp. & Humidity:	-10 $^{\circ}$ C~50 $^{\circ}$ C \leq 80% R.H.
Dimensions	250(L) x 190(W) x 110(D)mm
Weight (battery included)	Approx. 1500g
Power source	1.5V (AA) x 8
Safety standards	EN 61010-1 CAT IV 300V EN 61557-1, EN 61557-5 EN 61326-1

Accessories

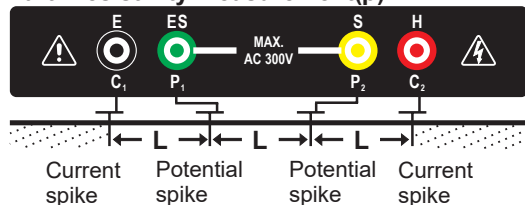
- Test leads (red-15m, black-10m, yellow-10m, green-5m)
- Instruction manual
- Auxiliary earth spikes
- Carry case,
- Shoulder belt,
- Batteries

Earth Voltage measurement



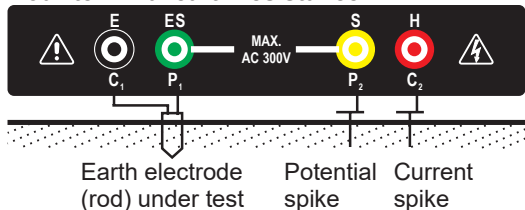
Earth electrode (rod) under test Test spike

Earth resistivity measurement(ρ)



Current spike Potential spike Potential spike Current spike

Four-terminal earth resistance



Earth electrode (rod) under test Potential spike Current spike

4 Wire Earth Resistance & Resistivity Testers

4236 ER 4-Wire Earth Resistance / Earth Resistivity Tester



(CA-232)

Features

- Microprocessor-controlled.
- Earth resistivity (ρ) test.
- Earth testing at 20 Ω , 200 Ω , 2k Ω .
- Earth voltage measuring : 0-300V AC.
- Automatic C spike check.
- Automatic P spike check.
- 2-Wire test, 3-Wire test, 4-Wire test.
- LCM display.
- Auto ranging.
- Auto power OFF.
- Data hold.
- 200 measurement results can be saved in the memory and recalled on the display.
- Interval between auxiliary earth spikes is 1.0~50.0m.
- Optical USB to RS-232 data transmission.
- The stored data can be transferred to a PC.
- 2 optical LEDs are built-in for data transfer.

Specifications

Measuring ranges

Earth Resistance:	0-20 Ω / 0-200 Ω / 0-2k Ω
Earth Voltage:	0-300.0V AC
Earth Resistivity	0.06~6.28k Ω .m
($\rho=2 \times \pi \times L \times R$):	0.62~62.8k Ω .m
	6.28~628k Ω .m

Accuracy

Earth Resistance:	0-20 Ω : $\pm(2\%rdg+0.1\Omega)$ 0-200 Ω ,0-2k Ω : $\pm(2\%rdg+3dgt)$
Earth Voltage:	$\pm(2\%rdg+3dgt)$

Earth resistance resolution	0-20 Ω : 0.01 Ω 0-200 Ω : 0.1 Ω 0-2k Ω : 1 Ω
Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA

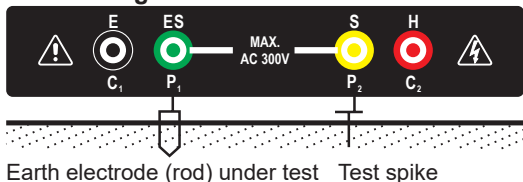
General

Operating Temp. & Humidity	0 $^{\circ}$ C~40 $^{\circ}$ C \leq 80% R.H.
Storage Temp. & Humidity:	-10 $^{\circ}$ C~50 $^{\circ}$ C \leq 80% R.H.
Dimensions	250(L) x 190(W) x 110(D)mm
Weight (battery included)	Approx. 1500g
Power source	1.5V (AA) x 8
Safety standards	EN 61010-1 CAT IV 300V EN 61557-1, EN 61557-5 EN 61326-1

Accessories

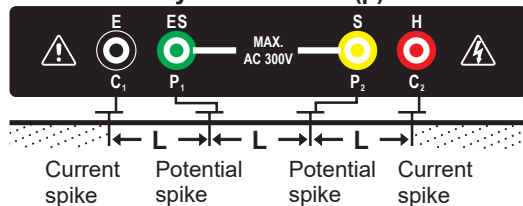
- Test leads (red-15m, black-10m, yellow-10m, green-5m)
- Instruction manual
- Auxiliary earth spikes
- Carry case,
- Shoulder belt,
- Batteries
- Data Transmission cable CA-232(4236ER)
- Compact disc(CD) for PC interface(4236ER).

Earth Voltage measurement



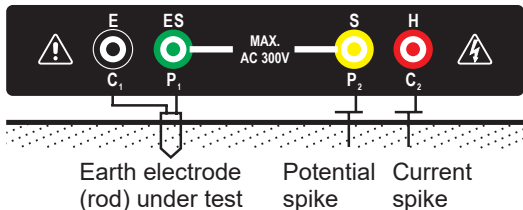
Earth electrode (rod) under test Test spike

Earth resistivity measurement(ρ)



Current spike Potential spike Potential spike Current spike

Four-terminal earth resistance



Earth electrode (rod) under test Potential spike Current spike

3 Wire Earth Resistance Testers



ST-1505 3 Wire (Analog) Earth Resistance Tester

Features

- High quality Taut Band movement.
- Capable of measuring earth resistance and earth voltage.
- The timer operates automatically for about three to five minutes when the "PUSH BUTTON SWITCH" and "TIMER ON BUTTON" are pressed together.
- This will keep test "ON" for the duration of the timer.
- Battery check function.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges

Earth Resistance:	0-10Ω / 0-100Ω / 0-1000Ω
Earth Voltage:	0-30 Vac (40-500Hz)

Accuracy

Earth Resistance:	±3% of full scale
Earth Voltage:	±2.5% of full scale

Measuring system

Earth resistance by constant current Inverter 820Hz approx. 2mA

Open circuit indication

LED will be unlit

General

Dimensions	163(L) × 100(W) × 50(D)mm
Weight (battery included)	Approx. 460g
Power source	1.5V (AA) x 6
Safety standards	EN 61010-1 CAT II 30

Accessories

Instruction manual
 Test leads (red-15m, yellow-10m, green-5m)
 Auxiliary earth spikes
 Carry case
 Batteries



AL-36



TOC-1505



TEL-1505 S

3 Wire Earth Resistance Testers

1105 ER 3 Wire (Analog) Earth Resistance Tester



CE



AL-36



AL-33



TEL-1505 S



BET-1800

Features

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- In addition to facilitating for precision measurement, test leads for simplified two-wire measuring system also are supplied as standard accessories.
- Battery operated.
- Battery life indicator.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges	
Earth Resistance:	0-12Ω / 0-120Ω / 0-1200Ω
Earth Voltage:	0-30 Vac (40-500Hz)
Accuracy	
Earth Resistance:	±3% of full scale
Earth Voltage:	±2.5% of full scale
Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA
Open circuit indication	LED will be unlit

General

Dimensions	175(L) × 85(W) × 75(D)mm
Weight (battery included)	Approx. 600g
Power source	1.5V (AA) x 8
Safety standards	EN 61010-1 CAT II 30V EN 61326-1

Accessories

- Instruction manual
- Test leads (red-15m, yellow-10m, green-5m)
- Auxiliary earth spikes
- Simplified measurement probe
- Shoulder belt
- Batteries

3 Wire Earth Resistance Testers

1805 ER 3 Wire (Analog) Earth Resistance Tester



Features

- High quality Taut Band movement.
- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- Test test leads are supplied as standard accessories for simplified two-wire measuring system.
- Battery operated.
- Battery check function.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges

Earth Resistance:	0-10 Ω / 0-100 Ω / 0-1000 Ω
Earth Voltage:	0-30 Vac (40-500Hz)

Accuracy

Earth Resistance:	$\pm 3\%$ of full scale
Earth Voltage:	$\pm 2.5\%$ of full scale

Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA
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Open circuit indication	LED will be unlit
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General

Dimensions	170(L) \times 165(W) \times 92(D)mm
Weight (battery included)	Approx. 1000g
Power source	1.5V (AA) \times 8
Safety standards	EN 61010-1 CAT III 150V, EN 61326-1

Accessories

Instruction manual
Test leads (red-15m, yellow-10m, green-5m)
Auxiliary earth spikes
Simplified measurement probe
Shoulder belt
Batteries

3 Wire Earth Resistance Testers

2105 ER 3 Wire (Analog) Earth Resistance Tester



CE

Features

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- In addition to facilitating for precision measurement, test leads for simplified two-wire measuring system also are supplied as standard accessories.
- Battery operated.
- Battery life indicator.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges	
Earth Resistance:	0-12 Ω / 0-120 Ω / 0-1200 Ω
Earth Voltage:	0-30 Vac (40-500Hz)
Accuracy	
Earth Resistance:	\pm 3% of full scale
Earth Voltage:	\pm 2.5% of full scale
Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA
Open circuit indication	LED will be unlit

General

Dimensions	210(L) \times 210(W) \times 100(D)mm
Weight	Approx. 1370g (battery included)
Power source	1.5V (AA) \times 8
Safety standards	EN 61010-1 CAT III 30V, EN 61326-1

Accessories

Instruction manual
Test leads (red-15m, yellow-10m, green-5m)
Auxiliary earth spikes
Simplified measurement probe
Shoulder belt
Batteries

3 Wire Earth Resistance Testers

2705 ER 3 Wire (Analog) Earth Resistance Tester



CE

Features

- High quality Taut Band movement.
- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- The test leads are supplied as standard accessories for simplified two-wire measuring system.
- Battery operated.
- Battery check function.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges	
Earth Resistance:	0-10Ω / 0-100Ω / 0-1000Ω
Earth Voltage:	0-30 Vac (40-500Hz)
Accuracy	
Earth Resistance:	±3% of full scale
Earth Voltage:	±2.5% of full scale
Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA
Open circuit indication	LED will be unlit

General

Dimensions	205(L) × 90(W) × 55(D)mm
Weight	Approx. 514g (battery included)
Power source	1.5V (AA) x 6
Safety standards	EN 61010-1 CAT III 30V, EN 61326-1

Accessories

Instruction manual
Test leads (red-15m, yellow-10m, green-5m)
Auxiliary earth spikes
Simplified measurement probe
Carry case
Batteries

3 Wire Earth Resistance Testers

4105 ER 3 Wire (Analog) Earth Resistance Tester



CE



AL-36



AL-33



TEL-1505 S



BET-1800

Features

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- In addition to facilitating for precision measurement, test leads for simplified two-wire measuring system also are supplied as standard accessories.
- Battery operated.
- Battery life indicator.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges	
Earth Resistance:	0-12Ω / 0-120Ω / 0-1200Ω
Earth Voltage:	0-30 Vac (40-500Hz)
Accuracy	
Earth Resistance:	±3% of full scale
Earth Voltage:	±2.5% of full scale
Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA
Open circuit indication	LED will be unlit

General

Dimensions	250(L) × 190(W) × 110(D)mm
Weight	Approx. 1500g (battery included)
Power source	1.5V (AA) x 8
Safety standards	EN 61010-1 CAT III 30V, EN 61326-1

Accessories

- Instruction manual
- Test leads (red-15m, yellow-10m, green-5m)
- Auxiliary earth spikes
- Simplified measurement probe
- Shoulder belt
- Batteries

3 Wire Earth Resistance Testers

IP54





CE

1120 ER 3 Wire (Digital) Earth Resistance Tester

Features

- Waterproof: IP54
- Capable of measuring earth resistance and earth voltage
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test
- The test leads are supplied as standard accessories for simplified two-wire measuring system
- 0Ω adjustment
- Battery operated
- Data hold function
- Low battery indication

Specifications

Measuring ranges	Earth resistance: 0-20Ω / 0-200Ω / 0-2000Ω Earth voltage: 0-200 Vac(40-500Hz)
Accuracy	Earth resistance: ±(2%rdg+2dgt) or ±0.1Ω, which is greater Earth voltage ±(1%rdg+2dgt)
Earth resistance resolution	0-20Ω : 0.01Ω 0-200Ω : 0.1Ω 0-2000Ω : 1Ω
Measuring system	Earth Resistance by constant current inverter 820Hz approx. 2mA
Display	3½ digit (2000 counts)
0Ω adjustment	√
Open circuit indication	LED will be unlit
Low battery indication	 symbol appears on the display
Data hold indication	 symbol appears on the display
Over range indication	"1"(MSD)

The 1120 ER is a professional instrument suitable for testing single earth electrodes such as lightning conductors and other small earthing systems. The unit can also measure the resistance of conductors such as continuity and conduit coupling joints.

Earth resistance can be measured directly from 0.01 ohms up to 1999 ohms. The reading is displayed on a large, easy-to-read digital display. The reading can be adjusted to 0Ω as a baseline control reading when shortcircuiting all of the test leads.

The 1120 ER makes measurements by passing a constant current through the device being tested and measuring the voltage across it. The earth resistance is then calculated by Ohm's Law.

The advanced circuitry of 1120 ER permits the instrument to operate with minimal influence from earth voltage and earth resistance of the auxiliary spikes. The instrument is powered by 8 x 1.5 volt manganese alkaline AA batteries. The calibration of the instrument is performed with the included test leads. When using all three test leads in the three-terminal method, accuracy is assured for most common applications. Alternatively, two-terminal measurements, though generally less accurate than three-terminal measurements, are also possible by shorting the P and C terminals or by using the simplified measurement probe.

The test frequency of 820Hz avoids stray currents at power frequencies and their harmonics. Additionally, the 1120 ER utilizes a built-in filter to reject unwanted signals. The batteries are constantly being checked while in use. The rugged case is ideal for outdoor work.

Earth electrode testing, which is an important part of electrical installation and maintenance procedures, is made easy with the 1120 ER. It can be used by electrical contractors or maintenance engineers to check the effectiveness of their earth electrode systems.

General

Dimensions	175(L) × 85(W) × 75(D)mm
Weight	Approx. 600g (battery included)
Power source	1.5V (AA) × 8
Safety standards	IEC/EN 61010-1 CAT III 200V IEC 61557-1 IEC 61557-5, EN 61326-1

Accessories

Instruction manual
Test leads (red-15m, yellow-10m, green-5m)
Auxiliary earth spikes
Simplified measurement probe
Soft pouch
Shoulder belt
Batteries

3 Wire Earth Resistance Testers

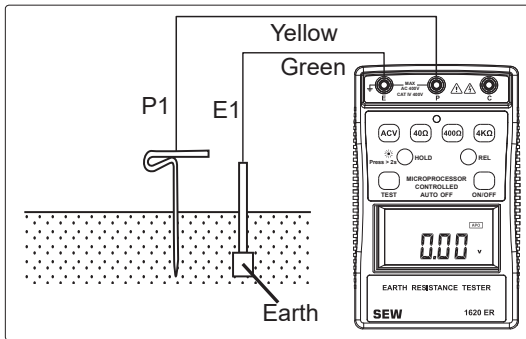


1620 ER 3 Wire (Digital) Earth Resistance Tester

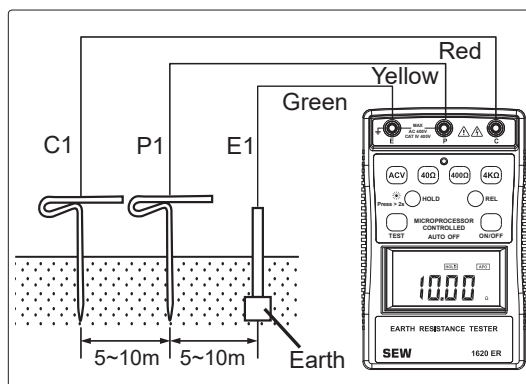
Features

- Microprocessor-controlled.
- Measures earth resistance in three ranges : 40Ω, 400Ω, 4kΩ.
- Capable of measuring earth voltage.
- 3 ¾ digit (4000 counts).
- LCD backlight display.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- Data hold function.
- Relative function.
- Auto power-off function.
- Low battery indication.
- Calibration performed with supplied test leads.

Earth Voltage measurement



Earth Resistance measurement



Specifications

Measuring ranges

Earth Resistance: 0~40Ω / 0~400Ω / 0~4kΩ

Earth Voltage: 0~400V (40~500Hz)

Accuracy

Earth Resistance: $\pm(2\%rdg+3dgt)$

Earth Voltage: $\pm(2\%rdg+3dgt)$

Measuring system

Earth resistance by constant current
Inverter 820Hz approx. 2mA

General

Dimensions

163(L) x 102(W) x 50(D)mm

Weight

Approx. 440g (battery included)

Power source

1.5V (AA) x 6

Safety standards

EN 61010-1 CAT IV 400V

EN 61557-1, EN 61557-5

EN 61326-1.

Accessories

Instruction manual

Test leads (red-15m, yellow-10m, green-5m)

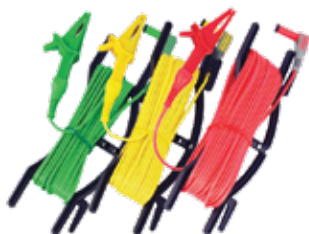
Auxiliary earth spikes

Simplified measurement probe

Hand strap

Carry case

Batteries



AL-36



TEL-1505 S



AL-33 (optional)



TOC-1505

3 Wire Earth Resistance Testers

ST-1520 3 Wire (Digital) Earth Resistance Tester

Features

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- Auto power off function.
- The timer operates automatically for about three to five minutes when the "PUSH BUTTON SWITCH" and "TIMER ON BUTTON" are pressed together. This will keep test "ON" for the duration of the timer.
- Timer for test function (count 3-5 minutes).
- Battery operated.
- Data hold function.
- Small and light weight.
- Calibration performed with supplied test leads.

Specifications

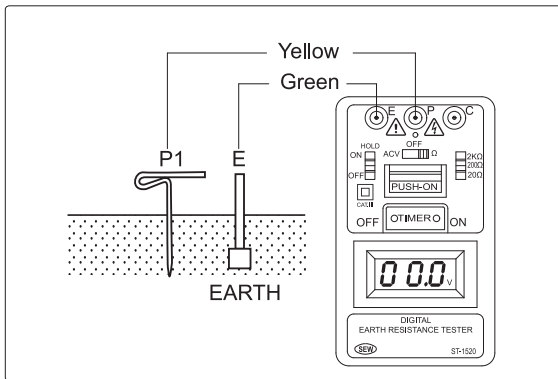
Measuring ranges	
Earth Resistance:	0-20Ω / 0-200Ω / 0-2000Ω
Earth Voltage:	0-200 Vac (40-500Hz)
Accuracy	
Earth Resistance:	±(2%rdg+2dgt) or ±0.1Ω, which is greater
Earth Voltage:	±(1%rdg+2dgt)
Earth resistance resolution	0-20Ω : 0.01Ω 0-200Ω : 0.1Ω 0-2000Ω : 1Ω
Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA
Display	3½ digit (2000 counts)
Open circuit indication	LED will be unlit
Low battery indication	" B " symbol appears on the display
Data hold indication	" DH " symbol appears on the display
Over range indication	" 1 " (MSD)

General

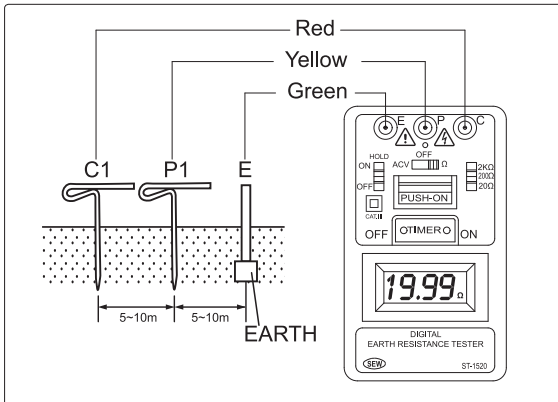
Dimensions	163(L) x 102(W) x 50(D)mm
Weight	Approx. 480g (battery included)
Power source	1.5V (AA) x 6
Safety standards	EN 61010-1 CAT III 200V EN 55022



Earth Voltage Measurement



Earth Resistance Measurement



Accessories

- Instruction manual
- Test leads (red-15m, yellow-10m, green-5m)
- Auxiliary earth spikes
- Simplified measurement probe
- Hand strap
- Carry case
- Batteries



AL-36



TEL-1505 S



TOC-1505

3 Wire Earth Resistance Testers

1820 ER 3 Wire (Digital) Earth Resistance Tester

Features

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- The test leads are supplied as standard accessories for simplified two-wire measuring system.
- Battery operated.
- Data hold function.
- Low battery indication.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges

Earth Resistance:	0-20 Ω / 0-200 Ω / 0-2000 Ω
Earth Voltage:	0-200 Vac (40-500Hz)

Accuracy

Earth Resistance:	$\pm(2\%rdg+2dgt)$ or $\pm 0.1\Omega$, which is greater
Earth Voltage:	$\pm(1\%rdg+2dgt)$

Earth resistance resolution

0-20 Ω :	0.01 Ω
0-200 Ω :	0.1 Ω
0-2000 Ω :	1 Ω

Measuring system

Earth resistance by constant current
Inverter 820Hz approx. 2mA


Display

3½ digit (2000 counts)

Open circuit indication

LED will be unlit

Low battery indication

“  “ symbol appears on the display

Data hold indication

“ HOLD ” symbol appears on the display

Over range indication

“1”(MSD)

General

Dimensions	170(L) × 165(W) × 92(D)mm
Weight	Approx. 1040g (battery included)
Power source	1.5V (AA) × 8
Safety standards	EN 61010-1 CAT II 300V IEC 61557-1 IEC 61557-5 EN 61326-1

Accessories

Instruction manual
Test leads (red-15m, yellow-10m, green-5m)
Auxiliary earth spikes
Simplified measurement probe
Shoulder belt
Batteries



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3 Wire Earth Resistance Testers

2120 ER 3 Wire (Digital) Earth Resistance Tester

Features

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- The test leads are supplied as standard accessories for simplified two-wire measuring system.
- 0Ω adjustment.
- Battery operated.
- Data hold function.
- Low battery indication.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges	
Earth Resistance:	0-20Ω / 0-200Ω / 0-2000Ω
Earth Voltage:	0-200 Vac (40-500Hz)
Accuracy	
Earth Resistance:	±(2%rdg+2dgt) or ±0.1Ω, which is greater
Earth Voltage:	±(1%rdg+2dgt)
Earth resistance resolution	0-20Ω : 0.01Ω 0-200Ω : 0.1Ω 0-2000Ω : 1Ω
Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA
Display	3½ digit (2000 counts)
Open circuit indication	LED will be unlit
Low battery indication	“  “ symbol appears on the display
Data hold indication	“ HOLD ” symbol appears on the display
Over range indication	“1”(MSD)

General

Dimensions	210(L) × 210(W) × 100(D)mm
Weight	Approx. 1395g (battery included)
Power source	1.5V (AA) x 8
Safety standards	EN 61010-1 CAT II 200V IEC 61557-1 IEC 61557-5 EN 61326-1

Accessories

Instruction manual
Test leads (red-15m, yellow-10m, green-5m)
Auxiliary earth spikes
Simplified measurement probe
Shoulder belt
Carry case
Batteries



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3 Wire Earth Resistance Testers




CE

2720 ER 3 Wire (Digital) Earth Resistance Tester

Features

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- The test leads are supplied as standard accessories for simplified two-wire measuring system.
- Battery operated.
- Data hold function.
- Battery test indication.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges	
Earth Resistance:	0-20Ω / 0-200Ω / 0-2000Ω
Earth Voltage:	0-200 Vac (40-500Hz)
Accuracy	
Earth Resistance:	±(2%rdg+2dgt) or ±0.1Ω, which is greater
Earth Voltage:	±(1%rdg+2dgt)
Earth resistance resolution	0-20Ω : 0.01Ω 0-200Ω : 0.1Ω 0-2000Ω : 1Ω
Measuring system	Earth resistance by constant current Inverter 820Hz approx. 2mA
Display	3½ digit (2000 counts)
Open circuit indication	LED will be unlit
Low battery indication	“  “ symbol appears on the display
Data hold indication	“ HOLD ” symbol appears on the display
Over range indication	“1”(MSD)

General

Dimensions	205(L) × 90(W) × 55(D)mm
Weight	Approx. 550g (battery included)
Power source	1.5V (AA) x 6
Safety standards	EN 61010-1 CAT III 300V IEC 61557-1 IEC 61557-5 EN 61326-1

Accessories

Instruction manual
Test leads (red-15m, yellow-10m, green-5m)
Auxiliary earth spikes
Simplified measurement probe
Carry case
Batteries



3 Wire Earth Resistance Testers

4120 ER 3 Wire (Digital) Earth Resistance Tester

Features

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- The test leads are supplied as standard accessories for simplified two-wire measuring system.
- Battery operated.
- Data hold function.
- Battery test indication.
- Calibration performed with supplied test leads.

Specifications

Measuring ranges	
Earth resistance	0-20Ω / 0-200Ω / 0-2000Ω
Earth voltage	0-200 Vac(40-500Hz)
Accuracy	
Earth resistance	±(2%rdg+2dgt) or ±0.1Ω, which is greater
Earth voltage	±(1%rdg+2dgt)
Earth resistance resolution	0-20Ω : 0.01Ω 0-200Ω : 0.1Ω 0-2000Ω : 1Ω
Measuring system	Earth Resistance by constant current inverter 820Hz approx. 2mA
Display	3½ digit (2000 counts)
Open circuit indication	LED will be unlit
Low battery indication	 symbol appears on the display
Data hold indication	 symbol appears on the display
Over range indication	"1"(MSD)

General

Dimensions	250(L) × 190(W) × 110(D)mm
Weight (battery included)	Approx. 1500g
Power source	1.5V (AA) × 8
Safety standards	EN 61010-1 CAT III 300V IEC 61557-1 IEC 61557-5 EN 61326-1

Accessories

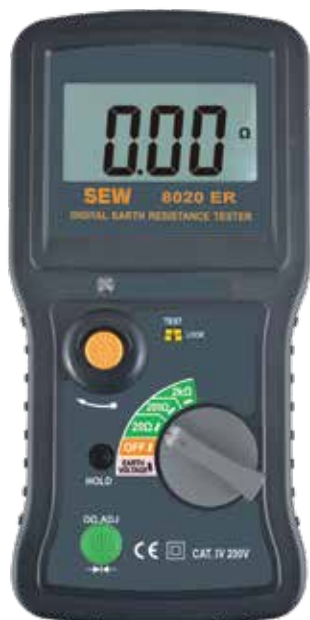
Instruction manual
Test leads (red-15m, yellow-10m, green-5m)
Auxiliary earth spikes
Simplified measurement probe
Shoulder belt
Batteries



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3 Wire Earth Resistance Testers



8020 ER 3 Wire (Digital) Earth Resistance Tester



Features

- Capable of measuring earth resistance and earth voltage.
- 2mA measuring current permits the testing of earth resistance without tripping earth leakage current breakers in the circuit under test.
- Frequency : 820Hz.
- 0Ω adjustment.
- Battery operated.
- Data hold function.
- Low battery indication.
- Calibration performed with supplied test leads.
- Simplified measurement probe is also provided for two-wire measuring method.

Specifications

Measuring ranges	
Earth resistance:	0-20Ω / 0-200Ω / 0-2000Ω
Earth voltage:	0-200 Vac (40-500Hz)
Accuracy	
Earth resistance:	±(1.5%rdg+2dgt) or ±0.1Ω, which is greater
Earth voltage:	±(1%rdg+2dgt)
Earth resistance resolution	0-20Ω : 0.01Ω 0-200Ω : 0.1Ω 0-2000Ω : 1Ω
Testing frequency	820 Hz
Measuring system	Earth resistance by constant current inverter 820Hz approx 2mA.
Display	3½ digit (2000 counts)
0Ω adjustment	√
Open circuit indication	LED will be unlit
Low battery indication	 symbol appears on the display
Data hold indication	 symbol appears on the display
Over range Indication	"1"(MSD)

General

Dimensions	221(L) × 110(W) × 57(D)mm
Weight (battery included)	Approx. 600g
Power source	1.5V (AA) x 6
Safety standards	IEC/EN 61010-1 CAT IV 200V EN 61557-1 EN 61557-5, EN 61326-1

Accessories

Instruction manual
Test leads (red-15m, yellow-10m, green-5m)
Auxiliary earth spikes
Simplified measurement probe
Hand strap
Carry case
Batteries.

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