



Hoyt ELCB Testers

General ELCB Testers

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General ELCB Tester



TEL1 General ELCB Tester

Specify plug type when ordering:

TEL1-1 110V

TEL1-2 220V

TEL1-3 230V

TEL1-4 240V

The TEL1 is the Basic Test Equipment an Electrician cannot do without. TEL1 is a Dual Function Test Instrument utilized to Verify Electrical Wiring Connections and the Functioning of Earth Leakage / Residual Current Detectors devices by forcing the ELCB/RCD to trip.

This verifies that the protection device open the mains power supply circuit when a current higher than a certain amplitude circulate into the ground/earth wire (generally around 15mA)

This ensure the electrical installation meet safety and regulation requirements.

The Wiring Check is reported on the Bright Neon Lights and the Key code is shown on the table located under the tester.

The WIRING INTEGRITY CHECKER of the TEL1 uses three Large and Bright Neon Lights to detect and display voltage conditions on and between powered electrical wires.

These neon lights will lit according to a different sequence related to the wiring conditions of the electrical system. The table located under the tester shows the wiring conditions.

The Residual Current Detector or Earth Leakage Circuit Breaker Tester injects and simulate a Ground/Earth Fault current into the Earth/Ground wire to trip the device under test. The fault current can be increased by rotating the switch to the new higher value to force the device to trip.

Once selected by the rotary switch, the user press the TEST button to inject the current. When the current is Flowing into the Earth/Ground wire, the IEARTH LED lit, confirming that current is still flowing into the Earth/Ground wire. Power Resistors are utilized to inject the current and No Phase shift is introduced between voltage and current. When rotating the selector, different resistors are selected by the rotary switch, this in turn, change the current selection. The User need to select the current on the rotary switch and then, press the TEST button shortly to inject the Fault Current. This ensure the fault current is only temporary injected into the system.

The TEL1 help the user finding the sensitivity at which the ELCB/RCD trips.

Specifications

Nominal Voltage System	110V-220V-230V-240Vac available - User Selectable at purchase.
System Voltage Frequency	50-60Hz
Wiring Check Accuracy	Table Valid for Voltage within 5% of nominal voltage. If voltage differs from Nominal Voltage System by more than 5%, table may be incorrect.
Earth / Ground Current	Current is set by Selected Resistors and therefore Proportional to Voltage.
Simulator Accuracy	Resistance Accuracy is 10% Maximum.
Overall Rating	Intermittent Rated (Press TEST Shortly). DO NOT KEEP PRESSING TEST.
Resistance Rating	Current Injection System uses Resistors which are Not Continuously Rated.
Case Material	ABS
Safety Standard	EN 61010-1 EN 61326-1

810 EL Analog ELCB Tester



CE

Features

- Wiring check.
- Can be used on 2 wires L-E (ELCB/RCCB/GFCI tester).
- Can be used on 3 wires L-E-N (with wiring check).
- Sense automatically 50 or 60 Hz.
- No battery required.
- Simple operation.
- Current injected in phase with the voltage.
- Fused.
- Wide operating voltage (195Vac to 265Vac).
- Other voltage optional (110V).
- Robust.

Specifications

Wiring check LEDs	Line-Neutral = Green Line-Earth = Green Neutral-Earth =Red
Current settings	10-50mA@230Vac
Current selection	Knob
Frequency of operation	50/60 Hz Sinusoidal
Over-Temperature Protection	Yes by NTC sensor Test stopped Indication by Red Led.
Operating voltage (L-E)	230 Vac \pm 15%
Meter accuracy	\pm 3% of full scale

General

Operating temperature	-5°C to 45°C
Storage temperature	-10°C to 55°C
Dimensions	150(L) \times 73(W) \times 50(D)mm
Weight	Approx. 220g
Safety standard	EN 61010-1 CAT III 265V, EN 61326-1

Accessories

Instruction manual
Test leads

1810 EL Analog ELCB Tester

Features

- Taut Band movement.
- Simple operation.
- Wiring check.
- Robust.
- Can be used on 2 wires L-E (ELCB/RCCB/GFCI tester).
- Can be used on 3 wires L-E-N (with wiring check).
- No battery required.
- Sense automatically 50 or 60 Hz.
- Current injected in phase with the voltage.
- Other voltage optional (110V).

Specifications

Current settings	10-50mA@230Vac
Current selection	Knob
Frequency of operation	50/60 Hz Sinusoidal
Over-Temperature Protection	NO
Operating voltage (L-E)	230 Vac \pm 15%
Meter accuracy	\pm 1% of full scale
Protection	Fused (200mA 250V)

General

Operating temperature	-5°C to 45°C
Storage temperature	-10°C to 55°C
Dimensions	170(L) \times 165(W) \times 92(D)mm
Weight	Approx. 730g
Safety standard	EN 50081-1, EN 50082-1

Accessories

Instruction manual
Test leads
Shoulder belt



CE

1112 EL Digital RCD Tester



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The 1112 EL is a compact hand-held residual current detector, earth leakage circuit breaker, or ground fault circuit interrupter tester (designation could be different from country to country).

It is designed to meet international standards of performance and safety.

This model is a high-quality instrument used by professionals to obtain accurate protection disconnection times when a selectable fault current is injected to earth (ground).

Accessories

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

Features

- Microprocessor-controlled.
- Very low consumption.
- 50Hz and 60Hz operation.
- Accurate digital readout of disconnection time.
- Over temperature protection.
- Over voltage protection.
- Fuse protection.
- Zero crossing circuitry permit testing at 0° or 180°.
- Auto power off.
- Backlight function.
- Wiring polarity indicator.
- Measure voltage between Line and Earth before testing.
- Frequency measurement indication.

Specifications

Current Settings	5mA, 10mA, 15mA, 30mA, 50mA, 150mA
Current Selection	Rotary Switch Selector
Phase Start Selection	Referenced to Earth
0° and 180°	Yes
Over-Temperature Protection	Yes
Wiring Correctness Indication	Yes (LEDs)
Trip Indicator	Yes (LCD)
Operating Voltage (L-E) 50Hz or 60Hz	Version A : 240 Vac Version B : 230 Vac
Voltmeter (L-E) 50Hz or 60Hz	10Vac ~ 280Vac
Timer Resolution	1ms (Max Time = 2.999s)
Timer Accuracy	± 2ms
Current Accuracy	± 5% ± 1mA
Voltmeter Resolution	1Vac
Voltmeter Accuracy	± 2%±1Vac

General

Operating Temperature	0°C ~ 40°C
Storage Temperature	-10°C ~ 50°C
Dimensions	175(L)×85(W)×75(D)m
Weight (batter included)	Approx. 660g
Power source	1.5V (AA) × 8 (Alkaline battery)
Safety standard	EN 61010-1 CAT IV 300V, EN 61326-1

1113 EL Digital RCD Tester



CE

The 1113 EL is a compact hand-held residual current detector, earth leakage circuit breaker, or ground fault circuit interrupter tester (designation could be different from country to country).

It is designed to meet international standards of performance and safety.

This model is a high-quality instrument used by professionals to obtain accurate protection disconnection times when a selectable fault current is injected to earth (ground).

Accessories

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

Features

- Microprocessor-controlled.
- Very low consumption.
- 50Hz and 60Hz operation.
- Accurate digital readout of disconnection time.
- Over temperature protection.
- Over voltage protection.
- Fuse protection.
- Zero crossing circuitry permit testing at 0° or 180°.
- Auto power off.
- Backlight function.
- Wiring polarity indicator.
- Measure voltage between Line and Earth before testing.
- Frequency measurement indication.

Specifications

Current Settings	10mA, 20mA, 30mA, 100mA, 150mA, 300mA
Current Selection	Rotary Switch Selector
Phase Start Selection	Referenced to Earth
0° and 180°	Yes
Over-Temperature Protection	Yes
Wiring Correctness Indication	Yes (LEDs)
Trip Indicator	Yes (LCD)
Operating Voltage (L-E) 50Hz or 60Hz	Version A : 240 Vac Version B : 230 Vac
Voltmeter (L-E) 50Hz or 60Hz	10Vac ~ 280Vac
Timer Resolution	1ms (Max Time = 2.999s)
Timer Accuracy	± 2ms
Current Accuracy	± 5% ± 1mA
Voltmeter Resolution	1Vac
Voltmeter Accuracy	± 2%±1Vac

General

Operating Temperature	0°C ~ 40°C
Storage Temperature	-10°C ~ 50°C
Dimensions	175(L)×85(W)×75(D)mm
Weight (batter included)	Approx. 670g
Power source	1.5V (AA) × 8 (Alkaline battery)
Safety standard	EN 61010-1 CAT IV 300V, EN 61326-1

1612 EL Digital RCD Tester



Features

- Microprocessor-controlled
- Extra large LCD (78 × 67mm)
- Very low power consumption
- 50Hz and 60Hz operation
- Accurate digital readout of disconnection time
- Over temperature protection
- Over voltage protection
- Fuse protection
- Zero crossing circuitry permits testing at 0° or 180°
- Auto power off
- Backlight function
- Wiring polarity indicator
- Measures voltage between Line and Earth before testing
- Frequency measurement indication

Specifications

Current Settings	3mA, 5mA, 10mA, 15mA, 20mA, 30mA, 50mA, 100mA, 150mA, 250mA, 300mA, 500mA
Current Selection	Rotary Switch Selector
Phase angle setting	0° and 180° selectable
Over-Temperature Protection	Yes
Wiring Correctness Indication	Yes (LEDs)
Trip Indicator	Yes (LCD)
Operating Voltage (L-E) 50Hz or 60Hz	Version B : 230 Vac Version C : 220 Vac
Voltmeter (L-E) 50Hz or 60Hz	10Vac ~ 280Vac
Timer Resolution	1ms (Max Time = 2.999s)
Timer Accuracy	± 2ms
Current Accuracy	± 5% ± 1mA
Voltmeter Resolution	1Vac
Voltmeter Accuracy	± 2%±1Vac

General

Operating Temperature	0°C ~ 40°C
Storage Temperature	-10°C ~ 50°C
Dimensions	163(L) × 122(W) × 67(D)mm
Weight (batter included)	Approx. 670g
Power source	1.5V (AA) × 8 (Alkaline battery)
Safety standard	EN 61010-1 CAT IV 300V, EN 61326-1



Accessories

- Instruction manual
- Test leads
- Carry case
- Shoulder belt
- Batteries

8012 EL Digital RCD Tester

Features

- Microprocessor-controlled.
- Extra large LCD(78 × 67mm).
- Very low consumption.
- 50Hz and 60Hz operation.
- Menu-driven.
- Accurate digital readout of disconnection time.
- Over temperature protection.
- Over voltage protection.
- Fuse protection.
- Zero crossing circuitry permit testing at 0° or 180°.
- Auto power off.
- Auto off and off override.
- Wiring polarity indicator.
- Measure voltage between Line and Earth before testing.
- Frequency measurement indication.

Specifications

Current Settings	3mA, 5mA, 10mA, 15mA, 20mA, 30mA, 50mA, 100mA, 150mA, 250mA, 300mA, 500mA
Current Selection	Rotary Switch Selector
Phase angle setting	0° and 180° selectable
Over-Temperature Protection	Yes
Wiring Correctness Indication	Yes (LEDs)
Trip Indicator	Yes (LCD)
Operating Voltage (L-E) 50Hz or 60Hz	Version A : 240 Vac Version B : 230 Vac Version C : 220 Vac Version D : 110 Vac
Voltmeter (L-E) 50Hz or 60Hz	10Vac ~ 280Vac
Timer Resolution	1ms (Max Time = 2.999s)
Timer Accuracy	± 2ms
Current Accuracy	± 5% ± 1mA
Voltmeter Resolution	1Vac
Voltmeter Accuracy	± 2%±1Vac

General

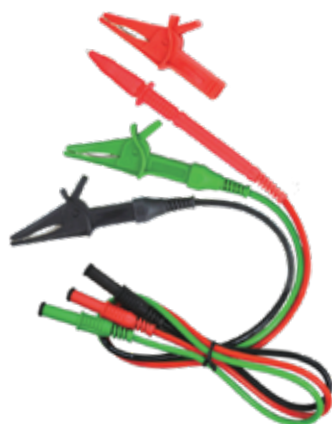
Operating Temperature	0°C ~ 40°C
Storage Temperature	-10°C ~ 50°C
Dimensions	221(L) × 110(W) × 57(D)mm
Weight (batter included)	Approx. 695g
Power source	1.5V (AA) × 8 (Alkaline battery)
Safety standard	EN 61010-1 CAT IV 300V, EN 61326-1



CE



With a hand strap
for easier holding.



AL-8012

Accessories

Instruction manual
Test leads
Carry case
Shoulder belt
Batteries

1811 EL Digital ELCB (RCD) Tester

Features

- Microprocessor-controlled.
- 2Lines × 16 Characters LCD.
- Very low consumption.
- Suitable for industrial applications.
- Better than 3% accuracy (current).
- Menu-driven.
- Accurate digital readout of disconnection time.
- Accurate digital readout of disconnection sensitivity.
- Data hold function.
- Zero Crossing Circuitry permit testing at 0° or 180°.
- Disconnection Phase Polarity shown on LCD display.
- Auto off and off override.
- Polarity Trip indicator (Positive or Negative Phase).

Specifications

Current Settings	0-999mAac / 50Hz
Current Selection	Knob
Phase start selection Referenced to Earth	0° and 180° Yes
Over-Temperature Protection	Yes
Phase polarity trip Indicator	Referenced to Earth Yes
Operating Voltage (L-E)	V110 Vac to 450 Vac
Timer Resolution	1ms (Max Time = 2.999s)
Timer Accuracy	1ms ±1ms
Current Accuracy	±1% ±1mA
Current resolution	1mA
Voltmeter accuracy (50Hz)	50-350 Vac = ±2%±1V 350-450 Vac = ±5%±1V
Voltmeter resolution	1V
Maximum current	Specified at 450 Vac/50Hz

General

Operating Temperature	-5°C ~ 40°C
Storage Temperature	-10°C ~ 55°C
Dimensions	170(L) × 165(W) × 92(D)mm
Weight (batter included)	Approx. 1180g
Power source	1.5V (AA) × 8 (Alkaline battery)
Safety standard	EN 61010-1 CAT III 450V, EN 50081-1 EN 50082-1



CE

Accessories

Instruction manual
Test leads
Shoulder belt
Batteries

1812 EL Digital ELCB (RCD) Tester



Specify plug type when ordering:

- 1812 EL-A 240Vac
- 1812 EL-B 230Vac
- 1812 EL-C 220Vac
- 1812 EL-D 110Vac



TEL_EL (Optional)

Accessories

- Instruction manual
- Test leads
- Shoulder belt
- Batteries

Features

- Microprocessor-controlled.
- 2Lines × 16 Characters LCD.
- Very low consumption.
- Menu-driven.
- Accurate digital readout of disconnection time.
- Automatic data hold function.
- Zero Crossing Circuitry permit testing at 0° or 180°.
- Disconnection Phase Polarity shown on LCD display.
- Auto-off and off override.
- Polarity Trip indicator (Positive of Negative Phase).
- Wiring polarity indicator.
- Measure voltage and frequency between Line and Earth before testing.

Specifications

Current Settings	3mA, 5mA, 7mA, 10mA, 15mA, 20mA, 30mA, 35mA, 50mA, 100mA, 125mA, 50mA, 175mA, 250mA, 275mA, 300mA, 375mA, 500mA.
Current Selection	Rotary Switch Selector
Phase start selection 0° and 180°	Referenced to Earth Yes
Over-Temperature Protection	(3 sensors)
Wiring Correctness Indication	Yes (LEDs)
Trip Indicator	Yes (LEDs)
Phase polarity trip Indicator	Yes Referenced to Earth
Voltmeter (L-E) 50Hz or 60Hz	20Vac ~ 280Vac
Timer Resolution	1ms (Max Time = 2.999s)
Timer Accuracy	±2% ±2ms
Current Accuracy	± 5% ± 1mA
Voltmeter Resolution	1Vac
Voltmeter Accuracy	± 2%±1Vac

General

Operating Tempe	-5°C ~ 45°C
Storage Temperatu	-10°C ~ 55°C
Dimensions	170(L) × 165(W) × 92(D)mm
Weight (batter included)	Approx. 1020g
Power source	1.5V (AA) × 8 (Alkaline battery)
Safety standard	EN 61010-1 CAT III 240V EN 61326-1

1813 EL Digital ELCB (RCD) Tester

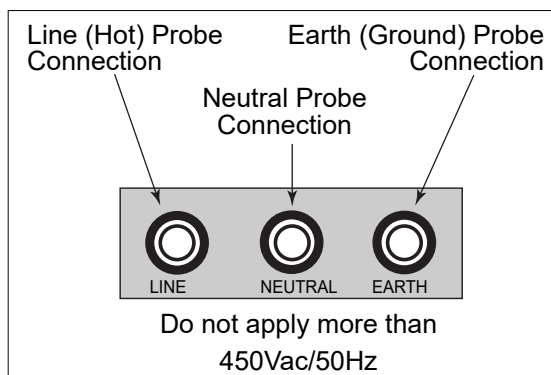
Features

- Microprocessor-controlled.
- 2 Lines × 16 characters LCD.
- Very low consumption.
- Suitable for domestic version.
- Better than 3% accuracy (current).
- Menu-driven.
- Accurate digital readout of disconnection time.
- Accurate digital readout of disconnection sensitivity.
- Automatic data hold function.
- Zero crossing circuitry permit testing at 0° or 180°.
- Disconnection phase polarity shown on LCD display.
- Auto off and off override.
- Polarity trip indicator (positive or negative phase)
- Wiring polarity indicator.
- Measure voltage between Line and Earth before testing.
- 60Hz available.



CE

Connections



Specifications

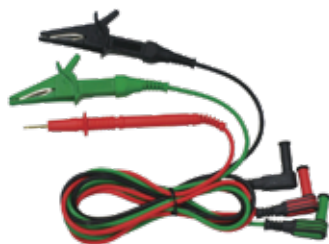
System voltage	550V, 380V, 240V (50Hz / 60Hz)
Current settings	2-999mA ac
Current selection	Knob
Phase start selection referenced to Earth	0° and 180°
Over-temperature protection	Yes
Wiring correctness indication	Yes
Phase polarity trip Indicator	Yes
Operating voltage (L-E)	110 Vac to 317 Vac
Timer resolution	1ms (Max. Time=19.999s)
Timer accuracy	1ms ±1ms
Current accuracy	±1% ±1mA
Voltmeter resolution	1V
Voltmeter accuracy (50Hz)	50-350 Vac : ±2%±1V 350-450 Vac : ±5%±1V

General

Operating temperature	-5°C to 40°C
Storage temperature	-10°C to 55°C
Dimensions	170(L) × 165(W) × 92(D)mm
Weight (battery included)	Approx. 1300g
Power source	1.5V (AA) × 8



TEL_EL (Optional)



TEL-1813 D

Accessories

- Instruction manual
- Test leads
- Shoulder belt
- Batteries

2712 EL Digital ELCB (RCD) Tester

Features

- Microprocessor-controlled.
- 2 Lines × 16 characters LCD.
- Very low consumption.
- 50Hz and 60Hz operation.
- Menu-driven.
- Accurate digital readout of disconnection time.
- Automatic data hold function.
- Over temperature protection.
- Over voltage protection.
- Fuse protection.
- Zero crossing circuitry permit testing at 0° or 180°.
- Disconnection phase polarity shown on LCD display.
- Auto off and off override.
- Polarity trip indicator (positive or negative phase)
- Wiring polarity indicator.
- Measure voltage between Line and Earth before testing.
- Frequency measurement indication.

Specifications

Operating voltage (L-E) (50Hz or 60 Hz)	Version A : 240 Vac Version B : 230 Vac Version C : 220 Vac Version D : 110 Vac
Current settings	3mA, 5mA, 10mA, 15mA, 20mA, 30mA, 50mA, 100mA, 150mA, 250mA, 300mA, 500mA.
Current selection	Rotary switch selector
Phase angle setting	0° and 180° selectable
Wiring correctness indication	Yes (LEDs)
Trip indicator	Yes (LCD)
Phase polarity trip indicator	Yes (LCD). Referenced to Earth
Over-temperature protection	Yes (3 sensors)
Voltmeter (L-E)	20Vac ~ 280Vac (50Hz or 60Hz)
Timer resolution	1ms (Max. Time=2.999s)
Timer accuracy	±2ms
Current accuracy	±5% ±1mA
Voltmeter resolution	1Vac
Voltmeter accuracy	±2%±1Vac

General

Operating temperature	-5°C to 45°C
Storage temperature	-10°C to 55°C
Dimensions	205(L) × 90(W) × 55(D)mm
Weight (battery included)	Approx. 530g
Power source	1.5V (AA) × 6
Safety standard	EN 61010-1 CAT III 300V EN 61326-1



TEL_EL (Optional)

TEL-1812 D

Accessories

- Instruction manual
- Test leads
- Carry case
- Batteries

2820 EL Digital ELCB (RCD) Tester

Features

- Microprocessor-controlled.
- Operating voltage 100-450V L-E.
- Rated current 999mA, at 317V AC/50Hz.
- Checks ELCB trip time and trip point (sensitivity).
- Auto off and auto ranging.
- Phase angle selection(0° / 180°).
- Indicates tripping phase angle.
- Impact resistant enclosure.
- Over temperature shut-down.
- Transient protection.
- Suitable for heavy industrial use.
- Fused.

Specifications

Trip current-range	0-1A at 317V (Auto-Rang Programmable)
Trip current- resolution	1mA
Operating voltage (L-E)	100 - 450V
Phase angle setting	0° and 180° selectable
Timer-max	99.999s
Timer resolution	1ms

Typical Accuracy

Trip-current	±1%rdg±1mA
Trip-time	±1%rdg±1dgt
Voltage	±3%rdg±1dgt

General

Operating temperature -	-10°C to +40°C
humidity	80% Max. relative humidity
Dimensions	170(L) × 120(W) × 95(D)mm
Weight (battery included)	Approx. 800g
Power source	1.5V (AA) × 8
Safety standard	EN 61010-1 CAT III 450V, EN 61326-1

Accessories

- Instruction manual
- Test leads
- Shoulder belt
- Batteries



CE



TEL-1181 D



BET-2800

4112 EL Digital RCD/RCCB/GFCI/ELCB Tester

Features

- Microprocessor-controlled.
- 2 Lines × 16 Characters LCD.
- Very low consumption.
- Menu-driven.
- Accurate digital readout of disconnection time.
- Automatic data hold function.
- Zero Crossing Circuitry permit testing at 0° or 180°.
- Disconnection Phase Polarity Shown on LCD.
- Auto off and off override.
- Polarity Trip indicator (Positive or Negative Phase).
- Wiring polarity indicator.
- Measure voltage between line and earth before testing.
- Indicates frequency of voltage L-E.

Specifications

Current settings	3mA, 5mA, 7mA, 10mA, 15mA, 20mA, 30mA, 35mA, 50mA, 100mA, 125mA, 150mA, 175mA, 275mA, 250mA, 300mA, 375mA, 500mA.
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Current selection	Rotary switch
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Phase start selection Referenced to Earth	0° and 180° Yes
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Over-temperature protection	Yes
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Wiring correctness indication	Yes
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Trip indicator	Yes
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Phase polarity trip Indicator	Yes
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Operating voltage (L-E)	Referenced to Earth 240Vac-50Hz or 60Hz Voltage Model (Vac)
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Timer resolution	1ms (Max. Time=2.999s)
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Timer accuracy	1ms ±1ms
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Current accuracy	±5% ±1mA
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General

Operating temperature	-5°C to 45°C
Storage temperature	-10°C to 55°C
Dimensions	250(L) × 190(W) × 110(D)mm
Weight (battery included)	Approx. 1500g
Power source	1.5 (AA) × 8
Safety standard	EN 61010-1 CAT III 300V, EN 61326-1

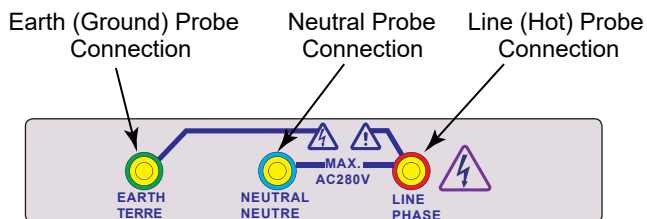
Accessories

Instruction manual
Test leads
Shoulder belt
Batteries



CE

Connections



Apply only Voltage Model @ 50Hz or 60 Hz.
Voltage Model (Vac) A=240, B=230, C=220, D=110



TEL_EL (Optional)



TEL-1812 D

6220 EL Digital ELCB Tester



CE

The 6220 EL is menu assisted making it extremely user friendly. It is a universal ELCB tester suitable for testing all ELCB's, including instantaneous, inverse time-delay and fixed time delay types.

Although primarily intended for the testing industrial ELCB's, it may also be used to test 30mA ELCB's (e.g. welding plugs).

The instrument is extremely versatile and easy to use. It is a two-lead instrument and may be used on either 380V or 550V systems (220 or 317V L-E). It should be noted however, that the maximum current attainable is proportional to the system voltage (1000mA at 550V/700mA to 380V).

The operation of the unit is fully microprocessor controlled through a keypad. There are no switches or push buttons. The tester has an auto-off feature and draws no current when off.

Current increases to a minimal 8mA during operation. Eight "C" cell batteries provide a life of over 12 months in normal use.

Features

- Microprocessor technology ensures high performance accuracy and reliability.
- Fully programmable via tactile key pad.
- Direct readout of disconnection, time or current.
- Voltage measured during test.
- Housed in a heavy duty carry case.
- Suitable for all industrial, mining and domestic environments.
- Display can be customized for special orders.
- Indicate voltage and trip Current/Time.
- Use binary principle.
- True resistor switching.

Specifications

Rated tripping current at 317V	1000mA (2000mA on special orders)
Lowest resolution	1mA
System voltage	230 / 380 / 550V(50Hz)
Maximum trip time	99.99s
Highest resolution	10ms

Typical Accuracy

Rated trip current	$\pm 1\% \text{rdg} \pm 2 \text{dgt}$
Voltage range	$\pm 1\% \text{rdg} \pm 1 \text{dgt}$
Trip-time	$\pm 1\% \text{rdg} \pm 2 \text{dgt}$

General

Operating Temperature	0°C to 40°C
Humidity	80% Max. R.H.
Dimensions	330(L) × 260(W) × 160(D)mm
Weight (battery included)	Approx. 3700g
Power source	1.5V "C" × 8 Alkaline batteries
Safety standard	EN 61010-1 CAT III 300V EN 61326-1

Accessories

Instruction manual
Test leads
Batteries

6221 EL Digital 3 Phase Industrial Earth Leakage Tester & 3 Phase Presence & Rotation Indicator



This Test Instrument is a combined 3 Phases Presence and Rotation Indicator combined with a 3 Phases Industrial Earth Leakage Tester. When utilized as a 3 Phase Presence and Rotation Indicator, the instrument does not use the batteries and can still be utilized if the batteries are not present or if the batteries are too low.

Features

- Microprocessor-controlled.
- Indicates phase rotation.
- Indicates phase presence.
- Tests for disconnection sensitivity.
- Indicates battery status.
- Tests for disconnection time.
- Measures voltage phase to earth.
- Select one of 3 Phase to test ELCB.
- Color-coded test leads.
- Phase presence indication from as low as 100Vac.
- Very low consumption.
- Fused earth leakage tester.
- ELCB works 50Vac to 330Vac 50Hz / 60Hz.
- Led indication of Voltage on ELCB.
- Phase rotation and presence does not require battery to indicate.

Specifications

Determination of the Phases Rotary Field Direction

Direction (the voltage required to have the direction LEDs L1-L2-L3 or L2-L1-L3 to indicates)	From 100Vac to 450Vac.
Frequency Range	From 2Hz to 400Hz.

Determination of the Phase Presence

Nominal Voltage for Phase Presence	
Indication (the voltage required for the neon lamps L1, L2, L3 to lit up)	From 100Vac to 450Vac.
Frequency Range	From 10Hz to 400Hz.

Protection

Over Load	550V(between all terminals)
Over Voltage	Class III - 450V towards ground.

Earth Leakage

Current Settings	999mAac / 50Hz-60Hz
Current Selection	Knob
Phase Start Selection (*)	0° and 180°
Over-Temperature Protection (*)	Yes
Phase Polarity Trip Indicator (*)	Yes
Phase Polarity Trip Indicator (*)	220Vac to 317Vac

(*) - Referenced to Earth

Timer Resolution	1ms(Max. Time = 99.99s)
Timer Accuracy	1ms ± 4ms
Current Accuracy	±3% ± 4mA
Current Resolution	1mA
Voltmeter Accuracy(50Hz)	50-350 Vac = ±3% ± 2V 350-550Vac = ±7% ± 3V
Voltmeter Resolution	1V

General

Operating Temperature	0°C to + 40°C
Storage Temperature	-10°C to + 50°C
Maximum Current Specified	at 317Vac / 50Hz
Batteries	1.5V "C" × 8 Alkaline batteries Bat OK Led = Vbat >9V
Dimensions	330(L) × 260(W) × 160(D)mm
Weight	3850g (batteries included)

DEL-101 Multi-purpose Tester

Specifications

Voltage / power input

Universal IEC LEAD: 240V/10A

Wiring polarity check

Nominal Voltage: 240Vac

Frequency: 50/60Hz

Mains Voltage Tolerance: $\pm 10\%$

EICB / RCD tester

Nominal Voltage: 240Vac

Frequency: 50/60Hz

Current Tolerance $\pm 10\%$
(current proportional to Line to Earth Voltage)

Universal test sockets

Nominal Voltage 240Vac

Frequency 50/60Hz

Mains Voltage Tolerance $\pm 10\%$

Fuse 10A

Appliance tester

Nominal Voltage 240Vac

Frequency 50/60Hz

Mains Voltage Tolerance $\pm 10\%$

Fuse 10A

Appliance line current coil

Measured by Fuse

Current clamp Type

Appliance earth current coil

Measured by Fuse

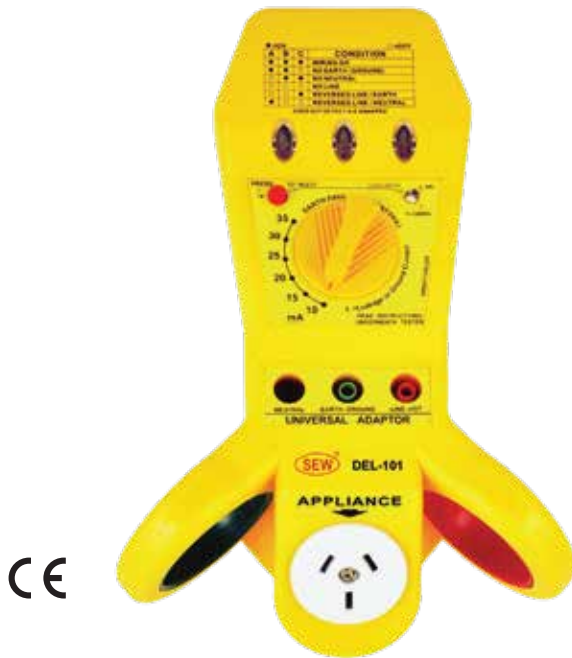
Current clamp Type

General

Dimensions 223(L)x152(W)x67(D)mm

Weight Approx. 318g

Safety standard IEC / EN 61010-1,
EN 61326-1



Features

- Mains wiring polarity check.
- ELCB/RCD testing.
- Measuring ear for line current.
- Measuring ear for leakage current.
- Helps calculate insulation resistance.
- Helps calculate power consumption.
- Helps fault finding of standing earth fault.
- Fused main adapter.
- Appliance testing (with the aid of a clamp meter).
- Fused appliance socket.
- No batteries required.
- HRC fuse inside.
- Fused, color-coded universal test sockets.
- Universal mains IEC Lead.

Multi-purpose Tester

6221 EL-M 3 Phase Industrial Earth Leakage Tester and 3 Phase Presence & Rotation Indicator(OLED Display)



CE

Features

- High contrast OLED display.
- Designed for viewing in the dark, for mining industry.
- Microprocessor-controlled.
- Indicates phase rotation
- Indicates phase presence
- TEST for disconnection sensitivity
- Battery status indicator
- Measures Voltage Phase to Earth
- Select one of 3 Phase to test ELCB.
- Color-coded test leads.
- Phase presence indication from as low as 100Vac.
- Fused earth leakage tester.
- ELCB works 50Vac to 330Vac 50Hz / 60Hz.
- Phase rotation and presence does not require battery to indicate.

Specifications

Nominal voltage for phase	100Vac to 450Vac
Presence frequency range	10Hz to 400Hz
Rotary field direction	100 to 450Vac
Phases frequency range	2Hz to 400Hz
Overload protection	550V (between all terminal)
Over voltage protection	Class III - 450V towards ground
Current settings	999mAac /50Hz-60Hz
Phase start selection	0° and 180°
Phase polarity trip Indicator	√
Operating voltage (L-E) referenced to earth	220Vac to 317Vac
Timer resolution	1ms (Max. Time=99.99s)
Timer accuracy	1ms ±4ms
Current accuracy	±3% ±4mA
Current resolution	1mA
Voltmeter accuracy (50Hz)	50-350Vac = ±3% ±2V 350-550Vac = ±7% ±3V
Voltmeter resolution	1V
Maximum current	317Vac / 50Hz

General

Operating Temp. Range	0°C to +40°C
Storage Temp. Range	-10°C to +50°C
Dimensions	330(L) x 260(W) x 160(D)mm
Weight (battery included)	Approx. 3850g
Power source	1.5V "C" x 8 Alkaline batteries. Bat OK LED = Vbat>9V
Safety standard	EN 61010-1 CAT III 550V EN 61326-1