

# TEST & MEASUREMENT

IDEAL has been in the Electrical Test & Measurement Business for over 80 years. Throughout that time we have remained dedicated to providing the professional electrician with the tools and support required to safely and efficiently verify and analyze electrical systems and equipment. So, whether you are conducting routine measurements, testing installed devices, checking branch circuit integrity, locating breakers, tracing wires, or verifying grounding integrity, IDEAL has the tools to help you get the job done safely and efficiently.

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THE ELECTRICIAN'S  
**CHAMPION™** 

# SURETRACE™ CIRCUIT TRACERS

IDEAL, a leader in Circuit Tracing technology, has released the latest generation of circuit tracers with refinements in performance, ease-of-use and safety.

## Performance

- Four defined ranges let you quickly select the proper sensitivity for your job
- Easy-to-replace AA batteries

## Ease-of-Use

- Super-bright OLED display (61-957 and 61-959) indicates a numeric value between 0 and 99, providing a quick and easy way to determine received signal strength
- Audible indication with variable tone assists in locating signal source
- Peak detection provides instantaneous signal strength feedback
- SureTrace™ Circuit Tracers feature a rotating display. Regardless of the receiver orientation, the display automatically adjusts itself to a vertical position for easy reading.

## Safety

- Designed for durability and safety
- CAT III 600V
- High energy fuse

## Features

- Can be used on circuits 0-600V AC/DC
- The transmitter is compatible with DC, 50 & 60Hz voltage from 0-600 volts. It is not compatible with the output of dimmer switches, variable frequency drives and any non-standard waveform.
- Identifies breakers and fuses
- Pinpoints opens and shorts
- Traces wires behind walls

## ⚡ CertainCircuit™

After the correct breaker has been identified and tripped, the transmitter senses the loss of power and sends a different signal back to the receiver at the panel to give the user confidence that the right circuit has been de-energized.



**Energized**



**De-energized**

**Pinpoints Opens & Shorts**



**Traces behind walls**



**Traces on de-energized circuits**



**Inductive Clamp**



**Exclusive Rotating Display**





## SureTrace™ Circuit Tracers

- Receiver display rotates automatically for easy viewing
- Identifies breakers and fuses with CertainCircuit™ detection
- Pinpoints opens and shorts
- Traces wires
- "0-99" display of signal strength
- Audible indication intensifies in tone/pitch with signal strength
- Works on energized or de-energized circuits (0 - 600V AC/DC)
- Four sensitivity levels
- Peak reading bar graph
- 2-year warranty



Description	Part No.
Receiver with super-bright OLED Rotating Display (in 90° increments) – Kit includes Transmitter TR-955, Receiver RC-959, Lead Set TL-956, Inductive Clamp IC-958, Battery Pack BP-958 & Strap 61-565, Hard Carrying Case C-959, Batteries and Instruction Manual	<b>61-959</b>
Receiver with super-bright OLED Rotating Display (in 90° increments) – Kit includes Transmitter TR-955, Receiver RC-959, Lead Set TL-956, Hard Carrying Case C-957, Batteries and Instruction Manual	<b>61-957</b>
Receiver with Rotating red LED Display (in 180° increments) – Kit includes Transmitter TR-955, Receiver RC-955, Lead Set TL-956, Hard Carrying Case C-955, Batteries and Instruction Manual	<b>61-955</b>

Kit Components	61-959	61-957	61-955
Transmitter	<b>TR-955</b>	<b>TR-955</b>	<b>TR-955</b>
Receiver	<b>RC-959</b>	<b>RC-959</b>	<b>RC-955</b>
Tracer Test Lead Set	<b>TL-956</b>	<b>TL-956</b>	<b>TL-956</b>
Inductive Clamp Transmitter	<b>IC-958</b>	–	–
Battery Pack & Strap (61-565)	<b>BP-958</b>	–	–
Hard Carrying Case	<b>C-959</b>	<b>C-957</b>	<b>C-955</b>
Batteries	•	•	•
Instruction Manual	•	•	•
Battery Pack Strap	<b>61-565</b>	–	–

### Notes:

- Circuit breaker identification is not possible using the inductive clamp. Connect directly to the H-N for breaker or fuse identification.
- The inductive clamp is intended for use on de-energized closed loop circuits, low voltage conductors, or live circuits up to 120V AC with less than 5 Amps of current flowing.
- All instruction manuals are included and are available on-line at <http://www.idealind.com/ideal-electrical/us/en/products/test-measurement/circuit-tracers/suretrace-circuit-tracer-61-959.aspx#resources>.

Cases only compatible with current components.



Visit [idealcircuit-tracer.com](http://idealcircuit-tracer.com) for complete information and "How-To Videos."

## RC-959 Receiver

- Super-bright OLED display
- Rotating display (in 90° increments)
- Displays 0-99 numeric signal strength
- Four sensitivity levels
- CertainCircuit™ detection
- Peak reading bar graph
- Audible indication (variable pitch/tone)
- Displays battery life remaining
- Supplied with 3 AA batteries



Description	Part No.
Receiver	<b>RC-959</b>

## RC-955 Receiver

- Red LED display (suitable for indoor lighting conditions)
- Rotating display (in 180° increments)
- Displays 0-99 numeric signal strength
- Four sensitivity levels
- CertainCircuit™ detection
- Peak reading bar graph
- Audible indication (variable pitch/tone)
- Displays battery life remaining
- Supplied with 3 AA batteries



Description	Part No.
Receiver	<b>RC-955</b>

## TR-955 Transmitter

- Rated for use on circuits from 0 to 600V AC/DC
- Works on de-energized circuits
- Can be used on GFCI protected circuits
- Indicates presence of AC/DC voltage
- DC and clean 50 and 60Hz waveforms only, incompatible with VFD outputs.
- Low battery indicator
- Supplied with 4 AA batteries



Description	Part No.
Transmitter	<b>TR-955</b>

## Accessories

### TL-956 Lead Adapter Kit



## Inductive Clamp & Battery Pack

- Induces a signal in a conductor
- 1 in. jaw opening/6 ft. cord
- Works on de-energized circuits and energized circuits up to 120VAC, with less than 5 amps, also low voltage wiring & metal conduit
- Powered solely by a separate battery pack (supplied with 8 C-cell batteries)
- Battery pack has magnetic strap for hanging in panels



Description	Part No.
Inductive Clamp	<b>IC-958</b>
Battery Pack	<b>BP-958</b>

Included in 61-659 kit only.

Replacement Parts	Part No.
Cradle for Receiver (threaded for use on standard extension pole)	<b>CR-959</b>
Fuse (for TR-955 Transmitter) - Contact Technical Services for information/availability	<b>F-956</b>
Lead/Adapter Kit (contains items 1 through 6 below)	<b>TL-956</b>
1. 3 ft. Lead Adapters for Transmitter (set of 2)	—
2. 25 ft. Lead Adapter for Transmitter	—
3. Alligator Clips for Lead Adapters (set of 2)	—
4. Blade Prongs for Lead Adapters (set of 2)	—
5. Prong for Lead Adapters	—
6. Outlet Plug Adapter for Transmitter	—

# TIGHTSIGHT™ CLAMP METERS

**Problem:** Have you ever had to measure the circuit current in a confined, dimly lit and hard to reach location?



**Solution:** IDEAL TightSight™ Clamp Meter! This meter allows the user to safely and easily view current measurements with the exclusive second TightSight® display.



## Safety

- Patented TightSight™ display lets you easily view readings while keeping your head at a safe distance from the panel – no more need to twist the meter or risk pulling on an energized conductor
- Easy-to-read backlit display with large numbers and icons so you can always see the correct reading
- Selectable audible and visual alerts when potentially hazardous voltages are detected at the probe terminals
- Electronic overload protection on all ranges
- Supplied with test leads complying with UL 61010-031

## Productivity

- Read instantaneous values while clamped instead of holding the reading, unclamping, moving and then viewing
- Hook tip for easy wire separation and tapered jaws for reaching into tight spaces
- Help troubleshoot with min and max value readings over a period, i.e. nuisance tripping and power supply fluctuations
- True RMS provides accurate readings of non-sinusoidal voltages and currents
- Broad current range from 0 to 1000 amps (61-770 series) covers multiple applications
- Large jaw diameter for cables up to 2" (51mm) in diameter (770 series only)

## Value

- Includes carrying case and test leads with alligator clip
- Full AC/DC capabilities: the TightSight™ is equally adaptable for both AC and DC current measurement requirements – such as solar, public transportation, and battery backup applications (Models 61-765 & 61-775)
- Calibration services available
- 2-year warranty

Visit [clamp-meter.com](http://clamp-meter.com) for more information.



## TightSight™ 1000A Clamp Meters

- TightSight™ bottom display
- Tapered jaws with hook tip
- True RMS current and voltage
- AC/DC Voltage
- Audible continuity
- High frequency rejection\*
- Peak hold
- Max/min hold
- Data hold
- Selectable audible and visual alerts when potentially hazardous voltages are detected at the probe terminals
- Selectable auto power off
- Backlit display
- Low battery indicator



\* Reads accurately on noisy electrical circuits.

Description	Part No.
1000A AC Clamp Meter	<b>61-773</b>
1000A AC/DC Clamp Meter	<b>61-775</b>

Includes: Carrying Case and Test Leads w/Alligator Clips.

## TightSight™ 660A Clamp Meters

- TightSight™ bottom display
- Tapered jaws with hook tip
- True RMS current and voltage
- AC/DC Voltage
- Audible continuity
- High frequency rejection\*
- Peak hold
- Max/min hold
- Data hold
- Selectable audible and visual alerts when potentially hazardous voltages are detected at the probe terminals
- Selectable auto power off
- Backlit display
- Low battery indicator



\* Reads accurately on noisy electrical circuits.

Description	Part No.
660A AC Clamp Meter	<b>61-763</b>
660A AC/DC Clamp Meter	<b>61-765</b>

Includes: Carrying Case and Test Leads w/Alligator Clips.

Specifications	Range & Resolution				Accuracy
	61-773	61-775	61-763	61-765	
AC Current	0.0-999.9A		0.0-660.0A		2.0%
DC Current	—	0.0-999.9A	—	0.0-660.0A	2.0%
AC Voltage	0.0-750.0V				1.0%
DC Voltage	0.0-999.9V				1.0%
Resistance	0.0-999.9Ω				1.5%
Capacitance	0.0-999.9μF				5.0%
Continuity	0.0-999.9Ω				Audible @ <30Ω
Frequency (clamp head or test leads)	20.0-400.0Hz				0.5%
Jaw Size	2" (51mm)		1.42" (36mm)		—

Accessories	Part No.
Test Leads w/Large Alligator Clip	<b>TL-770</b>
Nylon Carrying Case (for 61-763 & 61-765)	<b>C-760</b>
Nylon Carrying Case (for 61-773 & 61-775)	<b>C-770</b>



## Clamp-Pro™ Clamp Meters 600 Amp (740 Series)



- Measures up to 600A AC
- Non-contact voltage indicator (70V-600VAC)
- Audible continuity
- Tapered jaws with hook tip
- Auto/manual ranging
- Data hold
- Auto power off
- Low battery indicator



Description	Part No.
600A AC Clamp Meter	<b>61-744</b>
600A AC Clamp Meter w/TRMS	<b>61-746</b>

Includes: Carrying Case and Test Leads.

Specifications	Range & Resolution	Accuracy
AC Current	40.00/400.0/600A	1.7%
AC Voltage	400.0/600 V	1.2%
DC Voltage	400.0/600 V	0.5%
Resistance	400.0/4.000k/ 40.00k 400.0k/4.000M/40.00M Ω	1.0%

Jaw opening is 1.25" (32mm).

## 4-in-1 Test Tool



- 200AAC current capability
- Non-contact voltage (40-600VAC)
- Visual, audible and tactile (shaker) indication of high AC/DC voltage at terminals
- Clean voltage indicator
- Max hold
- Audible continuity
- Low battery indication
- Integral lead storage
- Auto power off
- Ergonomic hourglass shape
- Compact clamp head



Description	Part No.
4-in-1 Test Tool w/TRMS, Backlight	<b>61-704</b>

Includes: Carrying Case and Silicone Test Leads.

Specifications	Range & Resolution	Accuracy
AC Voltage	2000m/200.0/750 V	1.2%
DC Voltage	2000m/200.0/1000 V	0.5%
AC Current	200A	3.0%
Resistance	200.0/200.0k Ω	1.0%
Capacitance	200.0μ F	3.0%

Jaw opening is 1.3" (33mm).



## Clamp Meter Selection Guide

	700	740 Series		760 Series		770 Series	
	61-704	61-744	61-746	61-763	61-765	61-773	61-775
<b>CLAMP METER SELECTION GUIDE</b>							
<b>MEASUREMENT FUNCTIONS</b>							
AC Voltage	•	•	•	•	•	•	•
DC Voltage	•	•	•	•	•	•	•
AC Current	•	•	•	•	•	•	•
DC Current				•			•
Resistance	•	•	•	•	•	•	•
Audible Continuity	•	•	•	•	•	•	•
Diode Test	•						
Capacitance	•			•	•	•	•
Frequency				•	•	•	•
<b>FEATURES</b>							
Display Type (Digital)	D	D	D	D	D	D	D
AC Current Capacity - Amps	200	600	600	660	660	1000	1000
DC Current Capacity - Amps				660		1000	
True RMS	•		•	•	•	•	•
Auto Ranging	•						
Auto/Manual Ranging		•	•	•	•	•	•
Data Hold		•	•	•	•	•	•
Max Hold	•						
Peak Hold				•	•	•	•
Min/Max				•	•	•	•
DCA Zero					•		•
Auto Power Off	•	•	•	•	•	•	•
Non-Contact Voltage Indication	•	•	•				
Harmonics Indicator	•						
Vibration Mode	•						
Backlight	•			•	•	•	•
Low Battery Indication	•	•	•	•	•	•	•
High Voltage Warning	•			•	•	•	•
Overload Protection on all Ranges	•	•	•	•	•	•	•
Conductor Size - Inches (mm)	1.3" (33)	1.5" (38)	1.5" (38)	1.4" (36)	1.4" (36)	2.0" (51)	2.0" (51)
Warranty (years)	2	2	2	2	2	2	2
<b>CERTIFICATIONS</b>							
UL 61010 Listed	•	•	•	•	•	•	•
Category Safety Rating at 600 volts		III	III	IV	IV	IV	IV
Category Safety Rating at 1000 volts	III			III	III	III	III

# BRANCH CIRCUIT ANALYSIS & TESTING

Proper wiring is crucial to ensure safety and performance of Branch circuits. From a safety perspective, shock hazards and fires are mainly due to poor installation or failure of protective devices, such as GFCIs. From a performance perspective, electrical equipment and high-tech devices are found everywhere in residential and commercial buildings. They require reliable power to operate and function properly and to ensure their longevity.

IDEAL has a long history of providing the professional electrician with the tools and knowledge required to safely and efficiently verify and analyze Branch Circuits. So, whether you are: conducting routine measurements, testing installed devices or the integrity of a Branch Circuit, locating a breaker, or tracing wires, IDEAL has the tools for the job.



TEST & MEASUREMENT



## SureTest® Circuit Analyzer

Have wiring issues ever required you to remove multiple outlet covers and pull outlets out of their boxes to look for a problem? Have you ever suspected that wiring integrity is the issue but your meter shows 120 volts and your receptacle tester indicates wiring is correct?

The SureTest® Circuit Analyzer from IDEAL is a comprehensive branch circuit analyzer that allows you to “look behind the walls” to find wiring problems, saving you time and money while letting you get the job done with safety and confidence.

SureTest Circuit Analyzer finds many of the toughest problems:

**Bootleg Grounds** have been fooling inspectors for years when checking circuits for integrity. Receptacle (Plug) testers test for voltage and can't identify this improper wiring condition. Bootleg grounds set up the potential for dangerous undetected fault conditions.

**Traditional receptacle test indicates circuit is good.**



**Solution:** The SureTest® by IDEAL can't be fooled, its advanced processing software gives it the capability to quickly identify bootleg grounds within 15 ft. of the outlet being tested.

**IDEAL SureTest™ clearly identifies a fault with the ground.**



**Improper Installations** can result in electrical fire hazards, personal shock hazards, and premature equipment failure.



**Improper solid wire connection. Improper stranded wire connection. Improperly torqued circuit breaker lugs.**

**Solution:** The SureTest® measures and displays individual Line Impedance giving the electrician/inspector valuable insight as to whether a particular conductor is the problem due perhaps to faulty splicing, overly long conductor runs, or undersized wire gauge.



**Excessive voltage drop** in a circuit can cause lights to flicker or burn dimly, heaters to heat poorly, and motors to run hotter than normal and burn out. It also causes overheating of components, often resulting in expensive damage or fire.

- Measures voltage drop under load\*
- Hot, neutral, and ground conductor impedances
- Estimates Load on Line (ELL) up to 15A
- Tests GFCIs and EPDs for proper operation
- Super-bright OLED display
- True RMS
- Identifies proper wiring in 3-wire receptacles
- Identifies false (bootleg) grounds
- Tests without disturbing sensitive loads
- Verifies isolated grounds (with 61-176 adapter)
- 2-year warranty

**\*12A, 15A, 20A load tests**

**Solution:** SureTest® measures the line voltage under simulated load conditions. Results are displayed for 12A, 15A, and 20A loads.



Description	Part No.
SureTest® Circuit Analyzer	61-164

Includes: Carrying Case and Extension Cord.

The SureTest® Circuit Analyzer is designed for use on 120 VAC clean power, (no dimmer switches), Hot to Neutral and ground only. Certain calculations are not possible when no ground is present. It is protected against inadvertent connection to 240 volts but should be unplugged IMMEDIATELY and no buttons should be pressed. It is not intended for use on split (balanced) 60-60 volts systems.

Specifications	Range & Resolution	Accuracy
AC Voltage	85.0 - 265.0 VAC	1.0%
Frequency	45.0 - 65.0 Hz	1.0%
Impedance	0.00 - 3.00 Ω	5.0%
Ground-Neutral Voltage	0.0 - 24.0 VAC	2.0%
% Voltage Drop 12A, 15A, 20A load tests	0.1% - 50.0%	5.0%
GFCI Test Current/Time	6.0 - 9.0 mA 0.0 - 6500 mS	2.0%

Accessories	Part No.
Ground Continuity Adapter	61-175
Isolated Ground Adapter	61-176
Alligator Clip Adapter	61-183
1' Extension Cord	61-182
Nylon Carrying Case	61-179

## Circuit Breaker Finder w/GFCI Receptacle Testing and Non-Contact Voltage Sensing

Locating breakers is often a two person job, one turning off breakers, the other waiting to see when a specific circuit is de-energized. It is frequently done by trial and error, or even by dangerously grounding a wire to the box to trip a breaker.

When locating breakers becomes needlessly time consuming and short cuts are taken, nobody wins. It was with this challenge in mind that IDEAL developed the Digital Circuit Breaker Finder.

The patented 61-534 Digital Circuit Breaker Finder from IDEAL makes locating breakers in AC circuits quick and easy. No need to interrupt the supply - simply plug the transmitter into an outlet, then two quick passes of the receiver over the breakers will reveal the associated breaker with clear audible and visual indicators. The 61-534 Digital Circuit Breaker Finder enables safe and reliable working by taking the guesswork out of circuit identification.

The IDEAL 61-534 Circuit Breaker Finder provides three testers in one device. The receiver identifies breakers by detecting a signal applied to the branch circuit by the transmitter, and additionally incorporates a non-contact voltage sensing function. The transmitter also works as a GFCI receptacle tester, allowing you to verify AC is present in an outlet and to detect nearly all common improper wiring conditions. So you get the functionality of a circuit breaker finder, a non-contact voltage tester, and a GFCI receptacle tester in one versatile tool.

### Features & Specifications Transmitter

- Triple function - acts as a Signal Transmitter, Polarity Indicator and GFCI Receptacle Tester
- Tests for correct wiring, open ground, reverse polarity, open hot, open neutral, hot on neutral, hot and ground reversed with open hot in 3 wire, AC circuits
- 3-pin plug format allows direct connection to standard NEMA 5 15R receptacles
- Compatible with the latest generation of self-testing GFCIs
- Power Supply: Line powered (115-250VAC)
- Supply Frequency: 47-63Hz
- Weight: 50g approx.
- Pulse Amplitude: 18A approx. @ 120V
- Pulse Rate: 4mS every 17ms (@ 60Hz)
- Power Consumption: 200mW max. @ 120VAC



### Receiver

- Dual function - acts as a Non-Contact Voltage Tester and Breaker Finder
- Ergonomic Bent Tip Design w/ flat surface to support correct receiver orientation when scanning the panel
- Visual and audible indicators
- Low battery detect
- Auto Power off (after 10 mins. of no activity)
- Power Supply: 9V Alkaline Battery
- Weight: 85g (without battery)

### System

- Warranty: 2-years (limited)
- Certification: UL 1436
- Use Environment: Cat II 300V
- Operating Temperature: 32 to 122°F (0 to 50°C)

Description	Part No.
Circuit Breaker Finder w/Digital Receiver & GFCI Circuit Tester	<b>61-534</b>

## Split-Jaw™ Smart Meter

- Measures
  - 0.9-200AAC
  - 1.3-750VAC
  - 2.1-1000VDC
  - 0.0-9999Ω
- Audible continuity
- Data hold
- Integral lead storage
- Replaceable test leads
- Auto power off
- Low battery indication
- Test leads UL 61010-031 compliant
- 2-year warranty

Description	Part No.
Split-Jaw™ Smart Meter	<b>61-096</b>

Includes: Test Leads.

Specifications	Range & Resolution	Accuracy
AC Voltage	1.3 - 750 V	1.5%
DC Voltage	1.8 - 1000 V 0.6 - 1000 V	1.0%
AC Current	0.6 - 200.0A	3.0%
Resistance	0 - 2000 Ω	1.0%

\*Note: Jaw opening is 0.6 in. (16mm) - up to 1/0 copper cable.





## 486 Commercial-Grade Multimeter

- Voltage
- Current
- Resistance
- Audible continuity
- Capacitance
- Frequency
- Temperature
- Data hold
- Min/max/relative modes
- Backlight
- True RMS
- Auto AC/DC voltage detect w/low impedance (Auto - VLoZ)
- Analog bar graph
- Non-contact voltage detection
- Peak hold
- Low battery indication
- Auto power off
- Limited 2-year warranty



Description	Part No.
Digital Multimeter w/peak hold, temperature, includes thermocouple	<b>61-486</b>

Includes: Test Leads, Thermocouple & Carrying Case.

Specifications	Range & Resolution	Accuracy
AC Voltage	6.000/60.00/600.0/1000.0 V	0.80%
AC mV	600.0 mV	1.2%
DC Voltage	6.000/60.00/600.0/1000.0 V	0.08%
DC mV	60.00/600.0 mV	
AC Current	60.00m/600.0m/6.000/10.00A	1.2%
DC Current	60.00m/600.0m/6.000/10.00A	0.80%
Resistance	600.0/6.000k/60.00k/600.0k/6.000M/40.00M Ω	0.80%
Capacitance	1nF to 10mF	0.1%
Frequency	99.9 to 100.0k Hz	0.1%
Temperature	-40°F to 752°F (-40°C to 400°C)	1.0%

## 340 Series Test-Pro® Multimeters

- Voltage
- Current
- Resistance
- Audible continuity
- Capacitance
- Frequency
- Temperature
- Data hold
- Min/max/relative modes
- Backlight
- Low battery indication
- Auto power off
- Limited 2-year warranty



**61-342**



Description	Part No.
Test-Pro® Multimeter w/TRMS	<b>61-342</b>
Test-Pro® Multimeter	<b>61-340</b>

Includes: Test Leads and Thermocouple.

Specifications	Range & Resolution	Accuracy
AC Voltage	4.000/40.00/400.0/600 V	1.5%
DC Voltage	400.0m/4.000/40.00/400.0/600 V	0.5%
Current	400.0μ/4000μ/40.00m/400.0m/4.000/10.00A AC/DC	1.5%
Resistance	400.0/4.000k/40.00k/400.0k/4.000M/40.00M Ω	1.0%
Capacitance	40.00n/400.0n/4.000μ/ 40.00μ/ 400.0μ F	3.0%
Frequency	10.000/100.00/1.000k/10.00k/100.0k/1.000M/4.000M Hz	0.3%
Temperature	-4° F to 1382° F (-20° C to 750° C)	3.0%

Accessories	For Use with	Part No.
Nylon Carrying Case	61-340, 61-342	<b>C-290</b>
Test Leads w/Alligator Clips, Standard	61-340, 61-342, 61-486	<b>TL-495</b>
Test Leads w/Larger Alligator Clip	61-340, 61-342, 61-486	<b>TL-770</b>
Test Leads with Alligator Clips, Premium	61-340, 61-342, 61-486	<b>TL-795</b>
Beaded K-type Thermocouple*	61-340, 61-342, 61-486	<b>61-461</b>
Thermocouple Adapter*	61-340, 61-342, 61-486	<b>61-465</b>
Replacement Thermocouple	61-486	<b>TC-486</b>

\*Note: K-type thermocouple plugs into digital multimeter voltage jacks with 61-465 adapter.

## Solenoid Voltage Testers

- Extremely rugged and reliable
- Vibrates when AC voltage is present
- Indicates AC/DC voltage level
- Replaceable leads with shielded probe tips (UL 61010-031 compliant)
- Bright, long-life LED's and neon indicator lamp
- Dual voltage indication for backup safety
- 2-year warranty

61-076



Description	Part No.
Vol-Con® Voltage/Continuity Tester, 5-600V AC/DC	61-076
Vol-Test® Voltage Tester, 100-600V AC/DC	61-065
Nylon Carrying Case	C-90
Standard Test Leads (for use with 61-076 & 61-065)	61-070
Resistor Fused Leads (for use with 61-076 & 61-065)	61-072
Replacement 1.5V Batteries, 4/pack	61-201

Includes: Standard Test Leads.

## E-Z Check® Circuit Tester

- Tests for correct wiring, open Ground, reverse polarity, open hot, open neutral, hot on neutral, hot and ground reversed with open hot in 3-wire, 120VAC circuits
- Simulates ground fault for testing GFCIs (61-051 only)
- No-slip ergonomic design maximizes comfort
- Premium neon lamps prevent false readings
- Tough, impact-resistant case
- 2-year warranty

61-051

61-035



Description	Part No.
E-Z Check® Plus GFCI Circuit Tester	61-051
E-Z Check® Circuit Tester	61-035



## Receptacle Tester

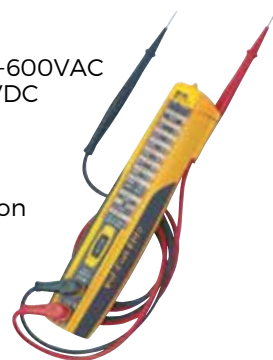
- Tests for correct wiring in 3-wire receptacles
- For use on 120VAC circuits
- 1-year warranty



Description	Part No.
GFCI Receptacle Tester	61-501

## Vol-Con® Elite Digital Voltage Tester

- Tests for AC Voltage from 24-600VAC and DC Voltage from 6-220VDC
- Visual and audible warning
- Audible continuity
- Non-contact voltage indication (40-600VAC)
- Low impedance to eliminate ghost voltages
- Low battery indicator
- Replaceable silicone test leads (UL 61010-031 compliant)
- Integral lead storage
- 2-year warranty



Description	Part No.
Vol-Con® Elite Digital Voltage Tester w/vibration mode	61-092
Nylon Carrying Case	C-90
Silicone Test Leads	TL-102

Includes: Silicone Test Leads.

## VoltAware™ Non-Contact Voltage Tester

- Indicates presence of voltage from 40-1000VAC
- Visual indication of voltage; green LED shows unit is active, flashing red live indicates voltage
- Selectable audible indication of voltage
- Sleek, compact design
- Auto shut-off to conserve battery life after 10 minutes
- Low battery detector and easy battery (2 AAA included) replacement
- 2-year warranty



Description	Part No.
VoltAware™ Non-Contact Voltage Tester	61-025

## VoltSensor™ Non-Contact Voltage Testers

- Tests for voltage from 40-600VAC
- Audible and visual indication
- 1-year warranty

Description	Part No.
VoltSensor™ Non-Contact Voltage Tester	<b>61-063</b>



## Insulation Testers

- Checks new installations for damaged insulation
- Checks existing installations and motor windings for breakdowns in insulation
- 2-year warranty

Description	Part No.
Insulation Meter w/PI, DAR, Includes Remote Probe, Test Leads and Carrying Case	<b>61-797</b>
Remote Probe Test Lead (61-797)	<b>TL-797RP</b>
Insulation Tester - Includes Test Leads and Carrying Case	<b>61-795</b>
Test Leads w/Alligator Clips, Premium (for 61-795 & 61-797)	<b>TL-795</b>



Specifications	Range & Resolution	
	61-797	61-795
Test Voltage	50/100/250/500/1000 VDC	250/500/1000 VDC
Voltage AC/DC	0.1-600.0 V	0.1-600.0 V
Continuity	—	0.01-20.0 $\Omega$
Resistance	0.01 $\Omega$ to 40.00k $\Omega$	0-200.0 $\Omega$
Insulation Resistance	Up to 20G $\Omega$	Up to 4000M $\Omega$
Earth-Bond Resistance	0.01 $\Omega$ to 40.00k $\Omega$	0.01 $\Omega$ to 19.99 $\Omega$

## Ground Resistance Meters

- Auto ranging
- Auto power off
- Hard case included
- 2-year warranty

Description	Part No.
Ground Resistance Clamp Meter	<b>61-920</b>
3-Pole Ground Resistance Tester (includes TL-796 lead set kit)	<b>61-796</b>
Earth Resistance Lead Set Kit (not shown)	<b>TL-796</b>



**61-796**



**61-920**



Specifications	Range & Resolution	Accuracy	Range & Resolution	Accuracy
	61-920		61-796	
Ground Resistance	0/120/1200 $\Omega$	1.5%	20.00/200.0/2000 $\Omega$	2.0%
Ground Leakage Current	100m/1000m/15/30 A	2.0%	—	—

## 3-Phase Sequence Tester

- For use from 120 to 600VAC
- Color-coded insulators
- Shock resistant housing
- Easy to read
- 2-year warranty



Description	Part No.
3-Phase Sequence Tester	<b>61-520</b>

Includes Carrying Case.

## 3-Phase/Motor Rotation Tester

- Identifies three-phase sequence
- Indicates motor rotation
- Checks for open phases
- For use up to 600VAC
- 2-year warranty



Description	Part No.
3-Phase/Motor Rotation Tester	<b>61-521</b>
Test Lead Set	<b>TL-521</b>

Includes Carrying Case.

## Digital Light Meter

- Responds to all visible light sources
- Measures in four ranges up to 20,000 Foot Candles or 200,000 Lux
- +/- 3% basic accuracy
- Data hold mode
- Max reading mode
- Auto zero adjustment
- Low battery indication
- Auto power off
- Remote sensor with 59 in. (1.5m) cable
- 2-year warranty



Description	Part No.
Digital Light Meter	<b>61-686</b>

Includes Carrying Case.



## Ground Continuity Adapter

- Verifies cabinet or equipment chassis has been properly bonded to system ground



Description	Part No.
Ground Continuity Adapter for 61-164 Circuit Analyzer	<b>61-175</b>

## Isolated Ground Adapter

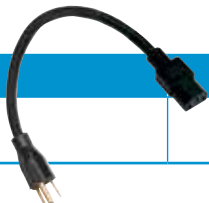
- Verifies receptacle is isolated from system ground and bonded to other devices on the branch circuit



Description	Part No.
Isolated Ground Adapter for 61-164 Circuit Analyzer	<b>61-176</b>

## Extension Cord

Description	Part No.
1' Extension Cord for 61-164 Circuit Analyzer	<b>61-182</b>



## Alligator Clip Adapter

- Allows SureTest® Circuit Analyzer to analyze non-outlet based circuit for branch circuit safety and performance



Description	Part No.
Alligator Clip Adapter for 61-164 Circuit Analyzer	<b>61-183</b>

## Magnetic Strap



- Frees up hands to help work safely
- Fits 480/340 Series Multimeters and Battery Pack BP-958

Description	Part No.
Magnetic Strap	<b>61-565</b>

## Thermocouple



**61-461**



**61-465**

- Measures up to 275°F
- K-type thermocouple plugs into digital multimeter voltage jacks with 61-465 adapter

Description	Part No.
Beaded K-type Thermocouple	<b>61-461</b>
Thermocouple Adapter	<b>61-465</b>
Replacement Thermocouple for 61-486 Digital Multimeter	<b>TC-486</b>

## Test Leads



Description	Category Rating	Part No.
Test Leads		<b>TL-95</b>
Silicone Test Leads	CATIII 1000V CATIV 600V	<b>TL-102</b>
Test Leads w/alligator clips (standard)		<b>TL-495</b>
Test Lead Set		<b>TL-521</b>
Premium Test Leads w/alligator clips	CATIII 1000V CATIV 600V	<b>TL-770</b>
Test Leads w/alligator clips (premium)		<b>TL-795</b>
Earth Resistance Lead Set		<b>TL-796</b>
Remote Probe Test Lead		<b>TL-797RP</b>
Test Lead Set		<b>TL-956</b>
Standard Test Leads (for use with 61-076 & 61-075)		<b>61-070</b>
Resistor Fused Test Leads (for use with 61-076 & 61-075)		<b>61-072</b>

For more detailed information on the selection of replacement fuses and carrying cases, please visit our website at [idealind.com](http://idealind.com).

## Carrying Case Selection Guide



		VOLTAGE TESTERS				160	340		480	700	740		760		770	
		61-065	61-076	61-092	61-096	61-164	61-340	61-342	61-486	61-704	61-744	61-746	61-763	61-765	61-773	61-775
Selection Guide																
61-179	Nylon Carrying Case					•										
C-90	Nylon Carrying Case	•	•	•	•						•	•				
C-290	Nylon Carrying Case						•	•	•							
C-700	Nylon Carrying Case									•						
C-760	Nylon Carrying Case												•	•		
C-770	Nylon Carrying Case														•	•

## Replacement Parts Selection Guide

Selection Guide			060	070	090		340		480	500	700	740		760		770		790			900		
			61-065	61-076	61-092	61-096	61-340	61-342	61-486	61-521	61-704	61-744	61-746	61-763	61-765	61-773	61-775	61-795	61-796	61-797	61-955	61-957	61-959
FUSES																							
F-105	1A (600V)	10.3 x 35mm																•					
F-340	0.5A (500V)	6.35 x 32mm						•															
F-341	10A (1000V)	10 x 38mm					•	•															
F-497	440mA (1000V)	10 x 35mm						•															
F-797	315mA (1000V)	5 x 32mm																	•				
BATTERIES																							
—	1.5V (AAA)											•	•					•		•			
—	9V				•	•	•	•			•			•	•	•	•						
TEST LEADS																							
TL-796	Earth Resistance Lead Set																		•				
TL-797RP	Remote Probe Test Lead																			•			
TL-102	Silicone Test Leads				•						•												
61-070	Standard Test Leads		•	•																			
TL-770	Test Leads w/larger Alligator Clips						•	•	•			•	•	•	•	•	•						
TL-95	Test Leads					•																	
TL-495	Test Leads w/Alligator Clips (Standard)						•	•	•														
TL-521	Test Lead Set									•													
TL-795	Test Leads w/Alligator Clips (Premium)						•	•	•								•		•				
TL-956	Test Lead Set																			•	•	•	

# TEST LEAD SELECTION CHART

for this **TESTER**

▶ use these **TEST LEADS**

**61-065**  
Vol-Test® Voltage Tester  
**61-076**  
Vol-Con® Voltage/Continuity Tester



**61-070**  
Standard Test Leads



OR

**61-072**  
Resistor Fused Test Leads



**61-092**  
Vol-Con® Elite Digital Voltage Tester



**TL-102**  
Silicone Test Leads



**61-096**  
Split-Jaw™ Smart Meter



**TL-95**  
Test Leads



**61-340, 61-342**  
Test-Pro® Multimeter  
**61-486**  
Digital Multimeter



**TL-770**  
Test Leads w/Alligator Clip



OR

**TL-495**  
Test Leads w/Alligator Clips Standard



**61-521**  
3-Phase/Motor Rotation Tester



**TL-521**  
Test Lead Set



**61-704**  
4-in-1 Test Tool



**TL-102**  
Silicone Test Leads



OR

**TL-495**  
Test Leads w/Alligator Clips Standard



**61-744, 61-746**  
Clamp-Pro™ 600A Clamp Meters



**TL-770**  
Test Leads w/Alligator Clip



OR

**TL-495** Test Leads w/Alligator Clips Standard



TL-495 leads are compatible with the 61-704 but will not fit in the lead storage mounts.

**61-773, 61-775**  
1000A Clamp Meter  
**61-763, 61-765**  
660A Clamp Meter



**TL-770**  
Test Leads w/Alligator Clip



OR

**TL-495**  
Test Leads w/Alligator Clips Standard



**61-795**  
Insulation Tester



**TL-795**  
Test Leads w/Alligator Clips Premium



**61-796**  
3-Pole Ground Resistance Tester



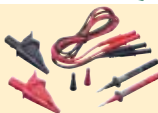
**TL-796**  
Earth Resistance Lead Set



**61-797**  
Insulation Tester



**TL-795**  
Test Leads w/Alligator Clips Premium



OR

**TL-797RP**  
Remote Probe Test Lead



**TR-955**  
Transmitter for SureTrace™ Circuit Tracers



**TL-956** Test Leads



# SAFETY IN THE FIELD

## IEC (International Electrotechnical Commission) Category Ratings

**Category I** – The signal level for telecommunications, electronic and other low-energy equipment with transient limiting protection. Peak impulse transient range is 600-4,000 volts with 30 ohm source.

**Category II** – The local level for fixed and non-fixed powered devices including appliances, lighting and portable equipment. Outlets located more than 30 feet from CAT III sources and 60 feet from CAT IV sources. Peak impulse transient range is from 600-6,000 volts with a 12 ohm source.

**Category III** – The distribution level for fixed primary feeders or branch circuits. Circuits that are separated from CAT IV sources by at least one level of transformer isolation. Peak impulse transient range is 600-8,000 volts with a 2 ohm source.

**Category IV** – The primary supply level for the highest levels of transient over voltage. Includes the utility service both outside and at the service entrance, service drop from the pole to the building, overhead line to remote buildings, and underground line to a well pump. Peak impulse transient range is 600-12,000 volts with less than a 1 ohm source.

Visit [idealind.com](http://idealind.com) for more technical product details, application support, white papers, videos and software.

