



IDEAL[®] Test and Measurement
61-517 GFCI
Receptacle/Voltage Tester
Operation and Safety Manual



Instrucciones en español adentro / Instructions en français
à l'intérieur

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Introduction

The IDEAL 61-517 GFCI Receptacle Tester is a 120V AC plug in outlet tester that indicates proper polarity or mis-wired outlets via Green and Red LEDs and line voltage via a LCD. It also tests for GFCI functioning.



Arc Flash and Shock Hazard, Proper PPE Required. Follow all safety procedures, wear proper PPE in accordance to NFPA 70E. Read and fully understand the instruction manual prior to using this product. Failure to comply can result in serious injury or death.

Contacting IDEAL INDUSTRIES, INC.

To contact IDEAL INDUSTRIES, INC., call one of the following telephone numbers:

IDEAL Industries USA Customer Service

- Phone Number: 800-435-0705
- Email: contactus@idealindustries.com

IDEAL Industries Canada Customer Service

- Phone Number: 905-683-3400
- Email: ideal_Canada@idealindustries.com

IDEAL Industries EMEA

- Phone Number: +44 (0)1925 444 446
- Email: eur.sales@idealindustries.com

IDEAL Industries Australia

- Phone Number: +61 3 9562 0175
- Email: InfoAUS@idealindustries.com

Or visit the IDEAL Electrical Website at www.idealind.com

To register your product, find manuals, watch videos, simply scan this QR code.



Safety Information



Warning - Identifies conditions and actions that could result in possible death or serious injury if the hazard is realized.




Caution - Identifies conditions and actions that could result in meter damage, equipment under test damage or data loss if the hazard is realized.



WARNING



Arc Flash and Shock Hazard, Proper PPE Required. Follow all safety procedures, wear proper PPE in accordance to NFPA 70E and follow the guidelines below and the instructions in this manual when operating the meter. Failure to comply can result in serious injury or death.

-  Choking Hazard, Small Parts. Keep Away from Children. Sharp Objects Hazard, This is not a toy. It is not for use or play by children. Keep Away from Children. Failure to do so can result in serious injury.
- Only experienced or technically competent consumers should use this equipment. When in doubt, call an experienced electrician to make any and all necessary repairs or installations. At all times, perform any necessary work on a de-energized circuit that has had its circuit breaker turned off and has been locked out.
- Use the Meter only as specified in this manual or protection provided by the Meter can be compromised.
- Before using or connecting the Meter, visually inspect it to ensure the cases are not cracked and the back case is securely in place. Do not use if the Meter appears damaged.
- This Meter is intended for use by qualified electricians. Follow NFPA 70E Standards for Electrical Safety in the Workplace when using this Meter.
- Do not use without the batteries correctly in place and the battery door closed and secured.
- Do not use Meter if it operates incorrectly as protection may be compromised. When in doubt, have the Meter serviced.
- When servicing the Meter, use only specified replacement parts.



WARNING

Arc Flash and Shock Hazard, Proper PPE Required. Follow all safety procedures, wear proper PPE in accordance to NFPA 70E and follow the guidelines below and the instructions in this manual when operating the meter. Failure to comply can result in serious injury or death.

- Have the Meter serviced only by qualified service personnel.
- Do not use the Meter around explosive gas, dust, or vapor, or during electrical storms, or in wet environments.
- Do not apply more than the rated voltage, as marked on the Meter, between the terminals or between any terminal and earth ground.
- To avoid false readings that can lead to electrical shock and injury, replace the batteries as soon as the low battery indicator () appears.
- Voltages exceeding 30VAC or 60VDC pose a shock hazard so use caution.
- Do not work alone so that assistance can be rendered in an emergency.
- Use extreme caution when working around bare conductors. Contact with the conductor could result in electric shock.
- Adhere to local and national safety codes. Individual protective equipment must be used to prevent shock and arc blast injury where hazardous live conductors are exposed.
- Never operate the Meter with the back cover removed or the case open.
-  Cancer and Reproductive Harm - www.P65Warnings.ca.gov













CAUTION

Meter damage, equipment under test damage or data loss can occur if the following guidelines are not adhered to.

- Clean the case and accessories with a damp cloth and mild detergents only. Do not use abrasives or solvents. Make sure the meter is completely dry before use.

Symbols & Descriptions

SYMBOL	DESCRIPTION
	Arc Flash and Shock Hazard
	Shock Hazard
	Warning or Caution
	Choking Hazard
	AC (Alternating Current)
	Low Battery Indicator
	Earth Ground
CAT II	IEC Measurement Category II CAT II has protection against transients in fixed and non-fixed powered devices including appliances, lighting, and 120V or 240V equipment inside a building.
VAC	Voltage AC
LCD	Liquid Crystal Display
	Double Insulation
	Do not dispose of this product as unsorted municipal waste. It must be properly disposed of in accordance with local regulations. Please see www.epa.gov or www.ecycle.org for additional information.
	Conforms to applicable North American Safety Standards

Operation

Identification and Description of Operating Controls and Functions for the 61-517 GFCI Receptacle/Voltage Tester:

1. On Off Button
2. GFCI Test Active LED
3. GFCI Test Button
4. Polarity Legend
5. AC Voltage LCD
6. Red-Green Polarity Indicator LEDs
7. Hot-Neutral-Ground Prongs



Operating Features

High Voltage Warning (HI-V)

The meter indicates a  when measuring ~120V AC

Backlight

Backlight is always on when meter is functioning.



Meter Operation

Voltage and Polarity



First, turn the meter on by pressing the ON/OFF Button and then insert into an outlet. If the batteries are good, the 61-517 will beep continuously to indicate live voltage, display the correct voltage, and indicate 3 bright green LEDs on the top and the bottom IF the HOT NEUTRAL and GROUND polarity of the outlet is correct. After removing the 61-517 from an outlet it will continue to display the polarity LED's and measured voltage value for 5 seconds and shut off after 3 minutes of inactivity. This gives the user time to unplug from hard to reach or limited access outlets such as those behind furniture and still have a clear indication of the outlets condition.

If any other polarity condition is encountered other than correct H-N-G, one or more red lights will illuminate. Refer to the legend to identify the incorrect wiring condition.

See table on page 13 for all conditions the 61-517 can detect.

NOTE: The 61-517 will automatically turn itself on when inserted into a live outlet.












Testing a GFCI




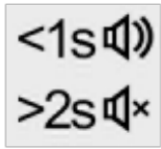

Turn the unit on. Insert the unit into a live GFCI receptacle. Confirm that the 3 polarity indicators are all green. Press and hold the GFCI button for 6 seconds or until the GFCI trips. The light next to the GFCI button will turn RED until the GFCI trips. If the GFCI DOES NOT trip then a defective GFCI or a wiring issue is likely the cause.

NOTE: Modern GFCI's will trip when self testing even without a ground connected. The 61-517 requires a low impedance ground to trip a GFCI. If the GFCI does not trip, pressing the GFCI repeatedly or for more than 6 seconds will not make it function and may cause damage to the 61-517.




Polarity Indications Table

Wire Condition	Indication When Plugged Into Outlet (Values Maintained for 5 Seconds After Unplugging from Outlet)		
	LED Indication	Buzzer	LCD display
	<ul style="list-style-type: none">  Green (G)  Red (R)  Off (O) 		
Correct Wiring is indicated by 3 Green LED's		1. 5s continuous beep (if Voltage between 108 ~ 132 VAC(120+/- 10%)) 2. 5s intermittent beep if voltage <108VAC or >132VAC	1. If Voltage is between 85 ~ 150VAC, LCD Displays Live voltage 2. If voltage is <85VAC, recycle displays ""85--LO--85""; if >150VAC, LCD recycle displays ""150--OL---150""
Open (No) Neutral		5s intermittent beep	Err displayed on LCD
Open (No) Hot		NA	000V display on LCD
Open (No) Ground		5s intermittent beep	1. If Voltage is between 85 ~ 150VAC, LCD Displays Live voltage 2. If voltage is <85VAC, recycle displays ""85--LO--85""; if >150VAC, LCD recycle displays ""150--OL---150""
Hot and Ground Reversed		5s intermittent beep	Err displayed on LCD
Hot and Neutral Reversed		5s intermittent beep	1. If Voltage is between 85 ~ 150VAC, LCD Displays Live voltage 2. If voltage is <85VAC, recycle displays ""85--LO--85""; if >150VAC, LCD recycle displays ""150--OL---150""
Hot on Ground and Open (No) Ground		5s intermittent beep	Err displayed on LCD
One or more red LED's indicates incorrect polarity and a miswired outlet.			

Functions Operation Table

Button	Response	Default Function	Operation
	Turns ON	OFF	1) Press the on button for longer than 2 sec. The unit will turn on and be in the silent mode. 2) Press the ON button for less than 1 sec. The unit will turn on and be in the audible mode. 3) Press the ON/OFF button for longer than 2 seconds when unit is on to turn off. Unit will automatically power off after 2 minutes. 4) Press the GFCI Button to test a GFCI.
	Silent Mode	Audible	
	RED LED	OFF	

Functions Indication Table

Function	Description
LCD	300 count LCD. Displays VAC and 
LCD Backlight	White backlight.
High Voltage Alarm	1) Effective setting: ACV. 2) In ACV/DCV, voltage measurement value: $ACV/DCV \geq 30V$, LCD displays high voltage alarm is  Simultaneously the buzzer emits a continuous tone.
Over Range Indication	LCD displays "OL" when over range is encountered.
Low Battery Indication	The " 
APO	No button presses for 3 minutes will be automatically cause the unit to shut down and enter the low-power state.

Function	Range	Resolution	Accuracy
	61-517		$\pm(a\%+b)$
AC Voltage (V)	150V	1V	$\pm(3.0\%+2)$
GFI (mA)	6mA~9mA	102V,>6.0mA	$\pm(2.0\%+5)$

Environmental Specifications

Operating Temperature:	32°F to 104°F (0°C to 40°C) (<80%RH)
Operating Altitude:	6500 ft (2000 m)
Storage Temperature:	14°F to 122°F (-10°C to 50°C) (<80%RH)

Intended for indoor use.

Mechanical Specifications

Dimensions: (L x W x H)	3.25 in. x 2.6 in. x 1.25 in. (85 mm x 65 mm x 33 mm)
Weight:	0.25 LBS (0.1 KG)
Display:	LCD
Display Count:	300
Power Source:	2 x 1.5V AAA
Battery Life:	100 Hours Typical

EMC/EMI

CISPR 22 3rd Edition. Class B Limits.

EN 55032

CISPR 32

CISPR 11

FCC 15. 107 with reference to Section 15.109 (g).

ICES-003

EN 61326-2-2 Sec 6.4.2.101

USA (FCC)

47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103.

Safety

Complies with the following:

IEC 61010-1, Edition 3 (2010-06) +AMD1 (2016-12)

ANSI/UL/IEC EN 61010-1, Edition 3 (2016-04-29)

CSA-C22.2 No. 61010-1-12 Edition 3 (2019-07-19)

IEC 61010-031 Hand-held Probe Assemblies (2015-05)+AMD1(2018-05)

IEC 61010-2-033 (2019-06)

UL1436

Overvoltage CAT II 150V.

Any voltages exceeding the defined maximum voltage measurement categories described above are outside the normal use of the equipment and protection cannot be guaranteed.

Pollution Degree Class 2

Maintenance and Service

Equipment Maintenance and Service

Meter Inspection

Do not use if meter appears damaged. Visually inspect the meter to ensure case is not cracked.

Prong Inspection

Inspect the insertion prongs and ground pin for any signs of corrosion and for straightness. If the blades are bent, do not use the unit. Return to IDEAL for service.

Battery Inspection/Replacement

Inspect the battery compartment monthly for any signs of degradation. Low battery voltages will cause inaccuracies in readings. Remove the batteries for storage or if the meter will not be used for longer than one month. Battery leakage will compromise the safety of the meter and cause irreparable damage to internal components.



Maintenance and Storage

Switch off and disconnect the meter completely before carrying out any maintenance. Clean the case with a damp cloth and mild detergent. Do not use abrasives or solvents. Keep away from liquids and ensure the meter is completely dry before use.

Service and Replacement Parts

This unit has no user-serviceable parts.

Disposal of Waste, Electrical & Electronic Equipment



In order to preserve, protect and improve the quality of the environment, protect human health and utilize natural resources prudently and rationally, the user should return unserviceable product to relevant facilities in accordance with statutory regulations. The crossed-out wheeled bin indicates the product needs to be disposed separately and not as municipal waste.

Do not dispose of this product as unsorted municipal waste. It must be properly disposed of in accordance with local regulations. Please see www.epa.gov or www.ecycle.org for additional information.

Disposal of Used Batteries/Accumulators

The user is legally obliged to return used batteries and accumulators. Disposing used batteries in household waste is prohibited! Batteries/accumulators containing hazardous substances are marked with the crossed-out wheeled bin. The symbol indicates that the product is forbidden to be disposed via domestic refuse. The chemical symbols for the respective hazardous substances are **Cd** = Cadmium, **Hg** = Mercury, **Pb** = Lead.

You can return used batteries/accumulators free of charge to any collecting point of your local authority, our stores, or where batteries/accumulators are sold. Consequently, you must comply with your legal obligations and contribute to environmental protection.

TWO YEAR LIMITED WARRANTY

This tester is warranted to the original purchaser against defects in material and workmanship for a period of two (2) years from date of purchase. With proof of purchase from an authorized IDEAL distributor, a defective tester will be repaired or replaced with the same product or a functionally equivalent product, at the option of IDEAL INDUSTRIES, INC. during the warranty period, subject to verification of the defect or malfunction. Warranty does not cover consumables such as fuses, batteries, and excludes defects caused by leakage from batteries, abuse, mishandling, dropping, ordinary wear and tear, misuse, neglect, unauthorized repair, improper use, alterations, accidents or any causes beyond IDEAL's reasonable control. Consequential or incidental damages are not recoverable under this warranty. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This LIMITED WARRANTY gives you specific legal rights, which vary from state to state. This warranty constitutes the sole and exclusive remedy of the purchaser and the exclusive liability of IDEAL, and is in lieu of any and all other warranties, and expressly disclaims all other warranties, implied, or statutory as to merchantability, fitness for purpose sold, description, quality productiveness, or any other matter. No agent, distributor or other supplier has the authority to modify or amend this warranty or make other representations or warranties other than those contained in this warranty without express written authorization from IDEAL. For warranty service, call IDEAL customer service at 1-800-435-0705.

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