#61-791

MEGGER®

Hand-held Insulation & Continuity Tester

Test Equipment Depot
1-800-517-8431

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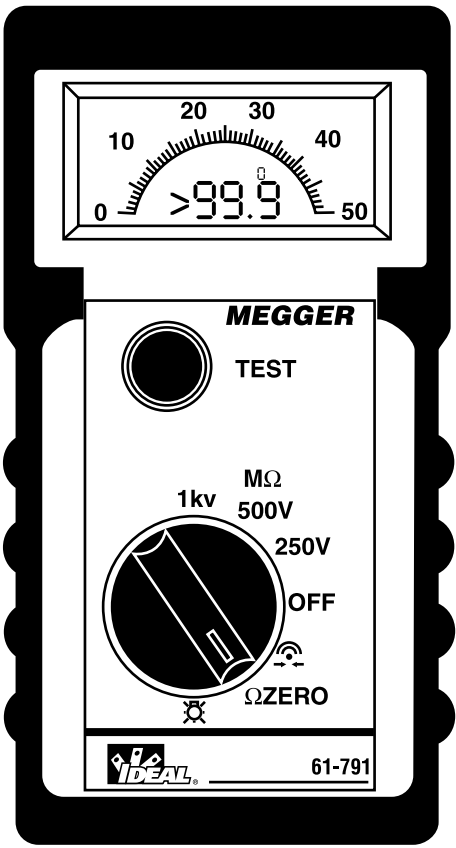
Melrose, MA 02176
Fax 781-665-0780
TestEquipmentDepot.com



SAFETY WARNINGS

- Safety warnings and precautions must be **read and understood** before the instrument is used. They must be **observed** during use.
- The circuit under test **must** be switched off, de - energised and isolated **before** Insulation or Continuity tests are made.
- The test button **must not** be held down while connecting the test leads or while changing ranges. (May cause '**Live Circuit Warning**' to become inoperable).
- The Voltage warning **does not function** if **OFF** or ☼ is selected.
- During an insulation test, connections **must not** be touched.
- After insulation tests, capacitive circuits **must** be allowed to discharge **before** disconnecting the test leads.
- Test leads, prods and crocodile clips **must be** in good order; clean, and with no broken or cracked insulation.
- Replacement fuses **must be** of the correct size, type and rating.

NOTE

THE INSTRUMENTS MUST ONLY BE USED BY SUITABLY TRAINED AND COMPETENT PERSONS.

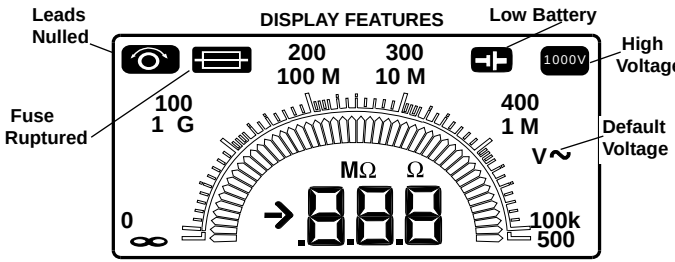
Symbols used on the instrument:

Caution: risk of electric shock

Caution: refer to accompanying notes

Equipment protected throughout by Double Insulation (Class II)

Equipment complies with relevant EU Directives



The 61-791 has the following features:

- ✷ 1mA Insulation test current
- ✷ 200mA Continuity test with lead zeroing facility
- ✷ Combined curved Analogue / Digital display
- ✷ Continuity Beeper
- ✷ Auto shut off
- ✷ Display Back light
- ✷ Low Battery indication
- ✷ 250 Volt Insulation
- ✷ 500 Volt
- ✷ 1000 Volt Insulation
- ✷ Default Voltmeter

OPERATION

⚠ Refer to Safety Warnings before using the instrument

Preliminary Test lead check

1. Before each use of the instrument, visually inspect the test leads, prods and crocodile clips to confirm that their condition is good, with no damaged or broken insulation.
2. Check continuity of the test leads by firmly shorting the leads together and read the test lead resistance. measurement directly from the display.

Backlight operation

1. Turn the instrument backlight '**On**' by selecting the ☼ position.
2. When the backlight is activated, select the desired test position.
3. On completion, select the '**OFF**' position to de-activate the backlight and conserve battery life.

Continuity Testing

1. Turn the instrument '**On**' by selecting the Ω range.
2. If required, zero test lead resistance by firmly shorting both leads together, wait for the reading to stabilise and press the test button. Display of the ☎ symbol confirms lead zeroing. **Note:** Lead zeroing cancels each time the instrument is switched off, or **Auto shut** off operates.
3. Connect the test probes to the isolated circuit under test.
4. The display shows the resistance value. (Maximum 99,9Ω)
5. On completion switch to '**OFF**' position. Alternatively auto shut off operates after 5 minutes of instrument inactivity.

Continuity Beeper On the position, a continuous beep note sounds when the test leads make contact with resistance less than 5Ω. If contact is maintained, beeping ceases after a few seconds and the resistance value is displayed. Resistance greater than 5Ω is indicated by an intermittent beep note.

Insulation Testing

1. Turn the instrument '**On'** by selecting the **MΩ** range.
2. Connect the test probes to the isolated circuit under test.
3. Press and hold the push button; the display shows the insulation value.The reading will remain displayed for a few seconds after the push button is released. As an additional safety feature, instruments with **1000V** range will flash 1000V symbol before performing a test.
4. Release the push button before removing the test leads (to enable the instrument to discharge the circuit under test).
5. On completion switch to the '**OFF**' position. Alternatively auto shut off operates after 12 minutes of inactivity.

SPECIFICATION

Insulation

Test Voltage Accuracy: -0% + 30% (over full operating temperature) into 0 to 1mA load

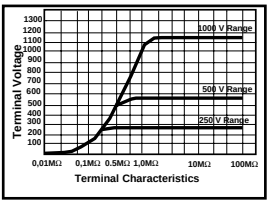
Measuring Range: 0,01MΩ - 999MΩ (Digital)
0,1MΩ - ∞ (Analogue)

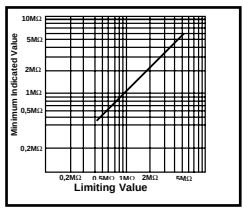
Short Cct. Current: Less than 2mA

Accuracy (at 20°C): ± 3% ±2 digits up to 10MΩ
± 5% ±2 digits up to 100MΩ
± 30% up to 999MΩ

Output Noise Voltage: Typically 2V pk to pk at 20kHz (at 1mA load)

Hum Rejection: <10% error with 100µA RMS (0,2MΩ to ∞)





Continuity

Measuring Range: 0,01Ω - 99,9Ω

Open Cct. Voltage: 5V ±1V

Accuracy (at 20°C): 0,01Ω - 9,99Ω ±3% ± 2 digits (I_{SC} >200mA)
10Ω – 100Ω ± 5% ± 2 digits (I_{SC} >20mA)

Lead res. comp: 0 to 9,99Ω

Hum Rejection: <3% error with 1V RMS (0,2Ω to 50Ω)

Continuity Beeper: On position, the beeper sounds at <5Ω resistance

Environmental Conditions

Temperature Coefficient: <0,1% per °C

Temperature Range:

Operating: -20°C to +40°C (full measurement range)
-20°C to +60°C (to 100 MΩ maximum)

Storage: -25°C to +65°C

Humidity: 90% RH at 40°C max

General Specifications

Display: 3 digit L.C.D. Maximum reading 999

Auto Shut off: Operates after 5 minutes of inactivity by the instrument in Continuity position and 12 minutes in Insulation position. Beep notes pre-empt auto shut off. The instrument can be switched back on by pressing the test button, or by selecting '**OFF**' and then the required position.

Default Live Circuit Warning

When more than 25 V is applied to the terminals, the instruments default to a

voltmeter on all switch positions except '**OFF**' and ☼. In addition, the beeper will sound on all switch positions except '**OFF**' and ☼. All selected tests will be inhibited except for Insulation tests, which will remain available until the voltage exceeds 55 V.

Default Voltmeter Ranges: 25V - 450V a.c. 50/60 Hz ± 2% ±3 digits
450V - 600V a.c. 50/60 Hz ± 3%
d.c. - unspecified

Automatic Discharge: Capacitive circuits are automatically discharged when the test button is released following an insulation test.

Power Supply: 6 x 1,5V cells IEC LR6 type only.

Battery life: Typically 3000 x 5 second operations (worst case, with ☼ not selected).
Battery cells should not be left in an instrument which may remain unused for extended periods of time.

Low Battery Indicator: The low battery indicator symbol ⊣+ will appear when the battery cells are exhausted.

Battery Replacement: The rear cover **must not** be opened if the test leads are connected. To remove the rear cover, release the screw at the bottom of the cover and lift the cover upwards.To avoid the possibility of shock, **do not** press the test button or touch the fuse when changing batteries.

Fuse: 500 mA (F) H.B.C.10 kA min (32mm x 6mm)
To check this fuse, select **MΩ**, open circuit the test leads and press the test button until a reading is obtained. Display of the fuse symbol ▭ or an error code indicates a ruptured fuse. Located behind the rear cover, this fuse can be replaced by the user. The rear cover **must not** be opened if test leads are connected. The replacement fuse **must** be of the correct type and rating. To avoid the possibility of shock, disconnect the battery **before** touching the fuse.

Safety: The instruments meet the requirements for double insulation to IEC 1010-1 (1995) EN 61010-1 (1995) to Category III*****, 300 Volts phase to earth, 440 Volts phase to phase, without the need for separately fused test leads. *****Relates to transient overvoltage likely to be found in fixed installation wiring.

E.M.C. Meets EN 50081-1 and EN 50082-1 (1992).

Weight: 530g (including batteries)

Dimensions: 195mm x 98mm x 40mm.

Cleaning: Wipe disconnected instrument with a clean cloth dampened with soapy water or Isopropyl Alcohol (IPA).

ACCESSORIES

Supplied	**Part Number**
Synthetic zip-up pouch	C90
Test leads, prods & crocodile clips	TL - 791

Lifetime Limited Warranty

This meter is warranted to the original purchaser against defects in material or workmanship for the lifetime of the meter. During this warranty period, IDEAL INDUSTRIES, INC. will, at its option, replace or repair the defective unit, subject to verification of the defect or malfunction.

This warranty does not apply to defects resulting from abuse, neglect, accident, unauthorized repair, alteration, or unreasonable use of the instrument.

Any implied warranties arising out of the sale of an IDEAL product, including but not limited to implied warranties of merchantability and fitness for a particular purpose, are limited to the above. The manufacturer shall not be liable for loss of use of the instrument or other incidental or consequential damages, expenses, or economic loss, or for any claim or claims for such damage, expenses or economic loss.

State laws vary, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.