PROJECTA

DIGITAL
CLAMP METER
UP TO 400 AMPS

P/No. DT910

⚠ WARNING

To avoid possible electric shock or personal injury, follow these guidelines:

- Do not use the meter if it is damaged. Before you use the meter, inspect the case. Pay particular attention to the insulation surrounding the connectors.
- Inspect the test leads for damaged insulation or exposed metal. Check the test leads for continuity. Replace damaged test leads before you use the meter.
- Do not use the meter if it operates abnormally. Protection may be impaired. When in doubt, have the meter serviced.
- Do not operate the meter around explosive gas, vapour, or dust.
- Do not apply more than the rated voltage, as marked on the meter, between terminals or between any terminal and earth ground.
- Before use, verify the meter's operation by measuring a known voltage.
- When servicing the meter, use only specified replacement parts.
- Use with caution when working above 30V ac rms, 42V peak, or 60 dc. Such voltages pose a shock hazard.
- When using the probes, keep your fingers behind the finger guards on the probes.
- Connect the common test lead before you connect the live test lead. When you disconnect test leads, disconnect the live test lead first.
- Remove the test leads from the meter before you open the battery door.
- Do not operate the meter with the battery door or portions of the cover removed or loosened.
- To avoid false readings, which could lead to possible electric shock or personal injury, replace the batteries as soon as the low battery indicator ("⊟") appears.
- CAT II – Measurement Category II is for measurements performed on circuits directly connected to low voltage installation. (Examples are measurements on household appliances, portable tools and similar equipment.) Do not use the meter for measurements within Measurement Categories III and IV.

INTRODUCTION

This manual provides all safety information, operation instruction, specifications and maintenance for the meter, which is compact, handheld, and battery operated.

This instrument performs AC/DC voltage, AC/DC Current (clamp), Resistance, Audible Continuity, Diode, Frequency measurements and Non-Contact ACV Detecting(NCV).
It is an 3 3/4 digit (4000 counts) auto ranging DMM with DC & AC clamp meter function.

CAUTION ⚠

To avoid damage to the meter, don't apply input which exceeds the limit shown below:

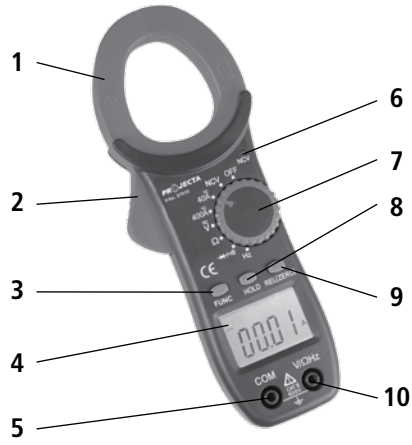
Function	Terminals	Input Limits
DCV/ACV	VΩ & COM	600V DC or 600V rms AC
Ω •))) →|–	VΩ & COM	250V DC or rms AC
Hz	VΩ & COM	250V DC or rms AC

GENERAL CHARACTERISTICS

Display: 4000 counts, updates 2/3 sec.
Polarity Indication: "-" displayed automatically
Over-range Indication: "OL" displayed
Low Battery Indication: "⊟" displayed
Operation Temperature: 0°C to 40°C
Storage Temperature: -10°C to 50°C
Battery Type: (AAA) 1.5V×2PCS
Dimension(H×W×D): 186×75×28mm
Weight: Approx. 180g
Accessories: Operator's Manual, Battery, Test Leads

PANEL DESCRIPTION

1. Transformer jaw
2. Clamp trigger
3. Function button
4. LCD display
5. COM Input Terminal
6. NCV LED Indication
7. Function rotated switch
8. Hold button
9. REL(Zero) button
10. VΩ Input Terminal



SPECIFICATIONS

AC VOLTAGE (Auto ranging)

Range	Resolution	Accuracy
400mV	0.1mV	±(1.5% of rdg + 5dgts)
4V	1mV	±(1.2% of rdg + 3dgts)
40V	10mV	
400V	100mV	
600V	1V	

Input Impedance: more than 10MΩ

Frequency Range: 40 to 200Hz

DC VOLTAGE (Auto ranging)

Range	Resolution	Accuracy
400mV	0.1mV	±(1.2% of rdg + 5dgts)
4V	1mV	±(1.0% of rdg + 2dgts)
40V	10mV	
400V	100mV	
600V	1V	

Input Impedance: more than 10MΩ

RESISTANCE (Auto Ranging)

Range	Resolution	Accuracy
400Ω	0.1Ω	±(1.2% of rdg + 3dgts)
4KΩ	1Ω	
40KΩ	10Ω	
400KΩ	100Ω	
4MΩ	1KΩ	
40MΩ	10KΩ	±(2.5% of rdg + 3dgts)

AC CURRENT (Auto ranging)

Range		Resolution	Accuracy
AUTO RANGE	4A	1mA	±(2.5% of rdg + 15dgts)
	40A	10mA	±(2.5% of rdg + 5dgts)
AUTO RANGE	200A	100mA	
	400A	1A	

Measuring voltage drop: 200mV; Frequency Range: 40 to 400Hz.

DC CURRENT (Auto ranging)

Range	Resolution	Accuracy
AUTO RANGE 4A	1mA	±(3.0% of rdg + 5dgts)
40A	10mA	±(2.5% of rdg + 7dgts)
AUTO RANGE 200A	100mA	
400A	1A	

FREQUENCY (Auto ranging)

Range	Resolution	Accuracy
10 ~ 1M Hz	1 Hz	±(1.0% of rdg + 2dgts)
1M ~ 10M Hz	1A	±(1.5% of rdg + 4dgts)

Input Voltage Limit: Max.250V(<1M Hz) Max. 10V(>1M Hz).

Non-Contact AC VOLTAGE Detection(NCV)

Special LED Lighting is indicating once AC>100V.

CONTROL BUTTON DESCRIPTION

HOLD BUTTON

When this button is pushed, LCD will show the last reading, and "H" symbol will appear till pushed again. Data holding will be cancelled automatically when the function switch is rotated.

FUNC BUTTON

Push this button to select ACA/DCA, ACV/DCV, measuring function when the function switch is set at A,V, or position.

REL/ZERO BUTTON

When this button is pushed, LCD will show the relative reading or Zero reading till pushed again.

OPERATION INSTRUCTION

AC/DC VOLTAGE MEASUREMENT

Connect the BLACK test lead to the COM jack and the RED to the VΩ jack.

Set the function switch at V position, connect test leads across the source or load under measurement.

Push "FUNC" button to select AC or DC Mode, and then the symbol ~ or ⎓ is shown on LCD.

Read LCD display. The polarity of RED test lead will be indicated when making a DC measurement.

RESISTANCE MEASUREMENT

1. Connect the BLACK test lead to the COM jack and the RED to the VΩ jack. (NOTE: The polarity of the RED lead is positive "+")
2. Set the function switch at Ω position, connect test leads across the resistance under measurement.

NOTE:

1. For resistance above 2MΩ, the meter may take a few seconds to stabilize reading. This is normal for high resistance measuring.
2. When the input is not connected, i.e. at open circuit, the figure "OL" will be displayed under over-range condition.
3. When check in circuit resistance, be sure the circuit under test, has all power removed and all capacitors are fully discharged.

AC/DC CURRENT MEASURE

1. Set Function/Range Switch to the 400A range. If the display indicates one or more leading zeros. Shift to 40A range to improve the resolution of the measurement.
2. Push "FUNC" button to select AC or DC Mode, and then the symbol ~ or ⎓ is shown on LCD.
3. Press the "REL(ZERO)" button to zero the meter.
4. Press the trigger to open the transformer jaws. And clamp one conductor only it is impossible to make measurements when two or three conductors are clamped at the same time.
5. Display reading is showing the current value.

CONTINUITY/DIODE TEST

1. Connect the BLACK test lead to the COM jack and the RED to the VΩ jack.
2. Set the function switch at  position and push the button "FUNC" to select continuity or diode test mode.
3. In continuity test, if the circuit resistance under test is lower than 50Ω, built-in buzzer will sound.
4. If diode test mode is selected, connect the RED and BLACK test leads to anode and cathodes of the diode under test separately. The forward voltage drop of this diode in V will be displayed.

FREQUENCY TEST

1. Connect the BLACK test lead to the COM jack and the RED test lead to the V/Ω Hz jack.
2. Put the range selector at "Hz" position, and connect the test leads across the resistance under measurement.
3. Take the reading from LCD.

Note:
When test the high Frequency >1MHz, the input Voltage must be less than 10V for getting the accurate value.

NON-CONTACT AC VOLTAGE DETECTION (NCV)

1. Set the function range switch at the NCV position. Then the NCV indicating LED light is flashing.
2. Take the clamp jaw close to the AC signal.
3. Once the ACV is above 100V, the NCV indicating LED flashes quickly.

NOTE:
Don't try to contact the testing place with this tester. No display on LCD at this range.

BATTERY REPLACEMENT

If the sign "  " appears on the display, it indicates battery should be replaced.
Remove screws and open the back case, replace the exhausted batteries with new ones (AAA 1.5V *2pcs or equivalent).

WARRANTY STATEMENT

Brown & Watson International Pty Ltd ("BWI") of 1500 Ferntree Gully Road, Knoxfield, Vic., telephone (03) 9730 6000, fax (03) 9730 6050, warrants that all products described in its current catalogue will under normal use and service be free of failures in material and workmanship for a period of one (1) year from the date of the original purchase by the customer as marked on the invoice. This warranty does not cover ordinary wear and tear, abuse, alteration of products or damage caused by the purchaser.

To make a warranty claim the consumer must deliver the product at their cost to the original place of purchase or to any other place which may be nominated by either BWI or the retailer from where the product was bought in order that the warranty assessment may be performed. The consumer must also deliver the original invoice evidencing the date and place of purchase together with an explanation in writing as to the nature of the claim.

In the event that the claim is determined to be for a minor failure of the product then BWI reserves the right to repair or replace it at its discretion. In the event that a major failure is determined the consumer will be entitled to a replacement or a refund as well as compensation for any other reasonably foreseeable loss or damage.

This warranty is in addition to any other rights or remedies that the consumer may have under State or Federal legislation.

IMPORTANT NOTE

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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