

DIGITAL CLAMP METER

Model: ET-3268
Serial: 1234567890

ET-3268



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Safety Notes

- Never make measurements with the instrument in the following conditions: the clamp meter or its test leads show damaged; the test leads or your hands are wet; after storage or package the instrument in abnormal conditions; or with the instrument opened.
- Take extreme care when working with voltage above 60V DC or 30V AC RMS, mainly in high energy circuits, as beyond the damage in the instrument, the accidents in these cases can be fatal.
- When taking measurements, keep your hands in the insulated area of the test leads and avoid being in contact with earth potential, that is, keep your body insulated using for example shoes with rubber sole.
- Never exceed the measurement limits of the instrument.
- The repairs, parts replacements and calibrations should be performed only by qualified personal. Excepting the battery replacement. Take the battery out when the instrument will not be used for long time.

Features

The ET-3266 clamp meter is a portable type current meter for easy transport, designed to make the most of electrical parameters measurements without the necessity of opening the current circuit. It has the insulation test function (through the optional unit of 500V insulation test). Directed to use by electricians, technicians, maintenance centers and others interested personal that need an accurate, trustful and always ready to use instrument. And it is powered by a 9V battery, for 150 to 200h of working, depending of the battery type and use. It has a resistant structure, it is easy to hand by user and practical. The liquid crystal display provide a good reading in all illumination conditions. The decimal point is automatically positioned, and the polarity signal (-) is indicated for negative DC measurement (when any signal is showed means that the polarity is positive +). So the display provides direct reading in the unit selected by rotary switch. The overange measurements are indicated when all segments of display are turned off, except the most significant digit together or not with negative signal and decimal point. Moreover, the display includes the low battery indication. If the low battery condition is indicated, the user must replace the battery by a new.

Specifications

General Specifications:

- Comply with IEC 1010 Safety Requirements, Over-voltage CAT II and Pollution Degree 2.
- Display: LCD 3 ½ digits, maximum reading ± 1999 .
- Measurement Ranges: ACA, ACV, DCV, OHM, Continuity Test and Insulation Test (by optional accessory).
- Low Battery Indication: "BAT" is displayed when the battery voltage drops below the normal operation voltage.
- Overrange: "1" or "-1" is displayed in the most significant digit.
- Polarity: Automatic, negative (-) indicated.
- Measuring Method: A/D conversion system with dual integration ramp.
- Protection by PTC for the resistance ranges.
- Conductor Diameter: 51mm (maximum).
- Jaw Opening: 51mm (maximum).
- Operation Environment: 0°C to 50°C, RH < 80%.
- Storage Environment: -20°C to 60°C, RH < 80%.
- Power Requirement: 9V battery.
- Dimensions: 240 (H) x 97 (W) x 38.5 (D) mm.
- Weight: Approx. 290g (including battery).

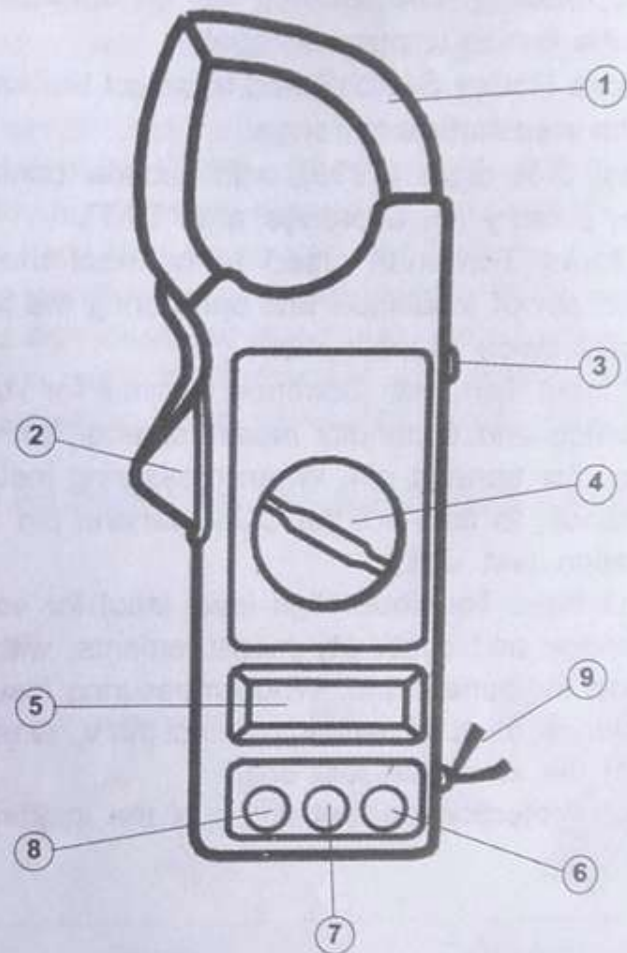
Electrical Specifications

The accuracy is specified as a percentage of the reading plus a number of digits $\pm(\% \text{ Read.} + \text{N. Dig.})$. It is valid for temperature in the range of 23°C \pm 5°C, RH < 80%.

- AC Current
Ranges: 200A, 1000A
Accuracy: 200A: $\pm(2.5\% \text{ Read.} + 5 \text{ Dig.})$
1000A: < 800A: $\pm(3.0\% \text{ Read.} + 5 \text{ Dig.})$
800~1000A: $\pm(5.0\% \text{ Read.} + 10 \text{ Dig.})$
Resolution: 100mA, 1A
Frequency Response: 50/60Hz
Overload Protection: 1200A AC per 1 minute
- AC Voltage
Ranges: 750V
Accuracy: $\pm(2.0\% \text{ Read.} + 4 \text{ Dig.})$
Resolution: 1V
Frequency Response: 50~500Hz
Input Impedance: 9M Ω
Overload Protection: 750V DC/AC
- DC Voltage
Ranges: 1000V
Accuracy: $\pm(1.2\% \text{ Read.} + 5 \text{ Dig.})$
Resolution: 1V
Input Impedance: 9M Ω
Overload Protection: 1000V DC or AC Peak

- Resistance
 Ranges: 200 Ω , 20k Ω
 Accuracy: 200 Ω : \pm (2.0% Read. + 3 Dig)
 20k Ω : \pm (2.0% Read. + 3 Dig)
 Resolution: 0.1 Ω , 10 Ω
 Overload Protection: 500V DC / AC RMS
- Continuity Test
 Range: 200 Ω
 Sonorous Threshold: 50 Ω \pm 25 Ω
 Overload Protection: 500V DC / AC RMS
- Function: DATA HOLD for all ranges
- Insulation Test (Optional Accessory)
 Ranges: 20M Ω , 2000M Ω
 Accuracy: 20M Ω : \pm (2.0% Read. + 2 Dig)
 2000M Ω : < 500M Ω : \pm (4.0% Read. + 2 Dig)
 > 500M Ω : \pm (5.0% Read. + 2 Dig)
 Resolution: 10k Ω , 1M Ω
 Test Voltage: 500V

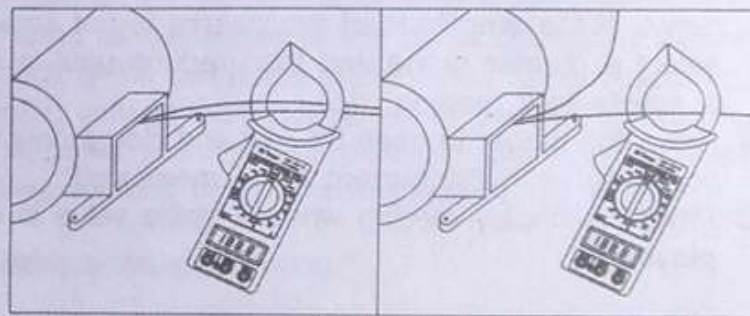
Panel Description



1. Jaw: Pick-up the current that flows by the conductor.
2. Trigger: Press to open the jaw.
3. Data Hold Button: Press this button to freeze the display reading. The reading will be updated only when the button is pressed again.
4. Functions Rotary Switch Used to select the function and the measurement range.
5. Display: 3 ½ digits (1999), with decimal point indication, polarity (-), overrange and "BAT".
6. EXT Input Terminal: Used to connect the EXT banana pin of insulation test unit during the insulation resistance measurement.
7. COM Input Terminal: Common terminal for voltage, resistance and continuity measurements, with connection for banana pin. When measuring insulation resistance, to connect the COM banana pin of the insulation test unit.
8. V / Ω Input Terminal: High level input for voltage, resistance and continuity measurements, with connection for banana pin. When measuring insulation resistance, must be used to connect the V / Ω banana pin of the insulation test unit.
9. Strap: Protection against drops of the instrument.

Cautions

- Make sure the battery is connected correctly to the terminals and placed in the proper compartment.
- Before any measurement, make sure the rotary switch is correctly positioned.
- When finishing the measurements set the rotary switch to the OFF position. Do not use or storage this instrument in high temperature or humidity, and do not keep it to direct sun light for long time.
- The jaw does not be used to hold or fix the instrument, it is only designed to pick-up current measurement. When using the instrument as voltmeter, ohmmeter or insulation tester, never clamp a conductor with the jaw.
- Do not clamp more than one conductor with the jaw.



Wrong

Correct

Operation

Before taking any measurement, read the section Safety Notes with attention and you must be sure about all warnings. Always examine the instrument regarding damages, contamination (excessive dust, grease, ...) and defects. Check the test leads against cracked or defects in the insulation. In the case of any abnormal condition is detected, do not take any type of measurement.

Keep the instrument turned on at least for 30 seconds before the measurement. When changing the rotary switch of position, make sure that the test leads are removed from the circuit or equipment in test.

AC Current Measurement

1. Select the rotary switch to the desired ACA current range. If the amplitude of the current is not known, select a greater range and then reduce until to get a satisfactory reading.
2. Press the trigger to open the jaw and clamp only the conductor with the current to be measured.
3. Make the display reading when a stable value is displayed.

Note: To get more accurate measurements, the conductor must be positioned in the center of the jaw.

AC/DC Voltage Measurement

1. Connect the red test lead in the V / Ω terminal and the black test lead in the COM terminal.
2. Select the rotary range to the desired type and range of voltage (DC or AC).
3. If possible, for safety issues, turn off the power and discharge all capacitors of the circuit under test before connecting the test leads to the points to be measured.
4. For DC voltage the (-) signal will be showed to indicate the negative polarity. The positive polarity is omitted.
5. Place the test leads in contact with the points to be measured. The voltage value will be showed in the display.

Notes:

- If possible, for safety issues, turn off the power and discharge all capacitors of the circuit under test before connecting the test leads to the points to be measured.
- For DC voltage the (-) signal will be showed to indicate the negative polarity. The positive polarity is omitted.
- Never exceed the instrument measuring limits.

Resistance Measurement

1. Connect the red test lead in the V / Ω terminal and the black test lead in the COM terminal.

2. Select the rotary switch to the desired resistance range.
3. Turn off the power and discharge all capacitors of the circuit under test before connecting the test leads to the points to be measured.

Notes:

- The test leads resistance can influence in the reading of low resistances, therefore it must be subtracted from the measurement to obtain a more accurate value. Select the more accurate range and short circuit the test leads, the value displayed must be subtracted from next readings.

- The $20\text{k}\Omega$ resistance range of this multimeter is low power type, then it is possible to measure resistance in the circuit, as the test voltage is lower than the necessary to conduct the diode junction.

4. Place the test leads in contact with the points to be measured. The resistance value will be displayed.

Continuity Test

1. Connect the red test lead in the V / Ω terminal and the black test lead in the COM terminal.
2. Select the rotary switch to the "Buzzer" position (continuity test).

3. Turn off the power and discharge all capacitors of the circuit under test before connecting the test leads to the points to be measured.
4. Place the test leads in contact with the points where the continuity is to be measured. In the continuity test the buzzer sounds if the resistance is less than the threshold.

Insulation Resistance Measurement

To make this measurement it is necessary to use the optional insulation tester.

More details regarding this measurement will be found in the instructions manual of the optional insulation tester.

Maintenance

⚠ WARNING:

Remove the test leads from the instrument before battery replacement or any repair.

Battery Replacement

The instrument is powered by a 9V battery. When the replacement is necessary, the low battery indication is displayed.

Remove the battery compartment, in the rear panel of the instrument and then remove the battery, replacing by a new with the same specifications.

Cleaning

To clean the instrument use a soft cloth damped with neutral detergent and water solution. Do not use chemical products as solvents or abrasive products in none point of the instrument.

Manual subject to change without prior notice.
Revision: 00
Date of Issue: 16/03/2006

Accessories

Supplied Accessories

Instructions Manual.....	1 pc
Test Leads.....	1 pair
Transport Case.....	1 pc
Battery (9V).....	1 pc

Optional Accessory

Insulation Tester