AC/DC CURRENT CLAMP METER

ACM-1803

User's Manual

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INTRODUCTION

The AC/DC A Current Clamp is a transducer which will allow your multimeter to measure electrical or/and electronic current up to 400 amperes AC/DC, with a frequency response to 50/60Hz. When measuring current with this clamp, there is no need to break a circuit or to affect the isolation. When measuring DC current, a simple operating knob is designed for zero adjustment.

APPLICATION PROCEDURES

1.Insert the black banana plug into the COM jack and the red banana plug into the V jack of any multimeter with a minimum input impedance of 10k ohms.(OUTPUT and V jack link)
2.Set the power switch from "OFF" to the desired range, 40A (output: 10mV/A) or 400A (1mV/A) position. The green LED will light to indicate that the clamp is switched on.
3.For current measurement below 40A, set the unit to 40A range and set the multimeter to 400mV or 600mV AC range for AC current measurements, or 400mV or 600mV DC range for DC current measurements. If the measured current exceeds 40A, set the unit to 400A range.
4.When perform DC current measurement, always turn the zero adjustment knob on the clamp until the multimeter reads zero.
5.Clamp the jaws around the current-carrying conductor and interpret the reading according to Step 3 above.
6.When 40A range of clamp unit is selected, the measured current value in A.For example, if the multimeter reads 100mV, the measured current is 100mV/(10mV/A)=10A.
When 400A range is selected, the measured current value in A. For example, if the multimeter reads 100mV, the measured current is 100mV/(1mV/A)=100A.

APPLICATION NOTES

1.In the case of DC current, the output is positive when the current flows from the upside to the underside of the clamp. The red banana plug and is positive(OUTPUT aperture).
2.In the case of DC current measurement, a hysteresis effect can occur so that it is impossible to zero the clamp properly. To eliminate this effect, open and close the jaws several times and turn zero adjustment knob

Non-Contact AC Voltage Measurements

WARNING: Risk of Electrocution. Before use, always test the Voltage Detector on a known live circuit to verify proper operation

1.Touch the probe tip to the hot conductor or insert into the hot side of the electrical outlet.
2.If AC voltage is present, the detector LED will illuminate.

NOTE: The conductors in electrical cord sets are often twisted. For best results, rub the probe tip along a length of the cord to assure placing the tip in close proximity to the live conductor.
NOTE: The detector is designed with high sensitivity. Static electricity or other sources of energy may randomly trip the sensor. This is normal operation

OPERATOR SAFETY

1.Do not clamp around conductors with voltages equal to or exceeding 600V DC or 600V rms AC.
2.To avoid physical injury, measurements on bare conductors or conductors with cracked or frayed insulator are forbidden.

SPECIFICATIONS

GENERAL

Captured Conductor Size: Φ30mm maximum
Low Battery Indictor: red LED lighting
Operating Temperature: 0°C to 50°C, 70% R.H.
Storage Temperature: -20°C to 70°C, 80% R.H.
Battery Type: Two “AAA” 1.5V Battery

ELECTRICAL (At 23±5°C, 70% R.H. maximum)

Effective Measurement Range
40A (output: 10mV/A): DC or rms AC for 400mV or 600mV range of the multimter.
400A (output: 1mV/A): DC or rms AC for 400mV or 600mV range of the multimeter.

Accuracy
Current Clamp Accuracy:
DCA range: 40A
0～40.0ADC: ± (2.5% +0.1A)

DCA range :400A
0～400ADC: ± (2.8% +0.5A)

ACA range: 40A(50/60Hz)
0～40.0AAC: ± (2.5% +0.1A)

ACA range: 400A(50/60Hz)
0～400AAC: ± (2.8% +0.5A)

SAFETY INFORMATION

The instrument complies with class II, overvoltage CAT III - 600V of the EN 61010-1, and EN 61010-2-032 stardards. Pollution degree 2 in accordance with IEC 664 indoor use.
If the equipment is used in a manner not specified, the protection provided by the equipment may be impaired.