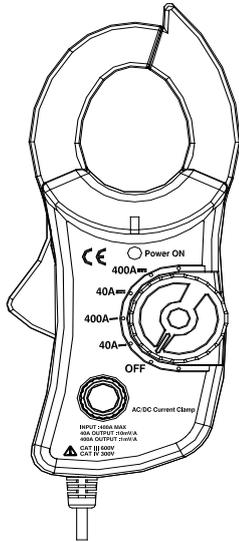


PDI CA-400D
AC/DC CURRENT CLAMP
OPERATOR'S MANUAL



International Safety Symbols



This symbol, adjacent to another symbol or terminal, indicates the user must refer to the manual for further information.

SAFETY NOTES:

- Do not exceed the maximum allowable input range of any function.
- Set the function switch OFF when the meter is not in use.

INTRODUCTION

The AC/DC Current Clamp is a transducer which will allow your multimeter to measure electrical and/or electronic current up to 400 amperes AC/DC, with a frequency response to 50/60Hz. There is no need to break a circuit or to remove the insulation when measuring current with this clamp.

When measuring DC current, the CA-400D offers the user “zero” adjustment by turning the **DC ZERO** knob on the clamp probe.

NOTE: Keep the clamp jaw closed around wire/cable, to ensure the accurate readings during current test.

MEASURING CURRENT

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 measuring DC current, always turn the zero adjustment knob on the clamp until the multimeter reads zero, before taking your measurement.
5. Clamp the jaws around the current-carrying conductor and interpret the reading according to Step 3 above. For more detail, refer to section below.

HOW TO INTERPRET READINGS

When 40A range is selected, the measured current value in Amps if the multimeter reads 100mV, is $100\text{mV}/(10\text{mV/A})=10\text{A}$. To simplify that, move the decimal point one position to the left.

When 400A range is selected, the measured current value in Amps if the multimeter reads 100mV, is $100\text{mV}/(1\text{mV/A})=100\text{A}$. To simplify that, the mV reading is equal to the Amp reading.

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 is positive (OUTPUT aperture).
2. In the case of DC current measurement, a hysteresis effect can occur making it impossible to zero the clamp properly. To eliminate this effect, open and close the jaws several times then 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, a red detector LED will illuminate.

NOTE: The conductors in electrical cord sets are often twisted. For best results, drag 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: 1 ¼ inch

Low Battery Indicator: Red LED light

Operating Temperature: 32°F to 122°F, 70% R.H.

Storage Temperature: -4°F to 158°F, 80% R.H.

Battery Type: Two "AAA" 1.5V Battery

ELECTRICAL (73°±5°F, 70% R.H. maximum)

Effective Measurement Range

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

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)

DC 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)

WARRANTY

This PDI product is warranted to be free from defects in materials and workmanship for a period of two (2) years from the verified date of purchase. During the two year warranty period, PDI will either repair or replace the defective unit, at PDI's discretion. A purchase receipt or other acceptable form of proof of original purchase date will be required before any warranty processes begin. PDI warrants all authorized repairs with a six (6) month limited warranty. View full warranty details and register your PDI product at www.PDIimeters.com

NOTE: Online product registration is required for all warranty claims.

SAFETY INFORMATION

The instrument complies with class II, overvoltage CAT III - 600V of the EN 61010-1, and EN 61010-2-032 standards. 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.



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