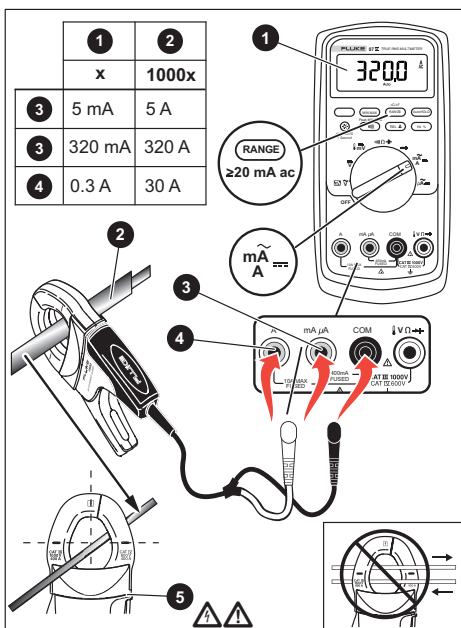


i400 AC Clamp Meter Instructions



Introduction

The i400 (the Product or Clamp) is an ac current clamp that outputs 1 mA/A through the use of safety-shrouded banana plugs. The Product extends the ability of an ac current meter to take measurements up to 400 A.

Use the Product with a multimeter that has: banana plug input jacks, a current range $\geq 20 \text{ mA ac}$, an input accuracy $\geq 2 \%$, and an input impedance $< 10 \Omega$.

To register your product, or to view, print, or download the latest manual or manual supplement, go to our website:

www.fluke.com/productinfo.

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Specifications are subject to change without notice.

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Safety Information

A **Warning** identifies hazardous conditions and procedures that are dangerous to the user. A **Caution** identifies conditions and procedures that can cause damage to the Product or the equipment under test.

Warning

To prevent possible electrical shock, fire, or personal injury:

- Read all safety information before you use the Product.
- Do not alter the Product and use only as specified, or the protection supplied by the Product can be compromised.
- Carefully read all instructions.
- Do not use the Product if it operates incorrectly.
- Do not touch voltages >30 V ac rms, 42 V ac peak, or 60 V dc.
- Do not work alone.
- Limit operation to the specified measurement category, voltage, or amperage ratings.
- Do not exceed the Measurement Category (CAT) rating of the lowest-rated individual component of a Product, probe, or accessory.
- Use Product-approved Measurement Category (CAT), voltage, and amperage-rated accessories (probes, test leads, and adapters) for all measurements.
- Do not make connections on hazardous live conductors in damp or wet environments.
- Comply with local and national safety codes. Use personal protective equipment (approved rubber gloves, face protection, and flame-resistant clothes) to prevent shock and arc blast injury where hazardous live conductors are exposed.
- Do not use a current measurement as an indication that a circuit is safe to touch. A voltage measurement is necessary to know if a circuit is hazardous.
- Use the Clamp only on insulated conductors. Use caution around bare conductors or bus bars. To prevent electrical shock, do not touch the conductor.
- Do not measure current while the test leads are in the input jacks.
- Hold the Product behind the tactile barrier. See  in the figure.
- Before each use, examine the Product. Look for cracks or missing pieces of the clamp housing or output cable insulation. Also look for loose or weakened components. Carefully examine the insulation around the jaws.

- **Do not use the Product above its rated frequency.**
- **Disable the Product if it is damaged.**

The table below lists the symbols that can be used on the Product or in this document.

Symbol	Description
	Consult user documentation.
	WARNING. RISK OF DANGER.
	WARNING. HAZARDOUS VOLTAGE. Risk of electric shock.
	Application around and removal from uninsulated hazardous live conductors is permitted.
	Double Insulated
CAT III	Measurement Category III is applicable to test and measuring circuits connected to the distribution part of the building's low-voltage MAINS installation.
CAT IV	Measurement Category IV is applicable to test and measuring circuits connected at the source of the building's low-voltage MAINS installation.
CE	Conforms to European Union directives.
	This product complies with the WEEE Directive and its marking requirements. The affixed label indicates that you must not discard this electrical/electronic product in domestic household waste. Do not dispose of this product as unsorted municipal waste. For information about take-back and recycling programs available in your country, see the Fluke website.

Maintenance

Periodically wipe the case with a damp cloth and mild detergent. Do not use abrasives or solvents to clean the clamp.

Open the jaws and wipe the magnetic pole pieces with a lightly oiled cloth. Do not allow rust or corrosion to form on the magnetic core ends.

Dispose of old devices in a professional and environmentally sound manner:

- Delete personal data on the Product before disposal.
- Remove batteries that are not integrated into the electrical system before disposal. Dispose of batteries separately.
- If this Product has an integral battery, put the entire Product in the electrical waste.

General Specifications

Size: 150 mm x 70 mm x 30 mm

Weight: 114 g

Temperature:

Operating: 0 °C to 50 °C (32 °F to 122 °F)

Storage: -20 °C to 60 °C (-4 °F to 140 °F)

Coefficient: 0.01 x (specified accuracy)/°C (<18 °C or >28 °C) [(64.4 °F to 82.4 °F)]

Relative humidity: 95 %, 10 °C to 30 °C (50 °F to 86 °F)

75 %, 30 °C to 40 °C (86 °F to 104 °F)

45 %, 40 °C to 50 °C (104 °F to 122 °F)

Altitude:

Operating: 2000 m

Storage: 12 000 m

Output cable length: 1.5 m

Maximum conductor size: 32 mm

Safety: IEC 61010-1: Pollution Degree 2

IEC 61010-2-032: CAT IV 600 V/CAT III 1000 V

Electrical Specifications

Reference conditions: 23 ± 5 °C, 20 % to 75 % RH, conductor centered in jaw opening, no dc component, no adjacent conductor

Measurement range: 1 A to 400 A ac rms, measurement accuracy of <1 A is unspecified

Output: 1 mA/A

Accuracy: 2 % + 0.06 A, 45 Hz to 400 Hz

Typical bandwidth: 5 Hz to 20 kHz

Working voltage: 1000 V ac rms from earth ground

Load impedance: <10 Ω

Maximum non-destructive current: 1000 A

Duty cycle: 1 A to 400 A continuous

Influence of adjacent conductor: <7.5 mA/A

Influence of conductor position in jaw opening: ± 1 % of reading + 0.05 A

LIMITED WARRANTY

This Fluke product will be free from defects in material and workmanship for 1 year from the date of purchase. This warranty does not cover fuses, disposable batteries, or damage from accident, neglect, misuse, alteration, contamination, or abnormal conditions of operation or handling. Resellers are not authorized to extend any other warranty on Fluke's behalf. To obtain service during the warranty period, contact your nearest Fluke authorized service center to obtain return authorization information, then send the product to that Service Center with a description of the problem.

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