i100
AC/DC Solar Current Clamp
100 A

Instructions

Introduction

Fluke current clamps extend the current ranges of Fluke tools. The Fluke i100 AC/DC Solar Current Clamp is highly reliable, measures 1 A to 100 A and provides accurate current reading without breaking the circuit. This clamp measures both ac and dc current with a large jaw, battery-powered Hall-effect probe that gives access to difficult to reach areas.

Contact Fluke

Fluke Corporation operates worldwide. For local contact information, go to our website: www.fluke.com.

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

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Safety

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:

- **Carefully read all instructions.**
- **Read all safety information before you use the Product.**

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- **Do not alter the Product and use only as specified, or the protection supplied by the Product can be compromised.**
- **Do not use the Product around explosive gas, vapor, or in damp or wet environments.**
- **Do not touch voltages >30 V ac rms, 42 V ac peak, or 60 V dc.**
- **Do not use the Product if it operates incorrectly.**
- **Do not use the Product if it is altered or damaged.**
- **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.**
- **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.**
- **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 apply more than the rated voltage and rated current on the jaws.**
- **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.**
- **Hold the Product behind the tactile barrier.**
- **Remove the input signals before you clean the Product.**
- **Repair the Product before use if the battery leaks. Battery leakage may create a shock hazard or damage the Product.**
- **Batteries contain hazardous chemicals that can cause burns or explode. If exposure to chemicals occurs, clean with water and get medical aid.**
- **Remove the batteries if the Product is not used for an extended period of time, or if stored in temperatures above 50 °C. If the batteries are not removed, battery leakage may result.**

- **The battery door must be closed and locked before you operate the Product.**
- **Be sure that the battery polarity is correct to prevent battery leakage.**
- **Use only specified replacement parts.**
- **Have an approved technician repair the Product.**

Symbols

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.
	Do not apply current sensor to or remove from HAZARDOUS LIVE UNINSULATED CONDUCTORS, which may render electric shock, electric burn, or arc flash.
	Battery
	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.

Instructions

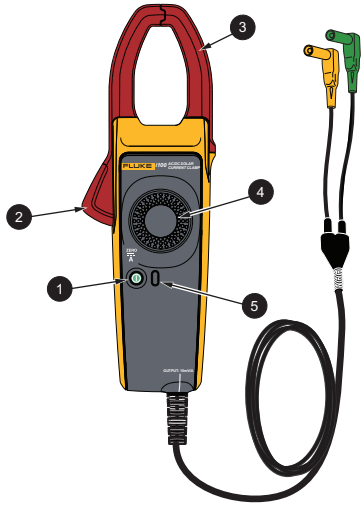
To use the Clamp:

1. Connect the green plug to the green socket on the Analyzer.
2. Connect the yellow plug to the yellow socket on the Analyzer.
3. Select **FUNC./$P_{AC/DC}$** on the Analyzer.
4. Turn on the Clamp ❶.

   The ON indicator ❺ turns on.

5. Rotate the Zero Adjust knob ❹ (jaws empty) until 0.0 shows on the Analyzer display.
6. Open the Clamp jaw ❷❸ and place around the insulated conductor.

   The measurement shows on the Analyzer display.



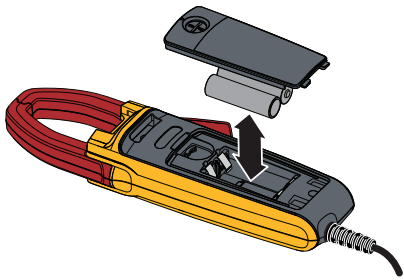
Item	Description
❶	ON/OFF Button
❷	Jaw Lever
❸	Jaw
❹	Zero Adjust
❺	ON Indicator

Maintenance

Clean with a soft towel moistened with water and mild detergent. DO NOT IMMERSE in liquid.

Battery Replacement

For specified battery life, replace with alkaline batteries.



Product Disposal

Dispose of the Product in a professional and environmentally appropriate manner. Remove batteries that are not integrated into the electrical system before disposal and dispose of batteries separately.

Specifications

Maximum voltage between any Terminal and Earth Ground	1000 V
Operating Temperature	0 °C to 50 °C (32 °F to 122 °F)
Storage Temperature	-30 °C to 60 °C (-22 °F to 140 °F)
Relative Humidity	<80 % RH, up to 40 °C (104 °F) <40 % RH, up to 50 °C (122 °F)
Operating Altitude	2000 m
Storage Altitude	12 000 m
Battery Type (x2)	1.5 V AA (alkaline) IEC LR6
Battery Life	50 hr typical
Output Signal	10 mV/A dc or ac
Jaw Opening	34 mm
Cable Length	150 cm
Load Impedance	≥1 MΩ, ≤100 pF
Specified Current Range	1 A to 100 A dc / 1 A to 100 A ac rms

Note

With a true-rms voltmeter, the minimum ac current is limited to the low end of the specified mV ac range.

Usable Current Range	0.2 A to 100 A
DC Accuracy (zero adjusted, conductor centered)	1.5 % + 0.1 A

AC Accuracy ..... 1.5 % + 0.1 A
up to 1 kHz
Crest Factor ≤3

Temperature Coefficient..... ±(0.1 x accuracy) per °C
(0 °C to 18 °C, 28 °C to 50 °C)

Size..... 246 x 83 x 45 mm

Weight..... 0.39 kg

Safety..... IEC 61010-1, Pollution Degree 2
IEC 61010-2-032, Type D current sensor (for use on insulated conductors), 1000 V max

Electromagnetic Compatibility (EMC)

International. ..... IEC 61326-1: Portable, Electromagnetic Environment, IEC 61326-2-2 CISPR 11: Group 1, Class A

Group 1: Equipment has intentionally generated and/or uses conductively-coupled radio frequency energy that is necessary for the internal function of the equipment itself.

Class A: Equipment is suitable for use in all establishments other than domestic and those directly connected to a low voltage power supply network that supplies buildings used for domestic purposes. There may be potential difficulties in ensuring electromagnetic compatibility in other environments due to conducted and radiated disturbances.

Caution: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

Korea (KCC) ..... Class A equipment (Industrial Broadcast & Communications Equipment)

Class A: Equipment meets requirements for industrial electromagnetic wave equipment and the seller or user should take notice of it. This equipment is intended for use in business environments and not to be used in homes.

USA (FCC)..... 47 CFR 15 subpart B. This product is considered an exempt device per clause 15.103.

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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