

⚠ ⚠ Warning

To avoid possible electric shock or personal injury:

- Before each use, inspect the Current Clamp. Look for cracks or missing portions of the clamp housing and output cable insulating cover and for loose or weakened components. Pay particular attention to the insulation surrounding the clamp jaws.
- Do not use a damaged Current Clamp. If a clamp is damaged, tape it shut to prevent unintended operation. A damaged clamp under warranty will be promptly repaired or replaced (at Fluke's discretion) and returned at no extra charge.

If the Current Clamp does not work or perform properly, use the following steps to help isolate the problem:

1. Inspect the jaw mating surface for cleanliness. If any foreign material is present, the jaw will not close properly and measurement errors will result.
2. Verify that the function selection and range on the Multimeter are correct and adjusted to the sensitivity of the Current Clamp.

Cleaning

Periodically wipe the case with a damp cloth and mild detergent.

⚠ Caution

To avoid damaging the Current Clamp, 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.

LIMITED WARRANTY AND LIMITATION OF LIABILITY

This Fluke product will be free from defects in material and workmanship for one 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.

THIS WARRANTY IS YOUR ONLY REMEDY. NO OTHER WARRANTIES, SUCH AS FITNESS FOR A PARTICULAR PURPOSE, ARE EXPRESSED OR IMPLIED. FLUKE IS NOT LIABLE FOR ANY SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES OR LOSSES, ARISING FROM ANY CAUSE OR THEORY. Since some states or countries do not allow the exclusion or limitation of an implied warranty or of incidental or consequential damages, this limitation of liability may not apply to you.

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Instruction Sheet

i400s

AC Current Clamp

Introduction

The i400s (hereafter called "Current Clamp") is compatible with any instrument capable of ac millivolt measurements. It can accept a standard BNC connector, and has an input impedance of greater than or equal to 1 M Ω in parallel with a maximum of 47 pF. The Current Clamp can also be used with digital multimeters using a BNC-to-banana jack adapter.

Contacting Fluke

To contact Fluke, call one of the following telephone numbers:

USA: 1-888-44-FLUKE (1-888-443-5853)
Canada: 1-800-36-FLUKE (1-800-363-5853)
Europe: +31 402-675-200
Japan: +81-3-3434-0181
Singapore: +65-738-5655
Anywhere in the world: +1-425-446-5500
USA Service: 1-888-99-FLUKE (1-888-993-5853)

Or, visit Fluke's Web site at www.fluke.com.

To register your product, visit register.fluke.com

Safety Information

⚠ ⚠ Read First: Safety Information

To ensure safe operation and service of the current clamp, follow these instructions:

- Read the operating instructions before use and follow all safety instructions.
- Use the Current Clamp only as specified in the operating instructions, otherwise the clamp

- **Use caution when working with voltages above 60 V dc or 30 V ac. Such voltages pose a shock hazard.**

Symbols

-  Application around and removal from hazardous live conductors is permitted.
-  Product is protected by double insulation.
-  Risk of Danger. Important information. See Instruction Sheet.
-  Hazardous voltage.
-  Conforms to relevant Canadian Standards Association directives.
-  Conforms to relevant European Union directives.

Safety Specifications

Category Rating: CAT III 1000 V and CAT IV 600 V per EN61010-1, Pollution Degree 2

EMC: EN 61326-1, FCC for emission and immunity

: Tested to US and Canadian standards for compliance to UL61010-1 and CAN/CSA C22.2 No. 101.1:2004

 IEC 61010-1 2nd Edition IEC 61010-02-032

Electrical Specifications

Reference Conditions: 23 ± 5 °C, 20 to 75 % RH; conductor centered in jaw opening; no DC component; no adjacent conductor.

	40 A Range	400 A Range
Measurement Range:	0.5 A to 40 A	5 A to 400 A
Output:	10 mV/A	1 mV/A
Accuracy: 45 Hz to 400 Hz	2 % + 0.015 A	2 % + 0.04 A
Phase Shift: (45 Hz to 400 Hz)		
0.5 A to 1 A	Unspecified	NA
1 A to 5 A	4°	NA
5 A to 10 A	3°	Unspecified
10 A to 20 A	3°	2°
20 A to 40 A	2°	2°
40 A to 400 A	NA	1.5°
Crest Factor:	≤3	≤3 to 300 A ≤2.5 to 400 A

Typical Bandwidth: 5 Hz to 10 kHz

Working Voltage: 1000 V ac rms, in compliance with EN61010

Common Mode Voltage: 1000 V ac rms from earth ground, in compliance with EN61010

Input Load Impedance (of host instrument): > 1 M Ω in parallel with up to 47 pF

Maximum Non-destructive Current: 1000 A

Duty Cycle: 0.5 A to 400 A continuous

Influence of Adjacent Conductor: < 9.0 mA/A

Influence of Conductor Position in Jaw Opening: ± 1.0 % of reading + 0.05 A

General Specifications

Output Cable Length: 2.5 m

Maximum Conductor Size: 32 mm

Storage Temperature: -20 °C to 60 °C

Operating Temperature: 0 °C to 50 °C

Relative Humidity: 10 °C to 30 °C: 95 %