

**FLUKE**<sup>®</sup>

# 302+/303

Clamp Meter

**Users Manual**

PN 4045130

September 2011

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## ***Introduction***

The Fluke 302+/303 Clamp Meter (the Product) measures ac and dc voltage, ac current, resistance, and continuity.

### **Warning**

**Read "Safety Information" before you use the Product.**

## ***How to Contact Fluke***

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

- Technical Support USA: 1-800-44-FLUKE (1-800-443-5853)
- Calibration/Repair USA: 1-888-99-FLUKE (1-888-993-5853)
- Canada: 1-800-36-FLUKE (1-800-363-5853)
- Europe: +31 402-675-200
- Japan: +81-3-6714-3114
- Singapore: +65-738-5655
- Anywhere in the world: +1-425-446-5500

Or, visit Fluke's website at [www.fluke.com](http://www.fluke.com).

To register your product, visit <http://register.fluke.com>.

To see, print, or download the latest manual supplement, visit <http://us.fluke.com/usen/support/manuals>.

## ***Safety Information***

A **Warning** identifies conditions and procedures that are dangerous to the user; A **Caution** identifies conditions and procedures that could cause Product damage, equipment under test damage, or permanent loss of data.


Table 1 shows the symbols used on the Product and in this manual.

### **Warning**

**To prevent personal injury, use the Product only as specified, or the protection supplied by the Product can be compromised.**

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

- **Use only correct measurement category (CAT), voltage, and amperage rated probes, test leads, and adapters for the measurement.**
- **Do not touch voltages > 30 V ac rms, 42 V ac peak, or 60 V dc.**









- Carefully read all instructions.
- Hold the Product behind the tactile barrier. See The Clamp Meter, item ①.
- Do not exceed the Measurement Category (CAT) rating of the lowest rated individual component of a Product, probe, or accessory.
- Do not measure current while the test leads are in the input jacks.
- Do not use the Product around explosive gas, vapor, or in damp or wet environments.
- Limit operation to the specified measurement category, voltage, or amperage ratings.
- Do not work alone.
- Do not apply more than the rated voltage, between the terminals or between each terminal and earth ground.
- 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.
- Replace the batteries when the low battery indicator () shows to prevent incorrect measurements.

- **The battery door must be closed and locked before you operate the Product.**
- **Measure a known voltage first to make sure that the Product operates correctly.**
- **Remove all probes, test leads, and accessories that are not necessary for the measurement.**
- **Only use probes, test leads, and accessories that have the same measurement category and voltage rating as the Product.**
- **Keep fingers behind the finger guards on the probes.**
- **Connect the common test lead before the live test lead and remove the live test lead before the common test lead.**
- **Remove all probes, test leads, and accessories before the battery door is opened.**





- **Do not use and disable the Product if it is damaged.**
- **Do not use the Product if it operates incorrectly.**
- **Do not use test leads if they are damaged. Examine the test leads for damaged insulation, exposed metal. Check test lead continuity.**
- **Before each use, examine the Product. Look for cracks or missing pieces of the clamp housing. Also look for loose or weakened components. Carefully examine the insulation around the jaws. See The Clamp Meter, item ②.**
- **Examine the case before you use the Product. Look for cracks or missing plastic. Carefully look at the insulation around the terminals.**
- **Read all safety Information before you use the Product.**

Table 1. Symbols

Symbol	Meaning	Symbol	Meaning
	AC (Alternating Current)		Earth ground
	DC (Direct Current)		<p>Do not dispose of this product as unsorted municipal waste. Go to Fluke's website for recycling information.</p> <p><i>Note</i></p> <p><i>This product complies with the Regulation for the Administration of the Recovery and Disposal of Waste Electrical and Electronic Products (China).</i></p>
	Hazardous voltage. Risk of electric shock.		Conforms to European Union directives.
	Risk of Danger. Important information. See Manual.		Double insulated

**Table 1. Symbols (cont)**

<b>Symbol</b>	<b>Meaning</b>	<b>Symbol</b>	<b>Meaning</b>
	Battery		Application around and removal from HAZARDOUS LIVE conductors is permitted.
<b>CAT III</b>	CAT III equipment is designed to protect against transients in equipment in fixed equipment installations, such as distribution panels, feeders and short branch circuits, and lighting systems in large buildings.	<b>CAT IV</b>	CAT IV equipment is designed to protect against transients from the primary supply level, such as an electricity meter or an overhead or underground utility service.

*Note*

*The Measurement Category (CAT) and voltage rating of combinations of test probes, test probe accessories, current clamp accessories, and the Product is the LOWEST rating of individual components.*

## How to Clean the Product

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



To prevent damage to the Product, do not use abrasives or solvents to clean the Product case.

## Specifications

### Electrical Specifications

#### AC Current (Jaw)

Range

302+ ..... 400.0 A

303 ..... 600.0 A

Resolution ..... 0.1 A

Accuracy ..... 1.8 %  $\pm$ 5 digits (45 Hz to 65 Hz)

2.5 %  $\pm$ 5 digits (65 Hz to 400 Hz)

#### AC Voltage

Range ..... 600.0 V

Resolution .....	0.1 V
Accuracy .....	1.5 % $\pm$ 5 digits (45 Hz to 400 Hz)

**DC Voltage**

Range .....	600.0 V
Resolution .....	0.1 V
Accuracy .....	1 % $\pm$ 5 digits

**Resistance**

Range .....	400.0 $\Omega$ /4000 $\Omega$
Resolution .....	0.1 $\Omega$ /1 $\Omega$
Accuracy .....	1 % $\pm$ 5 digits
Continuity Beeper .....	$\leq$ 70 $\Omega$

**Mechanical Specifications**

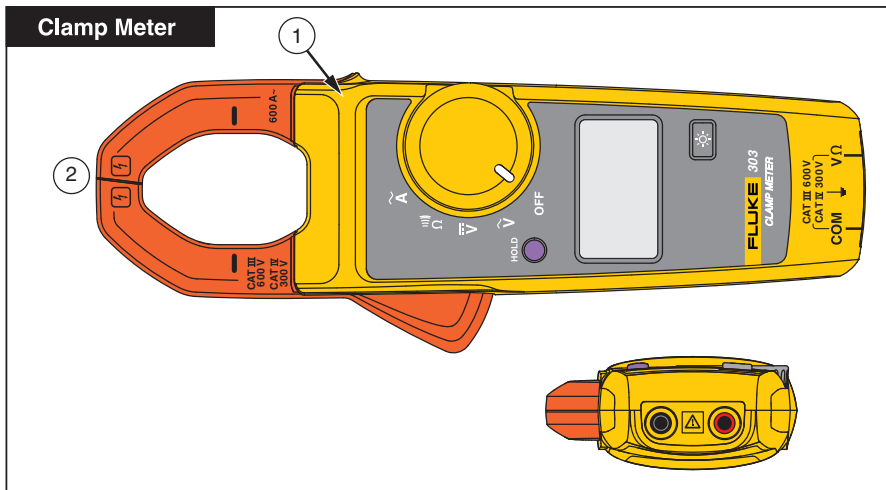
Size (L x W x H) .....	(206.9 x 58.7 x 28.1) mm
Weight.....	265 g

**Environmental Specifications**

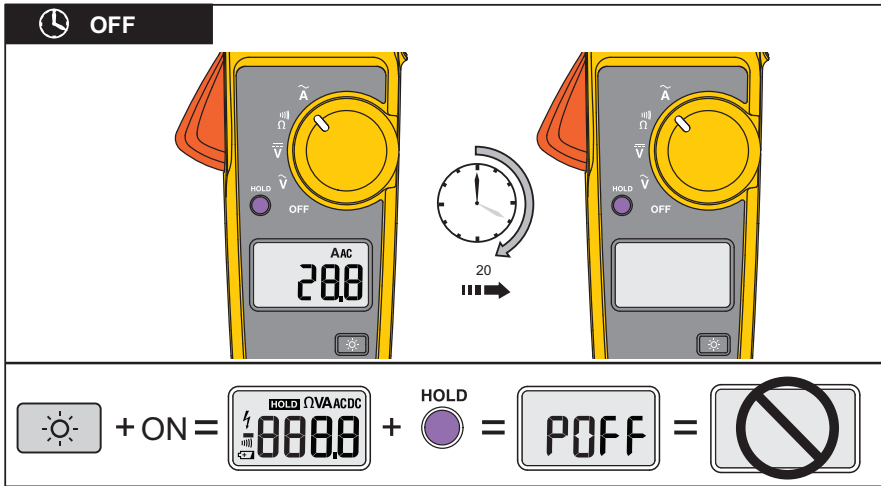
Operating Temperature.....	0 $^{\circ}$ C to +40 $^{\circ}$ C
Storage Temp .....	-30 $^{\circ}$ C to +60 $^{\circ}$ C

Operating Humidity .....	Non condensing (<10 °C) ≤90 % RH (at 10 °C to 30 °C) ≤75 % RH (at 30 °C to 40 °C) (Without Condensation)
Operating Altitude .....	2000 meters
Storage Altitude .....	12,000 meters
EMI, EMC.....	Meets all applicable requirements in EN/IEC 61326-1
Temperature Coefficients.....	Add 0.1 x specified accuracy for each °C above 28 °C or below 18 °C
Measurement Category .....	CAT IV 300 V, CAT III 600 V
Safety Compliance.....	EN/IEC 61010-1, Pollution Degree 2 EN/IEC 61010-2-032 EN/IEC 61010-031:2002/A1:2008 <b>CE</b>
IP Rating .....	IP 30 Per IEC 60529:2001; Non-operating
Batteries.....	2 AAA, NEDA 24A, IEC LR03

## The Clamp Meter



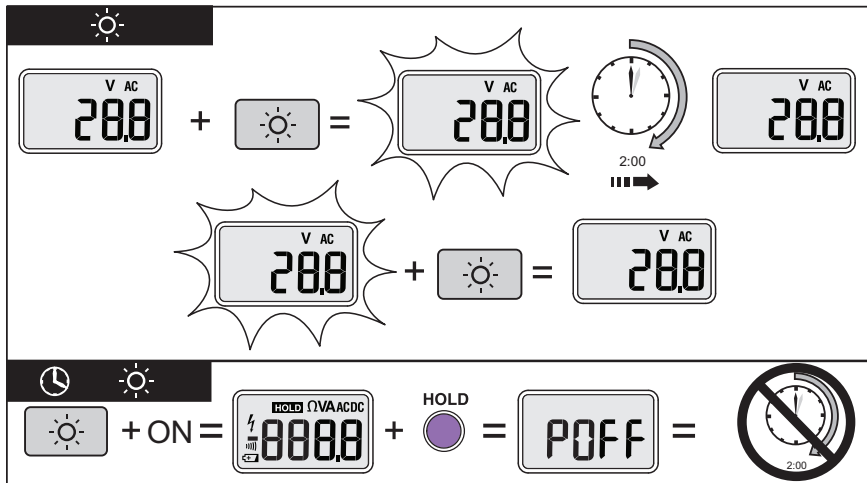
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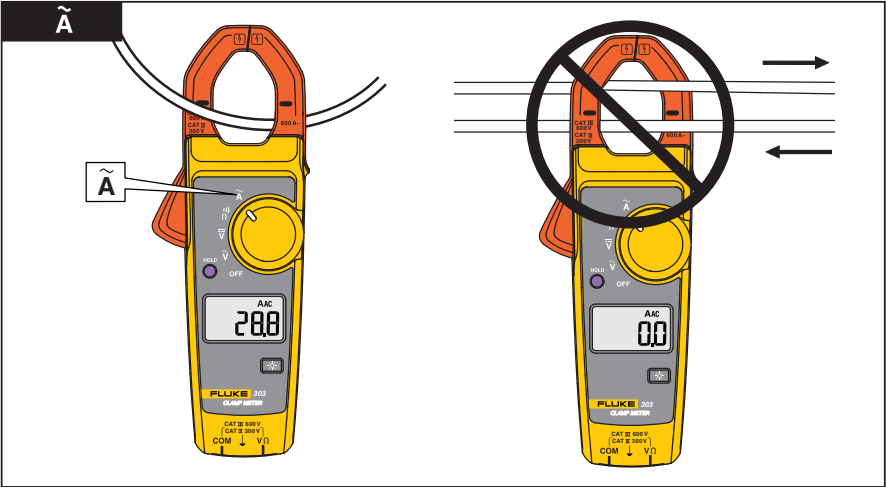


# Clamp Meter The Clamp Meter



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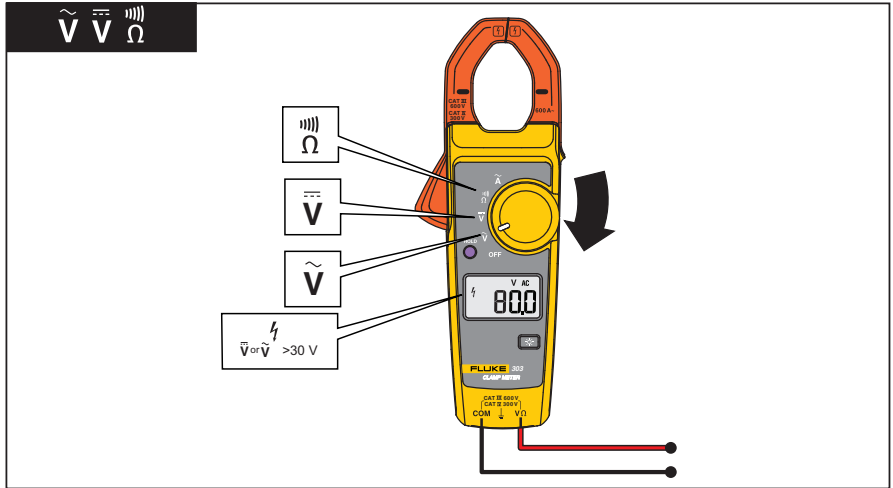
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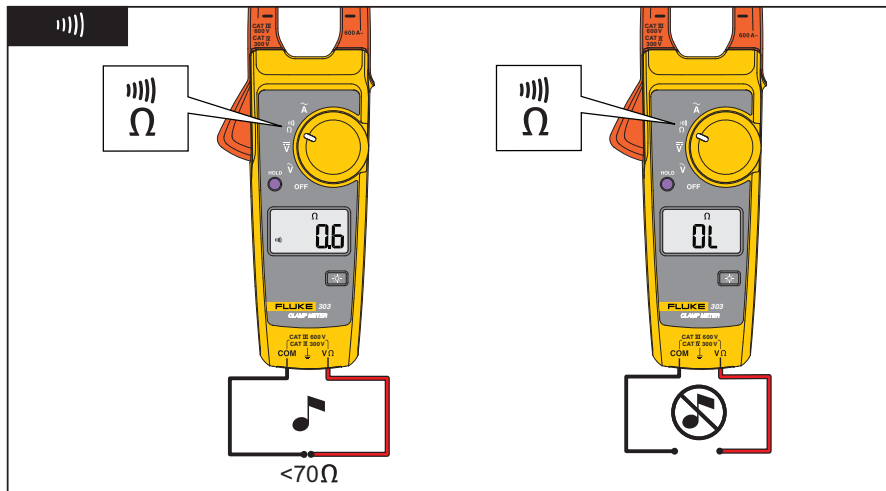
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# Clamp Meter

## The Clamp Meter



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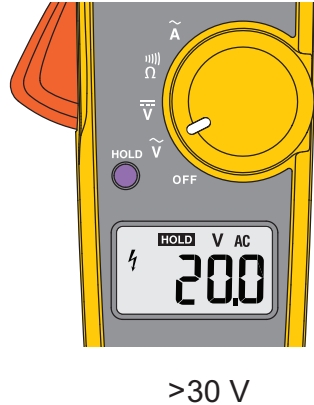
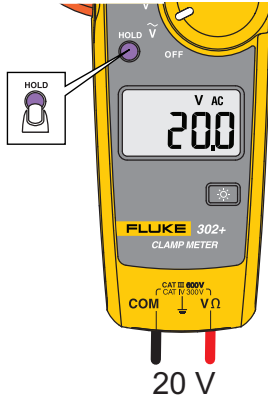


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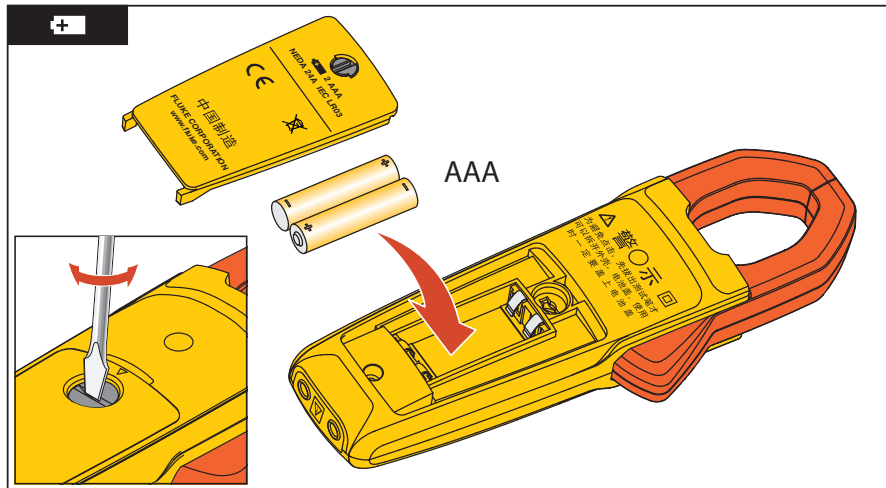
# Clamp Meter

## The Clamp Meter

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