

**FLiP**  
CLAMP

**HIOKI**

**CLAMP ON HiTESTER 3291**  
**CLAMP ON LEAK HiTESTER 3293**

**New**

Clamp Testers



# The World's First Flip Clamp!

For leak and load current: 3293 (0.06mA to 1000A)  
For load current: 3291 (0.06A to 1000A)

**Double the  
functionality**

- ✓ Stylish pocket-size design
- ✓ Backlit display with automatic reverse feature
- ✓ Filter

**True RMS**

**CE**



**10uA  
Resolution**

**3291**  
Load current

**3293**  
Leak and load current



ISO 9001  
JMI-0216



ISO 14001  
JQA-E-90091



[www.hioki.com](http://www.hioki.com)

HIOKI company overview, new products, environmental considerations and other information are available on our website.

# Flip-type clamp on design delivers the ease-of-use demanded by field technicians

Flip-down display keeps readings in easy view whether the target wire is up high or down low

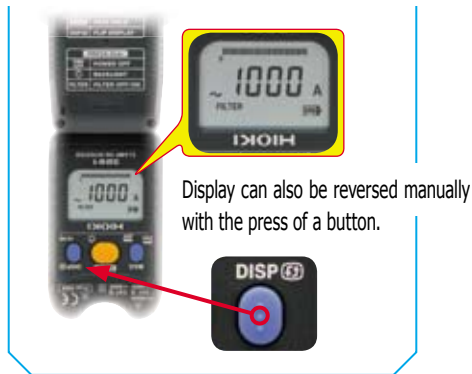
Equipped with an innovative display that flips down for easy visibility, the 3291 and 3293 are designed for efficient measurement of indoor wiring in a variety of environments, from factories, buildings, and offices to residences.

## Easy to read means easy to use

- Display rotates freely through 180° to keep measurements in view.



- Measurement reading reverses automatically when the display is flipped open to ensure readability.



- Backlight lets you read measurements in dim locations

- Push and hold for 2 seconds to activate
- Backlight goes out automatically after 15 seconds



## Easy measurement of wires on ceilings



## Easy to see, even when held up high

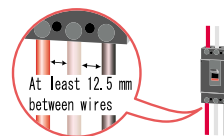


## Easy to see, even when held down low



## New clamp design is easier to attach

Slim clamp with a wide aperture attaches easily, requiring only 12.5 mm of space between wires.



## Unmatched ease of use

- Clamp meter turns on automatically when the clamp is opened so you can begin taking measurement immediately.

Automatically turns off 1 minute after input falls to 0A following measurement. (Can be manually disabled.)

## Open Jaws to Power On



- Slim core opens wide for easier clamping.



Sometimes it's easier to clamp the target wire at an angle.

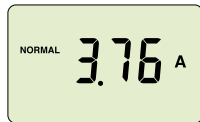
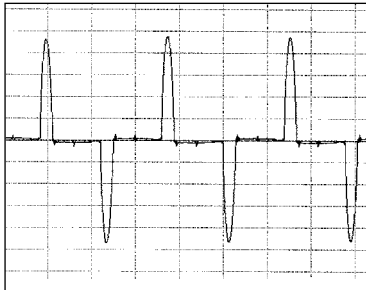
# Extensive current measurement functions

True RMS lets you measure even distorted currents accurately

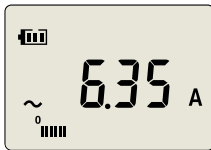
True RMS ensures accurate measurement, even of distorted load and leak currents



Why does the same current yield different readings?



Averaging-type clamp on current meter



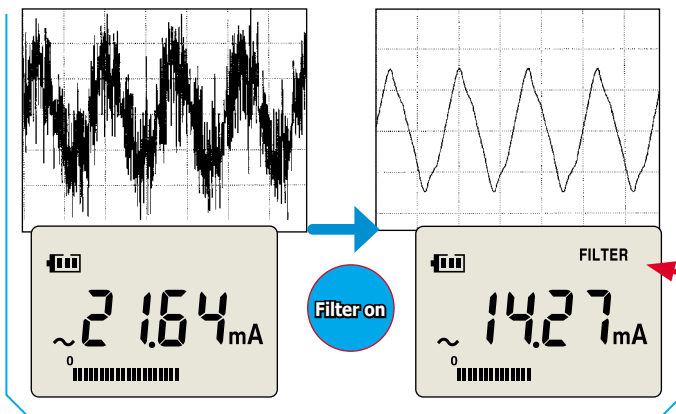
True RMS clamp on current meter

Inverters, office equipment, AC adapters - most load current waveforms are distorted. Current meters that display average rectified RMS values does not allow you to obtain accurate RMS measurements.

## Filter out noise

The 3291 and 3293 incorporate a switchable high-frequency noise filter. When activated, this filter rejects frequencies of 180 Hz and above to enable measurement approximating the filter characteristics of an earth leakage circuit breaker (ELCB).

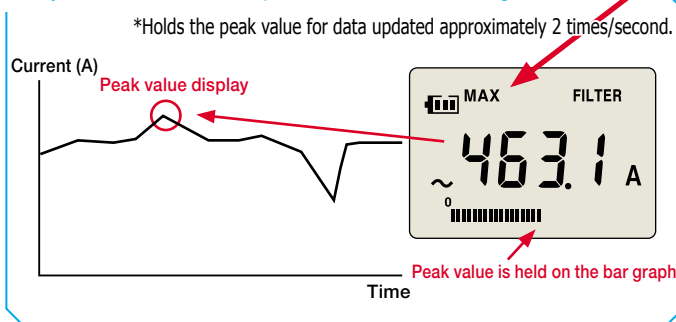
Get the maximum value of fluctuating current readings



## Measure fluctuating currents with the peak hold feature

The 3291 and 3293's peak hold feature (with bar graph hold) lets you capture peak values for currents that fluctuate due to load variability.

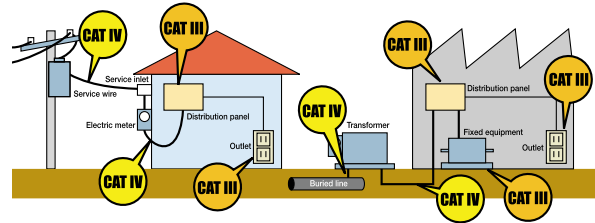
Easy measurement of the peak value of a fluctuating current.



Use with 3-phase 4-wire 440V lines

3291: CAT III 600 V (CAT IV 300 V)

3293: CAT III 300 V



## Measure leak and load current with the 3293

The 3293 features 6 ranges from 30 mA to 1000A, offering  $\pm 5\%$  rdg  $\pm 5$  dgt measurement accuracy of 1mA leak currents.

Easy-to-use auto range feature

3293	Leak current easurement			Load current measurement		
Range	30.00mA	300.0mA	6.000A	60.00A	600.0A	1000A

3291	Leak current easurement			Load current measurement		
Range	/	/	/	60.00A	600.0A	1000A



Push and hold for 2 seconds to activate filter

Loop a wrist strap through the small opening to help keep the instrument from being dropped

## Pocket Size Clamp On Design

Fits perfectly into a shirt pocket.

□ Compact design for superior portability



## ■ 3291, 3293 Specifications (accuracy at 23°C±5°C (73°F±9°F), 80% RH or less)

	3291 Load	3293 Leak and load
Measurable conductor size	ø30mm (1.18")max.	ø24mm (0.94")max.
Rectification	True RMS	
Max. rated voltage to earth	AC600Vrms	AC300Vrms
Measurement Range •Auto Range switching •Zero-suppress at 5 counts	60A/600A/1000A	30mA/300mA/ 6A/60A/600A/1000A
Accuracy filter ON: fc=180Hz	$\pm 1.5\%$ rdg. $\pm 5$ dgt. (50Hz to 60Hz), $\pm 5\%$ rdg. $\pm 5$ dgt. (1mA to 2.70mA) <i>filter OFF</i> : $\pm 2.0\%$ rdg. $\pm 5$ dgt. (45 to 66Hz), $\pm 3.0\%$ rdg. $\pm 5$ dgt. (66 to 400Hz) (Add $\pm 1\%$ rdg. for when using 60A on the 3293)	
Guaranteed Accuracy Period	1 Year (or opening and closing of the sensor 10,000 times)	
Accuracy Guaranteed Measurements	Minimum 5.40A	Minimum 1.00mA (Add $\pm 1\%$ rdg. for readings of 0.270 to 0.540A)
Crest factor	2.8 max (1.6 max when current exceeds 600A)	
Response Time	Max. 1.5s (Refers to time required to achieve 90% of accuracy specifications)	
Display Refresh Rate	Approx. 2 times/second (Bar graph: Approx. 4 times/second)	
Temperature Coefficient	Add (0.05 x accuracy specifications)/°C (at 0°C to 40°C)	
Effect of Conductor Position	within $\pm 5.0\%$	within $\pm 0.1\%$ (at or below 6A range) within $\pm 5.0\%$ (at or below 60A range)
Effect of External Magnetic Field	<i>not defined</i>	Max 7.5mA (within a 400A/m magnetic field, at or below 6A range)
Other Functions	Display hold, maximum value hold (hold bar graph position), reversible LCD display, backlight, auto power off, auto power on when jaws are open, battery level indication	
Usage Environment	0°C to 40°C/32°F to 104°F, 80%rh max. (no condensation)	
Storage Environment	-10°C to 50°C/14°F to 122°F, 80%rh max. (no condensation)	
Standards	EN61010-2-032 Type A current sensor, CAT III 600V, CAT IV 300V, EN61326	EN61010-2-032 Type A current sensor, CAT III 300V, EN61326
Rated Voltage and maximum rated power	DC3V, 25mVA	
Power Supply and max. continuous use	Button type lithium battery (CR2032) x 1, Approx. 10 hours (continuous, no load)	
Dimensions and mass	50W×136H×26Dmm, 90g 1.97"×5.35" H×1.02" D, 3.2 oz.	50W×130H×26Dmm, 120g 1.97"×5.12"×1.02", 4.2 oz.

## Convenient portable case

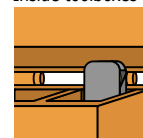
Included soft case protects the instrument and attaches conveniently to your belt.

□ Soft case protects the instrument inside toolboxes.

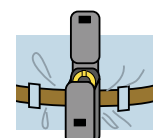
Carrying Case Model 9757 (included)



Inside toolboxes



Attaches to belt



**Bundled Accessories:** Carrying Case 9757 x 1, Wrist strap x 1, Button type lithium battery (CR2032 - test use only) x 1, Instruction Manual x 1, Basic Operation Sticker x 1

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