

**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**



**3291**

Load current

**3293**

Leak and load current

**10uA  
Resolution**



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

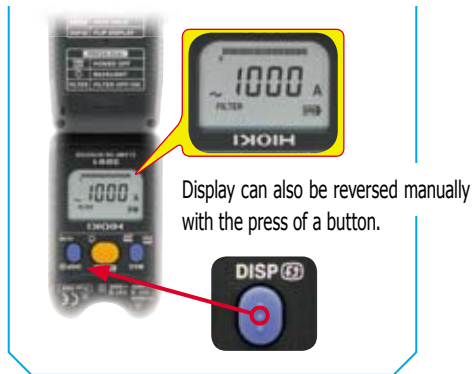
Equipped with an innovative display that flips down for easy visibility, the 3291 and 3293 are designed for efficient measurement of indoor wiring in a variety of environments, from factories, buildings, and offices to residences.

## Easy to read means easy to use

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

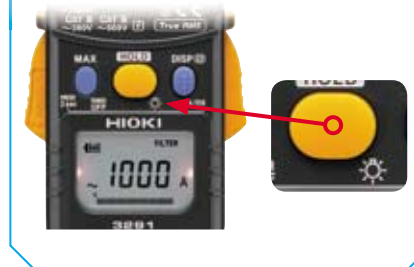


- Measurement reading reverses automatically when the display is flipped open to ensure readability.



- 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

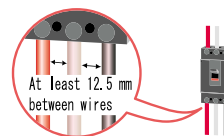


## Easy to see, even when held down low



## 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.



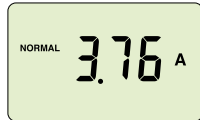
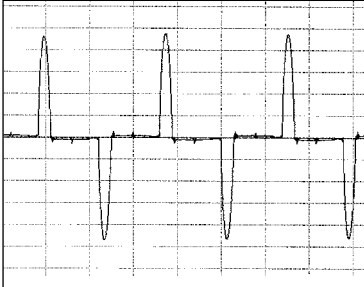
# Extensive current measurement functions

True RMS lets you measure even distorted currents accurately

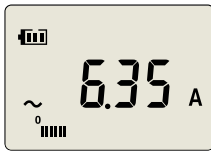
True RMS ensures accurate measurement, even of distorted load and leak currents



Why does the same current yield different readings?



Averaging-type clamp on current meter



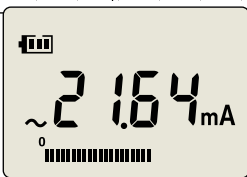
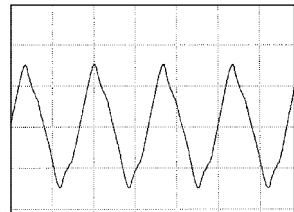
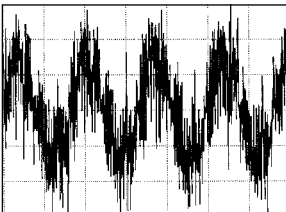
True RMS clamp on current meter

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.

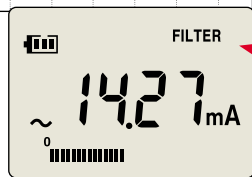
## Filter out noise

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



Filter on



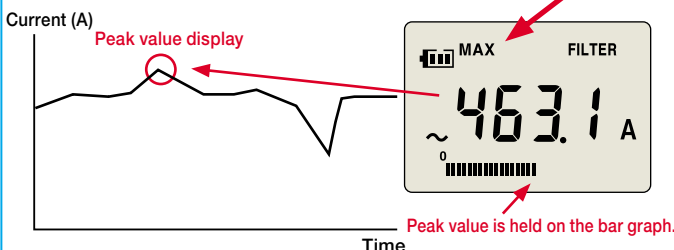
Push and hold for 2 seconds to activate filter

## 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.

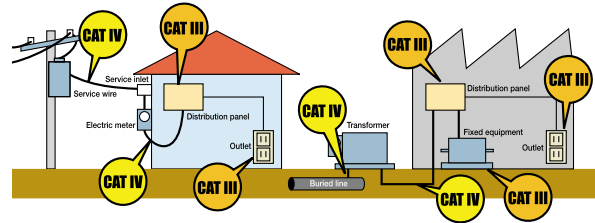
\*Holds the peak value for data updated approximately 2 times/second.



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 |



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



## Convenient portable case

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

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

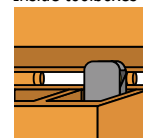
|  | 3291<br>Load  | 3293<br>Leak and load   |
|--|---|---|
| Measurable conductor size  | ø30mm (1.18")max.   | ø24mm (0.94")max.   |
| Rectification  | True RMS  |   |
| Max. rated voltage to earth  | AC600Vrms   | AC300Vrms   |
| Measurement Range<br>•Auto Range switching<br>•Zero-suppress at 5 counts | 60A/600A/1000A  | 30mA/300mA/<br>6A/60A/600A/1000A  |
| Accuracy<br>filter ON: fc=180Hz  | ±1.5%rdg. ±5dgt. (50Hz to 60Hz),<br>±5%rdg. ±5dgt. (1mA to 2.70mA)<br><i>filter OFF</i> : ±2.0%rdg. ±5dgt. (45 to 66Hz),<br>±3.0%rdg. ±5dgt. (66 to 400Hz)<br>(Add±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<br>(Add±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<br>(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 ±5.0%  | within ±0.1% (at or below 6A range)<br>within ±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<br>Type A current sensor,<br>CAT III 600V, CAT IV 300V, EN61326   | EN61010-2-032<br>Type A current sensor,<br>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,<br>Approx. 10 hours (continuous, no load)   |   |
| Dimensions and mass  | 50W×136H×26Dmm, 90g<br>1.97"×5.35" H×1.02" D, 3.2 oz.   | 50W×130H×26Dmm, 120g<br>1.97"×5.12"×1.02", 4.2 oz.                          |

Soft case protects the instrument inside toolboxes.

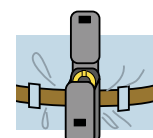
Carrying Case Model 9757 (included)



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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