

# HIOKI

## CLAMP ON HiTESTER Series

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
[Http://www.100y.com.tw](http://www.100y.com.tw)

### A Full Line-up of Digital and Analog Clamp Meters to Suit Any Need



### From Basic Testing to High Performance Analysis



Please see [www.hioki.com](http://www.hioki.com) for list of supported regions.

# Selection Guide

## A Complete HIOKI Digital & Analog Clamp Tester

	3291-50 True RMS	3280-10F MEAN value 3280-20F True RMS	3281 True RMS 3282 True RMS	3287 True RMS 3288 MEAN value 3288-20 True RMS	3284 True RMS 3285 True RMS
AC Current ranges	60.00/600.0/1000 A AC	42.00/420.0/1000A AC 420.0/4200A AC (Using the CT6280)	3281: 30.00/300.0/600A AC 3282: 30.00 /300.0/1000A AC	3287: 10.00/100.0A AC/ 3288/-20: 100.0/1000A AC	AC, AC+DC (True RMS or Peak value) 3284: 20.00/200.0A 3285: 200.0/2000A
Other current ranges	None	None	Wave peak value at AC Current 3281: 75.0 to 1000A peak, 3 ranges 3282: 75.0 to 1700A peak, 3 ranges	DC current range 3287: 10.00/ 100.0 A DC 3288/-20: 100.0/ 1000 A DC	DC (Average or Peak value) 3284: 20.00/200.0A DC 3285: 200.0/2000A DC
AC Voltage ranges	None	4.200/42.00/420.0/600V AC	300.0/600V AC	4.200/42.00/420.0/600V AC	AC, AC+DC (True RMS or Peak value) 30.00/300.0/600V
Other voltage ranges	None	DC voltage range: 420.0m/4.200/42.00/420.0/600V DC	Wave peak value at AC voltage up to 750/1000V peak	DC voltage range: 420.0m/4.200/42.00/420.0/600 V DC	DC (Average or Peak value) 30.00/300.0/600V DC
Other functions	None	Resistance: 420.0 to 42.00 MΩ, 6 ranges Accuracy: ±2.0 % rdg. ±4 dgt. (at 420 to 420 kΩ range) Continuity: 420.0Ω (Buzzer sounds less than approx. 50Ω ±40Ω)	Distortion check: 1 to 5 Crest factor Resistance:1k or 10kΩ range Frequency: 30.0 to 1000 Hz Mode: Slow/Peak/C.F./RMS Record mode/Auto-off/ Conduction	Resistance: 420.0Ω/4.200Ω/42.00kΩ/ 420.0kΩ/4.200MΩ/42.00MΩ Accuracy: ±2.0% rdg. ±4 dgt. (at 420 to 420kΩ range) Continuity: 420.0Ω (Buzzer sounds less than approx. 50Ω ±40Ω)	Frequency: 10/100/1000 Hz
Analog output Printer output	None	None	None	None	DC, or AC 1V / f.s. Level output with REC mode Waveform output with MON mode
Basic accuracy	AC current: ±1.5 % rdg. ±5 dgt.	AC current: ±1.5 % rdg. ±5 dgt. AC voltage: ±1.8 % rdg. ±7 dgt. DC voltage: ±1.0 % rdg. ±3 dgt.	AC current: ±1.0% rdg. ±5 dgt. AC voltage: ±1.0% rdg. ±3 dgt. Peak: ±3% rdg. ±5 dgt. Frequency: ±0.3% rdg. ±1 dgt.	AC current: ±1.5 % rdg. ±5 dgt. AC voltage: ±2.3 % rdg. ±8 dgt. DC current: ±1.5 % rdg. ±5 dgt. DC voltage: ±1.3 % rdg. ±4 dgt.	AC current: ±1.3% rdg. ±3 dgt. AC voltage: ±1.0% rdg. ±3 dgt. DC current: ±1.3 % rdg. ±3 dgt. DC voltage: ±1.0 % rdg. ±3 dgt. Frequency: ±0.3% rdg. ±1 dgt.
Frequency characteristics	45 to 400Hz	AC voltage: 45 to 500Hz AC current: 50 or 60Hz (3280-10F) 40 to 1kHz (3280-20F)	40 to 1 kHz	DC, 10 to 1 kHz (3287) DC, 10 to 500 Hz (3288/-20) AC voltage: 30 to 500 Hz	DC, 10 to 2 kHz (3284) DC, 10 to 1 kHz (3285)
Sampling rate	Maximum 1.1 sec	400 ms	2 or 4 times /sec (Slow: 1 time /3 sec)	2.5 times /sec	2 or 4 times /sec (Slow: 1 time /3 sec)
Crest factor (RMS)	2.8 or less (1.68 at 1000 A range)	3280-10F: Not defined 3280-20F: 2.5 or less (1.5 or less at 4200 counts)	3281:2.5 (1.7 at 600A range) 3282:2.5 (1.7 at 1000A range)	3287: 2.5 (150A, 100V maximum) 3288: Not defined 3288-20: 3 (2 at 1000A range, 1.5 at voltage)	3284: 2.5 (1.5 at 200A, 1.7 at 600V) 3285: 2.5 (1.42 at 2000A, 1.7 at 600V)
Effect of external magnetic fields	Yes; level not defined	Yes; level not defined	3281: 1.5A equivalent max. at 400 A/m 3282: 0.2A equivalent max. at 400 A/m	Yes; level not defined	3284: 0.5A equivalent max. at 400 A/m 3285: 2.0A equivalent max. at 400 A/m
Max. rated voltage to earth	600 V AC rms	600V AC rms	600V AC rms	600 V AC rms	600V AC rms
Measurement categories (A)	CAT IV 300V CAT III 600V	CAT IV 300V CAT III 600V	CAT III 600V (3281) CAT IV 600V (3282)	CAT III 600V	CAT III 600V
Measurement categories (V)	None	CAT III 300V/ CAT II 600V	CAT IV 600V	CAT III 300V/ CAT II 600V	CAT III 600V
Core jaw dia	φ30 mm	φ33 mm (3280-10F/-20F) φ130 mm (CT6280)	3281: φ33 mm 3282: φ46 mm	φ35 mm	3284: φ33 mm 3285: φ55 mm
Power supply	CR2032 (3VDC) × 1	CR2032 (3 VDC) × 1	6F22 (006P) × 1	CR2032 (3VDC) × 1	6F22 (006P) × 1 or AC adapter
Dimensions and mass	50W × 136H × 26D mm /115 g	57W × 175H × 16D mm /100 g	3281: 62W × 216.5H × 39D mm/350 g 3282: 62W × 231H × 39D mm/400 g	3287: 57W × 180H × 16D mm/170 g 3288/-20: 57W × 180H × 16D mm/150 g	3284: 62W × 230H × 39D mm, 460 g 3285: 62W × 260H × 39D mm, 540 g

### New insulated sleeves prevent short-circuits

No sleeves attached to the tip of test leads?  
**DANGER of short-circuit accident!!**

With sleeve attached to the tip of test leads,  
**short-circuit accidents can be prevented.**

Previous  
model



NEW!



Conforms to safety standard  
IEC61010-031 (revised) for hand-held probes

What are the new and additional requirements of the international safety standards?

- "Exposed metal part must be 4mm or shorter" (Previously, 19mm max.) for CAT III and IV environments to prevent short-circuits from occurring.
- Double-coating with different colors enables you to identify the wear condition of the test leads. (Previously, single-coated)

## Line-up to Suit Your Needs

CM4371, CM4373 True RMS CM4372, CM4374 True RMS, with Bluetooth® Smart	<b>Discontinued</b> 3290 True RMS, 3290-10 True RMS	3293-50 True RMS	3283 True RMS 3283-20 True RMS	<b>Discontinuation scheduled</b> 3286-20 True RMS
AC, AC+DC (Measurement value, Peak value) CM4371/ 72: 20.00/600.0A CM4373/ 74: 600.0/2000A	3290/-10+CT9691: 20.00A/100.0A AC 3290/-10+CT9692: 20.00A/200.0A AC 3290/-10+CT9693: 200.0A/2000A AC AC+DC, AC True RMS, AC MEAN	30.00 m/300.0 m/ 6.000/60.00/600.0/1000 A AC	10.00m/100.0m/ 1.000/10.00/200.0 A AC	20.00/200.0/1000 A AC
DC (Measurement value, Peak value) CM4371/ 72: 20.00/600.0A AC CM4373/ 74: 600.0/2000A AC	3290/-10+CT9691 : 20.00A/100.0A DC 3290/-10+CT9692 : 20.00A/200.0A DC 3290/-10+CT9693 : 200.0A/2000A DC	None	None	None
AC, AC+DC (Measurement value, Peak value) 6.000/60.00/600.0/1000V	None	None	None	150.0/300.0/600 V AC
DC (Measurement value, Peak value) 600.0m/6.000/60.00/600.0/1500V DC	None	None	None	None
Resistance: 600.0 Ω to 600.0 kΩ Electrostatic capacity: 1.000 μF to 1000 μF Frequency: 9.999 Hz to 999.9 Hz Continuity: 600.0Ω (Buzzer sounds less than approx. 25Ω ±10Ω) Temperature (K): -40.0 to 400.0 °C Diode check AC Voltage detection DC Power: 0.0 VA to 1020 kVA(CM4371/ 72) 0.000 kVA to 3400 kVA(CM4373/ 74)	Frequency : 10.00/100.0/1000 Hz	None	Frequency: 30.0 to 1000 Hz	Power (Single-phase or 3 phase): 3kW to 600kW(Single-phase) 6kW to 1200kW(3-phase) Power factor, Phase angle: Frequency: 30.0 to 1000Hz Voltage/current harmonic levels
None	DC, or AC Current : 2V/f.s. Level output with REC mode Waveform output with MON mode Integ./Frequency : 1V/f.s.	None	3283: DC, or AC 1V / f.s. (200A range:2V / f.s.) Level output with REC mode Waveform output with MON mode 3283-20: None	None
AC current: ±1.3% rdg. ±3 dgt. AC voltage: ±0.9% rdg. ±3 dgt. DC current: ±1.3 % rdg. ±3 dgt. DC voltage: ±0.5 % rdg. ±3 dgt. Frequency: ±0.1% rdg. ±1 dgt.	AC/DC/AC+DC Current: ±1.3 % rdg. ±3 dgt. (Typical) Frequency: ±0.3 % rdg. ±1 dgt. (Typical)	AC current: ±1.5 % rdg. ±5 dgt.	10m to 10A range: ±1.0 % rdg. ±5 dgt. 200A range: ±1.5 % rdg. ±5 dgt. Frequency: ±0.3 % rdg. ±1 dgt.	AC current: ±1.3 % rdg. ±3 dgt. AC voltage: ±1.0 % rdg. ±3 dgt. Power: ±2.3% rdg. ±5 dgt.(1f) ±3.0% rdg. ±10 dgt.(3f) (Accuracy guaranteed only for 50/60Hz cosφ=1)
AC current: 10 to 1 kHz AC voltage: 15 to 1 kHz	DC to 500 Hz (CT9691) DC to 1 kHz (CT9692, CT9693) ±2.3 % rdg. + 8 dgt.	45 to 400 Hz	40 to 2 kHz	AC current: 45 to 1 kHz AC voltage: 30 to 1 kHz
5 times/s (excluding electrostatic capacity, frequency, and temperature)	3290 FAST : 4 times/sec (3290-10 AC, AC+DC FAST: 10 times/sec) Normal : 2 times/ s, Slow : 1 time / 3s	Maximum 1.1 sec	2 or 4 times /sec (Slow: 1 time /3 sec)	Normal: 1 time /sec (Slow: 1 time /3 sec)
CM4371/ 72 [20 A range]: 7.5 CM4371/ 72/ 73/ 74 [600 A range]: 3 (greater than 500 A and less than or equal to 600 A: 2.5) CM4373/ 74 [2000 A range]: 2.84 (greater than 1000 A and less than or equal to 2000 A: 1.42)	2.5 or less	2.8 or less (1.68 at 1000 A range)	2.5 (1.5 at 200A range)	2.5 (1.7 at 1000 A, 600 V range)
CM4371/ 72: 2.00A or less at 400 A/m CM4373/ 74: 2.0A or less at 400 A/m	CT9691 : 0.5 A equivalent max. at 400 A/m CT9692 : 0.7 A equivalent max. at 400 A/m CT9693 : 2.0 A equivalent max. at 400 A/m	7.5 mA equivalent max. at 400 A/m	7.5 mA equivalent max. at 400 A/m	1.00 A equivalent max. at 400 A/m
1000V AC rms	600 V AC rms	300 V AC rms	300 V AC rms	600 V AC rms
CAT IV 600V CAT III 1000V	CAT III 600V (Sensor rating)	CAT III 300V	CAT III 300V	CAT III 600V
CAT IV 600V/ CAT III 1000V	None	None	None	CAT III 600V
CM4371/ 72: φ33 mm CM4373/ 74: φ55 mm	CT9691 : φ35 mm CT9692 : φ33 mm CT9693 : φ55 mm	φ24 mm	φ40 mm	φ55 mm or 80mm busbar
LR03 Alkaline battery ×2	LR6 (AA) alkaline batteries × 4 or AC adapter or +8.4 to 15.6 VDC external power (3290-10 only)	CR2032 (3VDC) × 1	3283: 6F22 (006P) × 1 or AC adapter 3283-20: 6LR61 × 1 or 6F22 (006P) × 1	6LR61/6LF22 (006P) × 1
CM4371/ 72: 65W × 215H × 35D mm, 340 g CM4373/ 74: 65W × 250H × 35D mm, 530 g	3290/-10 : 155W × 98H × 47D mm/545 g CT9691 : 53W × 129H × 18D mm/230 g CT9692 : 62W × 167H × 35D mm/410 g CT9693 : 62W × 196H × 35D mm/500 g	50W × 130H × 26D mm/135 g	62W × 225H × 39D mm/400 g	100W × 287H × 39D mm /650 g

## Accessories : TEST LEAD L9208/ L9207-10/ L9207-30

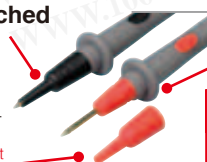
Sleeve attached	CAT IV 600V	When the CAT (measurement category) rating of the main unit is lower than that of test leads, the CAT of the main unit takes precedence. <b>When measuring in a CAT IV or CAT III environment, be sure to attach the sleeve to the test leads.</b>
	CAT III 1000V	
No sleeve attached	CAT II 1000V	

## Sleeve attached

CAT III, CAT IV

## Sleeve

included as a standard accessory (This sleeve cannot be attached to previous products)



## No sleeve attached

CAT I, CAT II

## Detachable!

When a sleeve is not attached, the test leads can only be used in a CAT II environment.

# Pocket size CLAMP SERIES

## AC CLAMP METER

### 3280-10F 3280-20F

Rugged & Compact

**New**



Use with an AC Clamp Meter to measure large wires and currents.



3280-10F

- 3280-10F: MEAN Value / 3280-20F: True RMS
- AC 1000 A clamp aperture: 33 mm dia.
- Slim body allows easy clamping even for narrow conductors
- Expanded -25 °C to 65 °C operating temperature range
- Connect the CT6280 flexible sensor to measure up to 4199 A in thick or paired wires

#### Order Code

3280-10F (MEAN value)	The 3280-70F and 3280-90F includes both the meter and an AC Flexible Current Sensor.
3280-20F (True RMS)	1: AC CLAMP METER 3280-10F×1 (3280-70F) or 3280-20F×1 (3280-90F)
3280-70F (MEAN value)	2: AC FLEXIBLE CURRENT SENSOR CT6280×1
3280-90F (True RMS)	3: CARRYING CASE C0205×1

#### Accessories (3280-10F, 3280-20F)

TEST LEAD L9208 ×1  
CARRYING CASE 9398 ×1  
Instruction manual ×1  
Coin type lithium battery (CR2032) ×1

#### Options

AC FLEXIBLE CURRENT SENSOR CT6280  
CARRYING CASE C0205  
TEST LEADS HOLDER 9209  
CONTACT PIN SET L4933  
SMALL ALLIGATOR CLIP SET L4934

**3 year**  
Guarantee

CE

**DROP PROOF**

**True RMS**  
3280-20F

## CLAMP ON AC/DC HITESTER

### 3287 3288

Compact & easy, one-touch maintenance on all types of AC/DC equipment

- New Model 3288-20 True RMS AC/DC pocket clamp meter measuring up to 1000 A further expands the HIOKI lineup
- The 3287 can handle even cogenerator / inverter energy-saving equipment (10/ 100A)
- Use the 3288 for high current measurements such as UPS emergency batteries and train motors (100/ 1000A)
- A slim core of only 10 mm (0.39") for easy clamping even in crowded wiring

#### Order Code

3287 (True RMS, 100 A AC/DC)  
3288 (MEAN value, 1000 A AC/DC)  
3280-20 (True RMS, 1000 A AC/DC)

#### Accessories

TEST LEAD L9208 ×1  
CARRYING CASE 9398 ×1  
Instruction manual ×1

3288-20



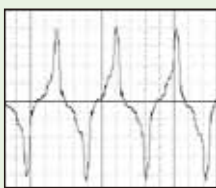
**3 year**  
Guarantee

CE

**True RMS**  
3287/ 3288-20

### True RMS vs. MEAN Value

Two ways to convert alternating current to RMS are "true RMS response" and "average rectified RMS response" (averaging). Both display the same value for a sine wave, but can display very different values for distorted waveforms.



When measuring current waveforms distorted by inverters...

**True RMS**

AUTO  
~ 8.56 A

High-frequency waveform components are included in the calculated RMS display value.

**MEAN Value**

AUTO  
~ 7.35 A

The measured waveform is treated as a single-frequency (undistorted) sine wave, and the calculated average of the AC signal is converted to an RMS display value. Measurement error increases with waveform distortion.

■ As inverters and switching power supplies proliferate, the need for the capability to measure distorted current waveforms grows.

**A true RMS clamp-on current meter is the proper tool for accurate measurements.**

# HIGH PERFORMANCE CLAMP SERIES

## DIGITAL CLAMP ON HI TESTER 3281 3282

The true RMS is shown in the distorted waveform

- 3281: 600A ACrms,  $\Phi$ 33mm dia.
- 3282: 1000A ACrms,  $\Phi$ 46mm dia.
- Non-fuse type protects up to 600VAC

### Order Code

3281 (True RMS, 600 A AC)  
3282 (True RMS, 1000 A AC)

### Accessories

TEST LEAD L9207-10 x1  
CARRYING CASE 9399 x1  
Hand strap x1  
Instruction manual x1  
Stacked manganese battery (6F22) x1



3282

Not CE Marked

3281

**True RMS**



3282

3281

## AC/ DC CLAMP METER

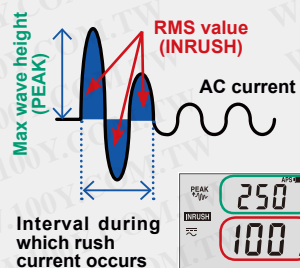
# CM4371 CM4372 CM4373 CM4374

Rugged clamp meters for the toughest situations

- CM4371, CM4372: 600 Arms, clamp aperture: 33 mm dia.
- CM4373, CM4374: 2000 Arms, clamp aperture: 55 mm dia.
- The CM4372 and CM4374 will be able to send measured values to a smart phone or tablet using Bluetooth® wireless technology.
- Multiple measurement functions such as current, voltage, resistance, frequency, and voltage detection
- Expanded -25 °C to 65 °C operating temperature range
- IP54 dustproof and waterproof enclosure \*Jaws (current sensor portion): IP50
- Remain alert to hazards with a red backlight and beeping tone

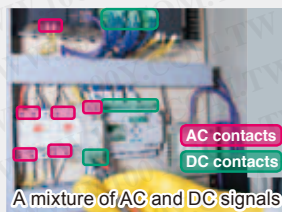
### Inrush (Rush current)

The CM4370 series can simultaneously measure inrush current in RMS as well as maximum crest values at motor startup and for welding currents. The clamp meters automatically detect the duration of the inrush current (which can range from several dozen milliseconds to several hundred milliseconds).



### Automatic AC/DC detection

Simply rotate the rotary switch to the CURRENT MEASUREMENT or VOLTAGE MEASUREMENT function to take measurements after automatically detecting whether the signal is AC or DC. Since this functionality eliminates the need to operate the rotary switch in locations where AC and DC wires are intermingled, it helps boost work efficiency.



**True RMS**



CM4372, CM4374



CM4372

CM4374

### Order Code

CM4371 (True RMS, 600 A AC/DC)  
CM4372 (True RMS, 600 A AC/DC, built in Bluetooth® wireless technology)  
CM4373 (True RMS, 2000 A AC/DC)  
CM4374 (True RMS, 2000 A AC/DC, built in Bluetooth® wireless technology)

### Accessories

TEST LEAD L9207-10 x1  
CARRYING CASE C0203 x1  
LR03 Alkaline battery x2  
Instruction manual x1

### Options

TEST LEAD L9207-10 Options		CONNECTION CABLE L4930 Options	
CONTACT PIN SET	L4933	CONNECTION CABLE SET	L4930
SMALL ALLIGATOR CLIP SET	L4934	EXTENSION CABLE SET	L4931
		TEST PIN SET	L4932
		ALLIGATOR CLIP SET	L4935
		BUS BAR CLIP SET	L4936
		MAGNETIC ADAPTER SET	L4937
		TEST PIN SET	L4938
		BREAKER PIN SET	L4939
		GRABBER CLIP	9243
THERMOCOUPLES(K)	DT4910		

# HIGH PERFORMANCE CLAMP and Detachable Designs

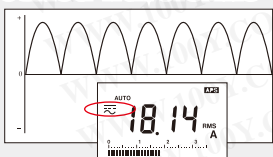
## CLAMP ON AC/DC HiTESTER 3284 3285

### Analysis for DC to distorted waves

- 3284: 200 Arms, clamp aperture: 33 mm dia.
- 3285: 2000 Arms, clamp aperture: 55 mm dia.
- Inrush current peak value
- RMS value of full-wave rectified waveforms
- Waveform and harmonic analysis

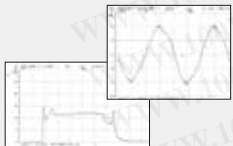
#### RMS value of full-wave rectified waveforms

The AC+DC mode enables measurement of the RMS value of full- or half-wave rectified waveforms used in electrical machinery.



#### Easily monitor current fluctuations

Using the external output functions of the 3284 or 3285 in combination with a HIOKI Memory HiCorder enables recording of current and frequency fluctuations and recording and harmonic analysis of instantaneous waveforms.



3284

3285



Not CE Marked

True RMS

#### Order Code

3284 (True RMS, 200 A AC/DC, Not CE marked)  
3285 (True RMS, 2000 A AC/DC, Not CE marked)

#### Accessories

TEST LEAD L9207-10 ×1  
CARRYING CASE (for 3284) 9399 ×1  
CARRYING CASE (for 3285) 9345 ×1  
Hand strap ×1  
Instruction manual ×1

#### Options

AC ADAPTER (for USA)	9445-02
AC ADAPTER (for EU)	9445-03
CLAMP ON ADAPTER	9290-10
OUTPUT CORD	
(Connect to Banana terminal)	L9094
OUTPUT CORD	
(Connect to BNC terminal)	L9095
OUTPUT CORD	
(Connect to terminal block)	L9096

## CLAMP ON AC/DC HiTESTER 3290 CLAMP ON AC/DC SENSOR CT9691 CT9692 CT9693

### All the Functions You Need for Measurement at DC or 1Hz and Up

- Choice of three sensors (Example combinations)
  - 3290/-10 +CT9691 : Measure up to 100A (φ35mm)
  - 3290/-10 +CT9692 : Measure up to 200A (φ33mm)
  - 3290/-10 +CT9693 : Measure up to 2000A (φ55mm)
- Choice of measurement methods
  - DC (for battery measurement)
  - AC+DC RMS (for full-/ half-wave rectification measurement)
  - AC RMS (for current distortion measurement)
  - PEAK (for peak value measurement of inrush current, etc.)
- Choice of output (Simultaneous output)
  - RMS value output, frequency output, waveform output
- Choice of response times (Switchable among three response times)
- LPF function (filters out unnecessary harmonics :  $f_c=550\text{Hz}$ )
- 3290-10 Functions
  - Current integral measurement (obtain polarity-specific integrated DC values)
  - Operating time/duty measurement



3 year Guarantee

CE

True RMS

Measurement is not available with only the **CLAMP-ON AC/DC HiTESTER 3290** or **3290-10**. A **CLAMP-ON AC/DC SENSOR** (Model CT9691, CT9692 or CT9693) must also be purchased separately.

#### Order Code

3290  
3290-10 (with integral current measurement)

#### Accessory

Hand strap ×1 Instruction manual ×1  
LR6(AA)alkaline batteries ×4

#### Options

CLAMP ON AC/DC SENSOR (100A)	CT9691	OUTPUT CORD	9094
CLAMP ON AC/DC SENSOR (200A)	CT9692	(Not CE marked)	
CLAMP ON AC/DC SENSOR (2000A)	CT9693	CARRYING CASE	9400
AC ADAPTER (for USA)	9445-02	CONNECTOR ADAPTER	9199
AC ADAPTER (for EU)	9445-03	(BNC to banana[female])	

# Flip CLAMP and Leak CLAMP SERIES

## CLAMP ON HITESTER 3291-50

## CLAMP ON LEAK HITESTER 3293-50

Easily read measured values from all heights with the adjustable display

### 3291-50 Overview

- Innovative flip clamp design
- Flip display to see measurement readings from any angle
- Max. 1000A, 3 ranges, Bar graph display
- Filter out high frequency noises for a clean signal

### 3293-50 Overview

- Measure for leakage current and load all with the same device
- Innovative flip clamp design
- Flip display to see measurement readings from any angle
- 1mA to 1000A accuracy guaranteed, 6 ranges and bar graph display
- Measure and display only the leakage current of commercial frequency components using the filter function

3291-50



FLIP CLAMP CE True RMS

3293-50



#### Order Code

3291-50  
3293-50

#### Accessories

CARRYING CASE 9757 x1  
Hand strap x1  
Instruction manual x1  
Coin type lithium battery (CR2032) x1

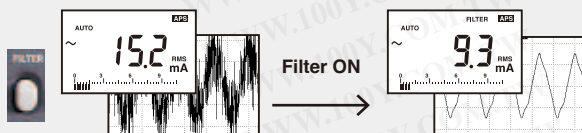
## CLAMP ON LEAK HITESTER 3283

1mA to 200A AC Leakage Current Clamp Meter with 10  $\mu$ A Resolution to Analyze Distorted Waveforms

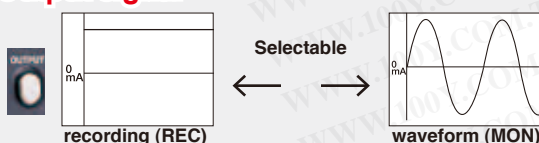
- Measure leak current using highly sensitive 10 $\mu$ A resolution (at 10.00 mA range)
- Indicate 50/60 Hz leak current components with the filtering function
- Monitor leak current conditions in combination with a Memory HiCorder (monitor output, Model 3283 only)
- 3283-20: EN 61010-2-032:2012 Type A to measure uninsulated hazardous live conductors such as busbars

### Filtering

Sharp Low-pass filter reduces harmonic currents.



### Output signal 3283 only



### Easily monitor leakage current fluctuations

In combination with a HIOKI Memory HiCorder the 3283 can be used for long-term monitoring for leakage current fluctuations.



CE

3283-20

Not CE Marked

3283



Insulated  
conductor

True RMS



3283-20

#### Order Code

3283  
(with analog/ waveform monitor output,  
Not CE marked)  
3283-20  
(without analog/ waveform monitor output)

#### Accessories

CARRYING CASE 9399 x1  
Hand strap x1 Instruction manual x1  
3283: Stacked manganese battery (6F22) x1  
3283-20: Alkaline battery (6LR61) x1

#### Options

AC ADAPTER (for USA) 9445-02  
AC ADAPTER (for EU) 9445-03  
CLAMP ON ADAPTER 9290-10  
OUTPUT CORD L9094  
(Connect to Banana terminal)  
OUTPUT CORD L9095  
(Connect to BNC terminal)  
OUTPUT CORD L9096  
(Connect to terminal block)

## CLAMP ON POWER HITESTER 3286-20



**All powerful ! Easy operation !  
True-RMS Clamp-on Power Meter !**

- Use as a single-phase power meter or power factor meter (3kW to 600kW range)
- Simple checking of three-phase lines (6kW to 1200kW range)
- Check power supply fluctuations
- 1000 A, 1000 Hz, peak and harmonic measurement
- True RMS (effective value) display method



**True RMS**



### Basic specifications

Measurement lines	Single-phase/two-wires, Three-phase/three-wires (balanced load only)
Measurement items	Voltage, current, voltage/current peak, effective/reactive/apparent power(Single-phase or 3-phase), power factor, reactivity, phase angle, frequency, phase detection(3-phase), voltage/current harmonic levels(up to 20th)
Measurement ranges	Voltage: 150.0 V to 600 V, 3 ranges, Current: 20.00 to 1000 A, 3 ranges, Power: 3.000 kW to 1200 kW, 18 combination patterns, Note: 3-phase power is calculated and displayed on the basis of a balanced, 50/60 Hz, sine wave input. For apparent power and reactive power, the unit of watts in the above table is replaced by VA and var respectively.
Basic accuracy at 50/60 Hz, cos φ=1	Power/single-phase: ±2.3 % rdg. ±5 dgt., Power/3-phase: ±3.0 % rdg. ±10 dgt. (at balanced load) Voltage: ±1.0 % rdg. ±3 dgt. (True RMS), Current: ±1.3 % rdg. ±3 dgt. (True RMS)
Frequency characteristics	AC current : 45 to 1 kHz AC voltage : 30 to 1 kHz
Other functions	Phase detection, Record (Max. value/Min. value), Battery capacity display, Data hold, Auto power off

### Order Code

3286-20

### Accessories

VOLTAGE CORD L9635-01 ×1  
CARRYING CASE 9245 ×1  
Hand strap ×1 Instruction manual ×1  
Stacked alkaline battery (6LF22) × 1

**⚠ WARNING** Inspect the unit and check that it is operating correctly before use. When carrying out measurement on live lines, wear proper protective gear, insulating rubber gloves, insulating rubber boots and safety helmet, and use extreme caution to avoid electric shock accidents.

**⚠ DANGER** In order to prevent short-circuits and injury, use the clamp product on electrical circuits with a voltage less than the maximum operation circuit voltage.

\*The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by HIOKI E.E. CORPORATION is under license.

**HIOKI**  
HIOKI E. E. CORPORATION

勝特力材料 886-3-5753170  
勝特力电子(上海) 86-21-34970699  
勝特力电子(深圳) 86-755-83298787  
Http://www.100y.com.tw