

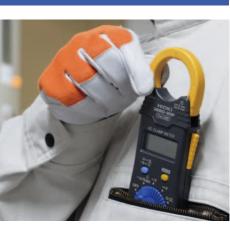






A Full Line-up of Digital and Analog

Clamp Meters to Suit Any Need











Selection Guide

A Complete HIOKI Digital & Analog Clamp Tester

Model	CM4371, CM4372	CM4373, CM4374	3280-10F, 3280-20F	3281, 3282	
True RMS rectifier	Crest factor 7.5 at 20.00 A range 3 or less at 600.0A range	Crest factor 3 or less at 600.0 A range 2.84 or less at 2000 A range	(3280-20F) ✓ Crest factor 2.5 or less	Crest factor 2.5 or less 3281: 2.5 (1.7 at 600 A range) 3282: 2.5 (1.7 at 1000 A range)	
MEAN rectifier	N/A	N/A	(3280-10F) ✔	N/A	
AC Current ranges	20.00 A/ 600.0 A	600.0 A/ 2000 A	42.00 A/ 420.0 A/ 1000 A	(3281) 30.00/ 300.0/ 600 A (3282) 30.00/ 300.0/ 1000 A	
AC Voltage ranges	6.000/ 60.00/ 600.0 V/ 1000 V	6.000/ 60.00/ 600.0 V/ 1000 V	4.200 / 42.00/ 420.0/ 600 V	300.0/ 600 V	
Frequency characteristics	AC A: 10 Hz to 1 kHz AC V: 15 Hz to 1 kHz	AC A: 10 Hz to 1 kHz AC V: 15 Hz to 1 kHz	(3280-10F) AC A: 50 to 60 Hz (3280-20F) AC A: 40 to 1 kHz AC V: 45 to 500 Hz	40 to 1000 Hz	
DC Current ranges	20.00 A/ 600.0 A	600.0 A/ 2000 A	N/A	N/A	
DC Voltage ranges	600.0 m/ 6.000/ 60.00/ 600.0 V/ 1500 V	600.0 m/ 6.000/ 60.00/ 600.0 V/ 1500 V	420.0 m/ 4.200/ 42.00/ 420.0/ 600 V	N/A	
Basic accuracy (at 50/60Hz)	AC A: ±1.3% rdg. ±3 dgt. AC V: ±0.9% rdg. ±3 dgt. DC A: ±1.3% rdg. ±8 dgt. DC V: ±0.5% rdg. ±3 dgt.	AC A: ±1.3% rdg. ±3 dgt. AC V: ±0.9% rdg. ±3 dgt. DC A: ±1.3% rdg. ±8 dgt. DC V: ±0.5% rdg. ±3 dgt.	AC A: ±1.5 % rdg. ±5 dgt. AC V: ±1.8 % rdg. ±7 dgt. DC V: ±1.0 % rdg. ±3 dgt.	AC A: ±1% rdg. ±5 dgt. AC V: ±1% rdg. ±3 dgt.	
Resistance ranges	600.0Ω to $600.0\mathrm{k}\Omega$, 4 ranges	600.0Ω to $600.0\mathrm{k}\Omega$, 4 ranges	419.9 Ω to 41.99 M Ω , 6 ranges	1000 or 10.00 kΩ	
Continuity	✓	V	✓	v	
Eroquopo: (Lla)			N/A	✓	
Frequency (Hz)	✓	~	N/A	V	
Other functions	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4372)	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAY, PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4374)	N/A Continuity: Buzzer sounds at $50 \Omega \pm 40 \Omega$ or less, Data hold, Auto power save, Drop-proof from height of 1 meter	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off	
	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth®	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth®	Continuity: Buzzer sounds at 50 Ω±40 Ω or less, Data hold, Auto power save,	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record,	
Other functions Monitor / Analog	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth® wireless technology (CM4372)	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4374)	Continuity: Buzzer sounds at $50 \Omega \pm 40 \Omega$ or less, Data hold, Auto power save, Drop-proof from height of 1 meter	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off	
Other functions Monitor / Analog output	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4372) N/A	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/ PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4374)	Continuity: Buzzer sounds at 50 Ω ± 40 Ω or less, Data hold, Auto power save, Drop-proof from height of 1 meter	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off N/A	
Other functions Monitor / Analog output Display refresh rate Max. rated voltage	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4372) N/A 5 times/s	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/ PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4374) N/A 5 times/s	Continuity: Buzzer sounds at $50 \Omega \pm 40 \Omega$ or less, Data hold, Auto power save, Drop-proof from height of 1 meter N/A 2.5 times/s	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off N/A 2.5 times/s, 1 time/3s	
Other functions Monitor / Analog output Display refresh rate Max. rated voltage to earth Measurement	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/ PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4372) N/A 5 times/s 600 V AC rms CAT IV 600 V	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/ PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4374) N/A 5 times/s 600 V AC rms CAT IV 600 V	Continuity: Buzzer sounds at 50 Ω±40 Ω or less, Data hold, Auto power save, Drop-proof from height of 1 meter N/A 2.5 times/s 600 V AC rms CAT IV 300V	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off N/A 2.5 times/s, 1 time/3s 600 V AC rms 3281: CAT III 600V	
Other functions Monitor / Analog output Display refresh rate Max. rated voltage to earth Measurement categories (current) Measurement	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4372) N/A 5 times/s 600 V AC rms CAT IV 600 V CAT III 1000 V CAT IV 600 V	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/ PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4374) N/A 5 times/s CAT IV 600 V CAT III 1000 V CAT IV 600 V	Continuity: Buzzer sounds at 50 Ω±40 Ω or less, Data hold, Auto power save, Drop-proof from height of 1 meter N/A 2.5 times/s 600 V AC rms CAT IV 300V CAT III 600V CAT III 300V	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off N/A 2.5 times/s, 1 time/3s 600 V AC rms 3281: CAT III 600V 3282: CAT IV 600V	
Other functions Monitor / Analog output Display refresh rate Max. rated voltage to earth Measurement categories (current) Measurement categories (voltage)	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX / PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth® wireless technology (CM4372) N/A 5 times/s 600 V AC rms CAT IV 600 V CAT III 1000 V CAT III 1000 V	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/ PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth® wireless technology (CM4374) N/A 5 times/s 600 V AC rms CAT IV 600 V CAT III 1000 V CAT III 1000 V	Continuity: Buzzer sounds at 50 Ω± 40 Ω or less, Data hold, Auto power save, Drop-proof from height of 1 meter N/A 2.5 times/s 600 V AC rms CAT IV 300V CAT III 600V CAT III 300V CAT II 600V	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off N/A 2.5 times/s, 1 time/3s 600 V AC rms 3281: CAT III 600V 3282: CAT IV 600V CAT IV 600V (3281) φ33 mm	
Other functions Monitor / Analog output Display refresh rate Max. rated voltage to earth Measurement categories (current) Measurement categories (voltage) Core jaw diameter	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX / PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth® wireless technology (CM4372) N/A 5 times/s 600 V AC rms CAT IV 600 V CAT III 1000 V CAT III 1000 V Q33 mm	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/ PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth® wireless technology (CM4374) N/A 5 times/s 600 V AC rms CAT IV 600 V CAT III 1000 V CAT III 1000 V CAT III 1000 V	Continuity: Buzzer sounds at 50 Ω±40 Ω or less, Data hold, Auto power save, Drop-proof from height of 1 meter N/A 2.5 times/s 600 V AC rms CAT IV 300V CAT III 600V CAT II 600V φ33 mm	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off N/A 2.5 times/s, 1 time/3s 600 V AC rms 3281: CAT IV 600V CAT IV 600V (3281) \(\phi 33 \) mm (3282) \(\phi 46 \) mm	
Other functions Monitor / Analog output Display refresh rate Max. rated voltage to earth Measurement categories (current) Measurement categories (voltage) Core jaw diameter Power supply	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4372) N/A 5 times/s 600 V AC rms CAT IV 600 V CAT III 1000 V CAT III 1000 V CAT III 1000 V Q33 mm LR03 Alkaline battery ×2	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/ PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4374) N/A 5 times/s 600 V AC rms CAT IV 600 V CAT III 1000 V CAT III 1000 V CAT III 1000 V CAT III 1000 V LR03 Alkaline battery ×2	Continuity: Buzzer sounds at 50 Ω±40 Ω or less, Data hold, Auto power save, Drop-proof from height of 1 meter N/A 2.5 times/s 600 V AC rms CAT IV 300V CAT III 600V CAT III 600V QAT III 600V CAT III 600V CAT III 600V	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off N/A 2.5 times/s, 1 time/3s 600 V AC rms 3281: CAT III 600V 3282: CAT IV 600V CAT IV 600V (3281) \(\phi 33\) mm (3282) \(\phi 46\) mm 6F22 (006P) \(\times 1)	
Other functions Monitor / Analog output Display refresh rate Max. rated voltage to earth Measurement categories (current) Measurement categories (voltage) Core jaw diameter Power supply Model Dimensions and	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX / PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth® wireless technology (CM4372) N/A 5 times/s 600 V AC rms CAT IV 600 V CAT III 1000 V	Automatic AC/DC detection, Plus/Minus judgement function of DC A, DC V, Max/Min/Average/PEAK MAX/ PEAK MIN value display, Filter function, Display value hold, Auto hold, Back light, Auto-power save, Buzzer sounds, Zero-adjustment, Bluetooth* wireless technology (CM4374) N/A 5 times/s 600 V AC rms CAT IV 600 V CAT III 1000 V	Continuity: Buzzer sounds at 50 \(\Omega \pm 40 \Omega \text{or less, Data hold,} \) Auto power save, Drop-proof from height of 1 meter \(\text{N/A} \) 2.5 times/s 600 V AC rms CAT IV 300V CAT III 600V CAT III 600V Q33 mm CR2032 \times 1 3280-10F 57 mm (2.24 in) W \times 175 mm (6.89 in) H \times 16 mm (0.63 in) D,	Current wave peak value, Voltage wave peak value, Distortion check, Max./ Min./ Average value record, Data hold, Auto power off N/A 2.5 times/s, 1 time/3s 600 V AC rms 3281: CAT III 600V 3282: CAT IV 600V CAT IV 600V (3281) \(\partial \text{33} \text{ mm} \) 6F22 (006P) × 1 3281 62 mm (2.44 in) W × 218 mm (8.58 in) H × 39 mm (1.54 in) D,	

New insulated sleeves prevent short-circuits

No sleeves attached to the tip of test leads?

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





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

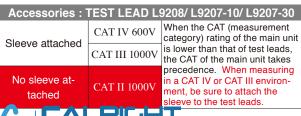
What are the new and additional requirements of the

- international safety standards? 1. "Exposed metal part must be 4mm or shorter" (Previously, 19mm max.)
- for CAT III and IV environments to prevent short-circuits from occurring. 2. Double-coating with different colors enables you to identify the wear
- condition of the test leads. (Previously, single-coated)

Selection Guide

Line-up to Suit Your Needs

Model	3284, 3285	3287, 3288, 3288-20	3291-50	3283, 3283-20	3293-50
True RMS rectifier	Crest factor 2.5 or less 3284: 2.5 (1.5 at 200 A range) 3285: 2.5 (1.42 at 2000 A range)	3287, 3288-20: Crest factor 3287: 2.5 (150 A, 100 V max.) 3288-20: 3 (2 at 1000 A, 1.5 at AC V)	Crest factor 2.8 or less (1.68 at 1000 A range)	Crest factor 2.5 (1.5 at 200 A range)	Crest factor 2.8 or less (1.68 at 1000 A range)
MEAN rectifier	N/A	3288: ✔	N/A	N/A	N/A
AC Current ranges	(3284) 20.00/ 200.0 A (3285/3285) 200.0/ 2000 A	(3287) 10.00/ 100.0 A (3288/3288-20) 100.0/ 1000 A	60.00/ 600.0/ 1000 A	10.00 m/ 100.0 m/ 1.000/ 10.00/ 200.0 A	30.00 m/ 300.0 m/ 6.000/ 60.00/ 600.0/ 1000 A
AC Voltage ranges	30.00/ 300.0/ 600 V	(3287) 10.00/ 100.0 A (3288/3288-20) 100.0/ 1000 A	N/A	N/A	N/A
Frequency characteristics	(3284) DC, 10 to 2 kHz (3285) DC, 10 to 1 kHz	(3287) DC, 10 to 1 kHz (3288/3288-20) DC, 10 to 500 Hz AC V: 30 to 500 Hz	45 to 400 Hz	40 to 2 kHz	45 to 400 Hz
DC Current ranges	(3284) 20.00/ 200.0 A (3285) 200.0/ 2000 A	(3287) 4.200/ 42.00/ 420.0/ 600 V (3288/3288-20) 4.200/ 42.00/ 420.0/ 600 V	N/A	N/A	N/A
DC Voltage ranges	30.00/ 300.0/ 600 V	420.0 m/ 4.200/ 42.00/ 420.0/ 600 V	N/A	N/A	N/A
Basic accuracy (at 50/60Hz)	AC A: ±1.3% rdg. ±3 dgt. AC V: ±1.0% rdg. ±3 dgt.	AC A: ±1.5 % rdg. ±5 dgt. AC V: ±2.3 % rdg. ±8 dgt. DC A: ±1.5 % rdg. ±5 dgt. DC V: ±1.3 % rdg. ±4 dgt.	AC A: ±1.5 % rdg. ±5 dgt.	AC A: ±1.0 % rdg. ±5 dgt. (at 10 m to 10 A range)	AC A: ±1.5 % rdg. ±5 dgt.
Resistance ranges	N/A	420.0 Ω to 42.00 M Ω , 6 ranges	N/A	N/A	N/A
Continuity	N/A	V	N/A	N/A	N/A
Frequency (Hz)	V	N/A	N/A	V	N/A
Other functions	AC+DC mode, Max./ Min./ Average value record, Data hold, Peak hold, Auto power off, Auto zero	Data hold, Auto power save, Auto zero (DC A)	N/A	Filter function, Max./ Min./ Average value record, Data hold, Auto power off	N/A
Monitor / Analog output	~	N/A	N/A	3283 : ✓ 3283-20 : N/A	N/A
Display refresh rate	4 times/s (FAST), 1 time/3s (SLOW)	2.5 times/s	1.1 sec or less	4 times/s (Fast), 1 time/3s (Slow), 4 times/s (bar graph)	1.1 sec or less
Max. rated voltage to earth	600 V AC rms	600 V AC rms	600 V AC rms	300 V AC rms	300 V AC rms
Measurement categories (current)	CAT III 600V	CAT III 600V	CAT III 600V CAT IV 300V	CAT III 300V	CAT III 300V
Measurement categories (voltage)	CAT III 600V	CAT III 300V CAT II 600V	N/A	N/A	N/A
Core jaw diameter	(3284) φ33 mm (3285) φ55 mm	φ35 mm	φ30 mm	φ40 mm	φ24 mm
Power supply	6F22 (006P) × 1, or AC adapter	CR2032 × 1	CR2032 × 1	3283: 6LR61/6F22 (006P) ×1, or AC Adapter 3283-20: 6LR61/6F22 (006P) ×1	CR2032 × 1
Model	3284	3287	3291-50	3283, 3283-20	3293-50
Dimensions and mass	62 mm (2.44 in) W × 230 mm (9.06 in) H × 39 mm (1.54 in) D, 460 g (16.2 oz)	57 mm (2.24 in)W × 180 mm (7.09 in)H × 16 mm (0.63 in)D, 170 g (6.0 oz)	50 mm (1.97 in) W × 136 mm (5.35 in) H × 26 mm (1.02 in) D, 115 g (4.1 oz)	62 mm (2.44 in) W × 225 mm (8.86 in) H × 39 mm (1.54 in) D, 400 g (14.1 oz)	50 mm (1.97 in) W × 130 mm (5.12 in) H × 26 mm (1.02 in) D, 135 g (4.8 oz)
Model	3285	3288, 3288-20			
Dimensions and mass	62 mm (2.44 in) W × 260 mm (10.24 in) H × 39 mm (1.54 in) D, 540 g (19.0 oz)	57 mm (2.24 in)W × 180 mm (7.09 in)H × 16 mm (0.63 in)D, 150 g (5.3 oz)			



Sleeve attached
CAT III, CAT IV

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

No sleeve attached

Detachable!

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

8715 Mesa Point Terrace San Diego, CA 92154 Toll Free: 1.866.363.6634 Tel: 1.619.429.4545 Fax: 1.619.374.7012

Email: sales@calright.com http://www.calright.com

The Right Source For Your Test & Measurement Needs

Pocket size CLAMP SERIES

AC CLAMP METER

3280-10F 3280-20F

Rugged & Compact

- 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



3280-20F (True RMS) 3280-90F (True RMS)

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 3280-10Fx1 (3280-70F) or 3280-20Fx1 (3280-90F) 2: AC FLEXIBLE CURRENT SENSOR CT6280x1 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 SMALL ALLIGATOR CLIP SET L4934



Meter to measur wires and currents









3288-20



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) 3288-20 (True RMS, 1000 A AC/DC)

Accessories

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



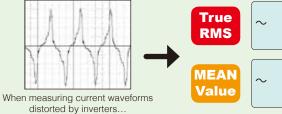






True RMS vs. MEAN Value

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.







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

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

on current meter is the proper tool for accurate measurements.



HIGH PERFORMANCE CLAMP SERIES

AC/ DC CLAMP METER

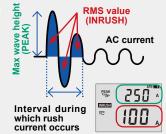
CM4371 CM4372 CM4373 CM4374

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
- Expanded -25 °C to 65 °C operating temperature range
- IP54 dustproof and waterproof enclosure
 - *Jaws (current sensor portion): IP50

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.



AUTO HOLD

The clamp meters beep when the measured value stabilizes and then automatically hold the display value.

This is useful when using the instrument in locations where it is difficult to see the display or press the hold button.



Making measurement more intelligent

The instruments listed below will be able to wirelessly send measured values to a smartphone or tablet using Bluetooth® wireless technology, enabling you to display measured values and waveforms in real time. (CM4372, CM4374)





Damage-resistant jaws

A new and improved design features stronger jaws (the current sensor portion of the instrument) and a dramatic boost in the duration of the warranty from 10,000 to 30,000 open-close cycles to ensure the instrument will provide even more years of reliable use.

Dustproof and waterproof IP54

*Jaws (current sensor portion): IP50

Rotary switch that can be turned with a single hand

Remain alert to hazards

When the clamp meter detects excessively high input or a short-circuit during a continuity check, it alerts you with a red backlight and beeping tone in order to help prevent accidents.



1700 V DC

The CM4370 Series can measure DC voltages of up to 1700 V, making them ideal for no-load voltage inspections of rapidly evolving solar power systems.

Order Code

6000

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 ×1 CARRYING CASE C0203 ×1 LR03 Alkaline battery ×2 Instruction manual ×1 [CM4372, CM4374 only] Precautions Concerning Use of Equipment That Emits Radio Waves

Options

TEST LEAD L9207-10 Options CONTACT PIN SET L4933 SMALL ALLIGATOR CLIP SET L4934

THERMOCOUPLES(K) DT4910 GENNECT Cross (freeware) CONNECTION CABLE L4930 Options CONNECTION CABLE SET 1 4930 EXTENSION CABLE SET L4931 TEST PIN SET 1.4932 ALLIGATOR CLIP SET L4935 BUS BAR CLIP SET L4936 MAGNETIC ADAPTER SET L4937 TEST PIN SET L4938 BREAKER PIN SET L4939 GRABBER CLIP 9243

HIGH PERFORMANCE CLAMP

DIGITAL CLAMP ON HITESTER

3281 3282

The true RMS is shown in the distorted waveform

●3281: 600A ACrms, Ф33mm dia.

•3282: 1000A ACrms, Φ46mm 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 ×1 CARRYING CASE 9399 ×1 Hand strap ×1 Instruction manual ×1 Stacked manganese battery (6F22) ×1





0000

2000

3282

3285

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.





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

Not CE Marked

3284

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) OUTPUT CORD (Connect to terminal block)

2000

Multi-functional Display Unit to Use Right on the Field or Output to Advanced Recorder or Logger



- Send measured values to a smartphone or tablet using Bluetooth® wireless technology (CM7291)
- Use the GENNECT Cross dedicated app to display and review measured values and waveforms in real time (CM7291)
- Simultaneous dual display of the measured values, frequency, and output rate
- Four output formats to output data to loggers or other devices (via Display Unit) *Waveform, RMS, Peak, Frequency output



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
- Measure and display only the leakage current of commercial frequency components using the filter function







Order Code

Accessories

CARRYING CASE 9757 ×1 Hand strap ×1 Instruction manual ×1 Coin type lithium battery (CR2032) ×1

CLAMP ON LEAK HITESTER 3283

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

- Measure leak current using highly sensitive 10µA 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

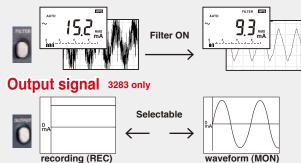




3283-20

Filtering

Sharp Low-pass filter reduces harmonic currents.



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.



Order Code

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

True RMS

Accessories

CARRYING CASE 9399 ×1 Hand strap ×1 Instruction manual ×1 3283: Stacked manganese battery (6F22) ×1 3283-20: Alkaline battery (6LR61) ×1

Options

AC ADAPTER (for USA) AC ADAPTER (for EII) 9445-03 CLAMP ON ADAPTER OUTPUT CORD I. (Connect to Banana terminal) L9094 L9095 OUTPUT CORD (Connect to BNC terminal) OUTPUT CORD L9096 (Connect to terminal block)



CM3286 AC CLAMP POWER METER

Quickly Check Current, Voltage, Power, and Power Factor

- Display four parameters simultaneously
- A handheld power meter that measures from 5 W of power and 60 mA of current Measure power ranging from 5 W at a low current of 60 mA to 360 kW
- In addition to current, voltage, and power, measure simple integral power consumption and phase sequence
- Features and functions deliver fast and efficient testing
- Hold measured values to send them to a smartphone, quick and easy data recording (CM3286-01 only)





■ Basic specifications (Accuracy guaranteed for 1 year, Post-adjustment accuracy guaranteed for 1 year)

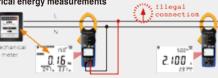
		recentley guaranteed for 1 year, 10st-adjustment decuracy guaranteed for 1 year)		
Measurement line		Single-phase, Three-phase (should be balanced and no distortion)		
Max. rated voltage to earth		600 Vrms (CAT IV), 1000 Vrms (CAT III)		
AC voltage (Frequency characteristics)		80.0 V to 600.0 V, Single range (45 Hz to 1 kHz)		
Basic accuracy		45 to 66 Hz: ±0.7 %rdg.± 3 dgt.		
AC current (Frequency characteristics)		0.060 A to 600.0 A, 3 range (45 Hz to 1 kHz)		
Basic acc	uracy	45 to 66 Hz: ±1.3 %rdg.± 3 dgt.		
Power	Single phase	0.005 kW to 360.0 kW		
	Accuracy	±2.0 %rdg.± 7 dgt. (50/60 Hz, Power factor = 1)		
	Balanced three phase	0.020 kW to 623.5 kW		
	Accuracy	±3.0 %rdg.± 10 dgt. (50/60 Hz, Power factor = 1)		
Measurement items		Voltage, Current, Voltage/ current peak, Active/ reactive/ apparent power, Power factor, Phase angle *1, Frequency, Simple Active Energy Consumption (Single-phase) [CM3286-01 only *2] Voltage/ current harmonic levels		
Harmonic (CM3286-01 only*2)		Voltage/ current harmonic levels up to 30th, Content factor, Total harmonic distortion ratio		
Other functions		PEAK, Phase detection, Max/ Min/ AVG value display, Auto hold, electric mete comparison, unbalanced 3-phase power estimate display, etc		
Dustproof and waterproof*3		IP54 (EN60529) Grip, excluding lever		
Bluetooth® (CM3286-01 only)		Supports devices: iOS10 or later, Android™ 4.3 or later smartphone/ tablet, Interface: Bluetooth® 4.0 LE, Communication distance: 10 m (line of sight)		
Power supply		LR03 Alkaline battery ×2		
Continuous operating time		25 hours		
Dimensions and mass		82 mm (3.23in) W × 241 mm (9.49in) H × 37 mm (1.46in) D, 450 g (15.9 oz		

Phase angle obtained from zero cross of current / voltage.
Harmonic can be displayed by dedicated application software (Gennect Cross). iOS support scheduled for 2018.

Although CM3286 is designed to resist the ingress of dust and dripping water, it is not entirely waterproof or dustproof. Therefore, to prevent an electric shock, do not use it in a wet or dusty environment.

Discover electricity theft

Uncover tampering of electric meters by comparing electrical energy measurements



Discover manipulation of electric meters by comparing meter and integral power consumption measurements

Discover theft by measuring leakage current.

Discover direct theft

by measuring current

Order Code

CM3286 CM3286-01 (Built in Bluetooth® wireless technology)

Accessories

CONNECTION CORD L9257 ×1 CARRYING CASE C0203 ×1 LR03 Alkaline battery ×2 [CM3286-01 only] Precautions Concerning Use of Equipment That Emits Radio Waves

Options

CONNECTION CABLE SET EXTENSION CABLE SET L4931 CLAMP ON ADAPTER 9290-10 TEST LEAD

GENNECT Cross (freeware)

L4930, L4931, L9257 Options TEST PIN SET L4932 ALLIGATOR CLIP SET L4935 BUS BAR CLIP SET L4936 MAGNETIC ADAPTER SET TEST PIN SET L4938 BREAKER PIN SET L4939 GRABBER CLIP 9243 MAGNETIC ADAPTER

⚠ 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 oltage.

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