KEW AC/DC CLAMP METERS

MODEL 2003A

CE

ϕ55 | MAX AC/DC 2000A | AC V | DC V | Ω | •))) Continuity | OUT PUT | MAX Hold

- Equipped to measure both AC and DC current with transformer jaws of large diameter.
- Can measure AC and DC currents up to 2000A.
- Output terminal for connection to recorders.
- AC/DC voltage, resistance measurement and continuity functions also available.

MODEL 2009A

CE

ϕ55 | MAX AC/DC 2000A | RMS | AC V | DC V | Ω | Hz | •))) Continuity | OUT PUT | PEAK 10ms

- True RMS reading instrument ideal for accurate measurement of distorted waveforms and non-sinusoidal waveforms arising from thyristors.
- Can measure AC and DC currents up to 2000A.
- Output terminal for connection to recorders.

MODEL 2004

ϕ19 | MAX AC/DC 200A | AC V | DC V | Ω

- Smallest clamp meter capable of AC and DC current measurements.
- 20A range has a minimum resolution of 0.01A AC/DC.
- AC/DC voltage and resistance measurement functions also available.

MODEL 2010

ϕ7.5 | MAX AC/DC 20A | OUT PUT | External Power Supply

- High sensitivity, miniature AC/DC clamp meter.
- 0.1mA minimum resolution for AC current and 1mA minimum resolution for DC current.
- Output terminal for recorder connection.

MODEL 2033

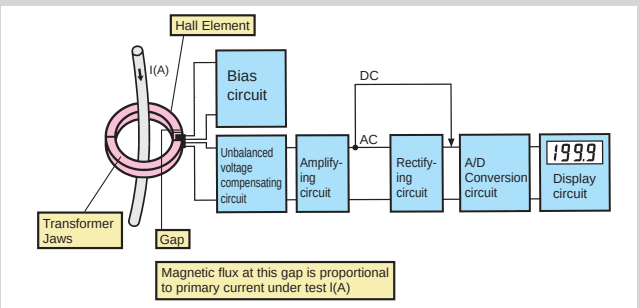
CE

ϕ24 | MAX AC/DC 300A

- Smallest clamp meter capable of AC and DC current measurements.
- 300A auto ranging has minimum resolution of 0.01A AC/DC.
- Auto-zero function to allow one touch zero adjustment.

Measurement Principle of AC/DC Clamp Meter

In general hall elements are used as a sensor to detect DC current because it is not possible to employ an electromagnetic induction method as used for dedicated AC clamp meters. As shown in a figure at left, a hall element is placed across a gap created by cutting off part of the transformer jaws. When there occurs a flow of magnetic flux proportional to both AC and DC primary currents in the transformer jaws this hall element detects the magnetic flux and takes it out as an output voltage.
Hall element:This is a semiconductor to generate a voltage proportional to the product of bias current and magnetic field on the output terminal when bias current is applied to the input terminal.



This is a full range of AC/DC digital clamp meters. Model 2003A has been synonymous with an excellent AC/DC digital clamp meter since its introduction more than 10 years ago. It can measure up to 2000A AC and DC. The instrument is widely recognized as a high function, high quality digital clamp meter.

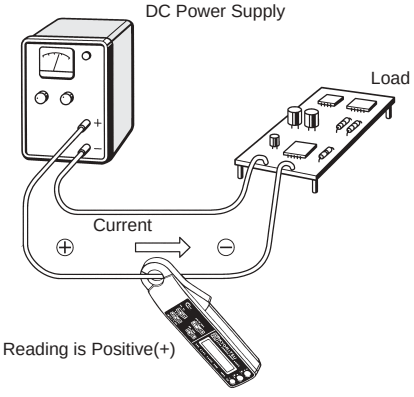
Selection Guide

MODEL	2033	2004	2003A	2009A	2010
AC A	● 300A	● 200A	● 2000A	● 2000A	● 20A
AC V		● 500V	● 750V	● 750V	
DC A	● 300A	● 200A	● 2000A	● 2000A	● 20A
DC V		● 200V	● 1000V	● 1000V	
Ω		● 200Ω	● 4000Ω	● 4000Ω	
Data Hold	●	●	●	●	●
Peak Hold				●	
MAX Hold			●		
Average				●	
Hz				● 4000Hz	
Output			●	●	●
True RMS				●	

Specifications

MODEL	Model 2003A	Model 2004	Model 2033	Model 2009A	Model 2010
AC A	400A(0～400A) ±1.5%rdg±2dgt(50/60Hz) ±3%rdg±4dgt(40～1kHz) 2000A(0～1700A) ±1.5%rdg±2dgt(50/60Hz) ±3%rdg±4dgt(40～1kHz) 2000A(1701～2000A) ±3%rdg±2dgt(50/60Hz)	20/200A ±1%rdg±2dgt(20A)(50/60Hz) ±1.5%rdg±4dgt(20A)(40Hz～1kHz) ±1.5%rdg±4dgt(0～150A)(50/60Hz) ±2%rdg±5dgt(0～150A) (40Hz～1kHz) ±3.5%rdg(>150A)(40Hz～1kHz)	40/300A ±1%rdg±4dgt(0～40A) (50/60Hz) ±2.5%rdg±4dgt(0～40A) (20Hz～1kHz) ±1.5%rdg±4dgt(20～200A) (50/60Hz) ±2.5%rdg±4dgt(20～200A) (20Hz～1kHz) ±3.5%rdg(200～300A) (50/60Hz) ±4%rdg(20～300A) (20Hz～1kHz)	400A(0～400A)(True-RMS) ±1.5%rdg±3dgt(50/60Hz) ±3%rdg±4dgt(30～1kHz) 2000A(0～1700A)(True-RMS) ±1.5%rdg±2dgt(50/60Hz) ±3%rdg±4dgt(30～1kHz) 2000A(1701～2000A)(True-RMS) ±3%rdg±3dgt(50/60Hz)	200mA/2/20A ±1%rdg±2dgt(200mA)(50/60Hz) ±1.5%rdg±4dgt(200mA) (40Hz～2kHz) ±1%rdg±2dgt(2A)(50/60Hz) ±2.5%rdg±5dgt(2/20A) (40Hz～2kHz)
AC V	400/750V ±1.5%rdg±2dgt(50/60Hz) ±1.5%rdg±4dgt(40～1kHz)	500V ±1.5%rdg±2dgt(50/60Hz) ±2%rdg±4dgt(40Hz～1kHz)	——	40/400/750V(True-RMS) ±1.5%rdg±3dgt(50/60Hz) ±1.5%rdg±4dgt(30～1kHz)	——
DC A	400/2000A ±1.5%rdg±2dgt	20/200A ±1%rdg±2dgt(20A) ±1.5%rdg±2dgt(0～150A) ±3%rdg(>150A)	40/300A ±1%rdg±4dgt(0～±40A) ±1.5%rdg±4dgt(±20～±200A)	400/2000A ±1.5%rdg±2dgt	2/20A ±1%rdg±2dgt(2A) ±1.5%rdg±4dgt(20A)
DC V	400/1000V ±1%rdg±2dgt	200V ±1%rdg±2dgt	——	40/400/1000V ±1%rdg±2dgt	——
Ω	400/4000Ω ±1.5%rdg±2dgt	200Ω ±1.5%rdg±2dgt	——	400/4000Ω ±1.5%rdg±2dgt	——
Continuity buzzer	buzzer sounds below 50±35Ω	——	——	buzzer sounds below 20Ω	——
Frequency	——	——	——	10 ～ 4000Hz ±1.5%rdg±5dgt	——
Output Voltage	400/2000A DC400mV/200mV	——	——	400/2000A DC400mV/200mV	200mV DC for 200mA AC/DC and 2A/20A AC/DC full scale
Conductor Size	ϕ 55mm max.	ϕ 19mm max.	ϕ 24mm max.	ϕ 55mm max.	ϕ 7.5mm max.
Safety Standard	IEC61010-1 CAT.Ⅲ 600V CAT.Ⅱ 1000V IEC61010-2-031,IEC61010-2-032	——	IEC61010-1CAT.Ⅲ 300V IEC61010-2-032	IEC61010-1 CAT.Ⅲ 600V CAT.Ⅱ 1000V IEC61010-2-031,IEC61010-2-032	——
Frequency Response	40Hz~1kHz	DC, 40Hz ～ 1kHz	DC, 20Hz~1kHz	40Hz~1kHz	DC, 40Hz~2kHz
Withstand Voltage	5550V AC for 1 minute	1000V AC for 1 minute	3700V AC for 1 minute	5550V AC for 1 minute	750V AC for 1 minute
Power Source	R6P(AA)(1.5V)×2	R6P(AA)(1.5V)×2	LR-44(1.5V)×2	6F22(9V)×1	6LF22(9V)×1 or AC Adaptor
Dimensions	250(L)×105(W)×49(D)mm	180(L)×54(W)×31(D)mm	147(L)×59(W)×25(D)mm	250(L)×105(W)×49(D)mm	142(L)×64(W)×26(D)mm 153(L)×23(W)×18(D)mm Clamp Sensor
Weight	530g approx.	170g approx.	100g approx.	540g approx.	220g approx.
Accessories	7107(Test Leads) 8201(Output Plug) 9094(Carrying Case) R6P(AA)×2 Instruction Manual	7066(Test Leads) 9055(Carrying Case) R6P(AA)×2 Instruction Manual	9090(Carrying Case) LR-44×2 Instruction Manual	7107(Test Leads) 8201(Output Plug) 9094(Carrying Case) 6F22×1 Instruction Manual	9071(Carrying Case) Alkaline 6LF22×1 Instruction Manual
Optional	8008(Multi-Tran)(AC only) 7014(Output Cord)	8004/8008(Multi-Tran)(AC only) 8021(Energizer)	8004/8008(Multi-Tran)(AC only) 8021(Energizer)	8008(Multi-Tran)(AC only) 7014(Output Cord)	8022(AC Adaptor)(110V) 8023(AC Adaptor)(220V) 7014(Output Cord)

How to Measure DC Current



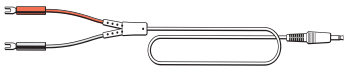
Clamp on to a conductor just the same way as with AC current measurement using an AC current clamp meter.
In the case of DC clamp meters the reading is positive (+) when the current is flowing from the upside to the underside of the clamp meter.

Accessories

■ Model 8201
Output Plug

Optional Accessories

■ Model 7014
Output Cord



■ Model 8022
AC Adaptor
(110V)

■ Model 8023
AC Adaptor
(220V)