



Quality and reliability is our tradition

KYORITSU

KEW CAT. IV CLAMP METER SERIES



- Designed to international safety standard IEC61010-1 CAT. IV 600V
- CAT. IV Clamp Meters can measure the Voltage and Current in both very low and high power circuits.
- Thus, very useful for power distribution companies, power utilities and maintenance fields.
- True RMS enables an accurate measurement (2046R/2056R).
- Red LED, as "Non Contact Voltage" function, gives warning to the user on the presence of AC voltage.
- Double molding gives comfortable feeling in palm.
- 6039 counts with Bar Graph display.
- MIN/MAX function enables to easing keep min & max value during measurement.

2040 

Discontinued Product

CAT. IV 600V

φ33

MAX AC 600A



2046R 

CAT. IV 600V

φ33

MAX AC/DC 600A

TRUE RMS °C



2055 

CAT. IV 600V

φ40

MAX AC/DC 1000A



2056R 

CAT. IV 600V

φ40

MAX AC/DC 1000A

TRUE RMS °C



KYORITSU ELECTRICAL INSTRUMENTS WORKS,LTD.

CLAMP METER SERIES

2055 / 2056R

(Actual Size)



True RMS (Root Mean Square value) Measurement

Averaging Value

True RMS Value



When load current is not affected by the distortion, both averaging value type and true RMS (root mean square) type clamp meters show the almost same value of about 10A with constant wave-form as the above display samples. However, when load current is affected by some distortions such as inverter, etc., averaging value type clamp meter indicates 5.5A instead of 9.7A and true RMS type clamp meter indicates 7.9A instead of 9.7A with irregular wave-form. Accordingly, true RMS type clamp meter is recommendable for the measurement of the equipment with inverter control

devices.

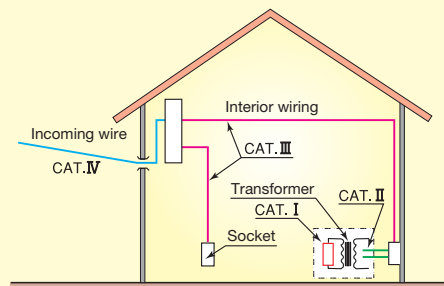
Due to the use of thyristors, inverters and other energy-saving controllers in recent electric wiring, current waveforms often include harmonic components and are distorted compared to sinusoidal waves (50/60Hz). The Kyoritsu True RMS value tester is able to measure distorted waveforms using true RMS since waveforms are being internally calculated continuously. In contrast, when measurements are made with a averaging value tester, errors are generated in the measurement value because the tester cannot continuously track distorted waveforms.

(Compared to the true RMS value tester, measurement values for the averaging value generate more than 30% errors in some cases.)

Crest Factor

The ratio of peak value to root mean square value, expressing the dynamic range. The crest factor on an undistorted sinusoidal wave is 1.41. Any value outside of this means that the waveform is considered to be distorted.

Measurement categories (Over-voltage categories)



To ensure safe operation of measuring instruments, IEC61010-1 establishes safety standards for various electrical environments, categorized as CAT. I to CAT. IV, and called measurement categories. Higher-numbered categories correspond to electrical environments with greater transient energy (that can be very dangerous), so a measuring instrument designed for CAT. IV environments can endure greater transient energy than one designed for CAT. III or lower.





CAT. I : Secondary electrical circuits connected to an outlet through a transformer or similar device. Secondary electrical circuit parts inside equipments like TVs, PCs, Copiers, etc.

CAT. II : Primary electrical circuits or equipments connected to an outlet by a power cord. Outlets at more than 10 meters from CAT. III source, or at more than 20 meters from CAT. IV source.


CAT. III : Primary electrical circuits of the equipment connected directly to the distribution panel. Switchboards, busbars and feeders from the distribution panel to outlets.

CAT. IV : The circuit from the service drop to the service entrance, and to the power meter and primary over current protection device (distribution panel). Circuits close to the secondary side of low voltage power transformer.

Specifications

MODEL	2040	2046R	2055	2056R
	 <p>Discontinued Product</p> <p>CAT. IV 600V</p> <p>φ33</p> <p>MAX AC 600A</p>	 <p>CAT. IV 600V</p> <p>φ33</p> <p>MAX AC/DC 600A</p> <p>TRUE RMS</p> <p>°C</p>	 <p>CAT. IV 600V</p> <p>φ40</p> <p>MAX AC/DC 1000A</p>	 <p>CAT. IV 600V</p> <p>φ40</p> <p>MAX AC/DC 1000A</p> <p>TRUE RMS</p> <p>°C</p>
AC A	0~600.0A 1.5%rdg±5dgt(50/60Hz) 3.5%rdg±8dgt(40~400Hz)	0~600.0A 2.0%rdg±5dgt(50/60Hz) 3.5%rdg±5dgt(40~500Hz)	0~600.0/1000A 1.5%rdg±5dgt(50/60Hz) 3.0%rdg±5dgt(40~400Hz)	0~600.0/1000A 2.0%rdg±5dgt(50/60Hz) 3.5%rdg±5dgt(40~500Hz)
AC V	6/60/600V Auto Ranging 1.3%rdg±4dgt(50/60Hz) 3.0%rdg±5dgt(40~400Hz)	6/60/600V Auto Ranging 1.5%rdg±4dgt(50/60Hz) 3.5%rdg±5dgt(40~400Hz)	6/60/600V Auto Ranging 1.3%rdg±4dgt(50/60Hz) 3.0%rdg±5dgt(40~400Hz)	6/60/600V Auto Ranging 1.5%rdg±4dgt(50/60Hz) 3.5%rdg±5dgt(40~400Hz)
DC A	—	0~600.0A 1.5%rdg±5dgt	0~600.0A/1000A 1.5%rdg±5dgt	0~600.0A/1000A 1.5%rdg±5dgt
DC V	600m/6/60/600V Auto Ranging 1.0%rdg±3dgt	600m/6/60/600V Auto Ranging 1.0%rdg±3dgt	600m/6/60/600V Auto Ranging 1.0%rdg±3dgt	600m/6/60/600V Auto Ranging 1.0%rdg±3dgt
Frequency / DUTY	10/100/1k/10kHz (Auto Ranging) / 0.1~99.9%			
Ω	600/6k/60k/600k/6M/60MΩ (Auto Ranging) 1%±5dgt(600~6M) / 5%±8dgt(60M)			
Continuity buzzer	Buzzer Sounds at 100Ω			
Conductor Size	φ33mm		φ40mm	
Diode Check	●	●	●	●
Capacitance		400n/4μ/40μF (Auto Ranging)		400n/4μ/40μF (Auto Ranging)
Temperature		●		●
Data Hold	●	●	●	●
Peak Hold		●		●
MAX / MIN	●	●	●	●
Bar Graph	●	●	●	●
NCV*	●	●	●	●
Backlight Display		●	●	●
Withstand Voltage	6880V AC for 5 seconds			
Applicable Standard	IEC61010-1 CAT. IV 600V, IEC61010-031, IEC61010-2-032, IEC61326			
Power Source	R03 (1.5V)(AAA) × 2			
Dimensions	243(L) × 77(W) × 36(D) mm		254(L) × 82(W) × 36(D) mm	
Weight	300g		310g	
Accessories	Test Lead, R03 × 2 Carrying Case Instruction Manual	Test Lead, R03 × 2 Carrying Case Instruction Manual	Test Lead, R03 × 2 Carrying Case Instruction Manual	Test Lead, R03 × 2 Carrying Case Instruction Manual
Option		Temperature Probe		Temperature Probe

*Non-Contact Voltage

 **Safety Warnings :** Please read the "Safety Warnings" in the instruction manual supplied with the instrument thoroughly and completely for correct use. Failure to follow the safety rules can cause fire, trouble, electrical shock, etc. Therefore, make sure to operate the instrument on a correct power supply and voltage rating marked on each instrument.