

# CAT IV Professional AC/DC Clamp Meters

## Technical Data



**K2056R**

**K2046R**

**K2055**

## K2056R • K2055 • K2046R

These meters are some of the first CAT IV clamp meter manufactured to meet the demands for measuring voltage and current spikes. As electrical distribution systems become more complex, the chances of voltage spikes are always increasing, and these spikes are superimposed to normal mains voltage waveform. If the instrument is not purposely designed to withstand these high voltage spikes, it will blow and a potential arc blast can create a life threatening situation for the end user.

### Features Include:

- Peak Hold (*K2056R / K2046R*)
- Measures AC and DC Voltage to 600V
- Capacitance to 4mF (*K2056R / K2046R*)
- Temperature measurement in °C or °F
- Continuity Buzzer and Diode Test
- Relative Mode
- Data Hold
- MIN/MAX recording mode
- Measures Resistance up to 60MΩ
- 6039 Count LCD with 61 segment bargraph
- 600V Input protection
- Auto Power Off
- Overmould rubber housing
- Integrated Test Lead Holder
- Backlight for dimly lit areas

### General Specifications

Mode of operation	: $\Delta \Sigma$ mode
Display	: Max. 6039 counts (Frequency: 9999 and bargraph) Capacity & Temperature: 4039 ( <i>K2056R / K2046R only</i> )
Over-range indication	: "OL" when exceeding the measuring range (except for AC/DCV and 1000A Function)
Range switching	: Auto-ranging / Voltage, Resistance and Single Range, Continuity, Diode check and DUTY. Capacity Range and Temperature ( <i>K2056R / K2046R only</i> )
Sample rate	: Three times per second
Functional construction	: OFF / ACA / DCA / ACV / DCV / $\Omega$ / °C / °F ( <i>K2056R / K2046R only</i> ) OFF / IACA / DCA / IACV / DCV / $\Omega$ (( <i>K2055 only</i> ))
Keys	: SELECT (AC / DC switching & / $\Omega$ / $\rightarrow$ / $\leftarrow$ / $\leftrightarrow$ ), / Back Light, REL $\Delta$ , Hz / DUTY and MIN/MAX. PEAK HOLD ( <i>K2056R / K2046R only</i> )
Power source	: DC3V / R03 (UM-4) x 2pcs
Low battery warning	: "batt" mark is displayed at 2.4V $\pm$ 0.15V or less.
Temperature and humidity	: 23°C $\pm$ 5°C, relative humidity accuracy guaranteed 85% or less (no condensation)
Operating temperature	: 0 ~ 40°C relative humidity 85% & humidity range or less (no condensation)
Storage temperature	: 20 ~ 60°C relative humidity 85% & humidity range or less (no condensation)



## General Specifications

<b>Current consumption</b>	: Approx. 25mA (K2056R / K2046R only) / approx. 12mA (K2055 only)
<b>Sleep Function</b>	: Automatically powered off in about 15min after the last Function switch operation. Rotate the Function Switch from OFF to any position to exit from the Sleep state
<b>Applicable Standards</b>	: IEC 61010-1 : 2001, Measurement CAT.IV 600V Pollution degree 2 / IEC 61010-031:2002, IEC 61010-2-032 EMC : EN 61326 / EN 55022 / EN 61000-4-2 (performance criterion B) / EN 61000-4-3 (performance criterion B)
<b>Overload Protection</b>	: Current Range : 720A AC / 10 sec @ K2046R / 1200AAC / DC / 10 sec @ K2056R and K2055 Voltage Range : 720V AC / DC / 10 sec Resistance Range : 600V AC / DC / 10 sec
<b>Withstand Voltage</b>	: 6880V AC (TRMS 50 / 60Hz) / 5 sec (between Jaws and electrical circuit / between internal circuit and enclosure)
<b>Insulation Resistance</b>	: 10MΩ or more / 1000V (between electrical circuit and enclosure)
<b>Conductor size</b>	: K2046R: approx 33mm and K2055 / K2056R: approx 40mm
<b>Dimension</b>	: K2046R approx. 243(L) x 77(W) x 36(D)mm / K2056R and K2055 approx. 254(L) x 82(W) x 36(D)mm
<b>Weight</b>	: K2046R : approx. 300g / K2056R and K2055 : approx. 310g
<b>Accessories</b>	: Test leads Model 7066 / 1 set, Battery R03 (UM-4) / 2pcs, Instruction manual / 1pce, Carrying Case / 1pce
<b>Optional Accessories</b>	: K-type temperature probe Model 8216, Multi-Tran M-8008

Accuracy guaranteed at 23 °C ± 5 °C , humidity 45 ~ 85%

Measurement	Function/Range	Measuring Range	Accuracy	K2046R	K2056R	K2055
<b>AC Current</b>	600A	0-600.0A	± 2.0% of rdg ± 5 dgts (50/60Hz)	*	*	
			± 3.5% of rdg ± 5 dgts (40~500Hz)			
			± 5.5% of rdg ± 5 dgts (500~1kHz)			
			± 1.5% of rdg ± 5 dgts (5/60Hz)			*
			± 3.5% of rdg ± 8 dgts (40-400Hz)			
	1000A	0-1000A	N/A	*	*	*
<b>DC Current</b>	600A	0-600.0A	± 1.5% of rdg ± 5 dgts	*	*	*
	1000A	0-1000A	± 1.5% of rdg ± 5 dgts		*	*
		0-600.0V	N/A	*		
<b>AC Voltage</b>	6V		± 1.5% of rdg ± 4 dgts (50/60Hz)	*	*	
	60V		± 3.5% of rdg ± 5 dgts (40~400Hz)	*	*	
	600V		± 1.3% of rdg ± 4 dgts (50/60Hz)			*
			± 3.0% of rdg ± 5 dgts (40~400Hz)			*
<b>DC Voltage</b>	600mV	0-600.0V	± 1.0% of rdg ± 3 dgts	*	*	*
	6V			*	*	*
	60V			*	*	*
	600V			*	*	*
<b>Resistance</b>	600Ω	0-600.0V	± 1.0% of rdg ± 5 dgts	*	*	*
	6kΩ			*	*	*
	60kΩ			*	*	*
	600kΩ			*	*	*
	6MΩ	0-600MΩ	± 5% of rdg ± 8 dgts	*	*	*
	60MΩ	60.00MΩ		*	*	*
<b>Capacity</b>	40nF	0.01nF	N/A	*	*	
	400nF			*	*	
	4μF	-4000μF	± 2.5% of rdg ± 20 dgts	*	*	
	40μF	Auto ranging	N/A	*	*	
	400μF		N/A	*	*	
	4000μF		N/A	*	*	
<b>Frequency</b>	ACA	40Hz - 400Hz	± 0.5% of rdg ± 5 dgts	*	*	*
	ACV	1Hz ~ 10kHz		*	*	*
		0.1-99.9% (Pulse width/Pulse period)		± 2.5% of rdg ± 5 dgts	*	*
<b>Temperature</b>	°C	-50°C ~ 0°C	± 5°C ± 3 dgts	*	*	
		0°C ~ 150°C	± 3°C ± 2 dgts	*	*	
		150°C ~ 700°C	± 2°C ± 2 dgts	*	*	
	°F	-58°F ~ 32°F	± 9°F ± 3 dgts	*	*	
		-32°F ~ 302°F	± 5°F ± 2 dgts	*	*	
		-302°F ~ 1292°F	± 2% ± 2 dgts	*	*	

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Measurement	Measuring Range	Accuracy	K2046R	K2056R	K2055
Continuity Buzzer	0.600.0Ω	Buzzer sounds at 100Ω or less	*	*	*
Measurement	Test Voltage		K2046R	K2056R	K2055
Diode Test	0-2V		*	*	*