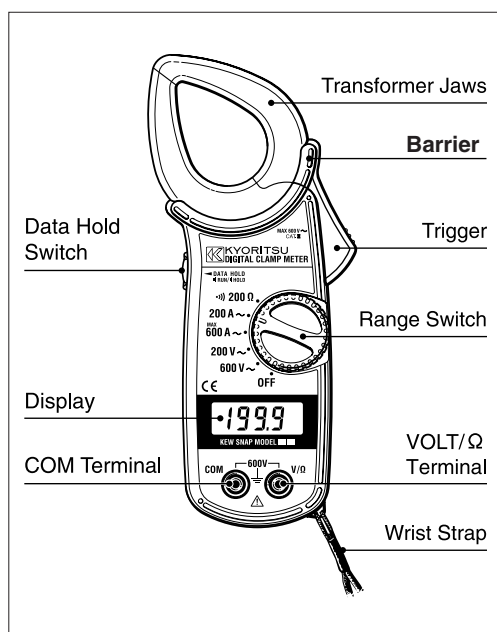


DIGITAL AC CLAMP METER

KEW SNAP SERIES

KEW SNAP 2017

KEW SNAP 2027 RMS



1. Safety Warnings ⚠

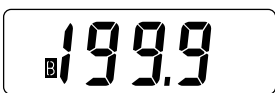
- This instrument has been designed, manufactured, and tested according to IEC 61010: Safety requirements for Electronic measuring apparatus, and delivered in the best condition after passed the inspection. This instruction manual contains warnings and safety rules which must be observed by the user to ensure safe operation of the instrument and to retain it in safe condition. Therefore, read through these operating instructions before using the instrument.

- Effect of conductor position :
 - 2017 Within 2% of indicated value at the center to a 10mm - dia conductor carrying 100A, at every part inside the jaws.
 - 2027 Within 3% of indicated value at the center to a 10mm - dia conductor carrying 100A, at every part inside the jaws.
- Effect of external : 2 A or less in AC magnetic field of magnetic field 400A/m
- Power Source : 6F22(9V DC) or equivalent battery
- Battery Life : Approx. 200 hours (continuous)
- Current consumption : Approx. 2mA
- Withstanding Voltage : 5550V AC for 1 minute between housing case and metal part of jaws
- Insulation Resistance : 50MΩ or greater at 1000V between housing case and metal part of jaws
- Conductor Size : Approx. 30mm diameter max.
- Dimensions : Approx. 91(W)×208(H)×40(D)mm
- Weight : Approx. 400g(batteries included)
- Safety Standard : EN61010-1
EN61010-031
EN61010-2-032
- (600V AC CAT. III, Pollution degree2, indoor use)
- EMC Standard : EN 55022
- Accessories : Test leads Model 70661set
6F22 battery1
Carrying case Model 90791
Instruction Manual1
- Optional Accessories : Clamp adapter Model 8004, 8008

4. Operating Instruction

4-1 Preparation to check battery voltage;

- (1) Set the range switch to a desired position
- (2) If the display is clear without symbol "B" showing, proceed to measurement, Battery voltage is OK.
- (3) If the Display blinks or symbol "B" is indicated, replace the battery in accordance with Section 5 for Battery Replacement.



4-2 AC Current Measurement

⚠ WARNING

- Keep your fingers and hands behind the barrier during measurement.
- Do not make measurement with the battery cover removed from the instrument.
- Please be sure to remove a measurement code before measurement.

- (1) Set the range switch to 200A or 600A.

⚠ WARNING

- Read through and understand the instructions contained in this manual before starting to use the instrument.
 - Save and keep the manual at hand to enable quick reference whenever necessary.
 - Be sure to use the instrument only in its intended applications.
 - Be sure to understand and follow all safety instructions contained in the manual.
- Be sure to observe the above instructions. Failure to follow the above instructions may cause injury, instrument Damage and/or damage to equipment under test. Kyoritsu is by no means liable for any damage resulting from the instrument in contradiction to these cautionary notes.

- The symbol ⚠ indicated on the instrument means that the user must refer to the related parts in the manual for safe operation of the instrument.
- Be sure to carefully read the instructions following each ⚠ symbol in the manual.

- ⚠ **DANGER** is reserved for conditions and actions that are likely to cause serious or fatal injury.
- ⚠ **WARNING** is reserved for conditions and actions that can cause serious or fatal injury.
- ⚠ **CAUTION** is reserved for conditions and actions that can cause injury or instrument damage.

- Please refer to following explanation of the symbols used on the instrument and in this manual.

- ⚠ User must refer to the explanations in the instruction manual.

- Ⓜ Indicates an instrument with double or reinforced insulation.

- ⚡ Indicates that this instrument can clamp on bare conductor when measuring a voltage corresponding to the applicable Measurement category, which is marked next to this symbol.

- ~ Indicates AC (Alternating Current).

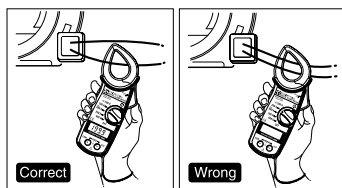
- ⊕ Indicates Earth.

- Read through the following safety instructions contained in this manual before using the instrument.

⚠ DANGER

- Never make measurement on the circuit in which electrical potential to ground over 600V exists.
- Do not attempt to make measurement in the presence of flammable gasses. Otherwise, the use of the instrument may cause sparking, which can lead to an explosion.
- Transformer jaw tips are designed not to short the circuit under test. If equipment under test has exposed conductive parts, however, extra precaution should be taken to minimize the possibility of shorting.
- Never attempt to use the instrument if its surface or your hand is wet. Otherwise, you may get electrical shock.
- Never open the Bottom case and Battery cover during a measurement.

- (2) Press the trigger to open the transformer jaws and clamp onto a conductor. The most accurate reading will be obtained by keeping the conductor at the center of the transformer jaws.
- (3) Read the display.

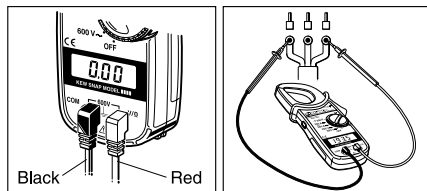


4-3 AC Voltage Measurement

⚠ WARNING

- Never use the instrument on a circuit above 600Vrms AC. Measurement on circuits above this voltage to the instrument or equipment under test.
- Keep your fingers and hands behind the batteries during measurement.
- Do not operate the range switch during a measurement.
- Do not open the battery cover when making measurement.

- (1) Set the range switch to 200V or 600V.
- (2) Insert the red plug of the test lead into the V/Ω terminal and the black plug into the COM terminal.
- (3) Touch the tips of the test leads to the circuit under test.
- (4) Read the display.



4-4 Resistance Measurements and Continuity Check

⚠ WARNING

- To avoid possible electrical shock and instrument damage, make sure that a circuit to be tested is de energized.
- Keep your fingers and hands behind the barrier during measurement.
- Do not operate the range switch during a measurement.
- Do not open the battery cover when making measurement.

- (1) Set the range switch to 200Ω.
- (2) Insert the red plug of the test lead into the V/Ω terminal and the black plug into the COM terminal. With the test leads open, the display should show "1" on the highest digit (over range condition)
- (3) Short the test leads. The display should read nearly 0 and the beeper should sound. (Teas lead have a resistance of about 0.2Ω)

⚠ WARNING

- Never attempt to make any measurement if the instrument has any structural abnormality such as cracked case and exposed metal part.
- Do not turn the range switch with test leads connected to the instrument.
- Do not install substitute parts or make any modification to the instrument. Return the instrument to the distributor from whom you purchased this instrument for repair or re-calibration.
- Always switch off the instrument before opening the battery compartment cover for battery replacement.

⚠ CAUTION

- Always make sure to set the Range switch to the appropriate position before making measurement.
- Always make sure to insert the plug of each lead fully into the appropriate terminal on the instrument.
- Be sure to set the Range switch to "OFF" position after use. When the instrument will not be in use for a long period, place it in storage after removing the batteries.
- Do not expose the instrument to the direct sun, high temperature and humidity or dewfall.
- Use a damp cloth and detergent for cleaning the instrument. Do not use abrasives solvents.

- Measurement categories (Over-voltage categories)

To ensure safe operation of measuring instruments, IEC61010 establishes safety standards for various electrical environments, categorized as CAT I to CAT IV, and called measurement categories. These are defined as indicated on the next.

CAT. I : Secondary electrical circuits connected to an AC electrical outlet through a transformer or similar device.

CAT. II : Primary electrical circuits of equipment connected to an AC electrical outlet by a power cord.

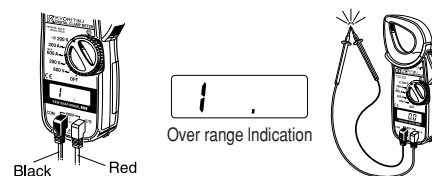
CAT. III : Primary electrical circuits of the equipment connected directly to the distribution panel, and feeders from the distribution panel to outlets.

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).

2. Features

- Designed to CAT. III 600V and pollution degree 2 specified by the international safety standard, IEC 61010-1.
- Tear-drop-shaped jaws for ease of use in crowded cable areas and other tight places.
- Data Hold function.
- Wide frequency range from 40Hz to 1kHz.
- KEW SNAP 2027 is a true RMS Type that permits most accurate measurements independent of waveforms.

- (4) Connect the leads to the circuit to be tested and read the display. The beeper sounds below about 30Ω.



4-5 How to Use Data Hold Function

On all ranges, you can hold a reading on the display using Data Hold function.

- (1) While making measurement, press the Data Hold switch. The last reading remains held on the display, with a Hold "H" symbol shown on the display.
- (2) Press the Data Hold switch again to exit from Data Hold function.



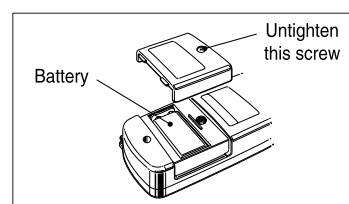
5. Battery Replacement

⚠ WARNING

- To avoid electric shock hazard, make sure to set the range switch to "OFF" and remove the test leads from the instrument before trying to replace battery.

If symbol "B" appears on the display, replace the battery as follows.

- (1) Remove test leads from the instrument and set the range switch to OFF.
- (2) Unscrew and remove the battery compartment cover.
- (3) Replace the battery with a new 9V battery, Type 1604, PP3, 6F22 or equivalent, observing correct polarity.
- (4) Screw the battery compartment cover.



6. Optional Accessories

Model 8004 and 8008 (Multi-Tran) extend the existing current measuring range and the maximum conductor size.

- (1) Set the range switch to 200A or 600A
- (2) Clamp a Multi-Tran on a conductor to be tested.
- (3) Clamp KEW SNAP 2017 or 2027 on the pick-up coil of the Multi-Tran.
- (4) Read the display and multiply the reading by 10.

3. Specification

KEW SNAP 2017

Ranges	Frequency	Accuracy	Crest Factor
AC200A	50/60Hz	1.5%rdg+4dgt	sin
	40Hz~1kHz	2.0%rdg+5dgt	↑
AC600A	50/60Hz	1.0%rdg+3dgt	↑
	40Hz~1kHz	2.0%rdg+5dgt	↑
AC200V	50/60Hz	1.0%rdg+2dgt	↑
	40Hz~1kHz	1.5%rdg+4dgt	↑
AC600V	50/60Hz	1.0%rdg+2dgt	↑
	40Hz~1kHz	1.5%rdg+4dgt	↑
200Ω	1.2%rdg+2dgt	Beeps below about 30Ω.	

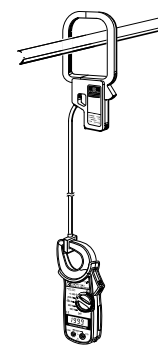
KEW SNAP 2027(True RMS Type)

Ranges	Frequency	Accuracy	Crest Factor
AC200A	50/60Hz	1.5%rdg+4dgt	≤3
	40Hz~1kHz	2.0%rdg+5dgt	sin
AC600A	50/60Hz	1.5%rdg+4dgt	≤3
	40Hz~1kHz	2.0%rdg+5dgt	sin
AC200V	50/60Hz	1.0%rdg+2dgt	≤3
	40Hz~1kHz	1.5%rdg+4dgt	sin
AC600V	50/60Hz	1.0%rdg+2dgt	≤3
	40Hz~1kHz	1.5%rdg+4dgt	sin
200Ω	1.2%rdg+4dgt	Beeps below about 30Ω.	

- Operating System : Dual Integration
- Display : Liquid crystal with a max count of 1999
- Over rang indication : "1" is displayed on the highest digit.
- Response time : Approx. 2 seconds.
- Location for use : Altitude up to 2000m or less, in-door use
- Temperature and Humidity : 23°C±5°C relative humidity (Guaranteed Accuracy) 75% or less. (no condensation)
- Operating temperature : -10~50°C, (no condensation) up to 30°C, 95% relative humidity up to 40°C, 75% relative humidity up to 50°C, 45% relative humidity
- Storage temperature and Humidity : -20~60°C, (no condensation) relative humidity 75% or less

Model	MAX. Conductor Size	Measuring Range	Input to Output Ratio
MODEL8004	Φ 60	AC0~1000A	10:1
MODEL8008	Φ 100	AC0~3000A	10:1

For further information, read the instruction manual for these models.



7. Maintenance

- Cleaning
Use a cloth dipped in water or neutral detergent for cleaning the instrument. Do not use abrasives or solvents. Otherwise, instrument get damaged, deformed or discolored.

DISTRIBUTOR

11-11

92-1281E

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