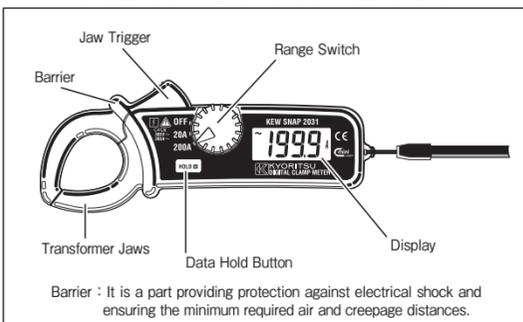


DIGITAL AC CLAMP METER

KEW SNAP

KEW SNAP 2031



4. OPERATING INSTRUCTIONS

4 – 1 Battery Check

- ①Set the range switch to 20A or 200A
- ②If the display is clear without showing symbol "BATT", battery voltage is OK.
- ③If the display remains blank or symbol "BATT" appears, replace the batteries in accordance with the battery replacement procedures as outlined in section 5.



4 – 2 AC Current Measurement

⚠ CAUTION

- The maximum size conductor to be tested is approx. 24 mm in diameter. An accurate measurement cannot be made when the transformer jaws are not fully closed on a conductor larger than 24mm.
- When measuring a large current, the transformer jaws may buzz. This is not a fault and does not affect the accuracy.
- About 10 minutes after the instrument is turned on, the Auto Power Off function turns the instrument off even during current measurement. To continue measurement, turn the range switch to OFF, then to 20A or 200A again.

1. SAFETY WARNINGS

- This instrument has been designed and tested according to IEC Publication 61010-1, Safety Requirements for Electronic Measuring Apparatus. This instruction manual contains warnings and safety rules which must be observed by the user to ensure safe operation of the instrument and retain it in safe condition. Therefore, read through these operating instructions before using the instrument.

⚠ WARNING

- Read through and understand instructions contained in this manual before starting using the instrument.
 - Keep the manual handy to quick reference whenever necessary.
 - Be sure to use the instrument in its intended applications only and to follow measurement procedures described in the manual.
 - Be sure to understand and follow all safety instructions contained in the manual.
- 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 this cautionary note.

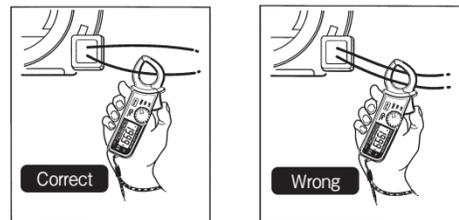
- The symbol ⚠ indicated on the instrument means that the user must refer to related parts in the manual for safe operation of the instrument. Be sure to carefully read instructions following each ⚠ symbol in this manual.

- ⚠ **DANGER** : Conditions and actions that are likely to cause serious or fatal injury.
- ⚠ **WARNING** : Conditions and actions that could cause serious or fatal injury.
- ⚠ **CAUTION** : Conditions and actions that could cause minor injury or instrument damage.

⚠ DANGER

- Never use the instrument on a circuit above 300V AC.
- The transformer jaws are made of metal and their tips are not insulated. Be especially careful about the hazard of possible shorting where equipment under test has exposed conductive parts.
- Do not attempt to make measurement with the battery compartment cover removed from the instrument.
- Keep your fingers and hands behind the barrier during measurement.

- ①Set the range switch to 20A or 200A.
- ②Press the jaw trigger to open the transformer jaws and clamp onto one conductor only. Try to place the conductor at the center of the transformer jaws.



Following symbols are used on the instrument and in the instruction manual. Attention should be paid to each symbol to ensure your safety.

- ⚡ Refer to the instructions in the manual.
- Indicates an instrument with double or reinforced insulation.
- ⚠ Indicates that this instrument can clamp on bare conductors when measuring a voltage corresponding to the applicable Measurement category, which is marked next to this symbol.
- ~ Indicates AC (Alternating Current).
- ⊕ Earth
- ♻ This instrument satisfies the marking requirement defined in the WEEE Directive (2002/96/EC). This symbol indicates separate collection for electrical and electronic equipment.

⚠ DANGER

- Never make measurement on a circuit above 300V AC. The instrument is designed for measurement on a low-voltage circuit below 300V AC.
- Do not attempt to make measurement in an explosive atmosphere (i.e. in the presence of flammable gasses or fumes, vapor or dust).
- The transformer jaws are made of metal and their tips are not insulated. Be especially careful about the hazard of possible shorting where equipment under test has exposed conductive parts.
- Never attempt to use the instrument if the instrument or your hand is wet.
- Do not exceed the maximum allowable input value of any measurement range.
- Never open the battery compartment cover when making measurement.
- Never try to make measurement if any abnormal conditions, such as broken Transformer jaws or case is noted.
- The instrument is to be used only in its intended applications or conditions. Otherwise, safety functions equipped with the instrument doesn't work, and instrument damage or serious personal injury may be caused.

4 – 3 Using Data Hold Function

- ①Press the Data Hold button to freeze the reading. Symbol "H" is displayed to indicate the instrument being in the Data Hold mode.
- ②Press the button again to cancel the Data Hold mode. The Data Hold function is available on both 20A and 200A ranges for measurement in hard-to-read locations.



5. BATTERY REPLACEMENT

When the display remains blank or symbol "BATT" appears, replace the batteries.

⚠ DANGER

Never replace the batteries while making measurement.

⚠ WARNING

- Never attempt to make any measurement if the instrument has any structural abnormality such as cracked case and exposed metal part.
- Do not install substitute parts or make any modification to the instrument. Return the instrument to Kyoritsu or your distributor for service and repair to ensure that safety features are maintained.
- Always switch off the instrument before opening the battery compartment cover for battery replacement.

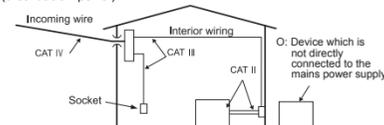
⚠ CAUTION

- Make sure that the range switch is set to an appropriate position before making measurement.
- Be sure to set the range switch to the OFF position after use. When the instrument will not be in use for a long period of time, place it in storage after removing the batteries.
- Do not expose the instrument to the direct sun, extreme temperatures or dew fall.
- Use a damp cloth and detergent for cleaning the instrument. Do not use abrasives or solvents.

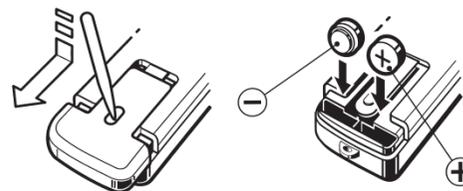
○ **Measurement Category**

To ensure safe operation of measuring instruments, IEC 61010 establishes safety standards for various electrical environments, categorized as 0 to CAT IV, and called measurement categories. Higher-numbered categories correspond to electrical environments with greater momentary energy, so a measuring instrument designed for CAT III environments can endure greater momentary energy than one designed for CAT II.

- 0 : Circuits which are not directly connected to the mains power supply.
- CAT II : 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).



- ①Set the range switch to the OFF position.
- ②Press in the hole on the battery compartment cover with the tip of a pointed object, then slide open the cover.
- ③Replace the batteries with new ones, observing correct polarity. Replacement batteries should be type LR-44 or SR-44. *The instrument does not operate if the polarity is set reversely.
- ④Slide the battery compartment cover in place.



This marking means they shall be sorted out and collected as ordained in DIRECTIVE 2006/66/EC. This directive is valid only in the EU. When you remove batteries from this product and dispose them, discard them in accordance with domestic law concerning disposal. Take a right action on waste batteries, because the collection system in the EU on waste batteries are regulated.

2. FEATURES

- ①Pocket-size, miniature AC clamp meter
- ②Tear drop shaped jaws for ease of use in crowded cable areas and other tight places
- ③Designed to international safety standard IEC61010-1 (CAT III 300V)
- ④A wide range of frequency response from 40 Hz to 1 kHz
- ⑤Data hold function to allow for easy readings in dimly light or hard-to-read locations
- ⑥Auto-power-off function to conserve battery power

3. SPECIFICATIONS

Range	Accuracy
20A 0~19.99 A	± 2.0%rdg ± 5dgt (50Hz ~ 1kHz)
200A 0~199.9 A	± 2.0%rdg ± 5dgt (50-60Hz) ± 3.0%rdg ± 10dgt (40Hz ~ 1kHz)

Operating System	Dual integration
Display	Field effect liquid crystal display
Measuring Ranges	20A/200A AC
Low Battery Indication	"BATT" symbol appears on the display
Overrange Indication	"1" flashes on the highest digit
Response Time	Approx. 1 second
Auto Power Off	The instrument automatically shuts off approx. 10 minutes after being turned on.
Data Hold	For all ranges
Location for use	Indoor use, Altitude up to 2000m
Storage Temperature & Humidity	-10~50°C, relative humidity up to 75% (without condensation)
Operating Temperature & Humidity	0~40°C, relative humidity up to 90% (without condensation)
Conductor Size	Approx. 24mm in diameter
Safety Standard	IEC61010-1 CAT III 300V IEC61010-2-032
EMC	EN61326-1
Environmental standards	EU RoHS directive compliant
Dimension	147 (L) × 59 (W) × 26 (D) mm
Weight	Approx. 100g (battery included)
Power Source	Two LR-44 (3V) or SR-44 batteries
Battery Life	Approx. 100 hours in continuous use
Current Consumption	Approx. 1 mA
Accessories	Instruction Manual Two LR-44 batteries Carrying Case Model 9090

DISTRIBUTOR

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