

sanwa®

KDP10

VOLTAGE DETECTOR SUPPORTER

INSTRUCTION MANUAL

[1] SAFETY PRECAUTIONS - Read Before Use -

Thank you for purchasing KDP10, a Voltage Detector Supporter for a manual cable cutter. This Voltage Detector Supporter is intended to eliminate accidents caused by an erroneous cut of a live-wire cable for a commercial power's alternate voltage (frequency: 50 Hz/60 Hz) by being attached to a manual cable cutter.

Read these instructions fully before using the product for your proper and safety use. In addition, keep this document handy with the product at all times so that you can consult it as needed.

Use of the product, which is not designated in this document, may endanger the safety of the user, damage the equipment, or impair a protection function of the product.

1-1 Explanation of Warning Symbols

The following symbols are used in this product labels and document to explain safety instructions:

 DANGER	Causes a death or severe damage unless avoided.
 WARNING	May cause a death or severe damage unless avoided.
 CAUTION	May cause a mild or moderate damage unless avoided.
NOTICE	May cause physical damages to the product or other objects unless avoided.

	May cause an electric shock or a fire by an electrical hazard.
	Indicates To-Do items (compulsory instructions).
	Indicates Not To-Do items (prohibitions).

1-2 Warning Instructions for Safe Use

Users are obliged to follow the instructions below when using the product.

DANGER

	<p>Follow the instructions below. May cause a fire or an electric shock.</p> <ul style="list-style-type: none">• This product or a manual tool with the product attached is not a voltage detector. Do not use the product as an alternative to a voltage detector.• Do not contact a metallic part of the cable cutter with an uninsulated live part.
	<p>Follow the instructions below. May cause an electric shock.</p> <ul style="list-style-type: none">• Do not touch the product with wet hands.• Do not touch a superimposed voltage part during a peripheral.• Ensure that you wear a “protective equipment” before use.• Do not give a strong impact on the product. If the product had a strong impact, make sure to check its operation before use. If you cannot ensure the normal behavior, refrain from using the product.
	<p>Do not store the product under a direct sunlight, high temperature, low temperature, humid, or dew-condensed environment. Make sure to check the operation before using the product which had been kept in such an environment. If you cannot ensure the normal behavior, refrain from using the product.</p>

WARNING

	<p>Follow the instructions below. May cause an electric shock.</p> <ul style="list-style-type: none">• Do not use the product in a way other than the one designated in this document.• Refrain from using the main unit, rubber rings, or the cutter which are damaged or broken.• Do not use the product with the case or a battery holder removed.• Do not repair or retrofit the product, except for a battery replacement.
	<p>Follow the instructions below. Otherwise, the product will not work normally, causing potential and unexpected accidents.</p> <ul style="list-style-type: none">• Use the product indoors.• Do not use the product on a circuit beyond 600V.• Make sure to check the product before use.
	<p>Do not leave removed button batteries unattended. Otherwise, an accidental ingestion by an infant may arise.</p>

CAUTION

Do not use the product near a high-field area including a transformer or high-current circuit, an electromagnetic-wave-emitting area including a wireless device or radio, or an electrostatic-charged area. Otherwise, an unwanted behavior may be detected on a detection principle.

NOTICE

- Do not give an impact on the product, including a strong vibration or fall. It may damage the product.

[2] APPLICATIONS AND FEATURES

2-1 Applications

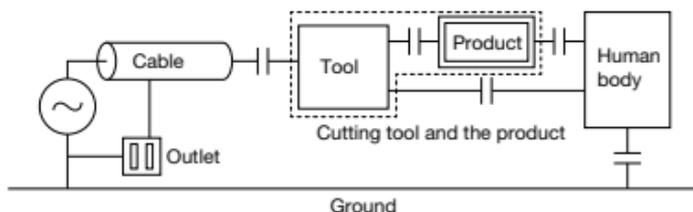
This product, when attached to the handle of the manual cable cutter, reacts and warns the user with light and sound about an erroneous cut when the sheathed cable of the commercial power (frequency: 50 Hz/60 Hz) is a live wire.

2-2 Features

- Attachable to your manual cable cutter
- Warns the live-wire status of a cable with a buzz and LED
- Detectable with gloves on
- Approx. 5 months of battery life in standby mode
- With a sensitivity control volume

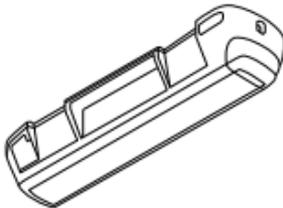
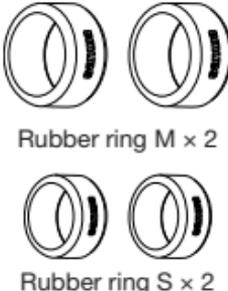
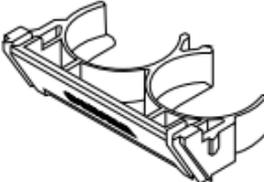
2-3 Detection Mechanism

A detection takes place when a signal run triggered by a difference of potential between the electric field of the live-wire cable and a human body runs through the product.

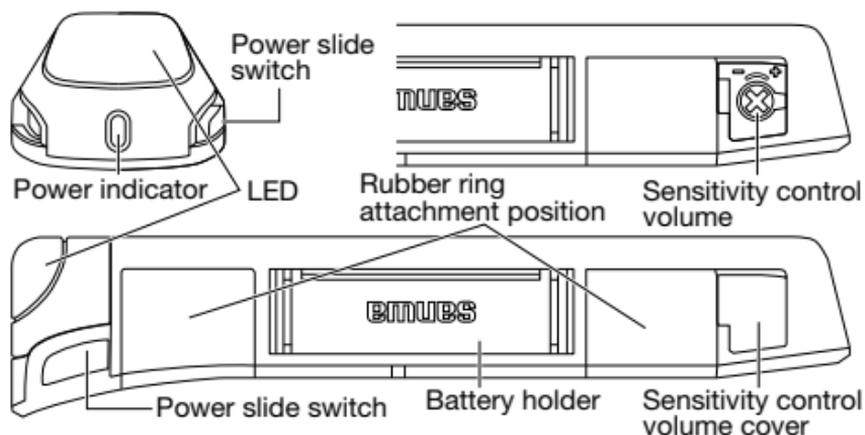


[3] BEFORE USE

3-1 Checking the Package

 <p>KDP10 main unit</p>	 <p>Rubber ring M × 2</p> <p>Rubber ring S × 2</p>	 <p>Sensitivity control volume cover (with the main body x 1, spare x2)</p>
 <p>LR44 (coin battery) × 2</p>	 <p>Battery holder</p>	 <p>Instruction Manual (This document)</p>

3-2 Names of Component Units



LED	Lits/flashes when the power is ON, the battery life is low, or the tool approached to the live-wire cable.
Rubber ring attachment	A position at which the included rubber rings are mounted when attaching the product to a tool.
Sensitivity control volume cover	Remove this when adjusting the sensitivity volume.
Sensitivity control volume	Adjusts and controls the sensitivity volume. Rotating the knob to “-” decreases the sensitivity while rotating it to “+” increases the sensitivity.
Battery holder	Open this when replacing the batteries.
Power slide	Slide to turn the power ON/OFF.
Power indicator	Indicates the status of the power supply (ON: red, OFF: black).

3-3 Installing Batteries

Be sure to install batteries before use after you purchase the product.

→ “5-2 Replacing the Batteries”

■ When the battery is exhausted

If the power is turned ON with the low voltage of internal batteries, you are warned with a buzz and LED as shown below. Replace both of the batteries.

A buzz and LED illumination (for approx. 4 seconds) ⇒ LED slowly flashing

* The battery status cannot be detected when the power remains ON. Do not forget to cycle the power of the product before use and make sure that the buzzer and LED does not show the status as above.

[4] HOW TO USE

⚠ DANGER

	This product and a manual cutter with the product attached is not a voltage detector. Use a voltage detector or multimeter for voltage detection. May cause a fire or an electric shock.
	Ensure that you wear a "protective equipment" before use. May cause an electric shock.

NOTICE

- This product is intended for a general 7"/8" manual cable cutter. The product may not be available for some cutters.
- **Situations where correct detection is not possible**
 - A live-wire may not be detected if the size of sensitivity volume is too low.
 - "4-5 Adjusting the Sensitivity Volume"
 - The product is exclusively for a commercial power's alternate voltage (frequency: 50 Hz/60 Hz), A circuit with a different frequency, for example, secondary voltage of an inverter, cannot be detected.
 - A live-wire may not be detected depending the surrounding environment, and how the product is attached or gripped.
 - When a human body is touching the metallic tip of the cutter or the sheath of the cutter's handle is thin, in principle, it is difficult for a signal to run through the product, which potentially disables the detection of a live-wire.
 - A detection sensitivity decreases when a target live-wire cable is touching a human body.
 - A live-wire cannot be detected on a shielded cable because the product cannot detect an electric field.
 - An electric field of an adjacent live-wire cable may be detected.

Follow the procedure below to use the product.

4-1 Check the Main Body

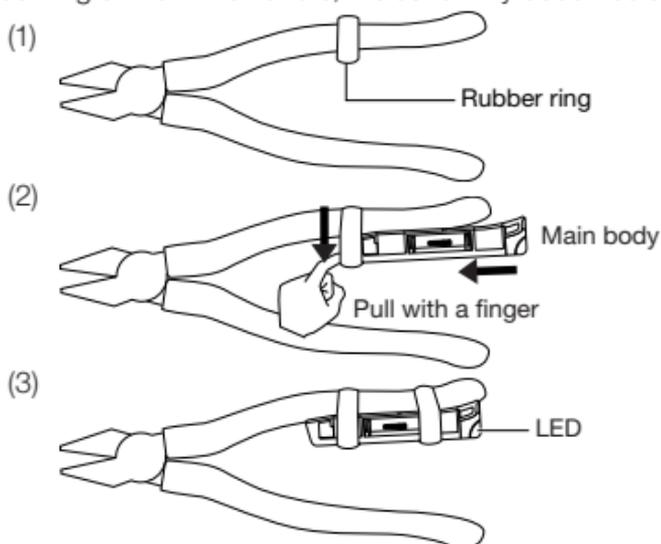
- Visual appearance check: Does the main body have flaws on its appearance due to a fall or others?
- Battery life check: Is a buzz heard for approx. 4 seconds, and the LED flashes slowly after illuminated?
→ “4-3 Checking ON/OFF of the Power”
- Are the main body, rubber ring, or hands wet with water?

4-2 Attaching to the Cutting Tool

- 1) Place the product inside the cable cutter's handle so that a working hand touches an electrode part.
- 2) Secure the product tightly with a provided rubber ring in a correct orientation as shown in the figure below (LED facing toward the wrist).

* Two different sizes of rubber rings (S/M) are provided. Select a ring which suits the thickness of the cutter's handle.

* If the product is not secured tight and apparently moving apart or coming off from the handle, the sensitivity becomes unstable.



4-3 Checking ON/OFF of the Power

Turn ON-OFF the power to check if the buzzer and LED are working correctly.

* Refrain from using the product when a failure has been found.

1) Turn the power ON

Press the power slide switch (ON) and identify that the power indicator is red.

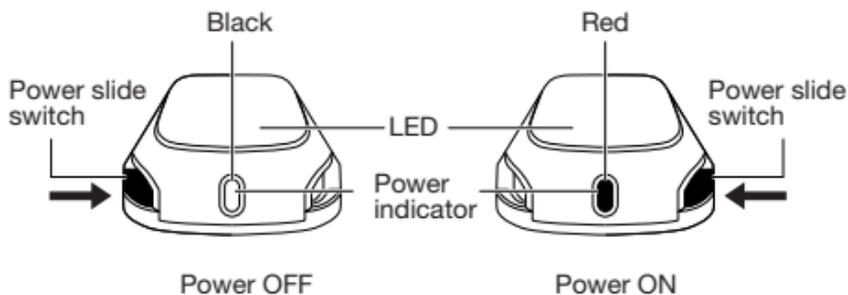
A buzz is heard nine times and the LED starts flashing.

* When the power is turned ON, and a buzz is heard for approx. 4 seconds and the LED flashes slowly, it indicates that the batteries need to be replaced.

→ “5-2 Replacing the Batteries”

2) Turn the power OFF

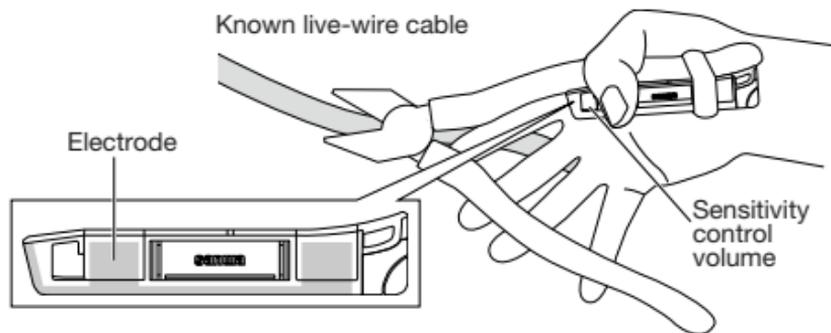
Press the power slide switch (OFF) and identify that the power indicator is black.



4-4 Checking for a normal detection

Check that the product works normally with the tip of the manual cutter 1 to 2 cm away from the known live-wire cable after the product is powered ON.

- * Grip the cutter so that your hand touches the electrode part inside the product.
- * If the product does not work properly, do not use the product at that place as the cutter or surrounding environment may have impacted the product.

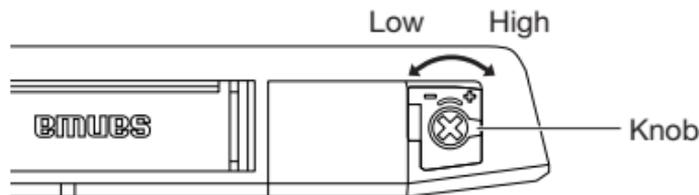


4-5 Adjusting the Sensitivity Volume

If the detection sensitivity needs to be adjusted, remove the sensitivity control volume cover, and rotate the knob with a Phillips-head screw driver. As the factory default, the sensitivity is set to the maximum.

After the adjustment, place the cover back into position.

- * Rotating to the left ("–") decreases the sensitivity (insensitive), and rotating to the right ("+") increases the sensitivity (sensitive).



4-6 Using the Tool for Work

Approach the cable cutter with the product attached to the live-wire cable.

- * If you hear a buzz and the LED flashes, stop cutting the cable. Use a voltage detector or multimeter to check if it is a live-wire or not, then resume the work.
- * Turn OFF the product after use.

[5] MAINTENANCE

5-1 Instructions on Cleaning and Storage

NOTICE

- Do not use a thinner or alcohol to wipe and clean the product as it is weak against a volatile solvent. Wet a lint-free soft cloth with water and wipe the dirt off.
- As the product is weak against heat, do not place it close to an object which generates heat.
- Do not store the product in a place where it is prone to shake or may fall.
- Do not store the product under a direct sunlight, high temperature, low temperature, humid, or dew-condensed environment.
- Be sure to remove the batteries if the product will not be used for a long time.
- Comply with local regulations when disposing or treating the product and coin batteries.

5-2 Replacing the Batteries

If the power is turned ON with the low voltage of internal batteries, you are warned with a buzz and LED as shown below. Replace both of the batteries.

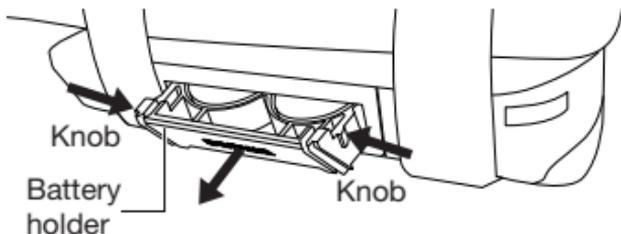
A buzz and LED illumination (for approx. 4 seconds) ⇨ LED slowly flashing

WARNING

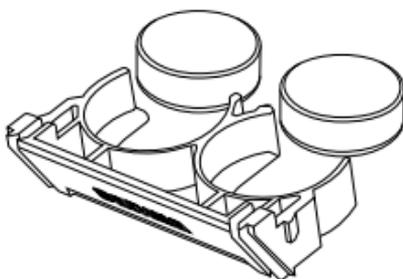


Make sure that the power is turned OFF before replacing the battery.
→ "4-3 Checking ON/OFF of the Power"

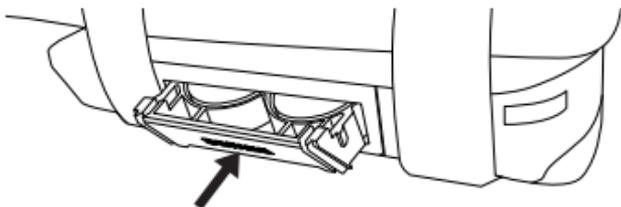
- 1) Push the knob on both sides of the battery holder to pull out the battery holder, then remove two coin batteries.
* Pull out the battery holder with the product upside down. Otherwise, the batteries will fall.



- 2) Get two new batteries ready, check the polarity and mount them into the battery holder.
* Recommended battery: LR44 (alkali-coin battery) 1.5 V × 2



- 3) Insert back the battery holder until you hear a click sound.



[6] TROUBLESHOOTING

Status	What to check
The power does not turn ON	Is the polarity of a battery correct? → "5-2 Replacing the Batteries"
	Is the battery life low? → "When the battery is exhausted" in "[3] Before Use"
Unable to detect live-wires	Is the product used under conditions where detection is not possible? → "[4] How to Use" in "Situations where correct detection is not possible"
	Is the product turned ON? → "4-3 Checking ON/OFF of the Power"

[7] AFTER-SALE SERVICE

7-1 Warranty and provision

Sanwa offers comprehensive warranty services to its end-users and to its product resellers.

Under Sanwa's general warranty policy, each instrument is warranted to be free from defects in workmanship or material under normal use for one (1) year from the date of purchase. This warranty policy is valid within the country of purchase only, and applied only to the product purchased from Sanwa authorized agent or distributor.

Sanwa reserves the right to inspect all warranty claims to determine the extent to which the warranty policy shall apply. This warranty shall not apply to disposables batteries or any product or parts which have been subject to one of the following causes:

1. A failure due to improper handling or use that deviates from the instruction manual.
2. A failure due to inadequate repair or modification by people other than Sanwa service personnel.
3. A failure due to causes not attributable to this product such as fire, flood and other natural disaster.
4. Non-operation due to a discharged battery.
5. A failure or damage due to transportation, relocation or dropping after the purchase.

7-2 SANWA web site

<http://www.sanwa-meter.co.jp>

E-mail: exp_sales@sanwa-meter.co.jp

[8] SPECIFICATIONS

Item	Range
Detectable voltage level (representative value)	Approx. AC 60 V to 600 V exclusively for 50 Hz/60 Hz (when attached to a 7"/8" cutter's handle)
Target cable	Sheathed cable (unshielded cable)
Operation check	Intermittent buzz/LED illumination
Operation indicator	Intermittent buzz/LED illumination
Power supply	LR44 (alkali-coin battery) 1.5 V × 2
Battery life	Approx. 5 months (in standby mode)
Operating temperature/humidity	0 °C to 40 °C, 80 % RH or less with no condensation
Storage temperature/humidity	-10 °C to 50 °C, 70 % RH or less with no condensation (Be sure to store the product with the batteries removed when not in use for a long time.)
Dimensions/weight	23 (H) × 77 (W) × 13 (D) mm, Approx. 13 g (without batteries)
Accessories	Rubber ring M x 2, S x2, sensitivity control volume cover x 2 (spares), LR44 (coin batteries) x 2, Instruction Manual
Sold separately	KDP 10 repair set (rubber ring M x 2, S x2, sensitivity control volume cover x 2, battery holder)

Note that the specifications or appearance of the product described in this document may change without prior notice due to revision, etc.

sanwa®

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