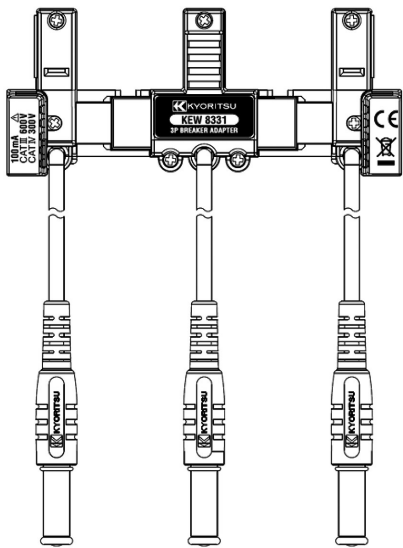


Instruction Manual



3P BREAKER ADAPTER

KEW 8331



KYORITSU ELECTRICAL
INSTRUMENTS WORKS, LTD.

05-25

92-2639

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1. Safety precautions

This product has been designed and manufactured according to IEC 61010-031: Safety requirements for hand-held and hand-manipulated probe assemblies and delivered in the best condition after passing quality control tests.

This instruction manual contains warnings and safety rules which have to be observed by the user to ensure safe operation of the product and to maintain it in safe condition. Therefore, read through these operating instructions before starting to use the product.

⚠ DANGER

- Read through and understand instructions contained in this manual before starting to use the product.
- Keep the manual at hand to enable quick reference whenever necessary.
- The product is to be used only in its intended applications.
- Understand and follow all the safety instructions contained in the manual. It is essential that the above instructions are adhered to. Failure to follow the above instructions may cause injury, product damage and/or damage to the equipment under test. Kyoritsu is by no means liable for any damage resulting from the product in contradiction to this cautionary note.

The symbol ⚠ indicated on the product, means that the user must refer to the related parts in the manual for safe operation of the product. It is essential to read the instructions wherever the ⚠ symbol appears 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 product damage.

⚠ DANGER

- Never make measurements on a circuit in which the electrical potentials, voltage to earth, exceeding 600 V. Do not apply voltage over 600 V across the terminals.
- This product is rated CAT III 600 V/CAT IV 300 V. Do not make measurements in the environment which exceeds CAT III 600 V/CAT IV 300V (equivalent to CAT IV 600 V etc.).
- Rated current is 100 mA. Do not apply currents exceeding 100 mA.
- Do not attempt to make measurements in the presence of flammable gases. Otherwise, the use of the product may cause sparks, which can lead to an explosion.
- Never use the product when the surface of the product or your hand is wet.

3. Specification

- Operating temperature : -10 to 50° C, relative humidity 85% or less and humidity range (no condensation)
- Storage temperature and : -20 to 60° C, relative humidity 85% or less humidity range (no condensation)
- Operating voltage range : 0 V AC to 600 Vrms AC (50 Hz/60 Hz)
- Supported size of breaker : 30 AF to 250 AF*

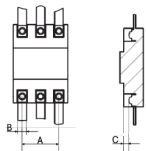


Fig. 3-1

- Rated current : 100 mA
- Dimension (main unit only) : 50(L) x 117.5 (W) x 37(D) mm (excluding the cable part)
- Cable length : 1.5 m
- Weight : Approx. 230 g
- Accessory : Instruction manual
- Optional accessories : (1) MODEL 8077 Tip attachment
(2) MODEL 7315-BLK ϕ 4 Banana Female-Female adapter
(3) MODEL 9096 Carrying case

4. Product layout

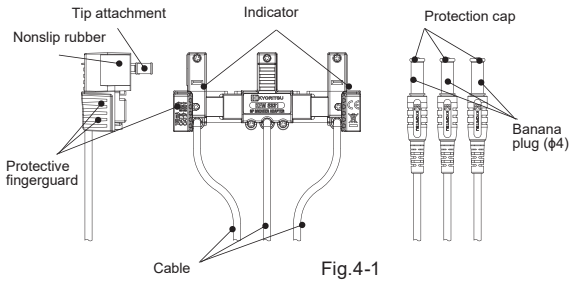


Fig. 4-1

- Care should be taken so as not to short circuit the power line during a measurement. It may cause personal injury.
- Keep your fingers and hand behind the protective fingerguard during use.
- Verify proper operation of the product before starting to use the product.

⚠ WARNING

- Never attempt to make measurements if any abnormal conditions, such as broken case and exposed metal parts are found on the product or cables.
- Do not install substitute parts or make any modification to the product. Return the product to your local Kyoritsu distributor for repair or re-calibration.
- When connecting this product with a measuring instrument, firmly insert the connector to the corresponding terminal.
- Stop using the test lead if the outer jacket is damaged and the inner metal or color jacket is exposed.

⚠ CAUTION

- The product is to be used only in its intended applications.
- Do not expose the product to direct sunlight, high temperature, humidity or dew.
- Use a damp cloth with neutral detergent for cleaning the product. Do not use abrasives or solvents.
- If the product is wet, store it after it dries.
- This product isn' t waterproofed. Keep away from water. Otherwise, it may cause malfunction.

Safety symbols

The following symbols are marked and/or used on/in the product and the instruction manual. Please read and understand the meaning of each symbol described below before starting to use the product.

	User must refer to the manual.
	This product satisfies the marking requirement defined in the WEEE Directive (2002/96/EC). (This directive is valid only in the EU.)

Protective fingerguard

It is a part providing protection against electrical shock and ensuring the minimum required clearance and creepage distance.

5. How to use

- 1) Uncap each banana plug (ϕ 4) and connect it with the input terminals of the measuring instrument.
- 2) Pinch and press both ends, protected by the protective fingerguard, of the breaker adapter with two fingers (the points indicated by arrow marks in Fig. 5-1).
- 3) Attach the breaker adapter so that the nonslip rubber is firmly in contact with the terminals of the RCD.
- 4) Check and confirm that the color of the indicator window is changed from black to white.
* The color of the indicator window just shows that the tip attachment is inserted in the terminal: it doesn' t guarantee a successful connection.
- 5) Check the reading displayed on the measuring instrument.

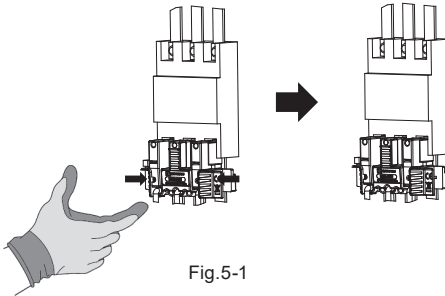
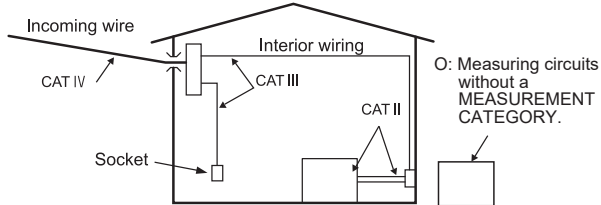


Fig. 5-1

Measurement category (Overvoltage category)

To ensure safe operation of measuring instruments, IEC 61010-031 establishes safety standards for various electrical environments, categorized as O 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.

- O : Measuring circuits without a MEASUREMENT CATEGORY.
- 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 overcurrent protection device (distribution panel).



2. Features

This is an adapter which is really helpful to connect measuring instruments such as power meters and loggers with various types of breaker terminals with a single action.

* It doesn't mean this adapter supports all types of measuring instruments or breaker terminals.

- Designed to meet the safety standard IEC 61010-031 (Requirements for hand-held probes) Measurement category CAT III 600 V, CAT IV 300 V IEC 63000 (RoHS)
- Indicators enable quick check of the connection with the breaker terminals.
- Banana plugs (ϕ 4 mm) are compatible with various measuring instruments.
- Optional female to female banana plug (ϕ 4 mm) is available for measuring instruments with male plugs (ϕ 4 mm).

●How to change the tip attachment

When a longer length is required for the tip attachment to reach the terminals of the breaker due to the bus bar, etc., the length of the attachment can be extended. First, disconnect the banana plug (ϕ 4) from the measuring instrument. Then remove and upside down the tip attachment and turn it clockwise to secure.

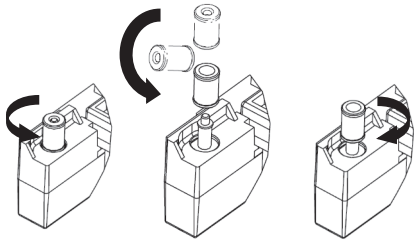


Fig. 5-2

●How to attach MODEL 7315-BLK Banana ϕ 4 Female-Female adapter (optional accessory)

When connecting to a device such as phase detector with ϕ 4 Banana male terminal, use this MODEL 7315-BLK Banana ϕ 4 Female-Female adapter.

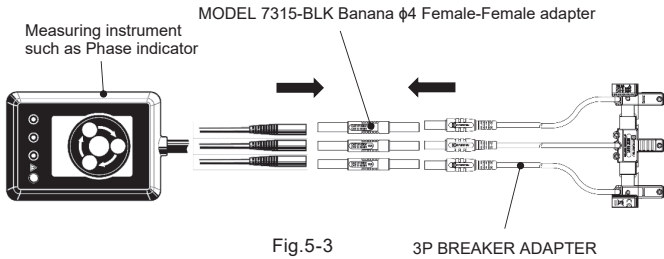


Fig. 5-3

3P BREAKER ADAPTER