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 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 instrument and to maintain it in a safe condition. Therefore, read through these operating instructions before using the instrument.

2. Operating Instructions

Never make measurement on a circuit in which the electrical potential exceeds AC500V when using KEW 8121 and AC1000V when using KEW 8122/8122WP and 8123. Do not make measurement when thunder rumbling. If the instrument is in use, stop the measurement immediately and remove the instrument from the equipment under test. Do not attempt to make measurement in the presence of flammable gases. Otherwise, the use of the instrument may cause sparking, which can lead to an explosion. Use insulated protective gears, such as insulated gloves, for your safety when possible electric shock hazards are concerned. The transformer jaws are made of metal and their tips are not symmetrical to lower figure. Use always these sensors when their surface or your hand is wet. Do not wet the output connectors because they aren’t dust-proof. Do not exceed the maximum allowable input of any measuring range. Do not attempt to make any measurement, if any abnormal conditions are noted, such as broken case, and exposed metal parts. Do not install substitute parts or make any modification to the instrument. Harm the instrument to your local Kyoritsu distributor for repair or re-calibration in case of suspected faulty operation. Always keep your fingers and hands behind the barrier on the instrument to avoid the possible shock hazard.

3. Feature

Clamp sensor for recording app.
Designed to international safety standard IEC 61010-2-032 (Pollution Degree 2).
KEW 8121 CAT IV 300V
KEW 8122/8122WP CAT IV 600V
Designed to meet IEC 61028 IP 54. Possible to perform measurements under adverse weather (KEW 8122WP only).

4. DIN pin plug assignment

5. Operating Instructions

(a) Connect the Output connector to the Input terminal of the measuring instrument.
(b) Press the Trigger to open the transformer jaws and clamp onto one conductor. Clamp-conductor should be at the center of the closed transformer jaws. (c) Ensure that the tips of transformer jaws are firmly closed. Measure the current by connecting the measuring instrument to an AC circuit. Never measure measurement on a circuit in which the electrical potential exceeds AC500V when using KEW 8121 and AC1000V when using KEW 8122/8122WP and 8123.

5. Operating instructions

WARNING
Never make measurement on a circuit in which the electrical potential exceeds AC3470V for 5 sec. Never apply voltage in excess of AC3470V to the instrument. The transformer jaws are made of metal and their tips are not completely insulated. Be especially careful about the possibility of electric shock. Never use these sensors when their surface or your hand is wet. Do not wet the output connectors because they aren’t dust-proof. Do not exceed the maximum allowable input of any measuring range. Do not attempt to make any measurement, if any abnormal conditions are noted, such as broken case, and exposed metal parts.

6. Specifications

- Model: KEW 8121, KEW 8122/8122WP, KEW 8123
- Input voltage: AC100V (115V), AC250V (230V), AC500V (415V)
- Output voltage: AC100V (115V), AC250V (230V), AC500V (415V)
- Measuring range: 0 ~ 100A
- Measuring resolution: 0.01A
- Accuracy (guaranteed): ±3.0%rdg±0.3mV
- Frequency range: 40 ~ 1kHz
- Frequency range: 50/60Hz
- Temperature range: 5 ~ 40°C
- Humidity range: 90% RH or less (no condensation)
- Storage temperature range: -20 ~ +70°C
- Pollution degree: 2
- Maximum permissible input: AC100V continuous (505W), AC250V continuous (505W), AC500V continuous (505W)
- Output impedance: Approx. 15Ω
- Location for use: Indoor, not directly exposed to sunlight or rain
- Available standards: IEC 61010-1, IEC 61010-2-032 (Pollution Degree 2), EN 50819
- Rated voltage: AC 100V, AC 200V, AC 500V
- Insulation resistance: 1GΩ between jaw and output connector, 0.1GΩ between jaw and enclosure, 1GΩ between barrier and output connector
- Conductor size: Approx. 10mm² in diameter (max.) Approx. 20mm² in diameter (max.)
- Dimensions: 61L×93W×22H mm
- Weight: Approx. 100g
- Accessories: Output cable, A4 adjuster plug, MODEL 7146 (Banana jack) for KEW 8122/8122WP, MODEL 7147 (A4 adjuster plug) for KEW 8123
- Option: LED adjuster plug, Model 7146, 7147 (A4 adjuster plug)

Safety symbols
Refer to the instructions in the manual.
Instruments with double or reinforced isolation.
Indicates that this instrument can clamp a big bare conductor when the voltage to be tested is below Circuit - Ground/Earth voltage against the indicated Measurement Category.

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

CAT I : Circuits which are not directly connected to the mains power supply.
CAT II : Electrical circuits of equipment connected to an AC electrical supply 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 outlet.
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).

Instruments with double or reinforced isolation.
Indicates that the instrument can clamp a big bare conductor when the voltage to be tested is below Circuit - Ground/Earth voltage against the indicated Measurement Category.

WARNING
Never make measurement on a circuit in which the electrical potential exceeds AC500V when using KEW 8121 and AC1000V when using KEW 8122/8122WP and 8123. Do not make measurement when thunder rumbling. If the instrument is in use, stop the measurement immediately and remove the instrument from the equipment under test. Do not attempt to make measurement in the presence of flammable gases. Otherwise, the use of the instrument may cause sparking, which can lead to an explosion. Use insulated protective gears, such as insulated gloves, for your safety when possible electric shock hazards are concerned. The transformer jaws are made of metal and their tips are not completely insulated. Be especially careful about the possibility of electric shock. Never use these sensors when their surface or your hand is wet. Do not wet the output connectors because they aren’t dust-proof. Do not exceed the maximum allowable input of any measuring range. Do not attempt to make any measurement, if any abnormal conditions are noted, such as broken case, and exposed metal parts. Do not install substitute parts or make any modification to the instrument. Harm the instrument to your local Kyoritsu distributor for repair or re-calibration in case of suspected faulty operation. Always keep your fingers and hands behind the barrier on the instrument to avoid the possible shock hazard.

CAUTION
Do not step on or push the cord to prevent the jacket of cord from being damaged.
The output connector shall be removed or connected without clamping a conductor. Otherwise, it may cause a failure.
Do not expose the instrument to direct sunlight, high temperatures, humidity or dust.
Do not give shocks, such as vibration or drop, which may damage the instrument.
Do not use a damp cloth and mild detergent for cleaning the instrument. Do not use abrasives or solvents.

SUPPORTER

Distributor

Kyoritsu reserves the rights to change specifications or designs described in the manual without notice and without obligations.