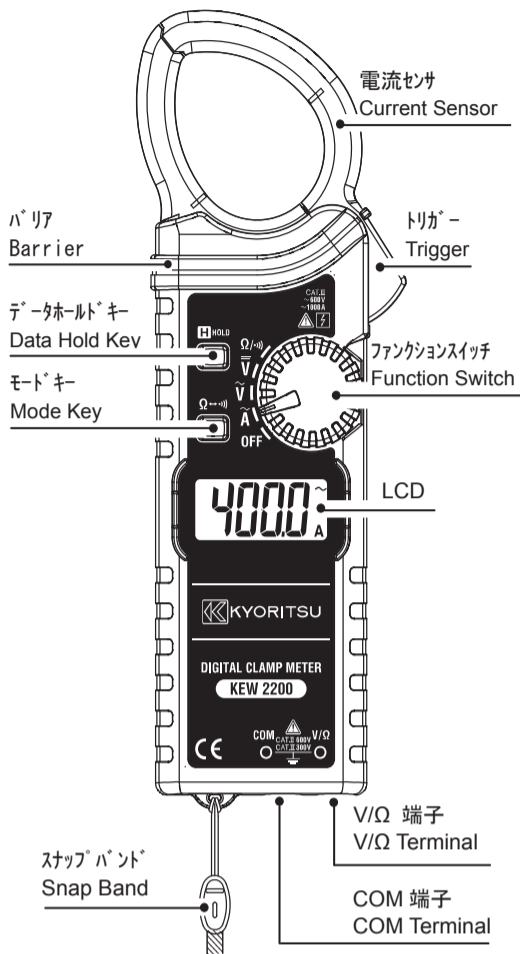


デジタルクランプメーター
DIGITAL CLAMP METER

KEW2200



保護用フィンガーガード / protective fingerguard
キャップ / Cap

保護用フィンガーガード / protective fingerguard
操作中の感電事故を防ぐため、最低限必要な沿面及び空間距離を確保するための目印です。
It is a part providing protection against electrical shock and ensuring the minimum required air and creepage distances.

キャップ: キャップを着脱することでCAT II とCAT III 及びCAT IV環境下での測定に対応します。測定場所にあった正しい方法でご使用ください。測定コードと本体の測定カテゴリが違っている場合は低い方の測定カテゴリが優先されます。
Cap: Test leads can be used under the CAT.II and III environments by attaching a Protective cap as illustrated below. Use of our Protective cap offers different lengths suitable for the test environments. When the instrument and the test lead are combined and used together, whichever lower category either of them belongs to will be applied.

警告
本製品を使用する前に、必ずこの取扱説明書をよく読んで理解してください。
WARNING
Read through and understand the instructions contained in this manual before using the instrument.

アフターサービス

- 修理・校正を依頼されるには
お買い上げいただいた販売店または弊社サービスセンター修理グループにお送りください。
- 製品のご使用に関するお問い合わせは
弊社お客様相談室にご連絡ください。
- 校正周期について
本製品を正しくご使用いただくため、定期的(推奨校正周期1年)に校正することをおすすめいたします。
- 補修用品の保有期間
本製品の機能・性能を維持するために必要な補修部品を製造打ち切り後、5年間を目安に保有しています。

ご使用に関するお問い合わせは
共立電気計器 お客様相談室
電話受付時間 9:00 ~ 12:00, 13:00 ~ 17:00
(土・日・祝日・年末年始・夏季休暇を除く)
0120-62-1172
※折り返しお電話させていただく場合がございますので発信番号の通知にご協力いただきますようお願いいたします。
※フリーコールをご利用いただけない場合は、最寄りの弊社営業所へおかけください。

修理・校正に関するお問い合わせは
共立電気計器 サービスセンター
〒797-0045 愛媛県西予市宇和町坂戸4 8 0
0894-62-1172
修理・校正を依頼される場合は事前に電池の消耗、ヒューズや測定コードの断線を確認してから輸送中に損傷しないように十分梱包した上で弊社サービスセンターまでお送りください。

共立電気計器株式会社
KYORITSU ELECTRICAL INSTRUMENTS WORKS, LTD.

開放電圧 / Open-loop voltage
: <3.4V (400Ω / Cont Range)
: 0.7V typ (4kΩ Range)
: 0.47V typ (40k - 40MΩ Range)
入力保護電圧 / Input protective voltage
: AC/DC600V 10秒間 / 10 sec

- 動作方式 / Measuring method
2重積分方式 / Dual integration
- 入力オーバー表示 / Over-range indication OL
- 測定周期 / Measurement cycle
毎秒2.5回 / 2.5 times per second
- 適応規格 / Applicable Standards
IEC/EN 61010-1/ 61010-2-032/ 61010-031 / 61010-2-033
- 汚染度2 / Pollution degree 2
屋内使用 / Indoor use
高度2000m以下 / Altitude up to 2000m
電流測定部 / Current measurement section
CAT.III 600V
電圧測定部 / Voltage measurement section
CAT.II 600V / CAT.III 300V
EN61326 (EMC)
RF電磁界3V/mにおいて精度の5倍以内
In the radio-frequency electromagnetic field of 3V/m, accuracy is within five times the rated accuracy.
- 環境規格 / Environmental standards
欧州RoHS指令適合
EU RoHS directive compliant
- 耐電圧 / Withstand voltage
AC5320Vrms 5秒間 電流センサと外装間
AC3540Vrms 5秒間 電気回路と外装間
AC5320Vrms 5sec between Current sensor and enclosure
AC3540Vrms 5sec between circuit and enclosure
- 絶縁抵抗 / Insulation resistance
>100MΩ/1000V 電気回路と外装間
between enclosure and electrical circuit
- 動作温度湿度範囲
0~40°C 相対湿度85%以下 (結露しないこと)
Operating Temperature and humidity range
0 to 40°C 85%RH or less (no condensation)
- 保存温度湿度範囲
-20~60°C 相対湿度85%以下 (結露しないこと)
Storage Temperature and humidity range
-20 to 60°C 85%RH or less (no condensation)
- 電源 / Power source
DC3V: 単4形乾電池×2 / R03/LR03 (AAA) ×2
- 消費電流 / Current consumption
< 3mA
- 連続使用時間 / Battery life
約350時間 (ACA、連続、無負荷)
/ Approx. 350 hours (ACA, continuous, no load)
- 外形寸法、質量 / Dimension, Weight
190(L)×68(W)×20(D)mm
approx. 120g (電池含 / including batteries)
- 付属品 / Accessories
測定コード / Test leads Model 7107A 1set
電池 / Battery R03(AAA) 2pcs
取扱説明書 / Instruction manual 1pce
携帯ケース / Carrying case Model 9160 1pce

2. その他の機能 / Other Function

- データホールド / Data Hold
ホールドキーを押すと測定値が保持されます。解除は再度ホールドキーを押します。
Press the Data Hold Key to freeze the reading. Press the Data Hold Key again to release the freezing display.



- 電池電圧低下表示 / Low battery indication
2.3±0.15V 以下でLCD上に「B」表示
indicated "B" on LCD at 2.3±0.15V or less

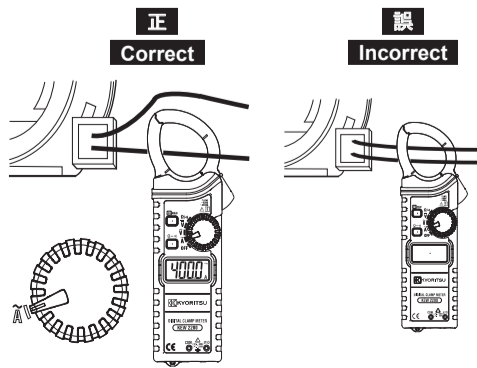
- スリープ機能 / Sleep Function
スイッチ/キー操作後約10分でスリープ状態。
データホールドキーを押しながら電源ONでスリープ機能解除 (LCDに "Pgff" が2秒間表示)。
Automatically powered off in about 10min after.
To disable the sleep function, power the instrument on with the Data Hold Key pressed.
(indicated "Pgff" for about 2 seconds on LCD)

3. ACA 測定 / Measurement

危険 / DANGER
測定を行うときは、必ず測定コードを本体から外してください。
Never measure current while the test leads are inserted into the V/Ω and/or COM Terminals.
● 測定の際は指先等が、バリアを越えることのないよう充分注意してください。
● Keep your fingers behind the barrier during a measurement.

トリガーを押して電流センサ先端を開き被測定導体 (最大φ33mm) が電流センサの中心になるようにクランプしてください。
Press the trigger to open the Current Sensor and clamp the one conductor (Dia. 33mm max.) under test.

正 / Correct
誤 / Incorrect



- ホームページのご案内
www.kew-ltd.co.jp
- 新製品情報
- 取扱説明書 / ソフトウェア / 単品カタログのダウンロード
- 販売終了製品情報

この説明書に記載されている事項を断り無く変更する事がありますのでご了承ください。

本製品には保証書が添付されておりますので、保証期間中の故障については保証規定をお読みになりご利用ください。

保証書

KEW2200 製造番号
保証期間ご購入日 (年 月 日) より1年間

共立製品をお買い上げいただきありがとうございます。保証期間内に正常なご使用状態で万一故障が生じた場合は、保証規定により無償修理をさせていただきます。本書を添付の上ご依頼ください。

お名前
ご住所 〒
TEL

● 本保証書に製造番号、ご購入日、およびお名前、ご連絡先をご記入の上、大切に保管してください。
● 本保証書の再発行はいたしません。
● 本保証書は日本国内でのみ有効です。
This warranty is valid only in Japan.

保証規定
保証期間内に生じた故障は無償で修理いたします。但し、下記事項に該当する場合は対象から除外させていただきます。

1. 取扱説明書と異なる不適切な取扱い、または使用方法が原因で発生した故障。
2. お買い上げ後の持ち運びや輸送の間に、落下させるなど異常な衝撃が加わって生じた故障。
3. 弊社サービス担当者以外による改造、修理が原因で生じた故障。
4. 火災、地震、水害、公害及びその他の天変地異が原因で生じた故障。
5. 傷など外観上の変化。
6. その他弊社の責任と見なされない故障。
7. 電池など消耗品の交換、補充。
8. 保証書のご提出がない場合。

共立電気計器株式会社
本社 〒152-0031 東京都目黒区中根 2-5-20
東京オフィス 〒031-7021 東京都文京区西目黒 3-1-1

JAPANESE / ENGLISH

1. 仕様 / Specification

精度保証 / Accuracy guaranteed
レンジの100%以下 / 100% or less of range
温度 / Temperature 23 ± 5°C
湿度 / Humidity 45 - 75%

ACA (オートレンジ / Auto Range)

レンジ / Range	精度 / Accuracy
40A	0.00, 0.03-41.99A
400A	32.0-419.9A
1000A	320-1049A

入力保護電流 / Input protective current : AC1200A

ACV (オートレンジ / Auto Range)

レンジ / Range	精度 / Accuracy
4V	0.000, 0.005-4.199V
40V	3.20-41.99V
400V	32.0-419.9V
600V	320-629V

DCV (オートレンジ / Auto Range)

レンジ / Range	精度 / Accuracy
400mV	±0.0±419.9mV
4V	±0.320±4.199V
40V	±3.20±41.99V
400V	±32.0±419.9V
600V	±320±629V

*1: 精度保証外 / Accuracy is not guaranteed

ACV/DCV入力インピーダンス / input impedance
: >100MΩ (400mV Range)
: 11MΩ (4V Range)
: 10MΩ (40/400/600V Range)

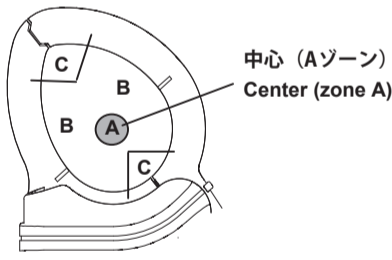
抵抗 / Resistance (オートレンジ / Auto Range)
導通 / Continuity

レンジ / Range	精度 / Accuracy
400Ω	0.0-419.9Ω
4kΩ	0.320-4.199 kΩ
40kΩ	3.20-41.99 kΩ
400kΩ	32.0-419.9 kΩ
4MΩ	0.320-4.199 MΩ
40MΩ	3.20-41.99 MΩ
導通 Cont.	0.0-419.9Ω

ブザーしきい値 / Bz threshold value
50±30Ω

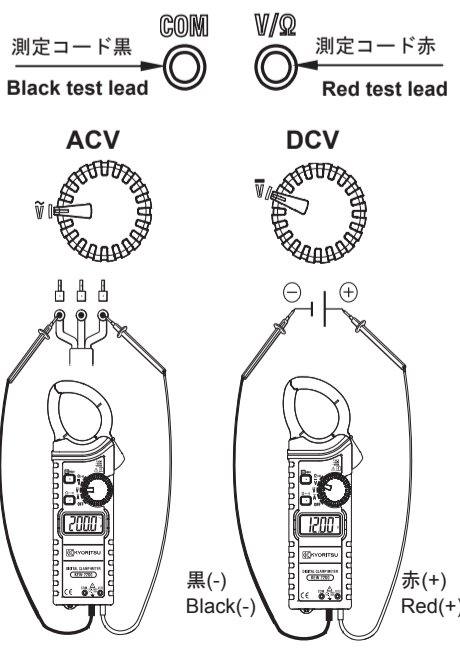
注記 / NOTE

精度保証は電流センサの中心 (Aゾーン) で測定したときが対象です。Bゾーンでは精度に4%を追加します。Cゾーンの測定値は参考値 (精度保証外) です。Measurement accuracy is guaranteed when the measured object is placed at the center (zone A) of the Current Sensor. In zone B, 4% of tolerance should be added to the specified accuracy. In zone C, measured values should be considered as reference values (Accuracy is not guaranteed).



4. ACV/DCV 測定 / Measurement

危険 / DANGER
600V以上の電位回路では、絶対に測定しないでください。
Never make measurement on a circuit in which voltage over 600V exists.
● 測定の際は指先等が、保護用フィンガーガードを越えることのないよう充分注意してください。
● Keep your fingers behind the protective fingerguard during a measurement.

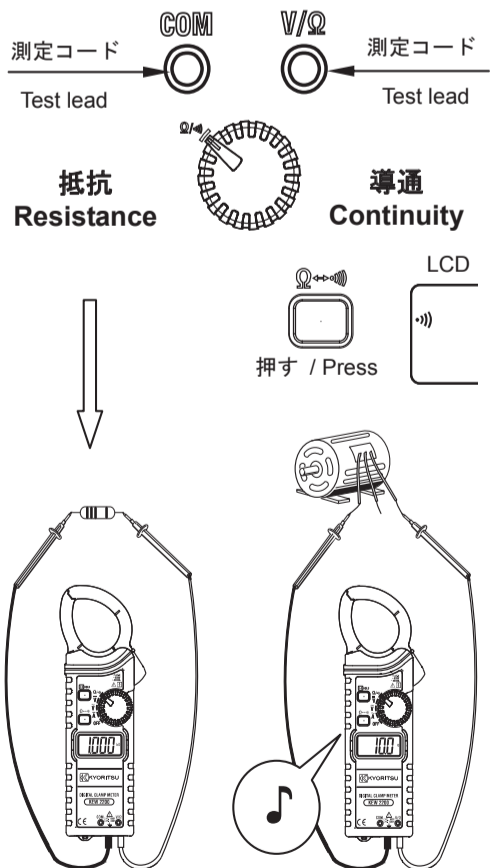


注記 / NOTE

DCV測定において、測定コードを逆接続すると、LCD上に“-”が表示されます。If the connection is reversed, the LCD indicates the “-” mark (DCV measurement).

5. 抵抗 (導通) 測定 / Resistance (Continuity) Measurement

警告 / WARNING
測定の前には、本体に電圧が印加されないよう被測定物 (回路) の電源を切ってください。
Never use the instrument on an energized circuit.



注記 / NOTE

測定コードがオープン状態では“OL”を表示します。LCD indicates “OL” when the test leads are open.

ENGLISH

6. 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 retain it in safe condition. Therefore, read through these operating instructions before using the instrument.

⚠ WARNING

- Read through and understand the instructions contained in this manual before using the instrument.
- Keep the manual at hand to enable quick reference whenever necessary.
- The instrument 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 impair the protection provided by the instrument and test leads, and 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. 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 instrument damage.

- Marks listed below are used on this instrument.



User must refer to the manual.



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.



AC



DC



Ground (Earth)



This instrument is subject to WEEE Directive (2002/96/EC). Please contact our dealer near you at disposal.

Measurement Category

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).

Current measurement section of this instrument is designed for CAT III 600V and Voltage measurement section is for CAT III 300V / CAT II 600V respectively.

Test leads 7107A with the Cap is designed for CAT IV 600V / CAT III 1000V and without the Cap is for CAT II 1000V.

⚠ DANGER

- Never make measurement on a circuit in which voltage over AC/DC600V 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.
- Never attempt to use the instrument if its surface or your hand is wet.
- Do not exceed the maximum allowable input of any measuring range.
- Never open the Battery cover during a measurement.
- To avoid electrical shock by touching the equipment under test or its surroundings, be sure to wear insulated protective gear.
- Never measure current while the test leads are inserted into the input terminals.
- Barriers on the instrument body and protective fingerguard the test leads provide protection to keep your fingers and hands from touching an object under test.
Keep your fingers and hands behind the and protective fingerguard during measurement.
- KEW2200 is a CAT III-rated instrument. Do not make measurements under the circumstances exceeding the designed measurement category.

⚠ WARNING

- Never attempt to make measurement if any abnormal conditions, such as broken case and exposed metal parts are found on the instrument or test leads.

- Verify proper operation on a known source before use or taking action as a result of the indication of the instrument.

- **Firmly attach the Caps to the test leads when performing measurements at CAT III or higher test environment.**

When KEW2200 and the test leads are combined and used together, whichever is lower category & voltage to earth either of them belong to is applied.

- Do not rotate the Function Switch while the test leads are being connected.
- Do not install substitute parts or make any modification to the instrument. For repair or re-calibration, return the instrument to your local distributor from where it was purchased.
- Stop using the test lead if the outer jacket is damaged and the inner metal or color jacket is exposed.

⚠ CAUTION

- Use of this instrument is limited to domestic, commercial and light industry applications. If equipments generating strong electromagnetic Interference or strong magnetic fields due to large currents exist nearby, malfunctions of the instrument may be caused.
- Set the Function Switch to an appropriate position before starting measurement.
- Firmly insert the test leads.
- The LCD shows some readings at the ACV and the DCV ranges even while the test leads are open. And, it may show some digits instead of 0 when short-circuiting the test leads. However, these phenomena don't affect measurement results.
- This instrument isn't dust & water proofed. Keep away from dust and water.
- Be sure to power off the instrument 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 cloth dipped in water or neutral detergent for cleaning the instrument. Do not use abrasives or solvents.
- Keep your fingers and hands behind the protective fingerguard during measurement.

7. Battery Replacement

⚠ WARNING

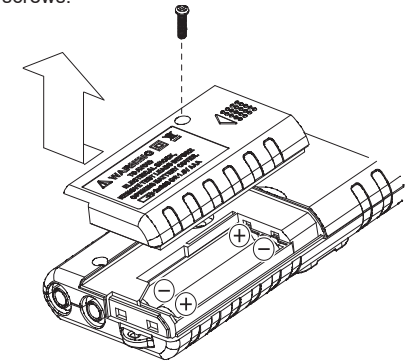
- Replace the batteries when a Low Battery Voltage warning " **B** " mark(< 2.3±0.15V) is indicated on the LCD. Otherwise, precise measurement cannot be made. Note that when the battery is completely exhausted, the LCD goes blank without showing " **B** " mark.

- Do not try to replace the batteries if the surface of the instrument is wet.
- Disconnect the test leads from the object under test and power off the instrument before opening the Battery Compartment Cover for Battery replacement.

⚠ CAUTION

- Do not mix old and new batteries.
- Install batteries in correct polarity as indicated in the Battery Compartment.

- (1) Set the Function Switch to "OFF" position.
- (2) Unscrew and remove the Battery Compartment Cover on the bottom of the instrument.
- (3) Replace the batteries observing correct polarity. Use new two R03/LR03 (AAA) 1.5V batteries.
- (4) Install the Battery Compartment and tighten the screws.



DISTRIBUTOR

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



KYORITSU ELECTRICAL INSTRUMENTS WORKS, LTD.

2-5-20, Nakane, Meguro-ku,
Tokyo, 152-0031 Japan
Phone: +81-3-3723-0131
Fax: +81-3-3723-0152
Factory: Ehime, Japan

www.kew-ltd.co.jp