

SPECIAL FEATURES :

- 600AAC Clamp-on + Multimeter ranges
- Ultra-slim jaws to access tight places
- Light weight & compact body to fit your hand
- Fully Auto-ranging for fast measurements
- Input Protection on all ranges
- Fast 30ms MAX Hold to capture in-rush currents
- Relative Zero mode
- Measures non-invasive ACA Frequency via clamp jaws
- Line level frequency measurements
- Data Hold function

Model KM 111M - Average Sensing - 18 FUNCTIONS 30 RANGES**KM 112M - True RMS Sensing - 19 FUNCTIONS 30 RANGES****GENERAL SPECIFICATIONS :**

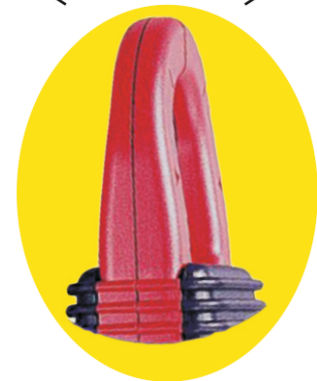
- * **Sensing** : Average sensing (KM 111M); True RMS Sensing (KM 112M)
- * **Jaw Opening Size** : 26mm
- * **Basic Accuracy** : 0.5%
- * **Display** : 3³/₄ Digits 4000 counts LCD display
- * **Update Rate** : 3 per second nominal
- * **Polarity** : Automatic
- * **Low Battery** : Below approx. 2.4V.
- * **Operating Temperature**: 0°C to 40°C.
- * **Relative Humidity**: Maximum relative humidity 80% for temperature upto 31°C decreasing linearly to 50% relative humidity at 40°C
- * **Altitude** : Operating below 2000m
- * **Storage Temperature** : -20°C ~ 60°C, < 80% R.H. (With Battery removed)
- * **Temperature Coefficient** : Nominal 0.15 x (specified accuracy) / °C @ (0°C ~ 18°C or 28°C ~ 40°C), or otherwise specified.
- * **Power Supply** : Single 3V coin Battery IEC CR-2032.
- * **Power Consumption** : 2.8mA typical, except 3.3mA typical for current function.
- * **APO Timing** : Idle for 30 minutes.
- * **APO Consumption** : 5µA typical.
- * **Dimension** : 190(L) x 63(W) x 32(H)mm
- * **Weight** : Approx. 139gm

Safety :

- **Safety** : Meets IEC61010-2-032, EN61010-2-032, UL61010B-2-032, IEC61010-1 2nd Ed., EN61010-1 2nd Ed., UL61010-1 2nd Ed.
Measurement Category : CAT III 600 Volts AC & DC.
- **Pollution degree** : 2
- **E.M.C.** : Meets EN61326 (1997, 1998/A1), EN61000-4-2 (1995, 2000/A2), and EN61000-4-3 (2002)
In an RF field of 3 V/m :
Capacitance function is not specified.
Total Accuracy = specified Accuracy + 65 digits.
Other function ranges :
Total Accuracy = Specified Accuracy + 45 digits.
Performance above 3V/m is not specified.
- **Overload Protections** :
ACA Clamp-on jaws : AC 600A rms Continuous.
+ / µA & COM terminals : 600VDC / VAC rms.
- **Transient protection** : 6.5KV (1.2/50µS surge)
- Rugged Fire-retarded casing

ACCESSORIES :

Test lead pair, Battery installed, User's Manual & Carrying case.

Transient protection
6.5KV (1.2/50µS surge)CAT III
600V**Ultra Slim jaw****All Specifications are subject to change without prior notice**

ELECTRICAL SPECIFICATIONS : KM 111M / KM 112M

Accuracy is \pm (% reading digits + number of digits) or otherwise specified, at 23°C \pm 5°C & less than 75% R.H. True RMS accuracy of ACV is specified from 5% to 100% of range, & ACA is specified from 10% to 100% of range, or otherwise specified. Maximum Crest Factor <1.75 : 1 at full scale & <3.5 : 1 at half scale, and with frequency spectrums, besides fundamentals, fall within the meter specified AC bandwidth for non-sinusoidal waveforms.

AC CURRENT (CLAMP-ON) (50HZ / 60HZ)

| Range | Resolution | Accuracy ¹⁾²⁾³⁾ |
|---------|------------|----------------------------|
| 40.00 A | 10 mA | $\pm(1.5\%rdg + 8dgts)$ |
| 400.0 A | 100 mA | |
| 600 A | 1 A | |

¹⁾ Induced error from adjacent current-carrying conductor : 0.05/A

²⁾ Specified accuracy is from 1% to 100% of range and for measurements made at the jaw center. When the conductor is not positioned at the jaw center, position errors introduced are:

Add 2% to specified accuracy for measurements made BEYOND jaw marking lines (toward jaw opening)

³⁾ Add 8d to specified accuracy @ reading < 10% of range.

HZ FREQUENCY

| Function | Sensitivity (sine Rms) | Range |
|----------|------------------------|--------------|
| 400.0 mV | 350 mV | 10Hz ~ 2KHz |
| 4.000 V | 1 V | 5Hz ~ 5KHz |
| 40.00 V | 32 V | 5Hz ~ 100KHz |
| 400.0 V | 90 V | 5Hz ~ 10KHz |
| 600 V | 500 V | 5Hz ~ 5KHz |
| 400.0 A | 60 A | 40Hz ~ 400Hz |

Display counts : 5000

Best Resolution : 0.001Hz

Accuracy : $\pm(0.5\%rdg + 4dgts)$

AC VOLTAGE (50HZ ~ 500HZ)

| Range | Resolution | Accuracy |
|---------|------------|-------------------------|
| 4.000 V | 1 mV | $\pm(1.5\%rdg + 5dgts)$ |
| 40.00 V | 10 mV | |
| 400.0 V | 100 mV | |
| 600 V | 1 V | $\pm(2.0\%rdg + 5dgts)$ |

CMRR : > 60dB @ DC to 60Hz, Rs=1k Ω

Input Impedance : 10 M Ω , 30pF Nominal.

RESISTANCE

| Range | Resolution | Accuracy |
|------------------|---------------|-------------------------|
| 400.0 Ω | 0.1 Ω | $\pm(0.8\%rdg + 6dgts)$ |
| 4.000 K Ω | 1 Ω | $\pm(0.6\%rdg + 4dgts)$ |
| 40.00 K Ω | 10 Ω | |
| 400.0 K Ω | 100 Ω | |
| 4.000 M Ω | 1 k Ω | $\pm(1.0\%rdg + 4dgts)$ |
| 40.00 M Ω | 10 k Ω | $\pm(2.0\%rdg + 4dgts)$ |

Open Circuit Voltage : 0.4VDC typical

DC VOLTAGE

| Range | Resolution | Accuracy |
|----------|-------------|-------------------------|
| 400.0 mV | 100 μ V | $\pm(0.3\%rdg + 4dgts)$ |
| 4.000 V | 1 mV | $\pm(0.5\%rdg + 3dgts)$ |
| 40.00 V | 10 mV | |
| 400.0 V | 100 mV | |
| 600 V | 1 V | $\pm(1.0\%rdg + 4dgts)$ |

NMRR : > 50dB @ 50/60Hz

CMRR : > 120dB @ DC, 50/60Hz; Rs=1K Ω

Input impedance : 10M Ω , 30pF nominal

(1000M Ω for 400.0mV range)

CAPACITANCE

| Range ¹⁾ | Resolution | Accuracy ^{2) 3)} |
|---------------------|------------|---------------------------|
| 500.0 nF | 100 pF | $\pm(3.5\%rdg + 6dgts)$ |
| 5.000 μ F | 1 nF | |
| 50.00 μ F | 10 nF | |
| 500.0 μ F | 100 nF | |
| 3000 μ F | 1 μ F | |

¹⁾ Additional 50.00nF range accuracy is not specified.

²⁾ Accuracies with film capacitor or better

³⁾ Specified with battery voltage above 2.8V (approx. half full battery).

Accuracy decreases gradually to 12% at low battery warning voltage of approx. 2.4V.

DIODE TESTER

| Open Circuit Voltage | Test Current (typical) |
|----------------------|------------------------|
| < 1.6 VDC | 0.25mA |

AUDIBLE CONTINUITY TESTER

| Audible threshold | between 20 Ω and 120 Ω . |
|-------------------|--|
|-------------------|--|

MAX HOLD (WHERE APPLICABLE)

Specified accuracy \pm 50 digits for changes > 25ms in duration.

All specifications are subject to change without prior notice.



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