

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**

ELECTRICAL SPECIFICATIONS : KM 111M / KM 112M

Accuracy is $\pm$ (% reading digits + number of digits) or otherwise specified, at $23^{\circ}\text{C} \pm 5^{\circ}\text{C}$ & 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	$\pm(1.5\%\text{rdg} + 8\text{dgts})$
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.

AC VOLTAGE (50HZ ~ 500HZ)

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

CMRR : $> 60\text{dB}$ @ DC to 60Hz, $R_s=1\text{k}\Omega$

Input Impedance : $10\text{M}\Omega$, 30pF Nominal.

DC VOLTAGE

Range	Resolution	Accuracy
400.0 mV	100 μV	$\pm(0.3\%\text{rdg} + 4\text{dgts})$
4.000 V	1 mV	$\pm(0.5\%\text{rdg} + 3\text{dgts})$
40.00 V	10 mV	
400.0 V	100 mV	
600 V	1 V	$\pm(1.0\%\text{rdg} + 4\text{dgts})$

NMRR : $> 50\text{dB}$ @ 50/60Hz

CMRR : $> 120\text{dB}$ @ DC, 50/60Hz; $R_s=1\text{k}\Omega$

Input impedance : $10\text{M}\Omega$, 30pF nominal
($1000\text{M}\Omega$ for 400.0mV range)

DIODE TESTER

Open Circuit Voltage	Test Current (typical)
$< 1.6\text{VDC}$	0.25mA

MAX HOLD (WHERE APPLICABLE)

Specified accuracy ± 50 digits for changes $> 25\text{ms}$ in duration.

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 : $\pm(0.5\%\text{rdg} + 4\text{dgts})$

RESISTANCE

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

Open Circuit Voltage : 0.4VDC typical

CAPACITANCE

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

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.

AUDIBLE CONTINUITY TESTER

Audible threshold	between 20Ω and 120Ω .
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All specifications are subject to change without prior notice.