KUSAM-MECO®
An ISO 9001:2015 Company

AC TRUE RMS DIGITAL CLAMPMETER WITH EF-DETECTION, AMPTIP FUNCTION FOR LOW CURRENT MEASUREMENT
MODEL - KM 031

THINK SAFETY
THINK KUSAM-MECO®

SPECIAL FEATURES :

- **AmpTip™ low-current range calibrated at Jaw-tip for slim-conditions for accurate readings**
- **MAX / MIN Recording mode.**
- **MAX / MIN Crest (Peak-Hold) mode.**
- **Relative-zero mode.**
- **Display Hold**
- **EF-Detection (NCV).**
- **Back-lighted easy-to-read LCD display**
- **Fully Autoranging**
- **BeepLit™ Feature.**



Preliminary Data

GENERAL SPECIFICATIONS :

- ✷ **Sensing :** True RMS
- ✷ **Jaws Opening size :** 26mm Max.
- ✷ **Display :** 3-5/6 digits 6000 counts
- ✷ **Update Rate :** 5 per second nominal
- ✷ **Polarity :** Automatic
- ✷ **Operating Temperature :** 0ºC to 40ºC
- ✷ **Relative Humidity :** Maximum relative humidity 80% for temperature up to 31ºC decreasing linearly to 50% relative humidity at 40ºC
- ✷ **Altitude :** Operating below 2000m
- ✷ **Storage Temperature :** -20°C ~ 60°C, \ <80% R.H. (with battery removed)
- ✷ **Temperature Coefficient :** Nominal 0.1 x (specified accuracy) / °C @ (0°C — 18°C or 28°C — 40°C), or otherwise specified
- ✷ **Power Supply :** Standard 1.5V AAA Size Battery
- ✷ **Power Consumption :** typical 4mA
- ✷ **Low Battery :** Below approx. 2.5V
- ✷ **APO timing :** Idle for 32 minutes
- ✷ **APO Consumption :** typical 5µA
- ✷ **Dimension :** 188(L) x 66(W) x 32(H)mm
- ✷ **Weight :** approx 158 gms.

SAFETY :

- **Safety :** Certified per IEC/UL/CSA_C22.2_# / EN standards.
  61010-1 Ed.3.0, 61010-2-032 Ed. 3.0,61010-2 033 Ed. 1.0 & 61010-031 Ed. 2.0 to
  Measurement Categories CAT III 600V AND CAT IV 300V AC & DC.
- **Overload Protection :**
  Current via jaws : 600A DC / AC rms at <400Hz.
  Voltage via terminal: 660V DC / 920VAC rms.
  Other functions via terminals : 600V DC / VAC rms
- **Pollution Degree :** 2
- **E.M.C. :** Meets EN61326-1
  DCA and ACA Functions, in an RF field of 1V/m :
  Total Accuracy = Specified Accuracy + 40 digits at around 87MHz
  DCµA & Ohm Functions, in an RF field of 1V/m :
  Total Accuracy = Specified Accuracy + 25 digits
  Other Functions, in an RF field of 3V/m :
  Total Accuracy = Specified Accuracy + 20 digits
- **Transient Protection :** 6.0kV (1.2/50µs surge)
- **Rugged Fire retarded housing.**
- **LVD EN61010-1/61010-2-032/61010-2-033 to CAT III 600V & CAT IV 300V**

ACCESSORIES : Test leads set, Users Manual, Carrying case

All Specifications are subject to change without prior notice.

ELECTRICAL SPECIFICATIONS : KM 031

Accuracy is ± (% of reading digits + number of digits) or otherwise specified, at 23°C ± 5°C

Maximum Crest Factor <2 :1 at full scale & <4:1 at half scale or otherwise specified, and with frequency spectrum not exceeding the specified frequency bandwidth for non-sinusoidal waveforms.

REGULAR AC CLAMP-ON CURRENT

Range	Resolution	Accuracy[1) 2)]
50Hz ~ 100Hz		
600.0 A	0.1 A	±(1.5%rdg + 5dgts)
100Hz ~ 400Hz		
600.0 A	0.1 A	±(2.0%rdg + 5dgts)

[1)] **Induced error from adjacent current-carrying conductor :** < 0.6A/A

[2)] Specified accuracy is for measurements made at the jaw center. When the conductor is not positioned at the jaw center, add 2% to specified accuracy for position errors.

CLAMP-ON AmpTip™ AC CURRENT

Range	Resolution	Accuracy[1)]
50Hz ~ 60Hz		
60.00 A	0.01 A	±(1.0%rdg + 5dgts)

[1)] **Induced error from adjacent current-carrying conductor :** < 0.06A/A

DC VOLTAGE

Range	Resolution	Accuracy
600.0 V	0.1 V	±(1.0%rdg + 5dgts)

Input Impedance : 10MΩ, 100pF nominal

RESISTANCE

Range	Resolution	Accuracy
600.0 Ω	0.1 Ω	±(1.0%rdg + 5dgts)
6.000KΩ	0.001kΩ	

Open Circuit Voltage : 1.0VDC typical

AC VOLTAGE (with Digital Low-Pass Filter)

Range	Resolution	Accuracy
50Hz ~ 60Hz		
600.0 V	0.1 V	±(1.5%rdg + 5dgts)

Input Impedance : 10MΩ, 100pF nominal

BeepLit™ CONTINUITY TESTER

Continuity Threshold	Between 30Ω & 480Ω
Continuity ON Response Time	15ms approx.
Audible Indication	Beep sound
Visible Indication	LCD Backlight

BeepLit™ DIODE TESTER

Range	Resolution	Accuracy[1)]
3.000 V	1 mV	±(1.5%rdg + 5dgts)

Test Current : 0.3mA typically
Open Circuit Voltage : < 3.5VDC typically
Short Beep Alert Threshold : Drop across 0.850V
BeepLit™ ON Threshold : <0.100V
Audible indication : Beep Sound
Visible Indication : LCD Backlight.

NON-CONTACT EF-DETECTION

Bar-Graph Indication	EF-H (Hi Sensitivity)	EF-L (Lo Sensitivity)
	Typical Voltage (Tolerance)	
-	10V (2V~20V)	40V (10V~70V)
- -	20V (4V~40V)	80V (20V~140V)
- - -	40V (8V~70V)	160V (40V~280V)
- - - -	80V (16V~140V)	320V (80V~560V)
- - - - -	160V (>40V)	500V (>160V)

Indication : Bar-graph segments & audible beep tones proportional to the field strength.
Detection Frequency : 50/60Hz
Detection Antenna : Inside the top side of the stationary jaw
Probe-Contact EF-Detection : For more precise indication of live wires, such as distinguishing between live and ground connections, use one single probe to test via terminal COM for direct Metal Probe-contact EF-Detection to achieve the most distinctive indication.

CREST (Peak-Hold)

Applicability	Voltage & Non-invasion Current functions
Accuracy	Add ± 250 digits to specified accuracy for changes > 5ms in duration.

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