

KUSAM-MECO

An ISO 9001:2015 Company

® 600A AC TRUE RMS DIGITAL CLAMPMETER WITH VFD, EF-DETECTION, AMPTIP FUNCTION FOR LOW CURRENT MEASUREMENT

THINK SAFETY
THINK **KUSAM-MECO**®

SPECIAL FEATURES :

- AmpTip™ low-current range calibrated at Jaw-tip for slim-conditions for accurate readings
- MAX/MIN/AVG Recording mode (Auto ranging)
- VFD-V & Hz for fundamental V/Hz of most Variable-Frequency-Drives
- Display Hold & Non-Contact EF-Detection (NCV)
- Probe-Contact EF-Detection.

GENERAL SPECIFICATIONS :

- * **Sensing** : AC; True RMS
- * **Jaws Opening size & conductor diameter** : 30mm Max.
- * **Display** : 3-5/6 digits 6000 counts
- * **Update Rate** : 5 per second nominal
- * **Polarity** : Automatic
- * **Operating Temperature** : 0°C to 40°C
- * **Relative Humidity** : Maximum relative humidity 80% for temperature up to 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** : Standard 1.5V AAA Size Battery X 2
- * **Power Consumption** : typical 4.3mA
- * **Low Battery** : Below approx. 2.85V for Capacitance & Hz
Below approx. 2.5V for other functions
- * **APO timing** : Idle for 32 minutes
- * **APO Consumption** : typical 5μA
- * **Dimension** : 217(L) x 76(W) x 37(H)mm
- * **Weight** : approx 186 gms.

SAFETY :

- **Safety** : Double insulation per UL/IEC/EN61010-1 Ed. 3, IEC/EN61010-2-033 Ed. 1, CAN/CSA C22.2 No. 61010-1 Ed. 3, IEC/EN61010-2-032 Ed. 3 & IEC/EN61010-031 Ed. 1.1
- **Measurement Category** : CAT III 600V AND CAT IV 300V AC & DC
- **E.M.C.** : Meets EN61326-1 : 2006 (EN55022, EN61000-3-2, EN61000-3-3, EN61000-4-2, EN61000-4-3, EN61000-4-4, EN61000-4-5, EN61000-4-6, EN61000-4-8, EN61000-4-11) :
DCA and DC+ACA Functions, in an RF field of 1V/m :
Total Accuracy = Specified Accuracy + 20 digits at around 405MHz
DCμA and 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
- **Overload Protection** :
Current & Hz functions via jaws : 600ADC/AAC rms at <400Hz
Voltage & 3-Phase Rotation functions via terminals : 660VDC/ 920VAC rms
Other functions via terminals : 600VDC/ VAC rms
- **Pollution Degree** : 2
- **Transient Protection** : 6.0kV (1.2/50μs surge)
- **Rugged Fire retarded casing.**
- **LVD EN61010-1/61010-2-032/EN61010-2-033 to CAT III 600V & CAT IV 300V**

ACCESSORIES :

Test leads set, Users Manual, Battery & Carrying Case.

MODEL KM 072**Preliminary Data**

All Specifications are subject to change without prior notice

KUSAM-MECO®

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ELECTRICAL SPECIFICATIONS : KM 072

Accuracy is $\pm$ (% of reading digits + number of digits) or otherwise specified, at 23°C $\pm$ 5°C
Maximum Crest Factor <2.5:1 at full scale & <5:1 at half scale or otherwise specified, and with frequency spectrum not exceeding the specified frequency bandwidth for non-sinusoidal waveforms.

REGULAR CLAMP-ON AC CURRENT

Range	Resolution	Accuracy ^{1) 2)}
50Hz ~ 100Hz		
60.00 A ³⁾	0.01 A	±(1.8%rdg + 5dgt)
600.0 A	0.1 A	
100Hz ~ 400Hz		
60.00 A ³⁾	0.01 A	±(2.0%rdg + 5dgt)
600.0 A	0.1 A	

¹⁾ Induced error from adjacent current-carrying conductor : < 0.01A/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.

³⁾ Add 10d to the specified accuracy @ < 6A & unspecified accuracy @ < 0.2A

AC VOLTAGE (with Digital Low-Pass Filter)

Range	Resolution	Accuracy
50Hz ~ 60Hz		
600.0 V	0.1 V	$\pm(1.0\%rdg + 5dgt)$

Input Impedance : 10M Ω , 100pF nominal

RESISTANCE

Range	Resolution	Accuracy
600.0 Ω	0.1 Ω	$\pm(1.0\%rdg + 5dgt)$
6.000K Ω	1 Ω	
60.00K Ω	10 Ω	

Open Circuit Voltage : 1.0VDC typical

HZ LINE LEVEL FREQUENCY

Function	Sensitivity ¹⁾ (Sine RMS)	Range
600 V	50 V	5.00Hz~999.9Hz
1000 V		
60 A (AmpTip™)	20 A	50.00Hz~400.0Hz
60 A	20 A	50.00Hz~400.0Hz
600 A		

Accuracy : $\pm(1\%rdg + 5dgt)$

¹⁾ DC-bias, if any, not more than 50% of Sine RMS

AMPTIP™ CLAMP-ON AC CURRENT

Range	Resolution	Accuracy ^{1) 2) 3) 4)}
DC, 50Hz ~ 60Hz		
60.00 A	0.01 A	$\pm(1.5\%rdg + 5dgt)$

¹⁾ Induced error from adjacent current-carrying conductor : < 0.01A/A

²⁾ Specified with Relative Zero mode applied to offset the non-zero residual readings, if any

³⁾ Add 10d to the specified accuracy @ < 4A

⁴⁾ Add 10d to the unspecified accuracy @ < 0.2A

DC VOLTAGE

Range	Resolution	Accuracy
600.0 V	0.1 V	$\pm(1.0\%rdg + 5dgt)$

Input Impedance : 10M Ω , 100pF nominal

Non-Contact EF-Detection

Typical Voltage	Bar-Graph Indication
20V (tolerance : 10V~36V)	-
55V (tolerance : 23V~83V)	--
110V (tolerance : 59V~165V)	---
220V (tolerance : 124V~330V)	----
440V (tolerance : 250V~1000V)	-----

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 contact EF-Detection with best sensitivity.

AUDIBLE CONTINUITY TESTER

Audible Threshold	Between 10 Ω and 250 Ω
Response Time	32ms approx.

DIODE TESTER

Range	Resolution	Accuracy ¹⁾
2.000 V	1 mV	$\pm(1.5\%rdg + 5dgt)$

Test Current : 0.3mA typically

Open Circuit Voltage : < 3.5VDC typically

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