KUSAM-MECO®
An ISO 9001:2015 Company

TRMS DIGITAL FORK CLAMPMETER

THINK SAFETY
THINK KUSAM-MECO®

15 FUNCTIONS 18 RANGES

MODEL-KM039F



Preliminary Data

SPECIAL FEATURES :

- ✷ Fork-clamp Current measurement
- ✷ 12mm Slim-Probe open jaws for easy slide into tight wirings.
- ✷ Cx range 200.0μF to 2500μF for start & run motor capacitors.
- ✷ MAX/MIN Recording Mode
- ✷ 5ms Crest (Peak-Hold) Mode.

FEATURES :

- ✷ Backlight Display
- ✷ Non-Contact EF-Detection (NCV) with Hi/Lo Selectable Sensitivities.
- ✷ Probe-contact EF-Detection (Single-pole) for precise indication of live.
- ✷ Auto ranging for all ranges.
- ✷ Relative Mode.
- ✷ Data Hold.
- ✷ BeepLit feature for Diode & continuity.
- ✷ Intelligent Auto-Power off.

GENERAL SPECIFICATIONS

- ✷ **Basic Accuracy :** 1.0%
- ✷ **Sensing :** True RMS
- ✷ **Display :** 3-5/6 digits 6000 counts LCD display
- ✷ **Fork-Clamp opening & conductor Diameter :** 12.5mm max.
- ✷ **Fork-Clamp probe width :** 12mm approx.
- ✷ **Update rate :** 5/sec nominal
- ✷ **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.
- ✷ **Pollution degree :** 2
- ✷ **Storage Temperature :** -20°C to 60°C, <80%R.H. (with battery removed).
- ✷ **Altitude :** Operating below 2000m
- ✷ **Temperature Coefficient :** nominal 0.1x (specified accuracy) / °C @ (0°C ~ 18°C or 28°C ~ 40°C), or otherwise specified.
- ✷ **Overload Protection :**
  Current via Fork-Clamp: 200A AC rms at <400Hz
  Voltage via terminals : 66V DC / 920V AC rms.
  Other functions via terminals : 600V DC / VAC rms
- ✷ **E.M.C. :** Meets EN61326-1:2013
  ACA functions, in an RF field of 1V/m:
  Total Accuracy = Specified Accuracy + 40 digits at around 87MHz
  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
- ✷ **Low Battery Indication :** Below Approx. 2.85V for Capacitance & Hz; Below Approx. 2.5V for other functions.
- ✷ **Auto Power Off :** idle for 32 minutes
- ✷ **Power Consumption :** 5μA Typical
- ✷ **Power Supply :** 1.5V AAA x 2 battery.
- ✷ **Dimension :** Approx.193(L)mm x 57(W)mm x 32(H)mm
- ✷ **Weight :** Approx. 158gm (including battery).

SAFETY

Certified per IEC/EN/CSA_C22.2_No./ULstandards:
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.

ACCESSORIES :

Test leads set, Battery, User Manual,

Bkp60 banana-plug type-k thermocouple & carrying case.

OPTIONAL ACCESSORIES :

BKB32 banana-plug to type-k socket plug adaptor.

All Specifications are subject to change without prior notice.

ELECTRICAL SPECIFICATIONS : KM 039F

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

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

DC VOLTAGE

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

Input Impedance : 10MΩ 100 pF nominal

AC VOLTAGE (LPF added)

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

Input Impedance : 10MΩ 100 pF nominal

FORK-CLAMP ACA

Range	Resolution	Accuracy[1]
50Hz ~ 60Hz		
60.00 A[2]	0.01 A	±(2.0%rdg + 5dgts)
200.0 A	0.1 A	
45Hz ~ 400Hz		
60.00A[2]	0.01 A	±(3.0%rdg + 5dgts)
200.0A	0.1 A	

[1] **Input ImpedaInduced error from adjacent current carrying conductor :** <0.08A/A

[2] **60.00A range measurement available from 0.10A**

Hz (LPF added) Line-Level Frequency

Function	Sensitivity[1] (Sine RMS)	Range
600Vac	50V	5.00Hz ~ 999.9Hz

Accuracy : 1% + 5d

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

RESISTANCE

Range	Resolution	Accuracy
600.0 Ω	0.1 Ω	±(1.0%rdg + 5dgts)
6.000 kΩ	0.001 kΩ	
60.00 kΩ	0.01 kΩ	
600.0 kΩ	0.1 kΩ	
6000 kΩ	1 kΩ	

Open Circuit Voltage : 1.0VDC typical

CAPACITANCE

Range	Resolution	Accuracy[1]
200.0 µF	0.1 µF	±(2.0%rdg + 4dgts)
2500 µF	1 µF	

[1] Accuracies with film capacitor or better.

DCµA

Range	Resolution	Accuracy
200.0 µA	0.1 µA	±(1.0%rdg + 5dgts)
2000 µA	1 µA	

Burden Voltage : 3.5mV/µA

TEMPERATURE

Range	Accuracy
-40.0ºC ~ 99.9ºC	1.0% ~ 1ºC
100.0ºC ~ 400ºC	
-40.0ºF ~ 211.8ºF	1.0% ~ 2ºF
212ºF ~ 752ºF	

[1] Accuracies assume meter interior has the same temperature (Isothermal stage) of the ambient for a correct junction voltage compensation. Allow the meter & the type-K probe set to reach isothermal stage for a significant change of ambient temperature. It can take up to an hour for changes >5°C.

[2] Type-K thermocouple range & accuracy not included

Non-Contact EF-Detection (NCV)

Bar-Graph Indication	EF-H (Hi Sensitivity)	EF-L (Lo Sensitivity)
	Typical AC 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~600V)	500V(160V~600V)

Indication : Bar-graph segments & audible beep tones proportional to the field strength.

Detection Frequency : 50/60Hz

Detection Antenna : Inside the top-left end of the Fork-clamp.

Probe-Contact EF-Detection (Single-pole Measurement) : For more precise indication of live wires, such as distinguishing between live and ground connections, use one single test probe to test via terminal COM for direct metal contact probing to achieve the most distinctive indications.

BEEPLIT™ DIODE TESTER

Range	Resolution	Accuracy
3.000 V	0.001 V	±(1.5%rdg + 5dgts)

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

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

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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