KUSAM-MECO®
An ISO 9001:2015 Company

3-5/6 DIGIT 6000 COUNTS DIGITAL MULTIMETER WITH EF-DETECTION & PC INTERFACE MODEL - KM 251

THINK SAFETY
THINK KUSAM-MECO®

FEATURES :

- Autoranging Relative Zero Mode
- Display Hold
- 24 Segments Analog Bar-graph
- EF-Detection (NCV)
- Probe contact EF-Detection
- Low Battery Indication
- Diode & Continuity Test
- Wrong Input (test lead) warning detection (w. r. t. switch position)
- Fully Autoranging
- PC interface (optional)
- Auto Power Off
- Rugged Fire Retarded Casing

NEW

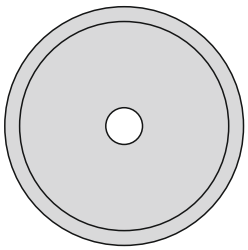
Preliminary Data

GENERAL SPECIFICATIONS :

- ✶ **Sensing :** Average Sensing.
- ✶ **Display :** 3-5/6 digits 6000 counts LCD display
- ✶ **Update Rate :** Fast Data : 5 per second nominal
  24 Segments Analog Bar-graph : 40/second
- ✶ **Operating Temperature :** 0°C to 40°C, at <70% R.H.
- ✶ **Relative Humidity :** Maximum relative humidity 80% for temperature upto 31°C decreasing linearly to 50% relative humidity at 40°C
- ✶ **Storage Temperature:** -20°C to 60°C, <80% R.H. With battery removed from meter.
- ✶ **Altitude :** 2000m
- ✶ **Pollution Degree :** 2
- ✶ **Temperature Coefficient :** nominal 0.15 x (specified accuracy) / °C @ (0°C~18°C or 28°C~40°C), or otherwise specified.
- ✶ **Low battery :** Below approx. 2.3V
- ✶ **Power Consumption :** 3.5mA
- ✶ **APO Consumption :** 10μA typical
- ✶ **APO Timing :** Idle for 34 minutes
- ✶ **Power Supply :** 1.5V AAA battery x 2
- ✶ **Dimension :** 161(L) X 80(W) X 50(H) mm
- ✶ **Weight :** Approx. 340 gm (with Holster)

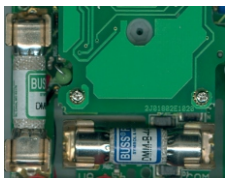
SAFETY :

- **Safety :** Certified per IEC/UL/EN61010-1 Ed. 3.1, IEC/UL/EN61010-2-033 Ed. 2.0, IEC/UL/EN61010-031 Ed. 2.0 and the corresponding CAN/CSA-C22.2 regulations to Measurement. Categories: CAT III 600V and CAT IV 300V AC & DC
- **E. M. C. :** Meets EN61326-1
  In an RF field of 3V/m :
  Capacitance function is not specified.
  Other function ranges :
  Total Accuracy = Specified Accuracy + 100 digits
  Performance above 3V/m is not specified.
- **Transient Protection :** 6.5kV lightning surge (1.2/50μs)
- **Terminals (to COM) Measurement Category :**
  V / mAμA / A : CAT III 600V and CAT IV 300 Volts AC & DC.
- **Overload Protections :**
  μA & mA : 0.4A/1000V DC/AC rms, IR 30kA @ 1000V DC/AC rms
  A : 11A/1000V DC/AC rms, IR 20kA @ 1000V DC/AC rms
  V & AutoCheckTM : 660VDC / 1100VAC rms
  mV, Ohm & others : 600V DC / VAC rms



Software CD

Software



Fuse

Software Cable

Magnetic Hanger

ACCESSORIES :

Test leads pair, Carrying Case, Batteries installed, User's Manual .

OPTIONAL ACCESSORIES : USB interface kit BRUA-20X.

Current Clamp CA300, Current Clamp Adaptor CA500, CA1000, CA2000, High Voltage Probe PD-28.

All Specifications are subject to change without prior notice.

ELECTRICAL SPECIFICATIONS - KM 251

Accuracy is ± (% reading digits + number of digits) or otherwise specified, at 23°C ± 5°C & less than 75% R.H.

DC VOLTAGE

Range	Resolution	Accuracy
60.00 mV[1]	10 µV	±(0.4%rdg + 5dgts)
600.0 mV[1]	100 µV	±(0.2%rdg + 3dgts)
6.000 V[2]	1 mV	
60.00 V[2]	10 mV	
600.0 V[2]	100 mV	

[1] **Overload protection :** 600Vrms AC/DC
[2] **Overload protection :** 1100Vrms for AC & 660V for DC
Input Impedance: 10MΩ, 50 pF nominal

AC VOLTAGE

Range	Resolution	Accuracy
50Hz -- 400Hz		
60.00 mV[1]	10 µV	±(1.0%rdg + 5dgts)
600.0 mV[1]	100 µV	
6.000 V[2]	1 mV	
60.00 V[2]	10 mV	
600.0 V[2]	100 mV	

[1] **Overload protection :** 600Vrms AC/DC
[2] **Overload protection :** 1100Vrms for AC & 660V for DC
Input Impedance: 10MΩ, 50 pF nominal

AC CURRENT

Range	Resolution	Accuracy	Burden Voltage
50Hz -- 400Hz			
600.0 µA	100 nA	±(1.0%rdg + 3dgts)	0.10 mV / µA
6000 µA	1 µA		0.10 mV / µA
60.00 mA	10 µA		1.7 mV / mA
600.0 mA	100 µA		1.7 mV / mA
6.000 A	1 mA	±(1.2%rdg + 6dgts)	0.03 V / A
10.00 A[1]	10 mA	±(1.8%rdg + 6dgts)	0.03 V / A

[1] 10A continuous, >10A to 20A for 30 Sec. Max with 5 minutes cool down interval

OHMS

Range	Resolution	Accuracy
600.0 Ω	100 mΩ	±(0.5%rdg + 4dgts)
6.000 kΩ	1 Ω	
60.00 kΩ	10 Ω	
600.0 kΩ	100 Ω	
6.000 MΩ	1 kΩ	±(0.7%rdg + 4dgts)
60.00 MΩ	10 kΩ	±(1.2%rdg + 4dgts)

Open Circuit Voltage : 0.45VDC typical.

DC CURRENT

Range	Resolution	Accuracy	Burden Voltage
600.0 µA	100 nA	±(0.5%rdg + 5dgts)	0.10 mV/µA
6000 µA	1 µA	±(0.5%rdg + 3dgts)	0.10 mV/µA
60.00 mA	10 µA	±(0.5%rdg + 5dgts)	1.7 mV/mA
600.0 mA	100 µA	±(0.5%rdg + 3dgts)	1.7 mV/mA
6.000 A	1 mA	±(1.2%rdg + 6dgts)	0.03 V/A
10.00 A[1]	10 mA	±(1.8%rdg + 6dgts)	0.03 V/A

[1] 10A continuous, >10A to 20A for 30 Sec. Max with 5 minutes cool down interval

LOGIC LEVEL Hz (mV FUNCTION)

Range	Sensitivity (square wave)	Accuracy
5.00 Hz to 500.0 kHz	3 Vpeak	±(0.03%rdg + 2dgts)
5.00 Hz to 1.000 MHz	5 Vpeak	±(0.03%rdg + 2dgts)

HZ(LINE) @ ACV, DCV, CURRENT & AUTOCHECK

Range	Resolution	Accuracy
6 V	0.4 V	10Hz - 100kHz
60 V	4 V	10Hz - 100kHz
600 V	40 V	10Hz - 100kHz
1000 V	400 V	45Hz - 1kHz
600 µA	40 µA	10Hz - 100kHz
6000 µA	400 µA	10Hz - 100kHz
60 mA	4 mA	10Hz - 100kHz
600 mA	40 mA	10Hz - 100kHz
6 A	1 A	10Hz - 1kHz
10 A	6 A	10Hz - 1kHz

Accuracy : 0.03%+3d

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 : Top-right end of the meter
Probe-Contact EF-Detection : For more precise indication of live wires, such as distinguishing between live & ground connections, use the Red(+) test probe for direct contact measurements.

DIODE TESTER

Range	Resolution	Accuracy
1.000 V	100mV	±(1.0%rdg + 3dgts)

Test Current : 0.56mA typical.
Open Circuit Voltage : <1.8VDC typically.

AUDIBLE CONTINUITY TESTER

Audible Threshold :	Between 10Ω and 80Ω
Response time :	32ms

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