KUSAM-MECO®

An ISO 9001:2015 Company

TRUE RMS DIGITAL INSULATION MULTIMETER

THINK SAFETY
THINK KUSAM-MECO®

23 FUNCTIONS 73 RANGES

MODEL KM 877



Preliminary Data

SPECIAL FEATURES :

- VFD V & Hz readings.
- Paper-White Backlight LCD Display
- Record MAX / MIN readings.
- Display Hold Function.
- Dual Digital Display.
- PI & DAR Function.
- Autoranging.
- Pass /Fail Insulation Resistance Compare function; 12 selectable Preset Values.
- LOCK-Test mode for Insulation Resistance & Earth Continuity Test.
- BeepJack™ audible & visible input warning.
- Remote Probe for insulation Resistance & Earth Continuity Test.

GENERAL SPECIFICATIONS :

✶ **Sensing :** AC, True RMS
✶ **Display :** 3-5/6 digits 6000 Counts Backlight LCD Display.
✶ **Polarity :** Automatic
✶ **Update Rate :** 5 per second nominal
✶ **61 Segments Analog Bar Graph :** 60 per second max.
✶ **Power Supply:** Four Alkaline AA batteries
✶ **Power Consumption:** 4.5mA typical except : ACV $^{+Hz}$ & VFD ACV $^{+Hz}$: 7.0mA
Earth Continuity Test : 110mA @20Ω range, 220mA @2.0Ω range.
Tester can perform at least 3000 Earth Continuity Test measurements with new alkaline batteries at room temperature. These are standard test of 1Ω with a duty cycle of 5 seconds on & 25 seconds off.
Insulation Resistance @ 1mA Test Current :
50V output Voltage : 25mA, 100V output Voltage : 45mA
250V output Voltage : 85mA, 500V output Voltage : 170mA
1000V output Voltage : 440mA
Tester can perform at least 950 Insulation Tests with new alkaline batteries at room temperature. These are standard tests of 1000V into 1MΩ with a duty cycle of 5 seconds on and 25 seconds off.
✶ **Operating Temperature :** -10ºC ~ 40ºC
✶ **Relative Humidity :** Maximum relative humidity 90% for temperature up to 28ºC decreasing linearly to 50% relative humidity at 40ºC.
✶ **Pollution degree :** 2
✶ **IP Rating Design :** IP40
✶ **Storage Temperature :** -20ºC ~ 60ºC, < 80% R.H. (with battery removed)
✶ **Altitude :** Operating below 2000m
✶ **Temperature Coefficient :** Nominal 0.15 x (specified accuracy)/ °C @(-10ºC~18ºC or 28ºC~40ºC), or otherwise specified.
✶ **Low Battery:** approx. 4.6V
✶ **APO Timing:** Idle for 20 minutes
✶ **APO Consumption:** 50μA typical
✶ **Auto or Manual-ranging mode.**
✶ **Auto Power Off.**
✶ **Dimension:** 208(L) X 103(W) X 64.5(H) mm with holster
✶ **Weight:** 635 gm with holster.

SAFETY :

✶ **Safety :** Double insulation per IEC/UL/EN61010-1 Ed. 3.0, IEC/EN61010-2-030 Ed. 1.0, IEC/EN61010-2-033 Ed. 1.0, IEC/UL/EN61010-031 Ed. 1.1 and CAN/CSA-C22.2 No. 61010-1-12 Ed. 3.0 to CAT III 1000 V AC & DC and CAT IV 600V AC & DC.
✶ **Compliance to IEC/EN61557; 2007 (per CE requirements, not certified by UL or ETL) :** IEC/EN61557-1, IEC/EN61557-2 & IEC/EN61557-4 where applicable.
✶ **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)
In an RF field of 3V/m:
Total Accuracy = Specified Accuracy + 25 digits.
Performance above 3V/m is not specified.
✶ **Transient Protection :** 8KV(1.2/50μS Surge)
✶ **Overload Protections :**

Earth Continuity Test	: 0.25A/1KV, IR 30kA or better
V	: 1100Vrms
mV, Ω & Others	: 1000 Vrms

ACCESSORIES : Test probe pair, BRP21S2-C Remote probe, Alligator clip pair, Holster, User manual & Carrying Case.

OPTIONAL ACCESSORIES : Magnetic hanger.

All Specifications are subject to change without prior notice

ELECTRICAL SPECIFICATIONS : KM 877

Accuracy is ± (% of reading digits + number of digits) or otherwise specified, at 23°C ± 5°C & less than 80%relative humidity.
True RMS voltage & current accuracies are specified from 1 % to 100 % of range or otherwise specified.
Maximum Crest Factor < 1.70:1 at full scale & < 3.4:1 at half scale, and with frequency components fall within the specified frequency bandwidth for non-sinusoidal waveforms.

DC VOLTAGE

Range	Resolution	Accuracy
6.000 V	1 mV	±(0.2%rdg + 3dgts)
60.00 V	10 mV	
600.0 V	100 mV	
1000 V	1 V	±(0.3%rdg + 3dgts)

Input Impedance : 10MΩ, 110pF nominal

VFD AC VOLTAGE

Range	Resolution	Accuracy[1)]
10Hz ~ 45Hz		
600.0 V	100 mV	±(4%rdg + 5dgts)
45Hz ~ 200Hz		
600.0 V	100 mV	±(2%rdg + 5dgts)
200Hz ~ 440Hz		
600.0 V	100 mV	±(7%rdg + 5dgts[2)])

[1)] Unspecified for fundamental frequency > 440Hz
[2)] Accuracy linearly decreases from 2% + 5d @ 200Hz to 7% + 5d @ 440Hz
Input impedance : 10MΩ, 110pF nominal.

EARTH CONTINUITY TEST

Range	Test Current	Accuracy	Measuring Range[1)]
2.000 Ω	> 200 mA	±(1.5%rdg +3dgts)	0.015Ω ~ 2.199Ω
20.00 Ω	> 90 mA		0.15Ω ~ 21.99Ω

Open Circuit Voltage : > 4VDC
Live Circuit Detector : Inhibit test if terminal voltage > 2V prior to initialization of test.
[1)]Specified measuring range at percentage operating uncertainly B(%) ≤ ± 30% per IEC/EN61557-4 requirements.

INSULATION RESISTANCE

Test Voltage[1)]	Range	Test Current	Accuracy
50 V	3.000MΩ, 30.00MΩ, 55.0MΩ	1mA @50kΩ	±(1.5%rdg + 5dgts)
100 V	3.000MΩ, 30.00MΩ, 110.0MΩ	1mA @100kΩ	
250 V	3.000MΩ, 30.00MΩ, 275.0MΩ	1mA @250kΩ	
500 V	3.000MΩ, 30.00MΩ, 300.0MΩ, 550.0MΩ	1mA @500kΩ	
1000 V	3.000MΩ, 30.00MΩ, 300.0MΩ	1mA @1MΩ	±(1.5%rdg + 5dgts)
	3000MΩ		±(2.0%rdg + 5dgts)
	25.0GΩ		±(10%rdg + 5dgts)

[1)] **Actual output voltage :** 100% ~ 120% of Test Voltage
Live Circuit Detector : Inhibit test and display voltage reading instead if terminal voltage > 30V prior to initialization of test.
Display Voltage Accuracy : DCV : 1.5% + 5d ;
ACV : 3.0% + 5d @50Hz ~60Hz (unspecified @ >600Vac)
Specified measuring range is 0.020MΩ....25.0GΩ for percentage operating uncertainly B(%) ≤ ± 30% per IEC/EN61557-2 requirements.

DIODE TESTER

Range	Resolution	Accuracy[1)]
2.000 V	1 mV	±(1.5%rdg + 4dgts)

Test Current : 0.5mA typically **Open Circuit Voltage :** < 2.8VDC typically

AC VOLTAGE

Range	Resolution	Accuracy
50Hz ~ 60Hz		
6.000 V	1 mV	±(1%rdg + 3dgts)
60.00 V	10 mV	
600.0 V	100 mV	
1000 V	1 V	
60Hz ~ 1kHz		
6.000 V	1 mV	±(2%rdg + 3dgts)
60.00 V	10 mV	
600.0 V	100 mV	
1000 V	1 V	
1kHz ~ 3kHz		
6.000 V	1 mV	±(2%rdg + 3dgts)
60.00 V	10 mV	
600.0 V	100 mV	Unspecified
1000 V	1 V	
3kHz ~ 5kHz		
6.000 V	1 mV	±(4%rdg + 5dgts)
60.00 V	10 mV	
600.0 V	100 mV	Unspecified
1000 V	1 V	

Input Impedance : 10MΩ, 110pF nominal

RESISTANCE

Range	Resolution	Accuracy
600.0Ω	100 mΩ	±(0.9%rdg + 5dgts)
6.000kΩ	1 Ω	±(0.9%rdg + 2dgts)
60.00kΩ	10 Ω	
600.0kΩ	100 Ω	
6.000MΩ	1 kΩ	±(1.2%rdg + 3dgts)
60.00MΩ	10 kΩ	±(3.0%rdg + 6dgts)

Open Circuit Voltage : < 1.5VDC typical

~ Hz Line Level Frequency

Function Range	Sensitivity (Sine RMS)	Range
6 V	0.6 V	10Hz ~ 20kHz
60 V	6 V	
600 V	60 V	10Hz ~ 3kHz
1000 V	600 V	
VFD 600 V	60~240 V[1)]	10Hz ~ 440Hz

Accuracy : ±(0.02%rdg + 4dgts)
[1)] VFD sensitivity linearly decreases from 10% F.S. @200Hz to 40% F.S. @440Hz.

AUDIBLE CONTINUITY TESTER

Audible Threshold	Between 20Ω and 200Ω
Response Time	< 30ms approx.

All Specifications are subject to change without prior notice

KUSAM-MECO®
An ISO 9001:2015 Company

Shop no.18, 1st Floor, CIDCO Shopping Complex, Plot # 9, Sector-7, Rajiv Gandhi Marg, Sanpada, Navi Mumbai - 400705. **Sales Direct :** +91-9867488006, 9867675093
Email : sales@kusam-meco.co.in **Web.:** www.kusamelectrical.com