

SPECIAL FEATURES :

- VFD V & Hz readings.
- LCD Backlight Display
- Record MAX/MIN regular readings.
- Display Hold Function.
- Dual Display +Hz readings.
- Relative zero mode.
- LOCK-Test mode for Insulation Resistance
- BeepJack™ audible & visible input warning.
- High resolution 60.00mV & 60.00Ω ranges.

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 : 40 per second max.
- * Operating Temperature : -10°C ~ 50°C
- * Relative Humidity : Maximum relative humidity 90% for temperature up to 28°C decreasing linearly to 50% relative humidity at 50°C.
- * Pollution degree : 2
- * IP Rating : IP40
- * Storage Temperature : -20°C ~ 60°C, < 80% R.H. (with battery removed)
- * Altitude : Operating below 2000m
- * Temperature Coefficient : Nominal 0.1 x (specified accuracy)/ °C @(-10°C~18°C or 28°C~50°C), or otherwise specified.
- * Low Battery: approx. 4.6V
- * APO Timing: Idle for 20 minutes
- * APO Consumption: 20μA typical
- * Auto Power Off.
- * Power Supply: Four Alkaline AA batteries
- * Power Consumption: 6.5mA typical except the followings : VFD ACV^{Hz} : 8mA

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.

- * Dimension: 208(L) X 103(W) X 64.5(H) mm with holster
- * Weight: 635 gm with holster.

SAFETY :

- * Safety : ETL certified per IEC/UL/EN61010-1 Ed. 3.0, IEC/UL/EN61010-2-030 Ed. 1.0, IEC/UL/EN61010-2-033 Ed. 1.0, IEC/UL/EN61010-031 Ed. 1.1 and the corresponding CAN/CSA-C22.2 regulations to measurement Categories. CAT III 1000 V AC & DC and CAT IV 600V AC & DC.
- * Compliance to IEC/EN61557 : IEC/EN61557-1 Ed.2.0, IEC/EN61557-2 Ed. 2.0 & IEC/EN61557-10 Ed. 2.0 (Tested per CE requirements, not covered by ETL certification)
- * Overload Protections :
 Insulation Resistance, μA & mA : 0.4A/1KV, IR 30kA, F Fuse, or better
 A : 11A/1KV, IR 20kA, F Fuse or better
 V : 1100Vrms
 mV, Ω & Others : 1000 Vrms
- * Transient Protection : 8KV(1.2/50μS Surge)
- * E.M.C. : Meets EN61326-1:2013
 In an RF field of 3V/m:
 Total Accuracy = Specified Accuracy + 25 digits.
 Performance above 3V/m is not specified.

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

OPTIONAL ACCESSORIES : Magnetic hanger & Carrying Case.

**Preliminary Data**

All Specifications are subject to change without prior notice

ELECTRICAL SPECIFICATIONS : KM 885

Accuracy is \pm (% of reading digits + number of digits) or otherwise specified, at 23°C \pm 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 < 1.8:1 at full scale & < 3.6:1 at half scale, and with frequency components fall within the specified frequency bandwidth for non-sinusoidal waveforms.

DC VOLTAGE

Range	Resolution	Accuracy
60.00 mV	0.01 mV	$\pm(0.3\%rdg + 3dgt)$
600.0 mV	0.1 mV	$\pm(0.2\%rdg + 2dgt)$
6.000 V	1 mV	
60.00 V	10 mV	
600.0 V	100 mV	$\pm(0.3\%rdg + 3dgt)$
1000 V	1 V	

Input Impedance : 10M Ω , 110pF nominal

VFD AC VOLTAGE

Range	Resolution	Accuracy ¹⁾
10Hz ~ 45Hz		
600.0 V	100 mV	$\pm(4\%rdg + 5dgt)$
45Hz ~ 200Hz		
600.0 V	100 mV	$\pm(2.5\%rdg + 5dgt)$
200Hz ~ 440Hz		
600.0 V	100 mV	$\pm(9.0\%rdg + 5dgt)^{2)}$

¹⁾ Unspecified for fundamental frequency > 440Hz

²⁾ Accuracy linearly decreases from 2.5% + 5d @ 200Hz to 9.0% + 5d @ 440Hz

Input impedance : 10M Ω , 110pF nominal.

RESISTANCE

Range ¹⁾	Resolution	Accuracy
60.00 Ω ²⁾	0.01 m Ω	$\pm(0.6\%rdg + 5dgt)$
600.0 Ω	100 m Ω	$\pm(0.3\%rdg + 3dgt)$
6.000k Ω	1 Ω	$\pm(0.3\%rdg + 2dgt)$
60.00k Ω	10 Ω	
600.0k Ω	100 Ω	$\pm(0.4\%rdg + 2dgt)$
6.000M Ω ³⁾	1 k Ω	$\pm(1.5\%rdg + 3dgt)$
60.00M Ω ⁴⁾	10 k Ω	$\pm(2\%rdg + 6dgt)^{5)6)}$

¹⁾ Open Circuit Voltage : < 1.7VDC typical

²⁾ Specified assumes input lead resistance been offset by REL Δ or Shrt (short) feature.

³⁾ Constant Test Current : 0.2 μ A typical

⁴⁾ Constant Test Current : 0.2 μ A typical

⁵⁾ Add 1% @ >20M Ω

⁶⁾ Add 2% @ operation temperature >35°C

AUDIBLE CONTINUITY TESTER

Audible Threshold	Between 20 Ω and 350 Ω
Response Time	< 30ms approx.

AC VOLTAGE

Range	Resolution	Accuracy
50Hz ~ 60Hz		
60.00 mV ³⁾	0.01 mV	$\pm(0.7\%rdg + 4dgt)$
600.0 mV ⁴⁾	0.1 mV	
6.000 V	1 mV	
60.00 V	10 mV	
600.0 V	100 mV	
1000 V	1 V	
40Hz ~ 500kHz		
60.00 mV ³⁾	0.01 mV	$\pm(1.3\%rdg + 4dgt)$
600.0 mV ⁴⁾	0.1 mV	
6.000 V	1 mV	
60.00 V	10 mV	
600.0 V	100 mV	
1000 V ⁵⁾	1 V	$\pm(2\%rdg + 4dgt)$

Input Impedance : 10M Ω , 110pF nominal

¹⁾ Add 20d @ >80% of range

²⁾ Unspecified @ <5% of range

³⁾ Signal peak absolute values, including DC bias, less than 110mV_{peak}

⁴⁾ Signal peak absolute values, including DC bias, less than 110mV_{peak}

DIODE TESTER

Range	Resolution	Accuracy
2.700 V	1 mV	$\pm(1.5\%rdg + 4dgt)$

Test Current : 0.4mA typically

Open Circuit Voltage : < 2.8VDC typically

~ Hz Line Level Frequency

Function	Range	Sensitivity (Sine RMS)	Range
60	mV	4 mV	6Hz ~ 50kHz
600	mV	40 mV	10Hz ~ 100kHz
6	V	0.4 V	10Hz ~ 50kHz
60	V	4 V	
600	V	40 V	10Hz ~ 30kHz
1000	V	400 V	10Hz ~ 5kHz
VFD	600 V	40 V	10Hz ~ 440Hz
600	μ A	40 μ A	10Hz ~ 5kHz
6000	μ A	400 μ A	
60	mA	4 mA	
600	mA	40 mA	10Hz ~ 3kHz
6	A	0.6 A	
10	A	6 A	

Accuracy : $\pm(0.02\%rdg + 4dgt)$

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ELECTRICAL SPECIFICATIONS : KM 885

DC CURRENT

Range	Resolution	Accuracy	Burden Voltage
600.0 $\mu\text{A}^{(1)}$	0.1 μA	$\pm(0.4\%rdg + 4dgts)$	0.2mV / μA
6000 $\mu\text{A}^{(1)}$	1 μA	$\pm(0.4\%rdg + 2dgts)$	
60.00 mA ⁽¹⁾	0.01 mA	$\pm(0.4\%rdg + 4dgts)$	3mV / mA
600.0 mA ⁽¹⁾⁽²⁾	0.1 mA	$\pm(0.5\%rdg + 3dgts)$	
6.000 A	0.001 A	$\pm(0.6\%rdg + 4dgts)$	30mV / A
10.00 A ⁽³⁾	0.01 A	$\pm(0.8\%rdg + 2dgts)$	

¹⁾ μA / mA DC accuracies will be affected by extreme interior temperatures of the meter. for rated accuracies, allow 6 to 20 minutes cool down interval after measuring A-currents of 3 to 10A continuously.

²⁾ $\leq 400\text{mA}$ continuous : $>400\text{mA}$ for < 1.1 hours on per > 20 minutes off

³⁾ 10A continuous upto ambient 35°C ; < 15 mins on per >5 mins off @ 35°C - 50°C .
 $>10\text{A}$ to 20A for < 30 second on per >5 mins off.

INSULATION RESISTANCE

Test Voltage ⁽¹⁾	Range	Test Current	Accuracy
50 V	3.000M Ω , 30.00M Ω , 55.0M Ω	1mA @50k Ω	$\pm(1.5\%rdg + 5dgts)$
100 V	3.000M Ω , 30.00M Ω , 110.0M Ω	1mA @100k Ω	
250 V	3.000M Ω , 30.00M Ω , 275.0M Ω	1mA @250k Ω	
500 V	3.000M Ω , 30.00M Ω , 300.0M Ω , 550.0M Ω	1mA @500k Ω	
1000 V	3.000M Ω , 30.00M Ω , 300.0M Ω	1mA @1M Ω	$\pm(1.5\%rdg + 5dgts)$
	3000M Ω		$\pm(2.0\%rdg + 5dgts)$
	25.0G Ω		$\pm(10\%rdg + 5dgts)$

¹⁾ Actual output voltage : 100% ~ 120% of Test Voltage

Live Circuit Detector : Inhibit test and display voltage reading instead if terminal voltage $> 30\text{V}$ prior to initialization of test.

Display Voltage Accuracy : DCV : $1.5\% + 5d$, ACV : $3.0\% + 5d$ @50Hz ~ 60Hz

Specified measuring range is 0.020M Ω ...25.0G Ω for percentage operating uncertainly B(%)
 $\leq \pm 30\%$ per IEC/EN61557-2 requirements.

AC CURRENT

Range	Resolution	Accuracy	Burden Voltage
50Hz ~ 60Hz			
600.0 μA	0.1 μA	$\pm(1\%rdg + 3dgts)$	0.2mV / μA
6000 μA	1 μA		
60.00 mA	0.01 mA		3mV / mA
600.0 mA ⁽¹⁾	0.1 mA		
6.000 A	0.001 A		30mV / A
10.00 A ⁽²⁾	0.01 A		
40Hz ~ 3kHz			
600.0 μA	0.1 μA	$\pm(2\%rdg + 3dgts)$	0.2mV / μA
6000 μA	1 μA		
60.00 mA	0.01 mA		3mV / mA
600.0 mA ⁽¹⁾	0.1 mA		
6.000 A	0.001 A		30mV / A
10.00 A ⁽²⁾	0.01 A		
3kHz ~ 5kHz			
600.0 μA	0.1 μA	Unspecified	0.2mV / μA
6000 μA	1 μA		
60.00 mA	0.01 mA		3mV / mA
600.0 mA ⁽¹⁾	0.1 mA		
6.000 A	0.001 A		30mV / A
10.00 A ⁽²⁾	0.01 A		

¹⁾ $\leq 400\text{mA}$ continuous : $>400\text{mA}$ for < 1.1 hours on per > 20 minutes off

²⁾ 10A continuous upto ambient 35°C ; < 15 mins on per >5 mins off @ 35°C - 50°C .

$>10\text{A}$ to 20A for < 30 second on per >5 mins off.

RECORD MODE

This mode records standard measurement Max & Min readings on most functions, Manual or Auto-ranging where available.

Nominal response & accuracy : Same as standard measurement.

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KUSAM-MECO®

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