

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 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.



Preliminary Data



SAFETY :

- * Safety : Double insulation 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 & the corresponding CAN / CSA-C22.2 regulations to Measurement CAT III 1000V AC & DC & 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 .
- * 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, Bkp60 banana plug type-K thermocouple & User manual.

OPTIONAL ACCESSORIES : BKB32 banana plug to type-K socket plug adaptor, Magnetic hanger, & BMP-86x Carrying Case.

All Specifications are subject to change without prior notice

ELECTRICAL SPECIFICATIONS : KM 887

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	$\pm(0.2\%rdg + 3dgts)$
600.0 mV	0.1 mV	$\pm(0.1\%rdg + 2dgts)$
6.000 V	1 mV	
60.00 V	10 mV	
600.0 V	100 mV	$\pm(0.2\%rdg + 3dgts)$
1000 V	1 V	

Input Impedance : 10M Ω , 110pF nominal

VFD AC VOLTAGE

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

Input impedance : 10M Ω , 110pF nominal.

¹⁾ Unspecified for fundamental frequency > 440Hz

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

RESISTANCE

Range ¹⁾	Resolution	Accuracy
60.00 $\Omega^{2)}$	0.01 m Ω	$\pm(0.5\%rdg + 5dgts)$
600.0 Ω	100 m Ω	$\pm(0.2rdg + 3dgts)$
6.000k Ω	1 Ω	$\pm(0.2\%rdg + 2dgts)$
60.00k Ω	10 Ω	
600.0k Ω	100 Ω	$\pm(0.3\%rdg + 2dgts)$
6.000M $\Omega^{3)}$	1 k Ω	$\pm(1\%rdg + 3dgts)$
60.00M $\Omega^{4)}$	10 k Ω	$\pm(1.5\%rdg + 6dgts)^{5)6)}$

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.

DIODE TESTER

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

Test Current : 0.4mA typically

Open Circuit Voltage : < 2.8VDC typically

AC VOLTAGE

Range	Resolution	Accuracy
50Hz ~ 60Hz		
60.00 mV	0.01 mV	$\pm(0.7\%rdg + 4dgts)$
600.0 mV	0.1 mV	
6.000 V	1 mV	
60.00 V	10 mV	
600.0 V	100 mV	
1000 V	1 V	
40Hz ~ 1kHz		
60.00 mV	0.01 mV	$\pm(1.3\%rdg + 4dgts)$
600.0 mV	0.1 mV	
6.000 V	1 mV	
60.00 V	10 mV	
600.0 V	100 mV	
1000 V	1 V	$\pm(2\%rdg + 4dgts)$
1kHz ~ 5kHz		
60.00 mV	0.01 mV	$\pm(2\%rdg + 4dgts)^{1)}$
600.0 mV	0.1 mV	
6.000 V	1 mV	
60.00 V	10 mV	
600.0 V	100 mV	
1000 V	1 V	Unspecified
5kHz ~ 20kHz²⁾		
60.00 mV	0.01 mV	Unspecified
600.0 mV	0.1 mV	$\pm(2\%rdg + 20dgts)$
6.000 V	1 mV	
60.00 V	10 mV	
600.0 V	100 mV	Unspecified
1000 V	1 V	Unspecified

Input Impedance : 10M Ω , 110pF nominal

¹⁾ Add 20d @ >80% of range

²⁾ Unspecified @ <5% of range

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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ELECTRICAL SPECIFICATIONS : KM 887

DC CURRENT

Range	Resolution	Accuracy	Burden Voltage
600.0 $\mu\text{A}^{(1)}$	0.1 μA	$\pm(0.2\%\text{rdg} + 4\text{dgts})$	0.2mV / μA
6000 $\mu\text{A}^{(1)}$	1 μA	$\pm(0.2\%\text{rdg} + 2\text{dgts})$	
60.00 mA ⁽¹⁾	0.01 mA	$\pm(0.2\%\text{rdg} + 4\text{dgts})$	3mV / mA
600.0 mA ^(1,2)	0.1 mA	$\pm(0.3\%\text{rdg} + 3\text{dgts})$	
6.000 A	0.001 A	$\pm(0.5\%\text{rdg} + 4\text{dgts})$	30mV / A
10.00 A ⁽³⁾	0.01 A	$\pm(0.7\%\text{rdg} + 2\text{dgts})$	

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⁾ $\leq 400\text{mA continuous}$: >400mA 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. >10A 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	$\pm(1.5\%\text{rdg} + 5\text{dgts})$
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	$\pm(1.5\%\text{rdg} + 5\text{dgts})$
	3000M Ω		$\pm(2.0\%\text{rdg} + 5\text{dgts})$
	25.0G Ω		$\pm(10\%\text{rdg} + 5\text{dgts})$

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

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

CAPACITANCE

Range	Resolution	Accuracy ¹⁾
2.000 $\mu\text{F}^{(2)}$	0.001 μF	$\pm(1.5\%\text{rdg} + 5\text{dgts})$
20.00 μF	0.01 μF	
200.0 μF	0.1 μF	
2000 μF	1 μF	
20.00 mF	0.01 mF	$\pm(5\%\text{rdg} + 5\text{dgts})$

¹⁾ Accuracies with film capacitor or better

²⁾ Specified from 0.200 μF

TEMPERATURE

Range	Accuracy ¹⁾²⁾
-40.0°C to 0.0°C	1% + 2°C
0.0°C to 50.0°C	2.2°C
50.0°C to 537.0°C	1% + 2°C
-40.0°F to 32.0°F	1% + 3.6°F
32.0°F to 122.0°F	4°F
122.0°F to 999.0°F	1% + 3.6°F

¹⁾ Accuracies assume meter interior has the same temperature of the ambient (isothermal stage) for a correct junction voltage compensation. Allow enough time to reach the 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.

AC CURRENT

Range	Resolution	Accuracy	Burden Voltage	
50Hz ~ 60Hz				
600.0 μA	0.1 μA	$\pm(1\%\text{rdg} + 3\text{dgts})$	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	$\pm(2\%\text{rdg} + 3\text{dgts})$	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	$\pm(2\%\text{rdg} + 5\text{dgts})$	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		Unspecified	30mV / A
10.00 A ⁽²⁾	0.01 A			

¹⁾ $\leq 400\text{mA continuous}$: >400mA 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. >10A to 20A for < 30 second on per >5 mins off.

~ 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 μA	40 μA	10Hz ~ 5kHz
6000 μA	400 μA	
60 mA	4 mA	
600 mA	40 mA	
6 A	0.6 A	10Hz ~ 3kHz
10 A	6 A	

Accuracy : $\pm(0.02\%\text{rdg} + 4\text{dgts})$

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