



# 3-5/6 DIGIT DIGITAL TRMS MULTIMETER MOBILE-LOGGER WITH PC INTERFACE

On Screen Date- logging capability 43000 points display with selectable sampling interval 0.05, 1, 20, 40, 60, 120, 240, & 480 seconds.

## 15 FUNCTIONS 41 RANGES

Model KM 515

CAT III 1KV  
CAT IV 600V  
UL Approved

### SPECIAL FEATURES :

- Data Logging + On screen Data item review
- 52 Segment Bar Graph
- Splash Proof construction
- Auto Leads Resistance Calibration
- Sleep & Log mode to largely extend battery life.
- Logged Max's & Min's turning points on screen recall.

### SAFETY :

- Double insulation per EN61010-1, UL3111-1, CSA C22.2 No.1010-1, & IEC1010-1 CAT III for 1000V DC & AC, and CAT IV for 600V DC & AC
- **Transient Protection** : 8 kV (1.2/50µs surge)
- **Terminals (to COM) Measurement Category** :  
V : Category III 1000V AC & DC & CAT IV 600V AC & DC  
A/mA : Category III & CAT IV 500V AC & 300V DC
- **Overload Protection** :  
A & mA : 0.63A/500V, IR 200kA , F Fuse  
A : 12.5A/500V, IR 20kA, F Fuse  
V : 1050Vrms, 1450Vpeak  
mV, & Others : 600V DC / V AC rms
- A input 240V HBC fuse protected
- 600V input protection
- Fire Retarded Case & Protective Holster
- EMC meets EN55022/A1 class B, EN50082-1, IEC801-2, & IEC801-3
- LVD meets EN61010-1 CAT II 1kV AC / DC & CAT III 600V AC / DC

### FEATURES :

- Basic Accuracy 0.08%
- RS232 PC interface
- Fully Auto-Ranging
- Fast Measurement 5/Sec
- Backlight Display & Data Hold
- Low Battery Indication
- Diode & Continuity Test
- Auto power off

### GENERAL SPECIFICATIONS :

- \* **Sensing** : True RMS  
Frequency Bandwidth 20kHz (V) & 1kHz (A)
- \* **Display** : 3-4/5 digits 5000 counts LCD display
- \* **Update Rate** :  
Digital Data : 5 per second nominal  
52 Segments Bargraph : 60per second nominal
- \* **Low Battery** : Below approx. 7V
- \* **Operating Temperature** : 0°C to 45°C, 0-80% R.H.;  
35°C to 50°C, 0-70% R.H.
- \* **Storage Temperature** : -20°C to 60°C, 80% R.H.  
(With battery removed)
- \* **Temperature Coefficient** : nominal 0.15 x (specified accuracy)/°C @ (0°C - 18°C or 28°C - 50°C); or otherwise specified.
- \* **Apo Timing** : Idle for 17 minute
- \* **Power Consumption** : 2.7mA typical
- \* **Power Supply** : Single alkaline 9V battery
- \* **Dimension** : 186(L) X 87(W) X 35.5(H) mm  
198(L) X 97(W) X 55(H)mm with holster
- \* **Weight** : Approx.340 gm;  
Approx. 430gm with Holster



Software CD



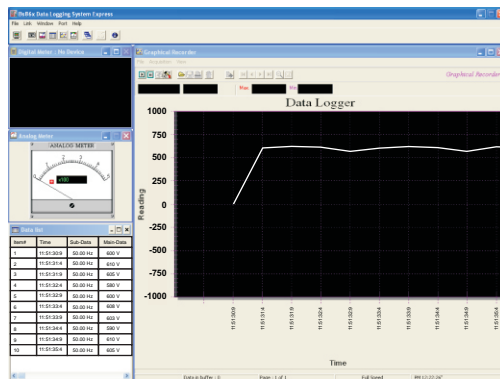
Software Cable

### ACCESSORIES :

Test leads (pair), Holster, Battery installed, User's Manual, Banana plug K-Type Thermocouple

### OPTIONAL ACCESSORIES :

PC interface Kit, (RS232 optical adapter cable+ software CD), Bkb32 banana plugs to K-Type socket plug Adapter.  
Current Clamp CA300,  
Current Clamp Adaptor CA500, CA1000, CA2000,  
High Voltage Probe PD-28.



Software

## ELECTRICAL SPECIFICATIONS : KM 515

Accuracy is  $\pm$  (% reading digits + number of digits ) or otherwise specified, at 23°C  $\pm$  5°C & less than 75% R.H. True RMS ACV & ACV accuracies are specified from 5% to 100% of range or otherwise specified, Crest factor < 3:1 at full scale & <6:1 at half scale, & with frequency component within the specified frequency bandwidth.

### DC VOLTAGE

Range	Resolution	Accuracy
50.00 mV	0.01 mV	$\pm(0.12\%rdg + 2dpts)$
500.0 mV	0.1 mV	$\pm(0.06\%rdg + 2dpts)$
5.000 V	0.001 V	$\pm(0.08\%rdg + 2dpts)$
50.00 V	0.01 V	
500.0 V	0.1 V	
1000 V	1 V	

NMRR : > 60dB @ 50/60Hz

CMRR : > 120dB @ DC, 50/60Hz, Rs = 1k

Input Impedance : 10M , 16pF nominal (44pF nominal for 50mV & 500mV ranges)

### AC VOLTAGE

Range	Resolution	Accuracy
<b>50Hz -- 60Hz</b>		
50.00 mV	0.01 mV	$\pm(0.5\%rdg + 3dpts)$
500.0 mV	0.1 mV	
5.000 V	0.001 V	
50.00 V	0.01 V	
500.0 V	0.1 V	
1000 V	1 V	
<b>40Hz -- 500Hz</b>		
50.00 mV	0.01 mV	$\pm(0.8\%rdg + 3dpts)$
500.0 mV	0.1 mV	$\pm(1.0\%rdg + 4dpts)$
5.000 V	0.001 V	
50.00 V	0.01 V	
500.0 V	0.1 V	
1000 V	1 V	$\pm(1.2\%rdg + 4dpts)$
<b>UP to 20kHz</b>		
50.00 mV	0.01 mV	0.5dB*
500.0 mV	0.1 mV	
5.000 V	0.001 V	3dB*
50.00 V	0.01 V	
500.0 V	0.1 V	
1000 V	1 V	Unspec'd

CMRR : >60dB @ DC to 60Hz, Rs = 1k

Input Impedance : 10M , 16pF nominal (44pF nominal for 50mV & 500mV ranges)

### CAPACITANCE

Range	Resolution	Accuracy
50.00 nF	0.01 nF	$\pm(0.8\%rdg + 3dpts)$
500.0 nF	0.1 nF	
5.000 $\mu$ F	0.001 $\mu$ F	$\pm(1.0\%rdg + 3dpts)$
50.00 $\mu$ F	0.01 $\mu$ F	$\pm(2.0\%rdg + 3dpts)$
500.0 $\mu$ F	0.1 $\mu$ F	$\pm(3.5\%rdg + 5dpts)$
9999 $\mu$ F	1 $\mu$ F	$\pm(5.0\%rdg + 5dpts)$

\* Accuracies with film capacitor or better

### AUDIBLE CONTINUITY TESTER

Audible Threshold	Between 20 & 200 .
Fast response time	<100 s

### DC CURRENT

Range	Resolution	Accuracy	Burden Voltage
500.0 A	0.1 A	$\pm(0.2\%rdg + 4dpts)$	0.15mV/ A
5000 A	1 A		0.15mV/ A
50.00 mA	0.01 mA		3.3mV/mA
500.0 mA	0.1 mA		3.3mV/mA
5.000 A	0.001 A		0.03V/A
10.00 A*	0.01 A*		0.03V/A

\*10A continuous, 20A for 30 second max with 5 minutes cool down interval.

### AC CURRENT

Range	Resolution	Accuracy	Burden Voltage
<b>50Hz -- 60Hz</b>			
500.0 A	0.1 A	$\pm(0.6\%rdg + 3dpts)$	0.15mV/ A
5000 A	1 A		0.15mV/ A
50.00 mA	0.01 mA		3.3mV/mA
500.0 mA	0.1 mA	$\pm(1.0\%rdg + 3dpts)$	3.3mV/mA
5.000 A	0.001 A	$\pm(0.6\%rdg + 3dpts)$	0.03V/A
10.00 A*	0.01 A*		0.03V/A
<b>40Hz -- 1kHz</b>			
500.0 A	0.1 A	$\pm(0.8\%rdg + 4dpts)$	0.15mV/ A
5000 A	1 A		0.15mV/ A
50.00 mA	0.01 mA		3.3mV/mA
500.0 mA	0.1 mA	$\pm(1.0\%rdg + 4dpts)$	3.3mV/mA
5.000 A	0.001 A	$\pm(0.8\%rdg + 4dpts)$	0.03V/A
10.00 A*	0.01 A*		0.03V/A

\*10A continuous, 20A for 30 second max with 5 minutes cool down interval.

### FREQUENCY

Function	Sensitivity (sine Rms)	Range
mV	300 mV	5Hz - 125kHz
5 V	2 V	5Hz - 125kHz
50 V	20 V	5Hz - 20kHz
500 V	80 V	5Hz - 1kHz
1000 V	300 V	5Hz - 1kHz
, Cx, diode	300 mV	5Hz - 125kHz
A, mA, A	10% F.S.	5Hz - 125kHz

Accuracy : 0.01% rdg + 2 dpts

### OHMS

Range	Resolution	Accuracy
50.00	0.01	$\pm(0.2\%rdg + 6dpts)$
500.0	0.1	$\pm(0.1\%rdg + 3dpts)$
5.000 k	0.001 k	$\pm(0.1\%rdg + 2dpts)$
50.00 k	0.01 k	
500.0 k	0.1 k	
5.000 M	0.001 M	$\pm(0.4\%rdg + 3dpts)$
50.00 M	0.01 M	$\pm(1.5\%rdg + 5dpts)$

Open Circuit Voltage : <1.3VDC  
(<3VDC for 50 & 500 ranges)

### TEMPERATURE(K-Type Thermocouple)

Range	Accuracy
-50°C TO 1000°C	$\pm(0.3\%rdg + 3dpts)$

K-Type thermocouple range & accuracy not included  
Supplied Thermocouple suitable for measurement  
upto 250°C

### DIODE TESTER

Range	Resolution	Accuracy
2.000V	0.001 V	$\pm(1\%rdg + 1dpt)$

Test Current (Typical) : 0.8mA  
Open Circuit Voltage : <3.5VDC

All specifications are subject to change without prior notice.