



3-5/6 DIGIT DIGITAL MULTIMETER WITH NON-CONTACT EF-DETECTION

MODEL KM 655 - 15 FUNCTIONS 38 RANGES
MODEL KM 656 (TRMS) - 16 FUNCTIONS 38 RANGES

Model - KM 655 / KM 656

SPECIAL FEATURES :

- Fully Auto-Ranging
- Max / Min Recording Mode
- Low Battery Indication
- Non-Contact EF-Detection (NCV)
- Probe-Contact EF-Detection for more precise Indication of live.
- Line level Frequency 40Hz to 60KHz
- Fast Measurements, 5/Sec
- Intelligent Auto Power Off & Data HOLD
- Beep-Jack Input warning against improper A-terminal plug in
- Fast Audible continuity < 100 S
- Diode Tester

GENERAL SPECIFICATIONS :

- * Sensing : Average sensing (KM 655); TRMS sensing (KM 656)
- * Basic Accuracy : 0.5%
- * Display : 3-5/6 Digits 6000 Counts Large Easy to read LCD display
- * Update Rate : 5 per second nominal
- * Operating Temperature : -10°C-50°C
- * Relative Humidity : Maximum relative humidity 80% for temperature upto 31°C decreasing linearly to 50% R.H. at 50°C
- * Altitude : Operating below 2000m
- * Storage Temperature : -20°C ~ 60°C; < 80% R.H. (With Battery removed)
- * Temperature Coefficient : Nominal 0.15 x (specified accuracy) / °C @ (-10°C-18°C or 28°C-50°C), or otherwise specified.
- * Low Battery indication : Below approx. 5.5V.
- * Power Consumption (typical) : 3mA
- * APO Consumption : 20 A typical except 50 A for A function
- * APO Timing : IDLE approx. > 30 minutes
- * Power Supply : Standard 9V battery.
- * Dimension : 173(L) x 83(W) x 48.5(H)mm
- * Weight : Approx. 300gm.

SAFETY :

- **Safety** : The meter is protected, against the users, by double insulation per EN61010-1, IEC61010-1, 2nd Ed., UL61010-1 2nd Ed. & CAN/CSA C22.2 No.61010-1 to "CAT III 1000V & CAT IV 600V".

Terminals (to COM) ratings:

- V : Category III 1000 Volts AC & DC, and CAT IV 600 Volts AC & DC
- A : CAT IV 600V AC & 500V DC

Over Load Protection:

- V : 1050V rms, 1450V peak.
- A : 15A/600V, IR 100KA, F fuse

- **Transient protection** : 8KV(1.2/50 S) lightning surge.
- **Pollution Degree** : 2
- **E.M.C.** : Meets EN61326(1997, 1998/A1), EN61000-4-2(1995) & EN61000-4-3(1996)
In an RF Field of 3V/m :
A) Capacitance function is not specified
B) Other function ranges : Total accuracy = Specified accuracy + 45d
C) Performance above 3V/m is not specified.
- **Rugged Fire retarded double injected casing**
- **600V (Input protection in all Ranges.)**
- **Battery access door with probe holders**
- **LVD meets EN61010-1 CAT III 1KV & CAT IV 600V.**



ACCESSORIES :

Test lead pair, Battery installed, Manual & Carrying case.

OPTIONAL ACCESSORIES :

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

All Specifications are subject to change without prior notice

Accuracy is give as \pm (% Reading Digits + Number Of Digits) or otherwise specified @ 23°C \pm 5°C & less than 75% R.H.

DC VOLTAGE

Range	Resolution	Accuracy
600.0 mV	100 V	$\pm(0.7\%rdg + 2dgt)$
6.000 V	1 mV	$\pm(0.5\%rdg + 3dgt)$
60.00 V	1 mV	$\pm(0.5\%rdg + 3dgt)$
600.0 V	100 mV	$\pm(0.7\%rdg + 2dgt)$
1000 V	1 V	$\pm(1.2\%rdg + 6dgt)$

NMRR : > 30dB @ 50Hz / 60Hz

CMRR : > 90dB @ DC, 50Hz / 60Hz; Rs=1k

Input Impedance : Nominal 10 M , 90pF(1000M , 90pF For 600.0mV Range)

AC VOLTAGE

Range	Resolution	Accuracy
50Hz ~ 500Hz		
600.0 mV	100 V	$\pm(1.2\%rdg + 3dgt)$
6.000 V	1 mV	$\pm(1.0\%rdg + 3dgt)$
60.00 V	1 mV	$\pm(1.0\%rdg + 3dgt)$
600.0 V	100 mV	$\pm(1.0\%rdg + 3dgt)$
1000 V	1 V	$\pm(2.5\%rdg + 6dgt)$

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

Input Impedance : Nominal 10 M , 90pF for all ranges.

DC CURRENT

Range	Resolution	Accuracy	Burden Voltage
6.000 A	1 mA	$\pm(0.9\%rdg + 3dgt)$	6.9mV/A
10.00 A*	10 mA	$\pm(0.9\%rdg + 3dgt)$	6.9mV/A

*8A Continuous : 10A for 5 minutes max with 10 minutes cool down interval

AC CURRENT

Range	Resolution	Accuracy	Burden Voltage
50Hz ~ 500Hz			
6.000 A	1 mA	$\pm(1.2\%rdg + 3dgt)$	3.3mV/A
10.00 A*	10 mA	$\pm(1.4\%rdg + 3dgt)$	3.3mV/A

* 8A Continuous : 10A for 5 minutes max with 10 minutes cool down interval

CONTINUITY BEEPER

Range	Accuracy
600.0	$\pm(0.8\%rdg + 4dgt)$

Continuity Beeper Response : < 100 S

Open Circuit Voltage : 0.4 VDC typical

Audible Threshold : Between 10 and 150

DIODE TESTER

Test Current	Open Circuit Voltage
0.4mA typical	<1.6 VDC typical

Accuracy : $\pm(1.9\%rdg + 3dgt)$

FREQUENCY

Function	Sensitivity (sine Rms)	Range
600.0 mVac	400 mV	40 ~ 500Hz
6.000 Vac	4 V	40 ~ 60kHz
60.00 Vac	6 V	40 ~ 60kHz
600.0 Vac	60 V	40 ~ 60kHz
1000 Vac	600 V	40 ~ 100Hz
600.0 mVdc	400 mV	40 ~ 500Hz
6.000 Vdc	4 V	40 ~ 30kHz
60.00 Vdc	6 V	40 ~ 30kHz
600.0 Vdc	60 V	40 ~ 30kHz
1000 Vdc	600 V	40 ~ 100Hz
6.000 A	5 A	40 ~ 6kHz
10.00 A	5 A	40 ~ 6kHz

Accuracy : $\pm(0.05\% + 1dgt)$

NON-CONTACT EF-DETECTION

Typical Voltage	Bar Graph Indication
20V To 60V	-
40V To 80V	--
60V To 110V	---
80V To 150V	----
Above 120V	-----

Indication : Bar Graph Segment & Audible Beep Tones

Proportional To The Field Strength

Detection Frequency : 50/60Hz

Detection Antenna : Top End Of The Meter

Probe-contact Ef-detection : For More Precise Indication Of Live Wires, Such As Distinguishing Between Live And Ground Connections, Use The Red (+) Test Probe For Direct Contact Measurements.

CAPACITANCE

Range	Resolution	Accuracy
600.0 nF ¹⁾	100 pF	$\pm(1.9\%rdg + 2dgt)$
6.000 F	1 nF	$\pm(1.6\%rdg + 4dgt)$
60.00 F	10 nF	
600.0 F	100 nF	
2000 F	1 F	$\pm(1.6\%rdg + 4dgt)$

Accuracies With Film Capacitor Or Better.

¹⁾ Accuracy Below 60nf Is Not Specified.

RESISTANCE

Range	Resolution	Accuracy
600.0	0.1	$\pm(0.8\%rdg + 4dgt)$
6.000 K	1	$\pm(0.7\%rdg + 2dgt)$
60.00 K	10	$\pm(0.7\%rdg + 2dgt)$
600.0 K	100	$\pm(0.7\%rdg + 2dgt)$
6.000 M	1 k	$\pm(0.9\%rdg + 4dgt)$
60.00 M	10 k	$\pm(2.0\%rdg + 4dgt)$

Open Circuit Voltage : 0.45VDC typical

All specifications are subject to change without prior notice.