KUSAM-MECO®

An ISO 9001:2015 Company

# 4½ DIGIT TRMS BENCH-TYPE DMM
# MODEL- KM 8045

THINK SAFETY
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## SPECIAL FEATURES :

- 4½ Digit high performance Bench-type DMM, with backlight display.
- It can be used to measure DCV, ACV, DCA, ACA, Resistance, Capacitance, Hz, hFE, Diodes and Continuity.
- The max. Voltage measurement is up to 1000V DC or AC peak value, resolution is 10μV, and current measurement is up to 20A, it also has the function of polarity auto-change, back light display and directly reading.
- For AC measuring, it is performed by high accuracy TRUE RMS, can test the bandwidth of the frequency and the TRUE RMS of any waveform can be accurately measured.

## ACCESSORIES :

Test Leads, Operating Manual, Power cord.

## GENERAL SPECIFICATIONS :

- 4½ digit large LCD display with backlight (displaying range : 75 x 40mm), max reading : 19999.
- Voltage measurement upto 1000V DC and 1000V AC.
- DC, AC current upto 20A.
- ACV frequency response : 50kHz.
- Frequency, Resistance, Capacitance measurement, Triode, Diode test and Continuity test.
- Manual Range
- Overload protection : 250V rms.
- Operating Temperature : 0°C ~ 40°C, <75% R.H.
- Power supply : 220V / 110V AC
- Dimension : 260(L) x 220(W) x 82(H)mm
- Weight : Approx. 1kg.

## 10 FUNCTIONS 36 RANGES




## SAFETY :

KM 8045 adopts double integral A/D converter as its core.
KM 8045 designed according to IEC1010 standard.

## ELECTRICAL SPECIFICATIONS : KM 8045

Accuracy = ± (reading % + the lowest effective digit) preheating time : 30min.Temperature for accuracy (23 ± 5)°C, R.H.<75%, one year warranted from the production date

### AC VOLTAGE (TRUE RMS)

| Range | Input frequency | Resolution | Accuracy |
|---|---|---|---|
| 200 mV | 40Hz ~ 1kHz | 10 μV | ± (0.7% rdg + 30 dgts) |
| | 1kHz ~ 10kHz | | ± (2% rdg + 30 dgts) |
| | 10kHz ~ 20kHz | | ± (3% rdg + 60 dgts) |
| | 20kHz ~ 50kHz | | ± (10% rdg + 250 dgts) |
| 2 V | 40Hz ~ 1kHz | 100 μV | ± (0.5% rdg + 30 dgts) |
| | 1kHz ~ 10kHz | | ± (2% rdg + 30 dgts) |
| | 10kHz ~ 20kHz | | ± (5% rdg + 60 dgts) |
| 20 V | 40Hz ~ 1kHz | 1 mV | ± (0.5% rdg + 30 dgts) |
| | 1kHz ~ 10kHz | | ± (2% rdg + 30 dgts) |
| | 10kHz ~ 20kHz | | ± (3% rdg + 60 dgts) |
| 200 V | 40Hz ~ 1kHz | 10 mV | ± (0.5% rdg + 30 dgts) |
| | 1kHz ~ 5kHz | | ± (2% rdg + 30 dgts) |
| 1000 V | 40Hz ~ 200Hz | 100 mV | ± (0.8% rdg + 10 dgts) |
| | 200Hz ~ 400Hz | | ± (1.2% rdg + 80 dgts) |

**Input resistance :** 2MΩ for all range.
**Overload protection : 200mV range :** 250V DC or AC peak value.
**Other range :** 1000V DC or AC peak value

### DC CURRENT

| Range | Accuracy | Resolution | Load Voltage |
|---|---|---|---|
| 200 μA | ±(0.35%rdg + 10dgt) | 0.01 μA | 1 mV/μA |
| 2 mA | | 0.1 μA | 101 mV/mA |
| 20 mA | | 1 μA | 11 mV/mA |
| 200 mA | | 10 μA | 1.5 mV/mA |
| 2 A | ±(0.8%rdg +10dgt) | 100 μA | 275 mV/A |
| 20 A | | 1 mA | 42 mV/A |

**Max. Input current :** 20A (within 15s)
**Overload Protection :** 2A / 250V fuse, 20A / 250V fuse

### DC VOLTAGE

| Range | Resolution | Accuracy |
|---|---|---|
| 200 mV | 10 μV | ±(0.05%rdg + 3dgt) |
| 2 V | 100 μV | |
| 20 V | 1 mV | |
| 200 V | 10 mV | |
| 1000 V | 100 mV | ±(0.1%rdg + 5dgt) |

**Input Impedance :** 10MΩ for all ranges
**Overload Protection :** 200mV range : 250V DC or AC peak value.
**Other range :** 1000V DC or AC peak value

### RESISTANCE

| Range | Resolution | Accuracy |
|---|---|---|
| 200 Ω | 0.01 Ω | ±(0.15%rdg + 20dgts) |
| 2 kΩ | 0.1 Ω | ±(0.15%rdg + 5dgts) |
| 20 kΩ | 1 Ω | |
| 200 kΩ | 10 Ω | |
| 2 MΩ | 100 Ω | |
| 20 MΩ | 1 kΩ | ±(0.5%rdg + 5dgts) |

**Open Voltage :** less than 1V
**Overload Protection :** 250V DC or AC peak value
**Note :** At range 200Ω, short-circuit the test leads to measure the wire resistance & the subtracts it from the real measurement.

### hFE MEASURING

| Range | Displaying | Test Condition |
|---|---|---|
| hFE NPN or PNP | 0 ~ 1000.0 | Basic current is approx. 10μA, Vce is approx. 3V |

**All Specifications are subject to change without prior notice**

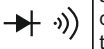
# ELECTRICAL SPECIFICATIONS : KM 8045

**AC CURRENT (TRUE RMS)**

| Range | Input Frequency | Accuracy | Resolution | Load Voltage |
|---|---|---|---|---|
| 20 mA | 40Hz ~ 400Hz | ±(0.8%rdg + 80dgts) | 1 µA | 11 mV/A |
| 200 mA | | | 10 µA | 1.5 mV/A |
| 2 A | | | 100 µA | 275 mV/A |
| 20 A | | ±(1.0%rdg + 50dgts) | 1 mA | 42 mV/A |

**Max. Input voltage drop :** 200mV
**Max. Input current :** 20A (within 15s)
**Overload protection :** 2A / 275V fused, 13A / 275V fused

**DIODE & CONTINUITY TEST**

| Range | Description |
|---|---|
|  | The measuring value is the approx. Value for forward voltage drop. When the resistance under tested is less than 50Ω ± 20Ω, buzzer sounds and display the approx. Value. The open voltage is approx. 3V. |

**Test Condition :** Forward DCA is approx. 1mA, backward DCV is less than 3V
**Overload Protection :** 250V DC and AC peak value.

**CAPACITANCE**

| Range | Accuracy | Resolution |
|---|---|---|
| 0nF ~ 10nF | ±(3.5%rdg + 20dgts) | 1 pF |
| 10nF ~ 100nF | | 10 pF |
| 100nF ~ 1µF | | 100 pF |
| 1µF ~ 10µF | | 1 nF |
| 10µF ~ 100µF | ±(5%rdg + 30dgts) | 10 nF |
| 100µF ~ 1mF | | 100 nF |
| 1mF ~ 2mF | | 1 µF |

**Measuring Range of Accuracy :**10%~100%; Large
**Capacitance response time** : ≥1mF about 8s;
Measured error is not including lead distributed capacitance

**FREQUENCY**

| Range | Accuracy | Resolution |
|---|---|---|
| 20Hz ~ 200kHz | ±(1.0%rdg + 3dgts) | 0.01Hz ~ 0.1kHz |
| 200kHz ~ 2MHz | | 0.01kHz ~ 0.001MHz |
| 2MHz ~ 20MHz | | 0.001MHz ~ 0.01MHz |

**Input Sensitivity :** 1.5V RMS ≤10V RMS, the reading value is zero for the signal below 3Hz
**Overload Protection :** 250V DC or AC peak value (within 15s)

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