

Safe    Reliable    High Performance



## New M63

Industrial Grade TRMS Multimeter

M63 is specially Designed Industrial Grade Trms Digital Multimeter in our Research Laboratory & manufactured under Stringent Manufacturing Process for a wide range of applications.

M63 is a versatile Industrial grade multimeter with CE, CAT IV 600 V safety rating, complies to 61010-1-2010 safety standards and it is IP 54 protected. It is built to work in the high energy intensive and toughest environment without compromising the performance.

## New M63

Industrial Grade  
TRMS Multimeter

### FEATURES:

- 6000 Count LCD display with pleasant white backlit.
- AC/ DC current range upto 20A.
- Resistance, Capacitance, Diode and Continuity measurement facility.
- Selectable Frequency & Duty Cycle measurement.
- Auto ranging, Trms AC Voltage and Current measurement.
- 60 position analog bar graph for trend indication.
- Highly linear readings.
- SELECT, RANGE, HOLD/LIGHT, REL, Hz/DUTY, MAX/MIN functions incorporated.
- CE & IEC 61010-1 CAT IV (600V) for enhanced safety in outdoor use.
- IP 54 Ingress protection.
- Robust casing.



### ACCURACY :

- Accuracy is valid from 10% of range to 95% of the range.
- Accuracy is specified as  $\pm$  % of reading + digits and is valid at  $25 \pm 3^{\circ}\text{C}$ ,  $\leq 55\%$  RH Humidity.
- It is recommended that calibration equipment used to verify the accuracy of the instrument should be 10 times more accurate.

# TECHNICAL SPECIFICATION

## DC VOLTAGE

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
600mV	0.1mV	600.0mV	$\pm(0.5\%+3)$	1050V DC/AC rms
6V	1mV	6.000V	$\pm(0.5\%+3)$	
60V	10mV	60.00V	$\pm(0.5\%+3)$	
600V	100mV	600.0 V	$\pm(0.5\%+3)$	
1000V	1V	1000V	$\pm(0.8\%+3)$	

**Note:** Input Impedance 10M $\Omega$  approx.

## DC 'mV' RANGE

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
60mV	0.01mV	60.00mV	$\pm(0.5\%+3)$	1000V DC/AC rms
600mV	0.1mV	600.0mV	$\pm(0.5\%+3)$	

Input Impedance :  $\geq 1000M\Omega$  approx

## DC CURRENT RANGE

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
60mA	0.01mA	60.00mA	$\pm(1\%+5)$	0.75A/0.8A/ 500V DC/AC fuse protection
600mA	0.1mA	600.0mA	$\pm(1\%+5)$	
6A	1mA	6.000A	$\pm(1\%+5)$	20A/500V DC/AC fuse protection
20A	10mA	20.00A	$\pm(1.2\%+5)$	

**Note:**

- 10A for continuous.
- > 10A for 20 sec. after 15 min. cool down interval

## RESISTANCE RANGE

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
600 $\Omega$	0.1 $\Omega$	600.0 $\Omega$	$\pm(0.5\%+3)$	1000V DC/AC rms
6 K $\Omega$	1 $\Omega$	6.000 K $\Omega$	$\pm(0.5\%+3)$	
60 K $\Omega$	10 $\Omega$	60.00 K $\Omega$	$\pm(0.5\%+3)$	
600 K $\Omega$	100 $\Omega$	600.0 K $\Omega$	$\pm(0.5\%+3)$	
6 M $\Omega$	1 K $\Omega$	6.000 M $\Omega$	$\pm(1\%+5)$	
60 M $\Omega$	10 K $\Omega$	60.00 M $\Omega$	$\pm(3\%+5)$	

**Note :**

- Open Circuit Voltage on 600 $\Omega$ -6M $\Omega$  ranges is 0.62V DC approx.
- Open Circuit Voltage on 60M $\Omega$  range is 0.31V DC approx.

## DIODE TEST

Range	Resolution	Open Circuit Voltage	Test Current
6V	1mV	$\leq 2.85VDC$	$\leq 1mA$ approx.

## FREQUENCY RANGES (Auto Ranging Only)

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
10Hz	0.001Hz	9.999Hz	$\pm(0.1\%+3)$	1000V DC/AC rms
100Hz	0.01Hz	99.99Hz	$\pm(0.1\%+3)$	
1KHz	0.1Hz	999.9Hz	$\pm(0.1\%+3)$	
10KHz	1Hz	9.999KHz	$\pm(0.1\%+3)$	
100KHz	10Hz	99.99KHz	$\pm(0.1\%+3)$	
1000KHz	100Hz	999.9KHz	$\pm(0.1\%+3)$	
10MHz	1KHz	9.999MHz	$\pm(0.1\%+3)$	

## AC VOLTAGE (50Hz-500Hz) Trms.

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
6V	1mV	6.000V	$\pm(1\%+5)$	1050V DC/AC rms
60V	10mV	60.00V	$\pm(1\%+5)$	
600V	100mV	600.0V	$\pm(1\%+5)$	
750V	1V	750V	$\pm(1.2\%+8)$	

**Note :**

- Input impedance : 10 M $\Omega$  approx. shunted by 60pF approx.

## AC 'mV' RANGE (50Hz-1KHz) Trms

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
60mV	0.01mV	60.00mV	$\pm(1\%+5)$	1000V DC/AC rms
600mV	0.1mV	600.0mV	$\pm(1\%+5)$	

Input Impedance :  $\geq 1000M\Omega$  approx

## AC CURRENT RANGE (50Hz-500Hz) Trms

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
60mA	0.01mA	60.00mA	$\pm(1.2\%+5)$	0.75A/0.8A/ 500V DC/AC fuse protection
600mA	0.1mA	600.0mA	$\pm(1.2\%+5)$	
6A	1mA	6.000A	$\pm(1.2\%+5)$	20A/500V DC/AC fuse protection
20A	10mA	20.00A	$\pm(1.5\%+5)$	

**Note:**

- 10A for continuous.
- > 10A for 20 sec. after 15 min. cool down interval

## CAPACITANCE RANGE (Auto Ranging Only)

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
40nF	0.01nF	39.99nF	$\pm(3.0\%+10)$	1000V DC/AC rms
400nF	0.1nF	399.9nF	$\pm(3.0\%+10)$	
4 $\mu$ F	1nF	3.999 $\mu$ F	$\pm(3.0\%+10)$	
40 $\mu$ F	10nF	39.99 $\mu$ F	$\pm(3.0\%+10)$	
400 $\mu$ F	100nF	399.9 $\mu$ F	$\pm(3.0\%+10)$	
4000 $\mu$ F	1 $\mu$ F	3999 $\mu$ F	$\pm(5.0\%+20)$	

**Note:**

- Settling time on 4000 $\mu$ F range is 40 sec. approx.

## CONTINUITY TEST

Range	Resolution	
600.0 $\Omega$	0.1 $\Omega$	Meter Beeps at <60 $\Omega$

**Note:** Open Circuit Voltage on continuity range is 0.64VDC approx.

## DUTY CYCLE MEASUREMENT

Range	Resolution	Accuracy (rdg+digit)	Overload Protection
0.1%-99.9%	0.1%	$\pm(0.5\%+3)$	1000V DC/AC rms

Accuracy is specified at <20 VAC rms

## Electromagnetic compatibility :

In RF Field, overall accuracy is equal to 10% of reading + 30 digits



## GENERAL SPECIFICATION:

- Display : 6,000 Count LCD display with white backlit.
- Polarity : Automatic.
- Display Update Rate : 3 times per second nominal.
- Sensing : Trms to DC Converter.
- Dimensions (WxHxD) : 94 X 205 X 36 mm approx.
- Weight : 450g. approx.
- Additional Functions : Select, Range, Hold/Light, Rel, Hz/Duty, Max./Min, Diode & Continuity measurement.

### Environmental:

- Operating Temperature : 0°C to 50°C
- Storage Temperature : - 20°C to 60°C
- Relative Humidity : 80% RH @ 5°C to 31°C, 50% RH @ 31°C to 40°C Non- condensing.

### Power:

- Power Supply : 9V Battery Type 6F22 or equivalent
- Power Consumption : 4mA typical.
- Low Battery Indication : '⚡' is displayed below 6.5V approx.
- Auto Power OFF : After 15 Min., Ideal sleep mode consumption is 300µA approx. (Can be cancelled by pushing SELECT key before power on the meter).

### Overload Protection:

- Fuse Protection for 'mA' input terminal : 0.75 A/ 0.8 A/ 500V fast blow type ceramic fuse.
- Fuse Protection for 20A input terminal : 20A/ 500V fast blow type ceramic fuse
- $\Omega$  /  $\rightarrow$  /  $\rightarrow$  / Hz / (%) : 1000 V DC / AC rms

### Safety:

#### CE Certifications

- Directives for CE Certification : LVD:2006/95/EC., EMC: 2004/104/EC
- Measurement Category : CAT IV, (600V) Reinforced Insulation.
- Relevant Standard specification : EN 61010-1:2010 EN61326-1:2006
- IP Rating : IP 54. (Dust & Water Protection)

### Accessories :

#### Standard Accessories :

- Pair of Test leads, User Manual,
- Battery installed, Fuses, Carrying Bag.

#### Optional Accessories

- Pair of test leads.

### NOTES

1. The Instrument is accompanied with Test & calibration sheet. 2. Test Facilities can be provided at the factory with the available test set-ups only. 3. The Company's policy is continuous improvement of its products. we therefore reserve the Right of any deviation from illustration or specifications without notice. 4. Stated accuracies are valid from 1/10th of range to FS. 5. Accuracy Specified for temperature range of 25°C ± 5°C & 55% RH ± 10%.



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