



## Features

- ✓ 6000 Count LCD display with pleasant white backlit.
- ✓ AC/ DC Current range upto 20A.
- ✓ Resistance, Capacitance, Diode & Continuity Measurement Facility.
- ✓ Selectable Frequency & Duty Cycle Measurement.
- ✓ 60 position analog bar graph for trend indication.
- ✓ Highly Linear Readings.
- ✓ Select, Range, Hold/Light, Rel, Hz/duty.
- ✓ Max/Min functions incorporated
- ✓ Safety - CE, CAT IV(600V), IP 54, EN61326-1 & IEC 61010-1
- ✓ Robust, Rugged & Double Mould Casing.

## M63

Digital Multimeter Industrial Graded

CAT IV	IP	CE
600V	54	

The Motwane's Terms Industrial Graded Digital Multimeter M63 is specially designed in our research laboratory & went under stringent manufacturing process for a wide range of applications like Power Generation, Power Distribution, Power Transmission, Steel Industries, Cement Industries, Mining Industries, Power Electronics Industries, Heavy Engineering Industries and Defence Sector & Aviation Sector. M63 is a versatile and high-performance industrial grade multimeter that complies with IEC 61010-1-2010 safety standards and excellent noise immunity to disturbances from energized power lines, with CE, CAT IV 600 V safety rating IP-54 protection.

## Applications

- Power Utility Industries
- Electrical Contractor
- Telecommunication
- Railway
- Defence

## Technical Details

M63

### General

**Display** 6,000 Count LCD display with white backlit.

**Display Update Rate** 3 times per second nominal.

**Dimensions (WxHxD)** 94 X 205 X 36 mm Approx

**Weight** 450g. Approx

### Environmental

**Environmental** 0°C to 50°C

**Relative Humidity** 80% RH @ 5°C to 31°C  
50% RH @ 31°C to 40°C Non condensing

**Storage Temperature** - 20°C to 60°C

### Power

**Power Supply** 9V Battery Type 6F22 or equivalent

**Power Consumption** 4mA typical.

**Low Battery Indication** 'LO BAT' is displayed below 6.5V approx.

**Auto Power OFF** After 15 Min., Ideal sleep mode  
consumption is 300uA 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

**Ω / / / / Hz(%)** 1000 V DC / AC rms

### Safety

**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 (Dust & Water Protection)** IP54

### Accessories

#### Standard Accessories

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

#### DC Voltage

Range	Resolution	Max. Reading	Accuracy	Overload Protection
600m	0.1 mV	600.0 mV	±(0.5% + 3)	1050V DC/AC rms
V6V	1 mV	6.000 V	±(0.5% + 3)	
60V	10 mV	60.00 V	±(0.5% + 3)	
600V	100 mV	600.0 V	±(0.5% + 3)	
1000V	1 V	1000 V	±(0.8% + 3)	

Note: Input Impedance 10MΩ approx.

## Technical Details

M63

### AC Voltage (50-500Hz)Trms

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

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

### DC 'mV' Range

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

Input Impedance : 1000M $\Omega$  approx.

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

Range	Resolution	Max. Reading	Accuracy	Overload Protection	
60 mV	0.01 mV	60.00 mV	$\pm(1\% + 3)$	1000V DC/AC rms	
600 mV	0.1 mV	600.0 mV	$\pm(1\% + 3)$		

Input Impedance : 1000M $\Omega$  approx.

### DC Current Range

Range	Resolution	Max. Reading	Accuracy	Overload Protection	
60 mA	0.01 mA	60.00 mA	$\pm(1\% + 5)$	0.75A/0.8A/ 500V DC/AC fuse protection	
600 mA	0.1 mA	600.0 mA	$\pm(1\% + 5)$		
6 A	1 mA	6.000 A	$\pm(1\% + 5)$	20A/500V DC/AC fuse protection	
20 A	10 mA	20.00 A	$\pm(1.2\% + 8)$		

Note : **1.** 10A for continuous **2.** >10A for 20sec. after 15min. cool down interval

### AC Current Range (50Hz-500Hz) Trms

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

Note : **1.** 10A for continuous **2.** >10A for 20sec. after 15min. cool down interval

### Resistance Range

Range	Resolution	Max. Reading	Accuracy	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 $\Omega$	$\pm(0.5\% + 3)$		
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 : **1.** Open Circuit Voltage on 600 -6M ranges is 0.62V DC approx. **2.** Open Circuit Voltage on 60M range is 0.31V DC approx

## Technical Details

M63

### Capacitance Range (Auto Ranging Only)

Range	Resolution	Max. Reading	Accuracy	Overload Protection
40 nF	0.01 nF	39.99 nF	$\pm(3.0\% + 10)$	1000V DC/AC rms
400 nF	0.1 nF	399.9 nF	$\pm(3.0\% + 10)$	
4 $\mu$ F	1 nF	3.999 $\mu$ F	$\pm(3.0\% + 10)$	
40 $\mu$ F	10 nF	39.99 $\mu$ F	$\pm(3.0\% + 10)$	
400 $\mu$ F	100 nF	399.0 $\mu$ F	$\pm(3.0\% + 10)$	
4000 $\mu$ F	1 $\mu$ F	3999 $\mu$ F	$\pm(5.0\% + 20)$	

Note : Setting time on 4000uF range is 40sec. 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.

### Frequency Ranges (Auto Ranging Only)

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

Note : Setting time on 4000uF range is 40sec. approx.

### Duty Cycle Measurement

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

## Accessories

#### Standard

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

#### Optional

- 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 includes continuous improvement of its product. We, therefore, reserve the right of any deviation from illustration or specifications without notice. **4.** Stated accuracies are valid from 10% of the range to 95% of the range. **5.** Accuracy specified for temperature range of 25°C  $\pm$  5°C & 55% RH  $\pm$  10%.