

NEW M41

DIGITAL MULTIMETER

MOTWANE
EMPOWERING
MEASUREMENT

Specially designed in our research laboratory and manufactured under stringent manufacturing processes for Electrical contractors, Service industries, SMEs and Educational institutions.

M41 is the most reliable and efficient measuring instrument with CE, CAT III/1000V certification along with a calibration certificate traceable to national standards and a standard warranty.

FEATURES :

- 4000 Counts LCD display with white backlit.
- Rugged Mechanical and electrical Design.
- Auto ranging.
- Frequency, Capacitance, Temperature & Duty cycle measurement features.
- 20Amp AC/DC current range with overload protection.
- CE/ CAT III 1000V/ IP 54.
- 40 position analog bar graph for trend indication.
- Highly linear readings.
- SELECT, RANGE, REL, HOLD/LIGHT, MAX/MIN, Hz/ DUTY functions incorporated.

GENERAL SPECIFICATIONS :

- Dimensions (W X H X D) : 94 X 205 X 36 mm approx.
- Weight : 450g. approx.
- 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 : Battery 1.5VAAA size X 2 nos
- Power Consumption : 3.5 mA typical.
- Low Battery Indication : 'E' is displayed below
2.4V approx.
- Auto Power OFF : After 15min., Idle Sleep mode
consumption 3µA approx.

OVERLOAD PROTECTION :

- Fuse protection for 'mA' : 0.5A/250V fast blow type
Input Terminal Ceramic Fuse.
- Fused Protection for 20A : 20A/250V fast blow type
Input Terminal Ceramic Fuse.
- $V\Omega/\rightarrow/ \bullet$) / \rightarrow / Hz (%) : 440 V DC/AC RMS.

SAFETY :

- Directives for : LVD:2006/95/EC.,
CE Certification EMC :2004/104/EC
- Measurement Category : CAT III/1000V Reinforced insulation
Relevant Standard : EN61010-1: 2010,
- Specification(s) : EN61326 -1: 2006
- IP Rating : IP 54
(Dust & Water Protection)



**Let the
Power Play begin..!**

www.motwane.com

TECHNICAL SPECIFICATION

DC VOLTAGE

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
400mV	0.1mV	400.0mV	±(0.5%+3)	1050V DC/AC rms
4 V	1mV	4.000V	±(0.5%+3)	
40 V	10mV	40.00V	±(0.5%+3)	
400 V	100mV	400.0V	±(0.5%+3)	
1000V	1V	1000V	±(0.8%+3)	

Note : Input Impedance 10MΩ approx.

AC VOLTAGE (50Hz-500Hz) Only sine wave (Average)

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
4V	1mV	4.000V	±(1%+5)	1050V DC/AC rms
40V	10mV	40.00V	±(1%+5)	
400V	100mV	400.0V	±(1%+5)	
750V	1V	750V	±(1.2%+8)	

Note :

1. Input impedance: 10 MΩ approx. shunted by 60pF approx.
2. 400mV Range will be displayed in manual ranging only (Unspecified Accuracy)

DC CURRENT RANGE

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
40mA	0.01mA	40.00mA	±(1%+5)	0.5A/250V DC/AC fuse protection
400mA	0.1mA	400.0mA	±(1%+5)	
4A	1mA	4.000A	±(1%+5)	20A/250V DC/AC fuse protection
20A	10mA	20.00A	±(1.2%+5)	

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

AC CURRENT RANGE (50Hz-500Hz) Only sine wave (Average)

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
40mA	0.01mA	40.00mA	±(1.2%+5)	0.5A/250V DC/AC fuse protection
400mA	0.1mA	400.0mA	±(1.2%+5)	
4A	1mA	4.000A	±(1.2%+5)	20A/250V DC/AC fuse protection
20A	10mA	20.00A	±(1.5%+5)	

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

RESISTANCE RANGE

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
400Ω	0.1Ω	400.0Ω	±(0.5% +3)	440V DC/AC rms
4KΩ	1Ω	4.000KΩ	±(0.5% +3)	
40KΩ	10Ω	40.00KΩ	±(0.5% +3)	
400KΩ	100Ω	400.0KΩ	±(0.5% +3)	
4MΩ	1KΩ	4.000MΩ	±(1% +5)	
40MΩ	10KΩ	40.00MΩ	±(3% +5)	

NOTE :

1. Open circuit voltage on 400Ω to 4MΩ Ranges is 0.44 VDC approx.
2. Open circuit voltage on 40MΩ Ranges is 0.23V DC approx.

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 10% of the range to 95% of the range. 5. Accuracy Specified for temperature range of 25°C ± 5°C & 55% RH ± 10%

DIODE TEST

Range	Resolution	Open Circuit Voltage	Test Current
4V	1mV	≤ 2.85VDC approx	0.8mA approx

CONTINUITY TEST

Range	Resolution	
400.0Ω	0.1Ω	Meter Beeps at <60 Ω

Note : Open Circuit Voltage on continuity range is 0.44VDC approx.

CAPACITANCE RANGE (Auto Ranging Only)

Range	Resolution	Max. Reading	Accurate (rdg+digit)	Overload Protection
40nF	0.01nF	39.99nF	±(3%+10)	440V DC/AC rms
400nF	0.1nF	399.9nF	±(3%+10)	
4μF	1nF	3.999μF	±(3%+10)	
40μF	10nF	39.99μF	±(3%+10)	
400μF	100nF	399.9μF	±(3%+10)	
4000μF	1μF	3999μF	±(5%+20)	

- Note: 1. Settling time on 4000uF range is 30 sec. approx.
2. Accuracy is valid from 15°C to 50°C for 400μF & 4000μF Ranges.

FREQUENCY RANGES (Auto Ranging Only)

Range	Resolution	Max. Reading	Accuracy (rdg+digit)	Overload Protection
10Hz	0.001Hz	9.999Hz	±(0.1%+3)	440V DC/AC rms
100Hz	0.01Hz	99.99Hz	±(0.1%+3)	
1KHz	0.1Hz	999.9Hz	±(0.1%+3)	
10KHz	1Hz	9.999KHz	±(0.1%+3)	
100KHz	10Hz	99.99KHz	±(0.1%+3)	
1000KHz	100Hz	999.9KHz	±(0.1%+3)	
10MHz	1KHz	9.999MHz	±(0.1%+3)	

DUTY CYCLE MEASUREMENT

Range	Resolution	Accuracy (rdg+digit)	Overload Protection
0.1%-99.9%	0.1%	±(0.5%+3)	440V DC/AC rms

Accuracy is specified at <20 VAC rms
Sensitivity: 10Hz to 100KHz >200mV, 1000KHz to 10MHz >2Vrms

K-type Thermocouple*

Range	Accuracy±(rdg+digit)
-20°C to 1200°C	± (1%+20)°C

Note: Temperature measurement in °F is proportional to °C range

*Optional

Accessories

Pair of test leads, User Manual, Fuses, Battery Installed
Pair of test leads, 'K' type thermocouple (Optional Accessories)



Designed and Manufactured by:

The Motwane Manufacturing Company Pvt. Ltd.

Gyan Baug, Motwane Road, Nashik, Maharashtra, India.

Tel. No.: +91-253-2463752 / 53 Fax.:+91-253-2463197

e-mail: sales@motwane.com visit : www.motwane.com