

NEW M42

True Rms Digital Multimeter

ISO 9001:2008 Certified

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

M42 is the most reliable and efficient measuring instrument with CE, CAT III/1000V and IP 54 certification along with a calibration certificate traceable to national standards and a standard warranty.

FEATURES :

- Trms 4000 Counts LCD display with white backlit.
- Rugged Mechanical and electrical Design.
- Auto ranging.
- Frequency, Capacitance & 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.
- AC/DC mV range with $\geq 1000M\Omega$ input impedance.

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 9V type 6F22 or equivalent
- Power Consumption : 8 mA typical.
- Low Battery Indication : 'E' is displayed below 6.5V approx.
- Auto Power OFF : After 15 min., Idle Sleep mode consumption 300µA approx.

OVERLOAD PROTECTION

- Fused 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)



The Super power Now in your Hands !

DC VOLTAGE

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

Note : Input Impedance 10M Ω approx.

AC VOLTAGE (50Hz-500Hz) Trms

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

NOTE :

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

DC "mV" RANGE

Range	Resolution	Max. Reading	Accuracy $\pm(\text{rdg}+\text{digit})$	Overload Protection
40mV	0.01mV	40.00mV	$\pm(0.5\%+3)$	440 V DC/ AC rms
400mV	0.1mV	400.0mV	$\pm(0.5\%+3)$	

Input impedance: $\geq 1000M\Omega$ approx.

AC "mV" RANGE (50Hz - 1kHz) Trms

Range	Resolution	Max. Reading	Accuracy $\pm(\text{rdg}+\text{digit})$	Overload Protection
40mV	0.01mV	40.00mV	$\pm(1\%+5)$	440 V DC/ AC rms
400mV	0.1mV	400.0mV	$\pm(1\%+5)$	

Input impedance: $\geq 1000M\Omega$ approx.

DC CURRENT RANGE

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

AC CURRENT RANGE (50Hz-500Hz) Trms

Range	Resolution	Max. Reading	Accuracy $\pm(\text{rdg}+\text{digit})$	Overload Protection
40mA	0.01mA	40.00mA	$\pm(1.2\%+5)$	0.5A/250V DC/AC fuse protection
400mA	0.1mA	400.00A	$\pm(1.2\%+5)$	
4A	1mA	4.000A	$\pm(1.2\%+5)$	20A/250V DC/AC fuse protection
20A	10mA	20.00A	$\pm(1.5\%+5)$	

RESISTANCE RANGE

Range	Resolution	Max. Reading	Accuracy $\pm(\text{rdg}+\text{digit})$	Overload Protection
400 Ω	0.1 Ω	400.0 Ω	$\pm(0.5\%+3)$	440V DC/AC rms
4K Ω	1 Ω	4.000K Ω	$\pm(0.5\%+3)$	
40K Ω	10 Ω	40.00K Ω	$\pm(0.5\%+3)$	
400K Ω	100 Ω	400.0K Ω	$\pm(0.5\%+3)$	
4M Ω	1K Ω	4.000M Ω	$\pm(1\%+5)$	
40M Ω	10K Ω	40.00M Ω	$\pm(3\%+5)$	

NOTE :

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

DIODE TEST

Range	Resolution	Open Circuit Voltage	Test Current
4V	1mV	$\leq 2.85\text{VDC}$ approx	0.8mA approx

CONTINUITY TEST

Range	Resolution	
400.0 Ω	0.1 Ω	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 $\pm(\text{rdg}+\text{digit})$	Overload Protection
40nF	0.01nF	39.99nF	$\pm(3\%+10)$	440V DC/AC rms
400nF	0.1nF	399.9nF	$\pm(3\%+10)$	
4 μF	1nF	3.999 μF	$\pm(3\%+10)$	
40 μF	10nF	39.99 μF	$\pm(3\%+10)$	
400 μF	100nF	399.9 μF	$\pm(3\%+10)$	
4000 μF	1 μF	3999 μF	$\pm(5\%+20)$	

Note:

- 1) Settling time on 4000 μF range is 30 sec. approx.
- 2) Accuracy is valid from 15 $^{\circ}\text{C}$ to 50 $^{\circ}\text{C}$ for 400 μF & 4000 μF ranges.

FREQUENCY RANGES (Auto Ranging Only)

Range	Resolution	Max. Reading	Accuracy $\pm(\text{rdg}+\text{digit})$	Overload Protection
10Hz	0.001Hz	9.999Hz	$\pm(0.1\%+3)$	440V 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	$\pm(0.1\%+3)$	

DUTY CYCLE MEASUREMENT

Range	Resolution	Accuracy $\pm(\text{rdg}+\text{digit})$	Overload Protection
0.1%-99.9%	0.1%	$\pm(0.5\%+3)$	440V DC/AC rms

Accuracy is specified at <20 VAC rms

Sensitivity: 10Hz to 100KHz >200mV, 1000KHz to 10MHz >2Vrms

Accessories

Pair of test leads, User Manual, Battery Installed, Fuses.
Pair of test leads.(Optional Accessories)