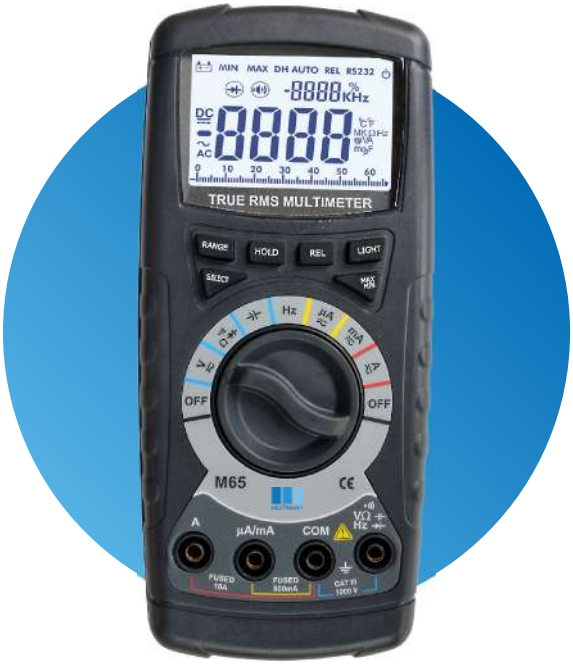

Features

- 6,000 Count LCD Dual display with white backlit.
- Auto ranging, terms AC Voltage & Current measurement.
- Basic DCV Accuracy of 0.25%.
- Highly Linear Readings.
- Capacitance Range upto 60mF.
- Resistance, Diode and Continuity Measurement Facility
  Selectable Frequency & Duty Cycle Measurement.
- 60 position analogy bar graph for trend indication.
- Select, Range, Hold, Rel, Lights, Max/Min
  Functions Incorporated.
- CE and IEC 61010-1 CAT III (1000V), IP 54 protection.
- Robust, Rugged and Double Mould Casing.

M65

Digital Multimeter

CAT III	IP
1000V	54

CE

The Motwane M65 Dual display Terms Digital Multimeter with high accuracy, is specially designed in our Research Laboratory and manufactured under stringent manufacturing processes for R&D and Process industries. M65 has 6000 count LCD dual display and measuring facilities like capacitance, resistance, diode and continuity as well as comes with Q Amp. range & DCV accuracy of 0.25%. M65 includes the features you need to troubleshoot and repair electrical and electronic systems.

M65 is a high performance multimeter complies with IEC 61010-1 safety standards and with CE, CAT III 1000 V safety rating, meeting with IP54 protection. M65 is designed very robust and rugged with double mould casing.

Applications

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

MOTWANE

Technical Details

M65

Accuracy

Accuracy is valid from 10% of range to 95% of the range.

Accuracy is specified as ± % of reading + digits and is valid at 25 ± 30C, ≤ 55% RH Humidity.

It is recommended that calibration equipment used to verify the accuracy of the instrument should be 10 times more accurate.

Temp. Coefficient = (0.1% x Specified accuracy) per degree centigrade referred to 25°C. Accuracy is not valid if display shows ' LO BAT'.

General

Display	6,000 Count Dual, LCD display with white backlit.
Display Update Rate	2.8 times per second nominal.
Dimension	94mm(W) X 205 mm(H) X 36 mm (L) approx.
Weight	450g. approx.
Dual Display	For AC Voltage with Frequency & Frequency with Duty Cycle simultaneously

Environmental

Operating Temperature	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	8mA typical.
Low Battery Indication	'LO BAT' is displayed below 6.5V approx.
Auto Power OFF	After 15 Min., Ideal sleep mode
	consumption is 1.3mA approx. (Can be cancelled by pushing any except for
	Hold & SELECT key before power on the meter).

Overload Protection

Fuse Protection for 'QA' & 'mA' input terminal	0.8 A/ 250V fast blow type ceramic fuse.
Fuse Protection for 10A input terminal	20A/ 500V fast blow type ceramic fuse
V/Ω/→⊢/⊣⊢/·))/Hz (%)	440 V DC / AC rms

Safety

Directives for CE Certification	LVD:2006/95/EC., EMC: 2004/104/EC
Measurement Category	CAT III, (1000V) Reinforced Insulation
Relevant Standard Specification	EN 61010-1:2010, EN61326-1:2006
IP Rating (Dust & Water Protection)	IP 54

Accessories

Standard Accessories

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

MOTWANE

Technical Details

M65

Optional Accessories

Pair of test leads, Pair of small test leads

Range	Resolution	Max. Reading	Accuracy	Overload Protection
6V	1 mV	6.000 V	±(0.25% + 3)	1050V DC/AC rms
60V	10 mV	60.00 V	±(0.25% + 3)	
600V	100 mV	600.0 V	±(0.25% + 3)	
1000V	1 V	1000 V	±(0.5% + 3)	

Note: 1. Input Impedance 10M approx. **2.** 600mV Range will be displayed in manual ranging only (Unspecified accuracy).

AC Voltage (50-500Hz) Trms

Range	Resolution	Max. Reading	Accuracy	Overload Protection
6V	1 mV	6.000 V	±(1% + 5)	1050V DC/AC rms
60V	10 mV	60.00 V	±(1% + 5)	
600V	100 mV	600.0 V	±(1% + 5)	
1000V	1 V	1000 V	±(1.2% + 8)	

Note : 1. Input impedance : 10 MΩ approx. shunted by 60pF approx. **2.** 600mV Range will be displayed in manual ranging only (Unspecified accuracy).

3. Main display shows AC Voltage & sub display shows frequency applied.

DC Current Range

Range	Resolution	Max. Reading	Accuracy	Overload Protection
600µA/6000µA	0.1µA/1µA	600.0µA/6000µA	±(1.2% + 5)	0.8A/ 250V DC/AC fuse protection
60mA/600 mA	10µA/100µA	60.00mA/600.0 mA	±(1.5% + 5)	
10 A	10 mA	10.00 A	±(1.5% + 8)	20A/250V DC/AC fuse protection

AC Current Range (50Hz-500Hz) Trms

Range	Resolution	Max. Reading	Accuracy	Overload Protection
600µA/6000µA	0.1µA/1µA	600.0µA/6000µA	±(1.5% + 5)	0.8A/ 250V DC/AC fuse protection
60mA/600 mA	10µA/100µA	60.00mA/600.0 mA	±(1.8% + 5)	
10 A	10 mA	10.00 A	±(2.0% + 8)	20A/250V DC/AC fuse protection

Note: Main display shows AC Current and sub display shows frequency applied.

Resistance Range

Range	Resolution	Max. Reading	Accuracy	Overload Protection
600 Ω	0.1 Ω	600.0 Ω	±(0.5% + 3)	440V DC/AC rms
6 KΩ	1 Ω	6.000 Ω	±(0.5% + 3)	
60 KΩ	10 Ω	60.00 KΩ	±(0.5% + 3)	
600 KΩ	100 Ω	600.0 KΩ	±(0.5% + 3)	
6 MΩ	1 KΩ	6.000 MΩ	±(1% + 5)	
60 MΩ	10 KΩ	60.00 MΩ	±(3% + 10)	

Note : 1. Open Circuit voltage on 600Ω range is -3.3V DC approx. **2.** Open Circuit voltage on 6kΩ-6MΩ ranges is -1.10V DC approx.

3. Open Circuit Voltage on 60MΩ range is -600mV approx.

MOTWANE

Technical Details

M65

Capacitance Range (Auto Ranging Only)

Pair of test leads, Pair of small test leads

Range	Resolution	Max. Reading	Accuracy	Overload Protection
6 nF	0.001 nF	6.000 nF	±(5.0% + 10)	440V DC/AC rms
60 nF	0.01 nF	60.00 nF	±(3.0% + 10)	
600 nF	0.1 nF	600.0 nF	±(3.0% + 10)	
6 µF	1 nF	6.000 µF	±(3.0% + 10)	
60 µF	10 nF	60.00 µF	±(3.0% + 10)	
600 µF	100 nF	600.0 µF	±(5.0% + 10)	
6 mF	1 µF	6.000 mF	±(5.0% + 20)	
60 mF	10 µF	60.00 mF	±(5.0% + 30)	

Note : 1. Settling time on 6mF and 60mF range is 40 sec. approx. **2.** Press REL button at 6nF & 60nF ranges so that the offset count can be subtracted from measurement. Now apply low value capacitance.

Diode Test

Range	Resolution	Open Circuit Voltage	Test Current
6V	1mV	≤3.0 V DC approx.	≤2.0mA approx.

Continuity Test

Range	Resolution	
600.0Ω	0.1Ω	Meter Beeps < 60Ω

Note: Open Circuit Voltage on continuity range is -3.3VDC approx.

Frequency Ranges (Auto Ranging Only)

Range	Resolution	Max. Reading	Accuracy	Overload Protection
60 Hz	0.01 Hz	60.00 Hz	±(0.5% + 3)	1000V DC/AC rms
600 Hz	0.1 Hz	600.0 Hz	±(0.5% + 3)	
6 KHz	1 HZ	6.000 KHz	±(0.5% + 3)	
60 KHz	10 Hz	60.00 KHz	±(0.5% + 3)	
600 KHz	100 Hz	600.0 KHz	±(0.5% + 3)	
6 MHz	1 KHz	6.000 MHz	±(0.5% + 3)	
60 MHz	10 KHz	60.00 MHz	±(0.5% + 3)	

Note: 1. Main display shows frequency & sub display shows Duty Cycle. **2.** If input frequency is less than 6.0Hz, display will show 0.00Hz.

Duty Cycle Measurement

Range	Resolution	Open Circuit Voltage	Test Current
0.1%-98.9%	0.1%	±(0.5% + 30)	440V DC/AC rms

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

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

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 ± 5°C & 55% RH ± 10%.