



Features

- ✓ Multi-featured single box design
- ✓ Multipurpose model - More Saving, More Testing
- ✓ Wide IR range up to $6G\Omega$, suitable for all LT applications
- ✓ Selectable Voltage Facility 50, 100, 250, 500 & 1000V
- ✓ Maximum test current of 1mA
- ✓ Industrial Grade True RMS Multimeter functions
- ✓ Voltage Measurement up to 1000V AC/DC
- ✓ Dual Display LCD with Amber backlit
- ✓ Auto Power Off Facility, Reading Hold / Lock, Min/Max, FLT (Filter)
- ✓ Bluetooth enabled for Motware Mobile App

MIRT-61

1KV Digital Multimeter Insulation Tester

CAT IV	IP	CE	Bluetooth
1000V	54		

The Motwane's multipurpose tester model MIRT-61 is a versatile, battery operated Digital Insulation Tester with true RMS industrial grade multimeter features, best suited for industrial preventive maintenance. With test voltage range up to 1KV, highest insulation resistance range of $6G\Omega$ and multi-featured function of RMS multimeter (i.e. AC/DC 1000V); makes it a superior offering for the industry and service segments. It is designed predominantly for low voltage insulation resistance testing in maintenance and services, which involves the applications like Cables/Wires, Rotating Machines, LT transformers, Switchgears and Industrial installations etc. It is designed to suit the extreme environment conditions. Save your operating cost and test more with this single box design rather than buying two different products.

MIRT61 has Bluetooth connectivity module with Motware Mobile App for remote access of testing data & storage in the cloud for further analysis & record purpose.

Applications

- Ideal for Insulation Resistance Measurement during maintenance for electrical equipments (Motors, Transformers, Machines, Switchgears etc.)
- Electrical Wire/Cables for Distribution Networks
- Control Panels
- Electrical Contractors
- Industrial, Commercial & Residential Installations
- Railways applications & Telecom applications

Technical Details

MIRT61

General

Display	6000 counts, LCD with amber backlit
Polarity	Automatic
Display Update Rate	3 Times per second nominal
Ranges	DCV, ACV, Resistance, Capacitance, Frequency, AC/DC Current, IRT
Dimensions	102mm(H) X 209mm(W) X 44mm(L).
Weight	620 gm. (with battery) approx.
Indications	Low battery Indication "⬢" below 6.5V approx.
Auto Power Off	After 10 mins

Resistance Range

Range	600Ω - 60MΩ (0.1Ω to 10KΩ resolution)
Accuracy	±(1.2%+3) upto 600KΩ ±(1.5%+5) from 600 KΩ to 6 MΩ ±(3%+5) from 6MΩ to 60MΩ

Capacitance Range

Range	6nF - 60mF (0.001nF to 10uF resolution)
Accuracy	±(3%+10) upto 600uF ±(5%+20) from 600uF - 60uF

Diode Test

Range	6V (1mV resolution)
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Continuity Test

Range	600.0Ω (0.1Ω resolution) Meter Beeps at < 60Ω approx.
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Frequency Range (Auto Ranging Only)

Range	60Hz - 60MHz
Resolution	0.01Hz
Accuracy	± (0.1%+3)
Overload Protection	1000V DC/AC rms

Duty Cycle Measurement

Range 	0.1% - 99.9% (with resolution 0.1%)
Accuracy	±(0.5%+3 Digit)

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

Overload Protection

Fuse protection for 'mA' Input Terminal

	0.8A/250V fast blow type, Ceramic fuse
Ω/→/→/→/→/Hz (%) / IRT	440V DC / AC rms

Safety CE Certifications

Directives for CE Certification: LVD: 2006/95/EC,

EMC: 2004/104/EC.

Measurement Category: CAT IV (1000V) Reinforced insulation.

Relevant Standard (S): EN61010-1, EN61326-1

IP Rating (dust & water protection) : IP 54.

Accessories

Standard

- Test lead set Red & Black one end with shrouded banana 4 mm & another with crocodile clip : 1 Set
- Test lead Green, one end with shrouded banana 4 mm & another with crocodile clip : 1 No
- Test lead set with one end pointed tip & another with 4mm shrouded banana: 1 Set
- Batteries 1.5V AA Alkaline (IEC LR6) (Duracell Only): 6 Nos.
- Instruction Manual: 1 No.
- Carrying Bag: 1 No.

Optional

- Bluetooth option for Motware Mobile App.

Technical Details

MIRT61

DC and AC Voltage Measurement

No.	Range	Resolution	Max. Reading	Measurement	DC Accuracy \pm (reading + digit)	AC Accuracy \pm (reading + digit)	Overload Protection
1	600mV	0.1mV	600.0mV	DC	$\pm(0.9\%+3)$	N/A	1050V DC/AC rms
2	6V	1mV	6.000V	AC/DC	$\pm(0.9\%+3)$	$\pm(1\%+5)$	
3	60V	10mV	60V	AC/DC	$\pm(0.9\%+3)$	$\pm(1\%+5)$	
4	600V	100mV	600V	AC/DC	$\pm(0.9\%+3)$	$\pm(1\%+5)$	
5	1000V	1V	1000V	AC/DC	$\pm(0.9\%+3)$	$\pm(1.2\%+8)$	

DC And AC Current Range

No.	Range	Resolution	Max. Reading	DC Accuracy \pm (reading + digit)	AC Accuracy \pm (reading + digit)	Overload Protection
1	600mA	0.1mA	600.0 mA	$\pm(1\%+5)$	$\pm(1.2\%+5)$	0.8A/250V fast blow type ceramic fuse

Insulation Test

Output Voltage	Range (Auto Ranging only)	Resolution	Test Current	Resistance Accuracy \pm (% of rdg + Digits)
50 V $\pm(10\%+5)$	30 to 300 k Ω	1 k Ω	1 mA approx@ 50 k Ω	$\pm(3\% + 5 \text{ counts})$
	0.30 to 3.00 M Ω 3.0 to 30.0 M Ω	0.01 M Ω 0.1 M Ω		
	30 to 300 M Ω	1 M Ω		
100 V $\pm(10\%+5)$	60 to 600 k Ω	1 k Ω	1 mA approx@ 100 k Ω	$\pm(3\% + 5 \text{ counts})$
	0.60 to 6.00 M Ω 6.0 to 60.0 M Ω	0.01 M Ω 0.1 M Ω		
	60 to 600 M Ω	1 M Ω		
250 V $\pm(10\%+5)$	0.15M Ω to 1.50 M Ω	0.01 M Ω	1 mA approx@ 250 k Ω	$\pm(1.5\% + 5 \text{ counts})$
	1.5to 15.0 M Ω 15 to 150 M Ω	0.1 M Ω 1 M Ω		
	0.15 to 1.50 G Ω	0.01 G Ω		
500 V $\pm(10\%+5)$	0.30M Ω to 3.00 M Ω	0.01 M Ω	1 mA approx@ 500 k Ω	$\pm(1.5\% + 5 \text{ counts})$
	3.0 to 30.0 M Ω 30 to 300 M Ω	0.1 M Ω 1 M Ω		
	0.30 to 3.00 G Ω	0.01 G Ω		
1000 V $\pm(10\%+5)$	0.60M Ω to 6.00 M Ω	0.01 M Ω	1 mA approx@ 1M Ω	$\pm(10\% + 3 \text{ counts})$
	6.0 to 60.0 M Ω 60 to 600 M Ω	0.1 M Ω 1 M Ω		
	0.60 to 6.00 G Ω	0.01G Ω		

This Product is Connected (MOT-WARE Enabled)

MOT-WARE Cloud Application

Motwane has designed and developed MOT-WARE – a cloud based test data platform to aid in accurate Asset Health Assessment. Through MOT-WARE, the test and measurement industry has taken a huge leap forward. MOT-WARE captures data from full range of BLE enabled Motwane testing equipment. It is a user-friendly platform as it is also accessible from a web-based, desktop as well as a mobile application. In addition, it offers an open architecture that can seamlessly integrate with any non Motwane test and measurement equipment for quick and authentic digital test data, captured periodically as well as streamed with real-time data via sensors from loXn series of IOT devices.

MOT-WARE has a preloaded repository of test templates for various electrical assets as well as customizable test templates. A customized report builder in MOT-WARE allows the user to generate report in their own format. It also has a facility to upload historical test data and breakdown history of assets. Test results can also be viewed by various metrics, such as pass or fail.

Data Analysis is also done through MOT-WARE which includes Trend Analysis, MIS Reports and Pivot Tables. As an add-on, MOT-WARE also offers “Motwane AI Analytics” which uses a proprietary AI algorithm and Machine Learning to make accurate predictions about assets life, based on its behavioural patterns and operating conditions.

Being centralized test data, it helps in improving life of assets, its productivity and efficiency, cost reduction, etc. It can be used for various applications across customers’ segments like Utilities, OEMs, Industry, Electrical contractors (Testing, O&M) or Field repairs & Service Provider, EPCs, commercial premise and many more.

Important Benefits



Accurate Digital Data



**Centralized
Data Access**



**Customizable Report
Templates**



Trend Analysis



Minimum Training



Scheduling Tests



Reach out to us at setup@motware.com to setup a new MOT-WARE account.