Rotating Machine Tester
RMT-10

PRODUCT INTRODUCTION

An ideal tool to test all machines and motors. The instrument can be used as a Digital Multimeter, an Insulation Tester, as well as a 4-wire Low Resistance Tester.

This meter measures AC/DC Voltage, AC/DC Current, Resistance, Capacitance, Frequency (electrical & electronic), Duty Cycle, Diode Test, Insulation Test and Continuity plus Thermocouple Temperature.

It can store and recall data. It features a waterproof, rugged design for heavy duty use. While using as an Insulation Tester, Polarization Index (PI) and DAR measurements can also be done. It features Bluetooth and with the free App, data can be shared to your Smartphone for editing, records and analysis.

Input Protection Limits	
Function	**Maximum Input**
V DC or V AC	1000V DC/AC RMS
mA AC/DC	500mA 1000V fast acting fuse
A AC/DC	10A 1000V fast acting fuse (20A for 30 seconds max every 15 minutes)
Frequency, Resistance, Capacitance, Duty Cycle, Diode Test, Continuity	1000V DC/AC RMS
Temperature	-50°C to 1200°C
Surge Protection: 8kV peak per IEC 61010	

Enclosure	Double-moulded, waterproof
Shock (Drop Test)	3.2 feet (1m)
Diode Test	Test current of 0.9mA maximum, open circuit voltage 2.8V DC typical
Continuity Check	Audible signal will sound if the resistance is less than 50Ω (approx.), test current <0.35mA
PEAK	Captures peaks >1ms
Temperature Sensor	Requires type K thermocouple
Input Impedance	>10MΩ VDC & >9MΩ VAC
AC Response	True RMS

METRAVI INSTRUMENTS PVT. LTD.
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AC True RMS:	The term stands for “Root-Mean-Square,” which represents the method of calculation of the voltage or current value. Average responding multimeters are calibrated to read correctly only on sine waves and they will read inaccurately on non-sine wave or distorted signals. True RMS meters read accurately on either type of signal.
ACV Bandwidth	50Hz to 1000Hz
Crest Factor	≤3 at full scale up to 500V, decreasing linearly to ≤1.5 at 1000V
Display	50,000 Counts backlit liquid crystal with bargraph
Overrange indication	“OL” is displayed
Auto Power Off	15 minutes (approximately) with disable feature
Polarity	Automatic (no indication for positive); Minus (-) sign for negative
Measurement Rate	3 times per second, nominal
Low Battery Indication	“ ▭ ” flashes if battery voltage drops below operating voltage
Battery	6 xAA NEDA 15A IEC LR6
Fuses	mA, µA ranges; 0.5A/1000V ceramic fast blow A range; 10A/1000V ceramic fast blow
Operating Temperature	41ºF to 104ºF (5ºC to 40ºC)
Storage Temperature	-4°F to 14°F (-20ºC to 60ºC)
Operating Humidity	Max 80% up to 87ºF (31ºC) decreasing linearly to 50% at 104ºF (40ºC)
Storage Humidity	<80%
Operating Altitude	7000ft. (2000meters) maximum.
Safety	This meter is intended for installation use and protected by double insulation per EN61010-1 and IEC61010-1 2nd Edition (2001) to Category IV 600V and Category III 1000V; Pollution Degree 2. The meter also meets UL 61010-1, 2nd Edition (2004), CAN/CSA C22.2 No. 61010-1 2nd Edition (2004), and UL 61010B-2-031, 1st Edition (2003)

Polarization Index

Di-Electric Absorption Ratio

MAX / MIN Hold

Peak Hold

Data Hold

Data Recording Feature for auto and manual records

Bluetooth and free App for reports and analysis

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SPECIFICATIONS

DC Voltage

Range	Resolution	Accuracy
500mV	0.01mV	±(0.1% reading +4digits)
5V	0.0001V	
50V	0.001V	
500V	0.01V	
1000V	0.1V	

AC Voltage (50 to1000Hz)

Range	Resolution	Accuracy
500mV	0.01mV	±(1.0% reading +5digits)
5V	0.0001V	±(1.0% reading +5digits)
50V	0.001V	
500V	0.01V	
1000V	0.1V	

All AC voltage ranges are specified from 5% of range to 100% of range

DC Current

Range	Resolution	Accuracy
500µA	0.01µA	±(1.0% reading +3 digits)
5000µA	0.1µA	
50mA	0.001mA	
500mA	0.01mA	
10A	0.001A	

Resistance

Range	Resolution	Accuracy
500Ω	0.01Ω	±(1% reading + 9 digits)
5kΩ	0.0001kΩ	±(1% reading +4 digits)
50kΩ	0.001kΩ	
500kΩ	0.01kΩ	
5MΩ	0.001MΩ	±(2.0% reading +9 digits)
50MΩ	0.001MΩ	±(3.0% reading +9 digits)

AC Current

Range	Resolution	Accuracy
500µA	0.01µA	±(1.5% reading + 3digits) (50 to1000Hz)
5000µA	0.1µA	
50mA	0.001mA	
500mA	0.01mA	
10A	0.001A	

NOTE : All AC current ranges are specified from 5% of range to100% of range

Accuracy is stated at 65°F to 83°F (18°C to 28°C) and less than 75% RH.

Low Pass Filter : 50/60HZ, ±(1%+20)
60-400Hz ±(3%+20) >3KHz (-3dB)

AC switch according to the calibration of sine wave. It generally increases ±(2% reading + 2%full scale) if non sine wave in the wave crest less than 3.0.

Capacitance

Range	Resolution	Accuracy
500nF	0.01nF	±(3.5% reading + 40 digits)
5µF	0.0001µF	±(3.5% reading +9digits)
50µF	0.001µF	
500µF	0.01µF	
5.000mF	0.0001mF	±(5% reading +9digits)

Frequency (electronic)

Range	Resolution	Accuracy
50Hz	0.001Hz	±(0.3% reading +2 digits)
500Hz	0.01Hz	
5kHz	0.0001kHz	
50kHz	0.001kHz	
500kHz	0.01kHz	
5MHz	0.0001MHz	
50MHz	0.001MHz	

Sensitivity : 0.8V rms min. @ 20% to 80% duty cycle and <100kHz; 5Vrms min @ 20% to 80% duty cycle and > 100kHz.

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Frequency (electrical)

Range	Resolution	Accuracy
40.00Hz-10KHz	0.01Hz - 0.001KHz	±(0.5% reading)

Sensitivity : 1V RMS

Meg Ohms

Terminal Voltage	Range	Resolution	Accuracy	Test Current
50V (0%~+20%)	0.050~5.000 MΩ	0.001MΩ	+(2%+10)	1mA @load 50kΩ
	5.000~50.00 MΩ	0.01MΩ	+(3%+10)	
	50.00~500.0 MΩ	0.1MΩ	+(4%+5)	
	500~2000 MΩ	1MΩ	+(5%+5)	
100V (0%~+20%)	0.100~5.000 MΩ	0.001MΩ	+(2%+10)	1mA @load 100kΩ
	5.000~50.00 MΩ	0.01MΩ	+(3%+10)	
	50.00~500.0 MΩ	0.1MΩ	+(4%+5)	
	500~5000 MΩ	1MΩ	+(5%+5)	
250V (0%~+10%)	0.250~5.000 MΩ	0.001MΩ	+(2%+10)	1mA @load 250kΩ
	5.000~50.00 MΩ	0.01MΩ	+(3%+10)	
	50.00~500.0 MΩ	0.1MΩ	+(3%+5)	
	500~5000 MΩ	1MΩ	+(4%+5)	
500V (0%~+10%)	0.500~5.000 MΩ	0.001MΩ	+(2%+10)	1mA @load 500kΩ
	5.000~50.00 MΩ	0.01MΩ	+(3%+10)	
	50.00~500.0 MΩ	0.1MΩ	+(3%+5)	
	500~5000 MΩ	1MΩ	+(4%+5)	
1000V (0%~+10%)	1.000~5.000 MΩ	0.001MΩ	+(2%+10)	1mA @load 1MΩ
	5.000~50.00 MΩ	0.01MΩ	+(3%+10)	
	50.00~500.0 MΩ	0.1MΩ	+(4%+5)	
	500~5000 MΩ	1MΩ	+(5%+5)	

Low Resistance Meaurement

Range	Resolution	Accuracy	Test Voltage	Overload Protection
0.000~5.000Ω	0.001Ω	+(1.5%+30)	5.0+1V	250V RMS
5.00~50.00Ω	0.01Ω	+(2.0%+5)		
50.0~500.0Ω	0.1Ω	+(2.5%+5)		
500 ~2000Ω	1Ω	+(3.0%+5)		

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