

Digital T-RMS Multimeter with Thermal Imager PRO TIM-900

INTRODUCTION

The Metravi PRO TIM-900 is a professional T-RMS Industrial Digital Multimeter with a built-in Thermal Imager, having TFT Colour LCD display, providing A/D Conversion with high sampling rate and high accuracy; these features make it easy to find and solve the problems of the production equipment.

The device features Bluetooth interface to connect to your smartphone for storing measured data and creating and analysing reports on thermal images captured. It is probably the safest meter to use for measurements even in high voltage areas, due to the double moulded plastic housing design.



FEATURES

- 4000 Counts 2.4" TFT Colour LCD display
- Built-in Thermal Imager with Max, Min and Center crosshair targeting
- 50Hz fast thermal image frame rate
- Bluetooth for data transfer to Smartphone App
- DC Voltage
- AC, AC+DC TRMS Voltage
- DC Current
- AC, AC+DC TRMS Current
- Resistance and Continuity test
- Diode Test
- Capacitance
- Frequency
- Duty Cycle
- Auto Ranging, Auto Power-off
- Built-in flashlight to access dark areas
- Rechargeable battery with USB charging and can be charged using powerbank too
- Double-moulded plastic housing, Double Insulation
- CAT III 600V, CAT IV 300V, Pollution Level II
- Rechargeable Battery

INPUT PROTECTION LIMITS

Function	Maximum Input
V DC or V AC	600V DC/AC RMS
Frequency, Resistance, Capacitance, Duty Cycle, Diode Test, Continuity	600V DC/AC RMS
Surge Protection: 6kV peak per IEC 61010	



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TECHNICAL SPECIFICATIONS

Thermal imager

Field of view (FOV) / Minimum focus distance	21° x 21° / 0.5m
Spatial Resolution (IFOV)	4.53mrad
IR Resolution	80 x 80 pixels
Thermal Sensitivity / NETD	< 0.1°C @ +30°C (+86°F) / 100 mK
Image Frequency	50Hz
Focus Mode	Focus free
Focal Length	7.5mm
Focal Plane Array (FPA) / Spectral Range	Uncooled microbolometer / 8-14 mm
Object Temperature Range	-20°C to +260°C (-4°F to + 500°F)
Accuracy	±3°C (±5.4°F) or ±3% of reading (Environment temperature 10°C-35°C, object temperature >0°C.)

Accuracy calculated as [%reading + (num. digits*resolution)] at 18°C ~ 28°C <75%RH

DC Voltage

Range	Resolution	Accuracy	Input impedance	Protection against overcharge
400.0mV	0.1mV	± (0.8% reading + 8 digits)	>10MW	600V DC/AC RMS
4.000V	0.001V	± (0.5% reading + 5 digits)		
40.00V	0.01V			
400.0V	0.1V	± (0.8% reading + 5 digits)		
600V	1V			

AC TRMS Voltage

Range	Resolution	Accuracy (*)		Protection against overcharge
		(50Hz ~ 60Hz)	(61Hz ~ 1kHz)	
4.000V	0.001V	± (1.0% reading +5 digits)	± (2.5% reading +5 digits)	600V DC/AC RMS
40.00V	0.01V			
400.0V	0.1V			
600V	1V			

(*) Accuracy specified from 10% ~ 100% of the measuring range, sine wave. Input Impedance : > 9MW;
Accuracy PEAK Function : ± 10%rdg, PEAK response time: 1ms

AC+ DC TRMS Voltage

Range	Resolution	Accuracy	Input impedance	Protection against overcharge
		(50Hz ~ 1kHz)		
4.000V	0.001V	± (2.5% reading +20 digits)	>10MΩ	600V DC/AC RMS
40.00V	0.01V			
400.0V	0.1V			
600V	1V			


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TECHNICAL SPECIFICATIONS

DC Current

Range	Resolution	Accuracy
200.0uA	0.1µA	± (1.5% reading + 5 digits)
4000mA	1mA	± (2.0% reading + 8 digits)
10.00A	0.01A	± (2.0% reading + 8 digits)

Diode Test

Function	Test Current	Max Voltage with Open Circuit
	<1.5mA	3.3VDC

AC TRMS Current

Range	Resolution	Accuracy (*) (50Hz ~ 1kHz)
200.0uA	0.1µA	± (2.0% reading + 5 digits)
4000mA	1mA	± (2.5% reading + 5 digits)
10.00A	0.01A	± (2.5% reading + 5 digits)

AC + DC TRMS Current

Range	Resolution	Accuracy (50Hz ~ 1kHz)
200.0uA	0.1µA	± (3.0%reading + 20dgt)
4000mA	1mA	± (3.0%reading + 20dgt)
10.00A	0.01A	± (3.0%reading + 20dgt)

(*) Accuracy specified from 5% ~ 100% of the measuring range, sine wave.

Accuracy PEAK function: ±10%rdg,

Resistance and Continuity Test

Range	Resolution	Accuracy	Buzzer	Protection against overcharge
400.0Ω	0.1Ω	± (1.0% reading + 10 dgt)	>50Ω	600V DC/AC RMS
4.000kΩ	0.001kΩ	± (1.0% reading + 5 dgt)		
40.00kΩ	0.01 kΩ			
400.0kΩ	0.1kΩ			
4.000MΩ	0.001MΩ	± (2.5% reading + 10 dgt)		
40.00MΩ	0.01Mz			

Frequency (Electrical Circuits)

Range	Resolution	Accuracy	Protection against overcharge
40.00Hz ~ 10kHz	0.01Hz ~ 0.001kHz	± (0.5% reading)	600V DC/AC RMS

Sensitivity : 2V RMS

Frequency (Electronic Circuits)

Range	Resolution	Accuracy	Protection against overcharge
40.00Hz	0.01Hz	±(0.20% rdg +5 digits)	600V DC/AC RMS
400.0Hz	0.1Hz		
4.000kHz	0.001kHz		
40.00kHz	0.01kHz		
400.0kHz	0.1kHz		
4.000MHz	0.001MHz		
10.00MHz	0.01MHz		

Sensitivity :
>2Vrms (@20% ~ 80% duty cycle) and f<100kHz;
>5Vrms (@ 20% ~ 80% duty cycle) and f> 100kHz