DT-898

Digital Multimeter with Thermal Imager

Professional T-RMS Industrial Digital Multimeter with Built-in Thermal Imager having TFT Color LCD Display, providing A/D Conversion with high sampling rate and high accuracy. It is easy to find and solve the problems of the production equipment. This has a Bluetooth interface to connect it to your smartphone for storing the date and making reports on thermal images captured. Safest instrument to make measurements even in high voltage areas, this can be accomplished since it has double molded plastic housing design.

FEATURES

4000 count 2.4" TFT Color 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 flash light to access dark area
Rechargeable battery, with USB charging, and can be charged through Powerbank

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 μm
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)	>10MΩ	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 : > 9MΩ;
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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DC Current

Range	Resolution	Accuracy
200.0uA	0.1uA	± (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	0.1uA	± (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	0.1uA	± (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			
40.00MΩ	0.01MΩ	± (2.5% reading + 10 dgt)		

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

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Duty Cycle

Range	Resolution	Accuracy
10.0% ~ 90.0%	0.1%	± (1.2% reading + 2 digits)

Pulse Frequency Range : 40Hz ~ 10kHz,
Pulse Amplitude : ± 5V (100us ~ 100ms)

Capacitance

Range	Resolution	Accuracy	Protection against overcharge
40.00nF	0.01nF	± (3.0% reading + 20 dgt)	600V DC/AC RMS
400.0nF	0.1nF	± (3.0% reading + 8 digits)	
4.000uF	0.001uF	± (3.0% reading + 8 digits)	
40.00uF	0.01uF	± (3.0% reading + 8 digits)	
400.0uF	0.1uF	± (3.0% reading + 8 digits)	
4000uF	1uF	± (3.5% reading + 20 dgt)	

Reference Standards

Safety :	IEC/EN61 01 0-1
EMC:	IEC/EN 61326-1
Insulation:	Double Insulation
Pollution Level:	2
Overvoltage Category :	CAT III 600V, CAT IV 300V
Max Operating Altitude :	2000m (6562ft)

General Characteristics

Mechanical characteristics

Size (L xWx H):	175 x 85 x 55mm (7 x 3 x 2in)
Weight (batteries included):	540g

Power Supply

Battery Type :	1x3.7V rechargeable Li-ION battery, 1400mAh
Battery Charger Power Supply :	5VDC,1A
Low Battery Indication:	symbol " ▭ " on the display
Auto Power Off:	after 15~60 minutes' idling (can be disabled)

Display

Conversion:	TRMS
Characteristics:	colour TFT, 4000 dots with bargraph
Sampling Frequency:	3times/s

Environment

Environmental conditions for use

Reference Temperature:	18°C~28°C (64°F~82°F)
Operating Temperature:	5°C~40°C (41°F~104°F)
Allowable Relative Humidity:	< 80%RH
Storage Temperature:	-20°~60°C (-4°F~140°F)
Storage Humidity:	< 80%RH

Accessories : Micro USB Cable, Test Leads, User Manual, Battery, Software, Gift Box with Carrying Case.

CEM