



HT22D

Rel. 1.00 – 06/06/23

TRMS Digital multimeter with VFD feature

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1. ELECTRICAL SPECIFICATIONS

Accuracy is indicated as $\pm[\% \text{ reading} + (\text{number of dgt} \times \text{resolution})]$ at $18^{\circ}\text{C} \div 28^{\circ}\text{C}$, $<75\% \text{RH}$

DC VOLTAGE

Range	Resolution	Accuracy	Input impedance	Overload protection
400.0mV	0.1mV	$\pm(0.8\% \text{rdg} + 3 \text{dgt})$	10M Ω	600VDC/ACrms
4.000V	0.001V			
40.00V	0.01V			
400.0V	0.1V			
600V	1V			

AC TRMS VOLTAGE

Range	Resolution	Accuracy (*) (45Hz $\div$ 400Hz)	Input impedance	Overload protection
4.000V	0.001V	$\pm(1.2\% \text{rdg} + 5 \text{dgt})$	10M Ω	600VDC/ACrms
40.00V	0.01V			
400.0V	0.1V			
600V	1V			

(*) Accuracy specified from 5% to 100% measurement range

AC TRMS VOLTAGE – VFD FUNCTION

Range	Resolution	Accuracy (*) (45Hz $\div$ 400Hz)	Input impedance	Overload protection
400.0V	0.1V	$\pm(3.5\% \text{rdg} + 5 \text{dgt})$	10M Ω	600VDC/ACrms
600V	1V			

(*) Accuracy specified from 5% to 100% measurement range

VFD cut-off frequency: 400Hz

RESISTANCE AND CONTINUITY TEST

Range	Resolution	Accuracy	Buzzer	Overload protection
400.0 Ω	0.1 Ω	$\pm(1.5\% \text{rdg} + 5 \text{dgt})$	<50 Ω	600VDC/ACrms
4.000k Ω	0.001k Ω			
40.00k Ω	0.01k Ω			
400.0k Ω	0.1k Ω			
4.000M Ω	0.001M Ω	$\pm(2.5\% \text{rdg} + 5 \text{dgt})$		
40.00M Ω	0.01M Ω			

DIODE TEST

Function	Test current	Max open voltage
	<1mA	3VDC

FREQUENCY (electrical circuits)

Range	Resolution	Accuracy	Sensitivity	Overload protection
10.00Hz $\div$ 1kHz	0.01Hz	$\pm(1.0\% \text{rdg} + 5 \text{dgt})$	15Vrms	600VDC/ACrms

FREQUENCY (electronic circuits)

Range	Resolution	Accuracy	Sensitivity	Overload protection
9.999Hz	0.001Hz	$\pm(1.2\% \text{rdg} + 5 \text{dgt})$	>0.5Vrms	600VDC/ACrms
99.99Hz	0.01Hz			
999.9Hz	0.1Hz			
9.999kHz	0.001kHz			
99.99kHz	0.01kHz			
999.9kHz	0.1kHz			
9.999MHz	0.001MHz		>3Vrms	

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DUTY CYCLE

Range	Resolution	Accuracy	Overload protection
0.1% ÷ 99.9%	0.1%	$\pm(1.2\%rdg + 5dgt)$	600VDC/ACrms

Frequency range electrical circuits: 10Hz ÷ 1kHz, Frequency range electronics circuits: 5Hz ÷ 100kHz

CAPACITANCE

Range	Resolution	Accuracy	Overload protection
40.00nF	0.01nF	±(2.5%rdg+5dgt)	600VDC/ACrms
400.0nF	0.1nF		
4.000μF	0.001μF		
40.00μF	0.01μF		
400.0μF	0.1μF		
4.000mF	0.001mF	±(3.0%rdg+5dgt)	
40.00mF	0.01mF		

DC CURRENT

Range	Resolution	Accuracy	Overload protection
400.0μA	0.1μA	$\pm(1.0\%rdg+5dgt)$	Fast fuse 500mA / 600V
4000μA	1μA		
40.00mA	0.01mA		
400.0mA	0.1mA	$\pm(1.0\%rdg+8dgt)$	
4.000A	0.001A	$\pm(1.5\%rdg+5dgt)$	Fast fuse 10A / 600V
10.00A	0.01A		

CORRENTE AC TRMS

Range	Resolution	Accuracy	Overload protection
400.0μA	0.1μA	$\pm(1.0\%rdg+5dgt)$	Fast fuse 500mA / 600V
4000μA	1μA		
40.00mA	0.01mA		
400.0mA	0.1mA	$\pm(1.2\%rdg+8dgt)$	
4.000A	0.001A	$\pm(2.0\%rdg+5dgt)$	Fast fuse 10A / 600V
10.00A	0.01A		

(*) Accuracy specified from 5% to 100% measurement range

Frequency range: 45Hz ÷ 400Hz



2. GENERAL SPECIFICATIONS

Display:

- LCD, 4dgt, 4000 points, sign and decimal point
- Sampling rate: 3 times/s
- Automatic polarity indication
- Backlight
- “O.L” overrange indication
- Conversion: TRMS

Features:

- Data HOLD, RANGE, VFD (Variable Frequency Driver)

Low battery indication:

- “” symbol shows on the display

Operating temperature:

- 0°C ÷ 40°C, <70%RH

Storage temperature:

- -10°C ÷ 60°C, <80%RH

General information:

- Max height of use: 2000m
- Pollution degree: 2
- Insulation: double insulation
- Mechanical protection: IP40

Power supply:

- 2x1.5V batteries type AAA IEC LR03
- Battery life: 160 hours (backlight ON), 550 hours (backlight OFF)
- Auto Power OFF: after 15 min of idleness (disabling)
- Protection fuses: fast 10A/600V, 6x32mm (**10A** input)
fast 500mA/600V, 6x32mm (**mAµA** input)

Dimensions (L x W x H):

- 150 x 75 x 45mm

Weight (included battery):

- 205g

Reference guidelines:

- Safety : IEC/EN61010-1
- EMC: IEC/EN61326-1
- Measurement category: CAT III 600V to ground

This product conforms to the prescriptions of the European directive on low voltage 2014/35/EU and to EMC directive 2014/30/EU

This product conforms to the prescriptions of the European directive 2011/65/EU (RoHS) and the European directive 2012/19/EU (WEEE)