

## INTRODUCTION


Metravi 19 Super is a 3 5/6 digit True-RMS, small-sized, handheld, digital multimeter with complete functions, modern structure, high reliability and safety.

It features a large screen, and auto-range. It can measure AC/DC voltage/current, resistance, diode, transistor, continuity, capacitance, frequency, duty ratio and temperature. Has non-contact voltage detection. It is an ideal tool for convenient repair and maintenance.

## ACCESSORIES

- User Manual
- Pair of test leads
- K-type Thermocouple

## GENERAL SPECIFICATIONS

- T-RMS measurements
- Auto-ranging
- 6000 counts LCD display
- Sampling Rate 2~3 times per second
- Over-range Indication: 'OL'.
- Display for Capacitance range: 6200 counts
- Display for Frequency range: 9999 counts
- Auto Polarity
- Operating Temperature: 0°C~40°C (32°F~104°F)
- Storage Temperature: -10°C~50°C (14°F~122°F)
- Relative Humidity: 0°C~30°C, RH≤75%; 30°C~40°C, RH≤50%
- Operating Altitude: 0~2000m
- Battery: 6F22 9V
- Low Battery: LCD displays the symbol, '  '.
- Size: 186 mm×91mm×39mm
- Weight: around 305g (including batteries)
- Electromagnetic compatibility: RF≤1V/m, overall accuracy=specified accuracy+5% of range; RF>1V/m, no specified calculation.
- CE certification
- Data Hold to freeze displayed data
- Relative measurement
- Complies with IEC60101-1, Pollution Degree 2, over-voltage (CAT II 1000V) and double insulation safety standards Transistor
- Test and Diode Test
- Built-in Non-contact type Voltage Detector



## TECHNICAL SPECIFICATIONS

**Accuracy** : ± (a% of reading + b), 'b' is the numerical value in least significant digit slot; 1 year warranty,

Ambient temperature: 23°C±5°C (73.4°F±9°F).

Ambient humidity: ≤75% RH.

**DC VOLTAGE**

Range	Resolution	Accuracy
600.0mV	0.1mV	±(0.8%+3)
6.000V	0.001V	±(0.5%+3)
60.00V	0.01V	
600.0V	0.1V	±(0.7%+3)
1000V	1V	

⚠ **Input impedance:** around 10MΩ

**AC VOLTAGE (T-RMS)**

Range	Resolution	Accuracy
600.0mV	0.1mV	±(1.0%+4)
6.000V	0.001V	±(0.8%+3)
60.00V	0.01V	
600.0V	0.1V	±(1.2%+3)
1000V	1V	

⚠ **Input impedance:** around 10MΩ

- True RMS display. Frequency response: 45~400Hz
- Accuracy assurance range: 5~100%,
- AC crest factor can reach up to 3.0 (1.5 for 600V range)

Non-sine wave: When the crest factor is 1.0~2.0, the accuracy should increase by 3.0%, 2.0~2.5, 5.0%, and 2.5~3.0, 7.0% . Max input voltage: 1000VRMS



**RESISTANCE**

Range	Resolution	Accuracy
600.0Ω*	0.1Ω	±(1.0%+2)
6.000kΩ	0.001kΩ	±(0.8%+2)
60.00kΩ	0.01kΩ	
600.0kΩ	0.1kΩ	
6.000MΩ	0.001MΩ	±(1.2%+3)
60.00MΩ	0.01MΩ	±(2.5%+5)

⚠\* **Range**

- Measurement result = reading of resistor – reading of shorted test leads
- Voltage at open circuit: around 1V
- Overload protection: 250V

**CONTINUITY** , **DIODE** 

Range	Resolution	Note
	0.1Ω	Resistance setting in open circuit status: >50Ω, buzzer doesn't beep; Resistance setting for normal circuit: ≤10Ω, buzzer beeps continuously.
	0.001V	Voltage at open circuit: about 3.2V Normal voltage of silicon PN junction is about 0.5~0.8V.
hFE	1B	Triode amplification factor 1~1000B I <sub>b</sub> ≈10uA ; V <sub>CC</sub> ≈3.2V

⚠ **Overload protection :** 250V

**CAPACITANCE**

Range	Resolution	Accuracy
6.000nF	1pF	In relative mode: ±(4%+10)
60.00nF ~ 600.0μF	10pF ~ 0.1μF	±(4%+5)
6.000mF ~ 60.00mF	1μF ~ 10μF	±10%

⚠ **Overload protection:** 250V

**FREQUENCY / DUTY RATIO**

Range	Resolution	Accuracy
9.999Hz ~ 9.999MHz	0.001Hz ~ 0.001MHz	±(0.1%+5)
0.1%~99.9%	0.1%	Unspecified

⚠ **Overload protection:** 250V

**Input amplitude a:** (DC level is zero)

- ≤ 100kHz: 100mVrms≤a≤20Vrms
  - > 100kHz~1MHz: 200mVrms≤a≤20Vrms
  - > 1MHz: 500mVrms≤a≤20Vrms
  - > 5MHz~10MHz: 900mVrms≤ a ≤20Vrms
- Duty ratio %: only applicable to ≤10kHz measurement

**TEMPERATURE**

Range		Resolution	Accuracy
°C	-40~1000°C	-40~40°C	±4°C
		>40~500°C	±(1.0%+4)
		>500~1000°C	±(2.0%+4)
°C	-40~1832°F	-40~104°F	±5°F
		>104~932°F	±(1.5%+5)
		>932~1832°F	±(2.5%+5)

⚠ **Overload protection:** 250V

**Note:** The equipped accessory, K-type thermocouple can only test the temperature below 230°C /446°F.

**DC CURRENT**

Range		Resolution	Accuracy	
µA	600.0µA	0.1µA	±(1.0%+3)	
	6000µA	1µA		
mA	60.00mA	10µA		
	600.0mA	0.1mA		
A	6.000A	1mA		±(1.2%+5)
	20.00A	10mA		

- The device can test up to 10A current continuously.

**Overload protection:**

µA mA range: F2 Fuse FF0.6A H 250V  
20A range: F1 Fuse F 20A H 250V

**AC CURRENT (T-RMS)**

Range		Resolution	Accuracy	
µA	600.0µA	0.1µA	±(1.2+3)	
	6000µA	1µA		
mA	60.00mA	0.01mA		
	600.0mA	0.1mA		
A	6.000A	0.001A		±(1.5%+5)
	20.00A	0.1A		

**Frequency response:** 45~400Hz

**Display:** True RMS

**Accuracy assurance range:** 5~100%, in short circuit status, remaining readings with less than 2 digits are permitted.

AC crest factor can reach up to 3.0.

**Non sine wave:** When the crest factor is 1.0~2.0, the accuracy should increase by 3.0%, 2.0~2.5, 5.0%, and 2.5~3.0, 7.0%

⚠ **Overload protection:** similar to the protection for DC current measurement

