



# VOLTCRAFT®

## VOLTCRAFT® - TOP PERFORMANCE IN EVERY WAY

“For more than 25 years, our product range has been dynamically adapting to the constant changes in the industry. We commit to offering first-class quality to our customers while delivering an excellent cost-performance ratio. This philosophy remains the cornerstone of Voltcraft’s success.”

# MT-52

## 5 IN 1 MULTI DMM

Nº 122900

CE

VERSION 09/14

The all-round multi-meter is an indispensable and versatile aid for hobbies, crafts and the household. All sensors except for the temperature measurement are fully integrated, making operation quick and easy.

## HIGHLIGHTS

**CAT III 600 //**

**Additional measurement functions for noise level, humidity, temperature and lighting intensity //**

**Extremely robust due to sprayed-on soft rubber protection //**

**Contactless voltage testing //**

**Capacity measurement //**



# TECHNICAL DATA

Symbol	4000 counts
Measuring rate	Approx. 3 measuring operations/second
Measuring line length	Approx. 80 cm each
Measuring impedance	>10M $\Omega$ (V range)
Operating voltage	9 V block battery
Working conditions	0 - 40°C (<70%rF)
Operating altitude	Max. 3,000 m
Storage temperature	-10°C to +60°C (<80%rF)
Weight	Approx. 335 g
Dimensions (LxWxH)	170 x 78 x 48 (mm)
Over-voltage category	CAT III 600 V, Impurity level 2

## Direct voltage (DC)

Range	Resolution	Accuracy
400 mV	0.1 mV	$\pm(1.2\% + 5)$
4 V	0.001 V	
40 V	0.01 V	
400 V	0.1 V	$\pm(1.8\% + 4)$
600 V	1 V	
Other Features	Overload protection 600 V	

## Alternate voltage (AC)

Range	Resolution	Accuracy
400 mV	0.1 mV	$\pm(1.8\% + 20)$
4 V	0.001 V	$\pm(1.2\% + 5)$
40 V	0.01 V	
400 V	0.1 V	$\pm(1.8\% + 4)$
600 V	1 V	$\pm(2.2\% + 5)$
Other Features	Frequency range 50 – 400 Hz; Effective average value with sinus voltage; Overload protection 600 V 400 mV area only through manual area selection!	

## Direct current (DC)

Range	Resolution	Accuracy
400 $\mu$ A	0.1 $\mu$ A	$\pm(1.2\% + 2)$
4000 $\mu$ A	1 $\mu$ A	
40 mA	0.01 mA	
400 mA	0.1 mA	$\pm(1.5\% + 2)$
10 A	0.01 A	$\pm(2.2\% + 5)$
Other features	Overload protection: Fuses; 500 mA 660 V, 10 A 600 V ; Measuring time limit > 5 A: max. 30 s with 15 min break	

**Alternate current (AC)**

Range	Resolution	Accuracy
400 $\mu$ A	0.1 $\mu$ A	$\pm(1.5\% + 3)$
4000 $\mu$ A	1 $\mu$ A	
40 mA	0.01 mA	
400 mA	0.1 mA	$\pm(1.8\% + 3)$
10 A	0.01 A	$\pm(2.2\% + 6)$
Other Features	Overload protection: Fuses; 500 mA 660 V, 10 A 600 V ; Measuring time limit > 5 A: max. 30 s with 15 min break; frequency range 50 - 400 Hz	

**Resistance**

Range	Resolution	Accuracy
400 $\Omega$	0.1 $\Omega$	$\pm(1.8\% + 5)$
4 k $\Omega$	0.001 k $\Omega$	$\pm(1.5\% + 2)$
40 k $\Omega$	0.01 k $\Omega$	
400 k $\Omega$	0.1 k $\Omega$	
4 M $\Omega$	0.001 M $\Omega$	$\pm(2.0\% + 2)$
40 M $\Omega$	0.01 M $\Omega$	$\pm(2.5\% + 2)$
Other Features	Overload protection 600 V; Measuring voltage: approx. 0.28 V	

**Capacity**

Range	Resolution	Accuracy
50 nF	0.01 nF	$\pm(5.5\% + 25)$
500 nF	0.1 nF	$\pm(3.5\% + 7)$
5 $\mu$ F	0.001 $\mu$ F	
50 $\mu$ F	0.01 $\mu$ F	
100 $\mu$ F	0.1 $\mu$ F	$\pm(5.0\% + 7)$
Other Features	Overload protection 600 V	

**Frequency**

Range	Resolution	Accuracy
5 Hz	0.001 Hz	$\pm(1.5\% + 3)$
50 Hz	0.01 Hz	
500 Hz	0.1 Hz	
5 kHz	0.001 kHz	
50 kHz	0.01 kHz	
500 kHz	0.1 kHz	
10 MHz	0.01 MHz	$\pm(1.5\% + 4)$
Other Features	Overload protection 600 V; sensitivity: <1 MHz: >0.5 V; >1 MHz: >3 V	

**Temperature contact sensor type K**

Range	Resolution	Accuracy
-20 to +400 $^{\circ}$ C	0.1 $^{\circ}$ C	$\pm(3.0\% + 3 \text{ }^{\circ}\text{C})$
-20 to +1300 $^{\circ}$ C	1 $^{\circ}$ C	

**Relative temperature and relative air humidity**

Range	Resolution	Accuracy
0 to +50 $^{\circ}$ C	0.1 $^{\circ}$ C	$\pm(3.0\% + 3)$
33 - 99 %rF	1 %rF	$\pm(3.0\% + 5.5)$

### Illumination strength

Range	Resolution	Accuracy
4000 lux	1 lux	$\pm(6\% + 15)$
40000 lux	10 lux	$\pm(3.5\% + 10)$
Colour temperature accuracy of 2856 K; repetition accuracy $\pm 2\%$ ; Temperature stability: $\pm 0.1\%$ per °C; light sensor: Silicium photo diode with spectral filter		

### Sound level

Range	Resolution	Accuracy
35 - 100 dB	0.1 dB	$\pm 5.5$ dB
Accuracy at 94 dB and 1 kHz sinus; frequency range: 30 Hz – 10 kHz; Assessment: Characteristic "C" (linear); time assessment: Fast; Microphone: Condenser microphone		

### Diode test

Test voltage	Approx. 1.5 V
Test current	Approx. 1 mA
Resolution	0.001 V
Accuracy	$\pm(10\% + 5)$
Overload protection: 600 V	

### Acoustic continuity tester

<100 $\Omega$ continuous sound, test voltage approx 0.5 V, overload protection 600 V
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### NCV

Detection range: 200 - 1,000 V/AC
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## PACKAGE CONTENT

Multimeter // 1 set of measuring cables // Temperature sensor type K (sensors for light, noise and humidity are integrated into the device) // 1 Battery (type 9 V Block) // Operating instructions

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