

VOLTCRAFT

VOLTCRAFT – TOP PERFORMANCE IN EVERY WAY

For more than 40 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.

VC151 DIGITAL MULTIMETER



Item no. 2446477

A robust CAT III 600 V digital multimeter for professional, industrial and do-it-yourself applications.

FEATURES

- AC / DC voltage measurement
- AC / DC current measurement up to 10 A
- Acoustic continuity tester
- Hold function
- Auto power off
- Backlight
- 4000 counts
- True RMS
- Auto range
- 600 V high performance fuses
- CAT III 600 V measuring category
- Temperature testing
- Torch function



TECHNICAL DATA

Intended use	Indoor use
Voltage supply	9 V block battery (6F22, NEDA 1604 or same)
Operating time/battery	approx. 35 h (backlight always on, torch off, buzzer off)
Measuring impedance	approx. 10 M Ω (400 mV: \geq 100 M Ω)
Display range	4000 counts (characters)
Refresh rate	2-3x per sec
Temperature measurement	-40 to +400 °C (-40 to 752 °F)
Measuring method AC	True RMS
Measuring line length	each approx. 90 cm
Low battery indicator	\leq 6 V \pm 0.2 V
Measuring jacks distance	19 mm (COM-V)
Auto power off	approx. 15 minutes
Data hold	approx. 15 minutes
Measuring category	\leq CAT III 600 V
Degree of contamination	2
Direct voltage	max. 600.0 V / DC
Alternating voltage	max. 600.0 V / AC
Direct current	max. 10.00 A / DC
Alternating current	max. 10.00 A / AC
Resistance	max. 40 M Ω
Operating temperature	0 to +40 °C
Storage temperature	-10 to +50 °C
Operating/storage humidity	0 to +30 °C: \leq 75 % RH (non-condensing) +30 to +40 °C: \leq 50 % RH (non-condensing)
Operating altitude	max. 2000 m (above sea level)
Dimensions (W x H x D):	76.5 x 157.5 x 40 mm
Weight	approx. 262 g (without battery)
F1 Fuse	\varnothing 5 x 20 mm, FF 400 mA H 600 V, Breaking capacity: 500 A min. Input terminal protection (μ A, mA)
F2 Fuse	\varnothing 6 x 32 mm, FF 10 A, H 600 V, Breaking capacity: 10 KA, Input terminal protection (A)

DC voltage measurement

Range	Resolution	Accuracy
4.000 V	0.001 V	\pm (0.7 % +6)
40.00 V	0.01 V	
400.0 V	0.1 V	
600 V	1 V	
<ul style="list-style-type: none"> • Input impedance: approx 10 MΩ • Input voltage: max. 600 V 		

AC voltage measurement

Range	Resolution	Accuracy
400.0 mV	0.1m V	$\pm (1.5 \% + 8)$
4.000 V	0.001 V	$\pm (1.2 \% + 6)$
40.00 V	0.01 V	$\pm (1.2 \% + 6)$
400.0 V	0.1 V	$\pm (1.2 \% + 6)$
600 V	1 V	$\pm (1.5 \% + 4)$

- Input impedance: approx. 10 M Ω .
- True RMS display.
- Frequency response: 40 - 400 Hz.
- Accuracy guarantee range: 5~100% of range, short circuit allows least significant digit <5.
- Non-sinusoidal waveforms:
 - When the crest factor is 1.0 to 2.0, the accuracy must be increased by 4.0 %.
 - When the crest factor is 2.0 to 2.5, the accuracy must be increased by 5.0 %.
 - When the crest factor is 2.5 to 3.0, the accuracy must be increased by 7.0 %.
- Input voltage: max. 600 Vrms.

Resistance measurement (Ω)

Range	Resolution	Accuracy
400.0 Ω	0.1 Ω	$\pm (1.3 \% + 5)$
4.000 k Ω	1 Ω	$\pm (1.3 \% + 5)$
40.00 k Ω	10 Ω	
400.0 k Ω	100 Ω	
4.000 M Ω	1 k Ω	$\pm (1.5 \% + 9)$
40.00 M Ω	10 k Ω	$\pm (2.5 \% + 5)$

Overload protection: 600 V

DC current measurement

Range	Resolution	Accuracy
μ A	400.0 μ A	0.1 μ A
	4000 μ A	1 μ A
mA	40.00 mA	10 μ A
	400.0 mA	0.1 mA
A	4.000 A	1 mA
	10.00 A	10 mA

$\pm (1.0 \% + 6)$

$\pm (1.3 \% + 4)$

$\pm (1.5 \% + 6)$

- When the measured current is >5 A, each measurement time should be ≤ 30 s and the rest interval should be ≥ 15 minutes.
- Overload protection:
 - F1 Fuse: $\varnothing 5 \times 20$ mm, FF 400mA, H 600V, Breaking capacity: 500 A min., Input terminal protection (μ A, mA)
 - F2 Fuse: $\varnothing 6 \times 32$ mm, FF 10A, H 600V, Breaking capacity: 10 KA, Input terminal protection (A)

Temperature measurement

Range	Resolution	Accuracy
$^{\circ}$ C	1 $^{\circ}$ C	$\pm (2.0 \% + 4)$ for -40.0 to +300 $^{\circ}$ C
		$\pm (2.5 \% + 3)$ for +300 to +400 $^{\circ}$ C
$^{\circ}$ F	2 $^{\circ}$ F	$\pm (2.0 \% + 7)$ for -40.0 to +572.0 $^{\circ}$ F
		$\pm (2.5 \% + 6)$ for 572 to 752 $^{\circ}$ F

- Overload protection: 600 V
- The K-type thermocouple is only suitable for measuring temperatures < 400 $^{\circ}$ C (752 $^{\circ}$ F).

AC current measurement

Range		Resolution	Accuracy
μA	400.0 μA	0.1 μA	$\pm (1.5 \% + 6)$
	4000 μA	1 μA	
mA	40.00 mA	10 μA	
	400.0 mA	0.1 mA	
A	4.000 A	1 mA	$\pm (1.5 \% + 6)$
	10.00 A	10 mA	$\pm (1.8 \% + 6)$

- When the measured current is $>5\text{ A}$, each measurement time should be $\leq 30\text{ s}$ and the rest interval should be $\geq 15\text{ minutes}$.
- True RMS display.
- Frequency response: 40 - 400 Hz.
- Accuracy guarantee range: 5 - 100 % of range, open circuit allows least significant digit <5 .
- Non-sinusoidal waveforms:
 - When the crest factor is 1.0 - 2.0, the accuracy must be increased by 4.0 %.
 - When the crest factor is 2.0 - 2.5, the accuracy must be increased by 5.0%.
 - When the crest factor is 2.5 - 3.0, the accuracy must be increased by 7.0%.
- Overload protection:
 - F1 Fuse: $\varnothing 5 \times 20\text{mm}$, FF 400mA, H 600V, Breaking capacity: 500 A min., Input terminal protection (μA , mA)

Continuity test

Range	Resolution	Remark
400.0 Ω	0.1 Ω	<ul style="list-style-type: none">• Open circuit: Resistance $>100\ \Omega$, no beep• Closed circuit: Resistance $\leq 10\ \Omega$, consecutive beeps

Overload protection: 600 Vrms

Battery test

Range	Resolution	Accuracy
1.5 V	0.001 V	$\pm (1.0 \% + 8)$
9 V	0.01 V	
12 V	0.01 V	

- The internal load resistance of the meter is approximately:
 - 100 Ω for 1.5 V range.
 - 900 Ω for 9 V range.
 - 240 Ω for 12 V range.
- Overload protection:
 - F1 Fuse: $\varnothing 5 \times 20\text{mm}$, FF 400mA, H 600V, Breaking capacity: 500 A min., Input terminal protection (μA , mA)
 - F2 Fuse: $\varnothing 6 \times 32\text{mm}$, FF 10A, H 600V, Breaking capacity: 10 KA, Input terminal protection (A)

PACKAGE CONTENTS

Digital multimeter // Test leads (pair) // Point contact temperature probe // 9 V block battery // Operating instructions