



# VOLTCRAFT®

## VOLTCRAFT® - TOP PERFORMANCE IN EVERY WAY

“Since 1982, 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.”

# VC 880

## DIGITAL-MULTIMETER

N° 124609

CE

VERSION 12/21

Robust, reliable, practical, ergonomically designed, safe – these are the attributes which describe this professional multimeter. Thanks to the patented housing design, the housing can be opened for battery and/or fuse replacement only if the device has been disconnected from all measurement leads. At input voltages  $>30$  V the display will show a warning icon. Its unique safety concept is rounded out by the robust housing with sprayed on soft rubber cast protection, the 1000 V high-braking-capacity fuses, the warning sound when measurement leads are incorrectly connected and the impedance switching to avoid incorrect measurements due to stray voltages. It also features a low-bat function.

## HIGHLIGHTS

CAT IV 600 V, CAT III 1000 V //

Display with 40000 Counts and backlight //

Optical interface //

Patented housing design and TLD® function //

True RMS //

Integrated data logger //

Low-pass filter measurement //

Standard measurement ranges V, A,  $\Omega$ ,  
Frequency, Capacitance //

Automatic range selection (Auto Range) //

Diode test, REL, Duty cycle //

Acoustic continuity checker //

Temperature measurement //



# TECHNICAL DATA

Symbol	Max. 40000 counts (characters)
Measuring rate	approx. 2-3 measurements/second, Bargraf approx. 10 measurements/second
Measuring line length	approx. 90 cm each
Measuring impedance	>10M $\Omega$ (V range)
Operating voltage	9V block battery
Working conditions	0 to 30°C (<75%rF), >30 to 40°C (<50%rF)
Operating altitude	max. 2,000 m
Storage temperature	-10°C to +50°C
Weight	approx. 380 g
Dimensions (LxWxH)	185 x 91 x 43 (mm)
Over-voltage category	CAT III 1,000 V, CAT IV 600 V, contamination degree 2

## Measurement tolerances

Statement of accuracy in  $\pm$  (% of reading + display error in counts (= number of smallest points)). The accuracy is valid for one year at a temperature of +23°C  $\pm$  5°C, and at a relative humidity of less than 75 %, non-condensing.  
 Temperature coefficient: +0.1 x (specified accuracy)/1°C

## Direct voltage

Range	Accuracy	Resolution
400 mV	$\pm(0,03\% + 10)$	0,01 mV
4 V	$\pm(0,05\% + 10)$	0,0001 V
40 V		0,001 V
400 V		0,01 V
1000 V		0,1 V
Overload protection 1000 V; Impedance: 10 M $\Omega$		

## Alternating voltage

Range	Accuracy	Resolution	Frequenz range
4 V	0,0001 V	$\pm(0,5\% + 40)$	45 Hz - 1kHz
		$\pm(1,2\% + 40)$	1 kHz - 10 kHz
		$\pm(3\% + 40)$	10 kHz - 20 kHz
		$\pm(4\% + 40)$	20 kHz - 100 kHz
40 V	0,001 V	$\pm(0,5\% + 40)$	45 Hz - 1kHz
		$\pm(1,2\% + 40)$	1 kHz - 10 kHz
		$\pm(3\% + 40)$	10 kHz - 20 kHz
		$\pm(6\% + 40)$	20 kHz - 100 kHz
400 V	0,01 V	$\pm(0,5\% + 40)$	45 Hz - 1kHz
		$\pm(1,2\% + 40)$	1 kHz - 10 kHz
		$\pm(3\% + 40)$	10 kHz - 20 kHz
		Not specified	20 kHz - 100 kHz
1000 V	0,1 V	$\pm(1,2\% + 40)$	45 Hz - 1kHz
		$\pm(3\% + 40)$	1 kHz - 5 kHz
		$\pm(6\% + 40)$	5 kHz - 10 kHz
		Not specified	10 kHz - 100 kHz
Overload protection 1000 V; Impedance: 10 M $\Omega$			
TrueRMS in the measuring range of 10 - 100%: Crest factor: max. 3.0 (at 750V max. 1.5)			

**Direct current**

Range	Accuracy	Resolution
400 $\mu$ A	$\pm(0,3\% + 10)$	0,01 $\mu$ A
4000 $\mu$ A	$\pm(0,5\% + 10)$	0,1 $\mu$ A
40 mA		0,001 mA
400 mA		0,01 mA
10 A	$\pm(1,5\% + 20)$	0,001 A
Overload protection: Fuses, measuring time limit >5 A: max. 10 s with 10 min break		

**Alternating current**

Range	Accuracy	Resolution	Frequenz range
400 $\mu$ A	0,01 $\mu$ A	$\pm(0,6\% + 40)$	45 Hz - 1 kHz
		$\pm(1,2\% + 40)$	1 kHz - 10 kHz
4000 $\mu$ A	0,1 $\mu$ A	$\pm(0,6\% + 40)$	45 Hz - 1 kHz
		$\pm(1,2\% + 40)$	1 kHz - 10 kHz
40 mA	0,001 mA	$\pm(0,6\% + 40)$	45 Hz - 1 kHz
		$\pm(1,2\% + 40)$	1 kHz - 10 kHz
400 mA	0,01 mA	$\pm(0,6\% + 40)$	45 Hz - 1 kHz
		$\pm(1,2\% + 40)$	1 kHz - 10 kHz
10 A	0,001 A	$\pm(2\% + 40)$	45 Hz - 1 kHz
		$\pm(4\% + 40)$	1 kHz - 10 kHz
Overload protection: Fuses, measuring time limit >5 A: max. 10 s with 10 min break			
Overload protection 1000 V			
TrueRMS in the measuring range of 10 - 100%			

**Measuring function AC + DC voltage**

Range	Accuracy	Resolution	Frequenz range
4 V	0,0001 V	$\pm(1\% + 80)$	45 Hz - 1 kHz
		$\pm(3\% + 40)$	1 kHz - 10 kHz
		$\pm(6\% + 40)$	10 kHz - 35 kHz
40 V	0,001 V	$\pm(1\% + 80)$	45 Hz - 1 kHz
		$\pm(3\% + 40)$	1 kHz - 10 kHz
		$\pm(6\% + 40)$	10 kHz - 35 kHz
400 V	0,01 V	$\pm(1\% + 80)$	45 Hz - 1 kHz
		Not specified	1 kHz - 10 kHz
		Not specified	10 kHz - 35 kHz
1000 V	0,1 V	$\pm(1,2\% + 80)$	45 Hz - 1 kHz
		Not specified	1 kHz - 10 kHz
		Not specified	10 kHz - 35 kHz
Overload protection 1000 V; Impedance: 10 M $\Omega$			

## Impedance

Range	Accuracy	Resolution
400 $\Omega$	$\pm(1,0\% + 10)$ with REL function	0,01 $\Omega$
4 k $\Omega$	$\pm(0,6\% + 10)$	0,1 $\Omega$
40 k $\Omega$		10 $\Omega$
400 k $\Omega$		100 $\Omega$
4 M $\Omega$	$\pm(1,2\% + 10)$	1 k $\Omega$
40 M $\Omega$	$\pm(2\% + 5)$	10 k $\Omega$
Overload protection 1000 V		

## Capacity

Range	Accuracy	Resolution
40 nF	$\pm(2,5\% + 20)$	1 pF
400 nF	$\pm(2\% + 20)$	10 pF
4 $\mu$ F		100 pF
40 $\mu$ F		1 nF
400 $\mu$ F		10 nF
4000 $\mu$ F	$\pm(5\% + 20)$	100 nF
40 mF	Not specified	1 $\mu$ F
Overload protection 1000 V		

## Frequency

Range	Accuracy	Resolution
10 Hz - 40 MHz	$\pm(0,02\% + 8)$	0,001 Hz - 0,001 MHz
400 MHz	Not specified	0,01 MHz
Overload protection 1000 V		
Sensitivity (10 Hz - 10 MHz): 200 mV; Amplitude max. 30 V <sub>eff</sub> (ms)		
Sensitivity (10 MHz - 40 MHz): 400 mV; Amplitude max. 30 V <sub>eff</sub> (ms)		

## Duty-Cycle (pulse-break ratio)

Range	Accuracy	Resolution
5Hz ~ 2kHz (10%~90%)	$\pm(1,2\% + 30)$	0,01%
Overload protection 1000V		

## Temperature

Range	Accuracy	Resolution
-40 to +40 $^{\circ}$ C	$\pm(3\% + 20)$	0,1 $^{\circ}$ C
+40 to +400 $^{\circ}$ C	$\pm(2\% + 20)$	
+400 to +1000 $^{\circ}$ C	$\pm 2,5\%$	
-40 to +32 $^{\circ}$ F	$\pm(2,5\% + 40)$	0,1 $^{\circ}$ F
+32 to +752 $^{\circ}$ F	$\pm(1,5\% + 40)$	
+752 to +1832 $^{\circ}$ F	$\pm 2,5\%$	

## Diode test

Test voltage	Resolution
2,73 V	0,0001 V
Overload protection: 1000 V	

## Acoustic continuity tester

Test voltage	Resolution
ca. 1,2 V	0,01 $\Omega$
Overload protection: 1000 V, <10 $\Omega$ continuous sound	

# PACKAGE CONTENT

Multimeter // 9 V battery // Measurement leads // Software CD // Operating instructions

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