



Digital Multimeter PCE-DM 4



Digital multimeter PCE-DM 4
Voltmeter with transistor test / Square function generation / Large LCD display / Voltage test

up to 1000V / Protective rubber cover / Diode test / Continuity test / Current measurement up to 20 A.

The voltmeter has many functions. In addition to voltage measurement up to 1000V, the voltmeter can also measure currents directly up to 20 A. This means that this voltmeter can also measure larger currents compared to other multimeters. Another special feature of the voltmeter is the transistor hFE test. During this test, transistors can be inserted into the voltmeter and their amplification can be checked. It does not matter to the voltmeter whether it is an NPN or PNP transistor. The voltmeter shows the current gain for the corresponding transistors.

In addition to the measurement functions, the voltmeter can also generate a square-wave voltage of up to 10 kHz. Thanks to this function on the voltmeter, it can be checked, for example, whether the built-in frequency counters are working properly in industrial operation. The rubber cover on the voltmeter protects the measuring device from rough vibrations. Thanks to this rubber cover on the voltmeter, damage to the measuring equipment is prevented.

- TRMS measurements AC / DC
- NPN and PNP transistor testing
- Rubberized housing with tripod holder
- Generation of a quadratic function
- Automatic shutdown
- Continuity test and diode test

Specifications:

DC

Measuring range	Resolution	Accuracy
200 mV	100 μ V	\pm (0.5% +5 digits)
2V	1 mV	\pm (0.5% +3 digits)
20V	10 mV	\pm (0.5% +3 digits)
200V	100 mV	\pm (0.5% +3 digits)
1000V	1V	\pm (1.0% +10 digits)

Input impedance: 10 M Ω

Surge protection: 1000V DC / AC RMS

AC

Measuring range	Resolution	Accuracy
2V	1 mV	\pm (0.8% +5 digits)
20V	10 mV	\pm (0.8% +5 digits)
200V	100 mV	\pm (0.8% +5 digits)
1000V	1V	\pm (1.2% +10 digits)

Input impedance: 10 M Ω

Surge protection: 1000V DC / AC RMS

The accuracies refer to 10 ... 100% of the respective measuring ranges, one Frequency of 40 ... 400 Hz with a sine wave (True RMS) and a crest factor (Crest factor): CF < 3. With a crest factor CF > 2 the increases 1% accuracy.

Capacity

Measuring range	Resolution	Accuracy
6 nF	1 pF	± (5.0% +40 digits)
60 nF	10 pF	± (2.5% +20 digits)
600 nF	100 pF	± (2.5% +20 digits)
6 µF	1 nF	± (2.5% +20 digits)
60 µF	10 nF	± (2.5% +20 digits)
600µF	100 nF	± (5.0% +10 digits)
6 mF	1 µF	± (5.0% +40 digits)
20 mF	10 µF	± (5.0% +40 digits)

Surge protection: 600V DC / AC RMS

The accuracies refer to 10 ... 100% of the respective measuring ranges

Response time for capacities > 1 mF approx. 8 seconds

The accuracy does not include the loading capacity

Transistor test

Measuring range	Resolution	Accuracy
0 ... 1000 hFE	1 hFE	-

For NPN and PNP transistors

Base current approx. 10 µA

Collector-emitter voltage approx. 3V

Direct current

Measuring range	Resolution	Accuracy	Voltage recording
20 µA	0.01 µA	± (1.2% +8 digits)	1.25 mV / µA
200 µA	0.1 µA	± (1.2% +8 digits)	0.125 mV / µA
2 mA	1 µA	± (1.2% +8 digits)	125 mV / mA
20 mA	10 µA	± (1.2% +8 digits)	3.75 mV / mA
200 mA	100 µA	± (1.2% +8 digits)	3.75 mV / mA
2 A	1 mA	± (1.5% +10 digits)	37.5 mV / A
20 A.	10 mA	± (2.0% +6 digits)	37.5 mV / A

Fuse up to the measuring range 200-mA: 200-mA / 250V

Fuses from a measuring range of 2 A: 20 A / 250V

Alternating current

Measuring range	Resolution	Accuracy	Voltage recording
200-mA	100 µA	± (1.5% +15 digits)	3.75 mV / mA
2 A	1-mA	± (2.0% +5 digits)	37.5 mV / A
20 A.	10-mA	± (3.0% +10 digits)	37.5 mV / A

Fuse up to the measuring range 200-mA: 200-mA / 250V

Fuses from a measuring range of 2 A: 20 A / 250V

The accuracies refer to 10 ... 100% of the respective measuring ranges, a frequency of 40 ... 400 Hz with a sine wave (True RMS) and one Crest factor: CF < 3. With a crest factor CF > 2 the increases 1% accuracy.

Resistance

Measuring range	Resolution	Accuracy	Short circuit current
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200 Ω	0.1 Ω	± (0.8% +5 digits)	approx.0.4-mA
2 kΩ	1 Ω	± (0.8% +3 digits)	approx. 100 μA
20 kΩ	10 Ω	± (0.8% +3 digits)	approx. 10 μA
200 kΩ	100 Ω	± (0.8% +3 digits)	approx. 1 μA
2 MΩ	1 kΩ	± (0.8% +3 digits)	approx. 0.2 μA
200 MΩ	100 kΩ	± (5% +30 digits)	approx. 0.2 μA

Voltage with open circuit: approx. 1V
Surge protection: 600V DC / AC RMS

Diode test	Test current	Test voltage	Accuracy
Measuring range	Approx.0.4-mA	Approx.3.3V	5%
Surge protection: 600 V DC / AC RMS			

Continuity test	Test current	Test voltage	Accuracy
Measuring range	Approx.0.4-mA	Approx.3.3V	5%

Surge protection: 600 V DC / AC RMS
Beep at 50 ± 20Ω

Function generation	Tension	Function generation
(square)	Approx.3.3V	50 Hz, 100 Hz, 200 Hz, 500 Hz, 1 kHz, 2 kHz, 5 kHz, 10 kHz

Surge protection: 600V DC / AC RMS

Further specification

Display	LCD display
Largest display	1999 (3 1/2)
Measuring rate	Approx. 3 measurements per second
Overrange	"OL" display
Operating conditions	0 ... 40°C / 32 ... 104°F, < 75% RH non-condensing
Power supply	1 x 9V block battery
Dimensions	190 x 88.5 x 27.5 mm
Weight	Approx. 320 g / < 1 lb (with battery)

Delivery Scope

- 1 x Digital multimeter PCE-DM 4
- 1 x Pair of test leads
- 1 x 9V block battery
- 1 x Instruction