

Technická data a přesnosti digitálního multimetru PeakTech2000

Výtah z originální příručky k přístroji

1. Introduction

This instrument is a compact, rugged, battery operated, handheld 3½-digit multimeter for measuring DC and AC voltage, DC and AC current, resistance, capacitance and diode, for testing audible continuity and transistor hFE. The dual-slope A/D converter uses C-MOS technology for auto-zeroing, polarity selection and overrange indication. Full overload protection is provided.

2. Features

- * Single 24 positions easy to use rotary switch for function and range selection
- * 24 mm high contrast LCD
- * display adjustable
- * Automatic overrange indication with the "1" displayed
- * Automatic polarity indication on DC ranges
- * All ranges fully protected, acoustical alarm at wrong connection of test leads
- * Diode testing with 1 mA fixed current
- * Audible continuity test
- * Transistor hFE-Test
- * Auto power off after 15 Minutes

3. Specifications

Accuracies are: (% of reading + no. of digits) guaranteed for 1 year, 23° C ± 5° C, less than 75 % R.H.

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DC Voltage

Range	Accuracy	Resolution
200 mV	± 0.5 % + 1 digit	100 µV
2 V	± 0.5 % + 1 digit	1 mV
20 V	± 0.5 % + 1 digit	10 mV
200 V	± 0.5 % + 1 digit	100 mV
1000 V	± 0.8 % + 2 digits	1 V

Input Impedance: 10 MΩ on all ranges
Overload protection: 1000 V DC or peak AC on all ranges,

AC Voltage

Range	Accuracy	Resolution
200 mV	± 1.2% + 3 digits	100 µV
2 V	± 0.8% + 3 digits	1 mV
20 V	± 0.8% + 3 digits	10 mV
200 V	± 0.8% + 3 digits	100 mV
700 V	± 1.2% + 3 digits	1 V

Input Impedance: 10MΩ on all ranges
Frequency range: 40 Hz to 400 Hz
Overload protection: 750 V_{rms} or 1000 V peak continuous on AC ranges, except 200 mV AC range: 250 V_{rms}
Average (rms of sine wave)

DC Current

Range	Accuracy	Resolution
200 µA	± 0.8 % + 1 digit	0,1 µA
2 mA	± 0.8 % + 1 digit	1 µA
20 mA	± 0.8 % + 1 digit	10 µA
200 mA	± 1.2 % + 1 digit	100 µA
10 A	± 2.0 % + 5 digits	10 mA

Overload protection: 0,2 A/250 V fuse (10 A range unfused)
maximum input current: 10 A

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AC Current

Range	Accuracy	Resolution
200 µA	± 1.8 % + 3 digits	0,1 µA
2 mA	± 1.0 % + 3 digits	1 µA
20 mA	± 1.0 % + 3 digits	10 µA
200 mA	± 1.8 % + 3 digits	100 µA
10 A	± 3.0 % + 7 digits	10 mA

Overload protection: 0,2 A/250 V fuse (10 A range unfused)
max. input current: 10 A
frequency range: 40 Hz to 400 Hz
indication: Average (rms of sine wave)

Resistance

Range	Accuracy	Resolution
200 Ω	± 0.8 % + 3 digits	0,1 Ω
2 kΩ	± 0.8 % + 1 digit	1 Ω
20 kΩ	± 0.8 % + 1 digit	10 Ω
200 kΩ	± 0.8 % + 1 digit	100 Ω
2 MΩ	± 0.8 % + 1 digit	1 kΩ
20 MΩ	± 1.0 % + 2 digits	10 kΩ
200 MΩ	±[5 % (reading-10dg.) + 10dg]	100 kΩ

Overload protection: under 700 mV
Overload Protection: 250 V DC or AC rms

Diode and Audible Continuity Test

Range	Description	Test Condition
▶	Display read approx. forward voltage of diode	Forward DC current approx. imately 1 mA. Reversed DC voltage approx. 2,3 V.
•••••	Built-in buzzer sounds if conductance is less than approx 30 Ω	Open circuit voltage approx. 2,3 V

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Transistor hFE-Test

Range	Description	Test Condition
hFE	Display read approx. hFE value (0-1000) of transistor under test (all types)	Base current approx. 10 µA, VCE approx. 2,8 V

Capacitance

Range	Accuracy	Resolution
2 nF	± 2.5 % + 3 digits	1 pF
20 nF	± 2.5 % + 3 digits	10 pF
200 nF	± 2.5 % + 3 digits	100 pF
2 µF	± 2.5 % + 3 digits	1 nF
20 µF	± 2.5 % + 3 digits	10 nF

Testing frequency: 400 Hz
Testing voltage: 40 mV

- * When using the capacitance range for testing, don't connect a resistor or a charged capacitor (especially large capacitor) to the meter. The reading need some times to stabilize or return to zero when changing the range.

Alarm

Alarm sounds		
	Switch position	Test leads position
Mis-operation	V, Ω, ✱, BATT, µA, mA, 2 A, 10 A	A or 10 A 10 A A
Overrange	display > 9999	

* The testing value for ▶/Ω range is meaningless.

4. General Characteristics

Display 24 mm LCD display, 1999 counts (3 ½ digits) with automatic polarity indication

Overrange indication "1" Figure only in the display

max. common mode voltage 500 V max.

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