Mikrosize®

MS86 Digital Multimeter

Contact us

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Feature And Application

The MS86 digital multimeter boasts remarkable advantages:It is fully functional,capable of measuring various parameters such as AC/DC voltage,current,and resistance,and includes multiple auxiliary functions;it adopts high-quality circuits,ensuring accurate measurements and stable performance;the large-screen LCD display is clear,supporting automatic polarity and unit display;it has functions such as automatic range selection,making operation convenient;it features maximum/minimum value display,making it highly practical;it is compact and portable;it has overload protection,meeting safety standards;it comes with complete accessories and is ready to use upon opening the box.

Product Feature

- The functions are comprehensive,capable of measuring various parameters such as AC and DC voltages,currents,and resistances.It also includes auxiliary functions like unit display and data retention.
- Using an 8-bit microprocessor and a dual-integration A/D conversion circuit,the measurement accuracy is high and the performance is stable and reliable.
- Equipped with a 22mm high LCD display,the readings are clear and presented in 3 1/2 digits.It supports automatic polarity and unit display.
- It features automatic/manual range conversion,automatic power-off function,etc.The operation is convenient and it is applicable to various scenarios.
- The design features maximum/minimum value display,alarm functions,etc.,meeting various measurement requirements and being highly practical.
- It features overload protection and other safety designs,in compliance with IEC1010 standards.It is safer and more reliable to use.

Features And Application

Product Application

- In the laboratory,it is used to precisely measure various electrical parameters,facilitating the acquisition and analysis of experimental data.
- The factory can test the performance of circuit components to ensure the normal operation of equipment and facilitate fault diagnosis.
- Radio enthusiasts use it to debug circuits,test component parameters,and assist in the production and repair of equipment.
- In the home,one can check the voltage and current of electrical appliances,diagnose simple circuit faults,and facilitate the daily maintenance of electrical equipment.
- Suitable for temperature measurement scenarios.When combined with thermocouples,it can monitor the temperatures of different environments or objects.

Instrument Appearance

1.Non-contact voltage sensing detection area and detection indicator light
2.LCD screen **3.Function key** **4.Knob switch** **5.Port**
6.Shockproof sleeve

Operation Interface

Measurement Of Alternating Voltage

- The measurement range is wide,including 2V,20V,200V,750V,etc.It is suitable for various scenarios of AC voltage measurement and has strong practicality.
- The accuracy is quite high.The 2V range has an error of ±(0.8%+6),and the 750V range has an error of ±(1.0%+6).This ensures the reliability of the measurement results.
- The input impedance is uniformly set at 10MΩ,which has little impact on the tested circuit and reduces measurement errors.

Direct Current Voltage Measurement

- The measurement range is extensive,covering 200mV,2V,20V,200V,1000V.It is suitable for different DC voltage scenarios and has a wide range of applications.
- The accuracy is quite high.The 200mV range has an error of ±(0.5%+4),and the 1000V range has an error of ±(1.0%+4).The measurement results are reliable.
- The input impedance of the 200mV range is greater than 40MΩ,while the rest is 10MΩ.
- This has a minimal impact on the measured circuit and results in low error.

Operation Interface

Resistance Measurement

- The range is diverse,covering multiple settings from 200Ω to 20MΩ,suitable for measuring different resistance values and meeting the needs of various scenarios.
- High accuracy,with a 200Ω range of ±(0.8%+5),and a 20MΩ range of ±(1.2%+5).The measurement results are reliable.
- High resolution,with a 200Ω setting capable of reaching 0.1Ω,precisely capturing even the smallest resistance variations.

Non-Contact Voltage Measurement

- The range is diverse,covering multiple settings from 200Ω to 20MΩ,suitable for measuring different resistance values and meeting the needs of various scenarios.
- High accuracy,with a 200Ω range of ±(0.8%+5),and a 20MΩ range of ±(1.2%+5).The measurement results are reliable.
- High resolution,with a 200Ω setting capable of reaching 0.1Ω,precisely capturing even the smallest resistance variations.

Operation Interface

Diode Measurement

- It can directly display the approximate value of the forward voltage drop of the diode.When reverse measurement is conducted,it shows "OL",which is convenient for quickly determining the quality of the diode,being intuitive and efficient.
- The test conditions are clearly defined:a forward direct current of approximately 0.8mA and a reverse voltage of approximately 2.2V.This ensures the standardization and accuracy of the measurement.
- Equipped with 250V DC or AC peak overload protection to prevent damage to the instrument due to incorrect voltage connection,making it safer to use.
- The on-off test function can be switched by pressing buttons.This device is versatile and can be used for both diode detection and circuit continuity testing scenarios.

Operation Interface

Temperature measurement

- It can directly display the approximate value of the forward voltage drop of the diode.When reverse measurement is conducted,it shows "OL",which is convenient for quickly determining the quality of the diode,being intuitive and efficient.
- The test conditions are clearly defined:a forward direct current of approximately 0.8mA and a reverse voltage of approximately 2.2V.This ensures the standardization and accuracy of the measurement.
- Equipped with 250V DC or AC peak overload protection to prevent damage to the instrument due to incorrect voltage connection,making it safer to use.
- The on-off test function can be switched by pressing buttons.This device is versatile and can be used for both diode detection and circuit continuity testing scenarios.

Operation Interface

Measurement of transistor hFE

- It can directly measure the hFE parameters of NPN or PNP type transistors,with the display value range of 0 to 1000,covering the common requirements for transistor detection.
- The test conditions are clearly defined:the base current is approximately 15uA,Vce is approximately 1.2V,ensuring the standardization and accuracy of the measurement.
- Equipped with dedicated hFE input terminals,facilitating the correct connection of transistor pins and enhancing measurement convenience.

Operation Interface

Measurement of direct current and alternating current

- The measurement range is wide,covering from 200uA to 20A for direct current,and the same range applies to alternating current,suitable for different scenarios of current measurement.
- High accuracy,DC 200uA setting ±(1.0%+5),20A setting ±(2.0%+5);AC 200uA setting ±(1.5%+5),20A setting ±(2.0%+10)
- Supports automatic/manual range conversion.It starts in the automatic mode and can be switched by pressing the "RANGE" key.The operation is flexible and convenient.
- The AC current frequency response is highly adaptable.The 20A range covers 40 to 100Hz,while the other range is from 40 to 400Hz.It has a wide range of applications.

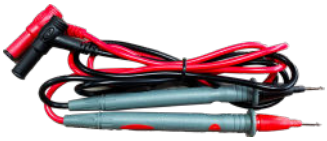
Technical Specification

Display Mode	LCD
Maximum Display	2000,3 1/2 digit automatic polarity display and unit display
Measurement Method	With microprocessor analog-to-digital converter (ADC+MCU)
Sampling Rate	About three times per second
Excessive Range Display	Display "OL"
Work Environment	(0-40)°C,relative humidity<80%
Storage Environment	(-10 to 50)°C,relative humidity<80%
Power Supply	Two 1.5V batteries ("AAA"type 7# batteries)
Size	170mm×86mm×35mm
Weight	Approximately 290g (including the battery)

Range technical parameters

Type	Range	Accuracy	Resolution
Direct Current Voltage (DCV)	200mV	±(0.5%+4)	0.1mV
	2V		1mV
	20V		10mV
	200V		100mV
	1000V	±(1.0%+4)	1V
Alternating Voltage (ACV)	2V	±(0.8%+6)	1mV
	20V		10mV
	200V		100mV
	750V	±(1.0%+6)	1V
Direct Current (DCA)	200uA	±(1.0%+5)	0.1uA
	2000uA		1uA
	20mA		10uA
	200mA		100uA
	2A		1mA
	20A	±(2.0%+5)	10mA
Alternating Current (ACA)	200uA	±(1.5%+5)	0.1uA
	2000uA		1uA
	20mA		10uA
	200mA		100uA
	2A		1mA
	20A	±(2.0%+10)	10mA
Resistance (Ω)	200Ω	±(0.8%+5)	0.1Ω
	2kΩ	±(0.8%+1)	1Ω
	20kΩ		10Ω
	200kΩ		100Ω
	2MΩ		1kΩ
	20MΩ	±(1.2%+5)	10kΩ
Type	Range	Display value	Test conditions
Transistor hFE	hFE NPN or PNP	0～1000	The base current is approximately 15 microamperes,and Vce is approximately 1.2 volts
Resistance (Ω) Temperature (°C)	-40°C-1000°C	<400°C±(1.0%+5); ≥400°C±(1.5%+15)	1°C
	-40°F-1832°F	<750°F±(1.0%+5); ≥750°F±(1.5%+15)	1°F

Standard Delivery

Name	Qty	Photo
Main Unit	1pc	
TP01 Thermocouple	1pc	
Table pen	1pc	
User Manual	1pc	
Certificate of Conformity	1pc	
Shockproof sleeve	1pc	/
1.5V battery	2pcs	
Packaging box	1pc