

3 3/4 DIGITAL MULTIMETER OPERATION MANUAL

This digital multimeter is a portable, compact 3 3/4 - digit multimeter for measuring DC and AC voltage, DC current, Resistance and Diode, Continuity, and Over setting value alarm, Data hold, Max, Min.

When power off or auto power off, it will change to be a quartz clock automatically.

There're four different types of switches set inside the meter for the Continuity and alarming of overloaded than the set figure. And they stand for different conditions.

1. SPECIFICATIONS

1.1 GENERAL SPECIFICATIONS

Display	: 3 3/4 digit LCD with bar graph dual display maximum indication of 3999
Polarity	: Automatic negative polarity indication.
Auto-Zero & Auto-polarity & Auto power off	
Overrange indication	: the OL display.
Lowbattery	: The " BATT " is display.
Safety standards	: The meter is up to the standards of IEC1010 Doble Insulation, Pollution Degree 2, Overvoltage Category II .
Operating environment:	Temperature 32 to104°F (0° to 40°C),humidity< 85% RH.
Storage environment :	Temperature -4 to140°F (-20° to 60°C),humidity< 95% RH.
Power	: Single, standard 9-volt battery, NEDA 1604IEC 6F 22
Dimension	: 145(H) x 73(W) x 40(D) mm
Weight	: Approx. 500g (including battery and holster).

1.2 ELECTRICAL SPECIFICATIONS

Accuracies are \pm (% of reading + number of digit) at $23 \pm 5^\circ\text{C}$, <75% RH.

DC Voltage

400mV, 4V, 40V, 400V, 600V : \pm (0.8% + 1)

Impedance : 20M Ω

AC Voltage

400V, 600V : \pm (1.2% + 10)

Impedance : 900k Ω

Frequency response : 40 -- 400Hz

Resistance

400 Ω , 4k Ω , 40k Ω , 400k Ω : \pm (1.0% + 3)

4M Ω , 40M Ω : \pm (2% + 5)

Overload protection : 250V DC/AC RMS.

DC Current

400 μ A, 4mA, 40mA	: \pm (1.0% + 2)
400mA	: \pm (1.2% + 2)
15A	: \pm (2.0% + 5)
Overload protection	: Fast 0.5A/250V fuse, fast 20A/250V fuse.

Diode Test

Test current	: 1.0 \pm 0.6mA
Test voltage	: Approx. 2.8V

Continuity Test

Audible indication : less than 10 Ω .

Battery Test

1.5V load current	: 100mA Approx. Load: 15 Ω +0.2A fuse.
9V load current	: 10mA Approx. Load: 1K Ω PTC+0.2A fuse.

hFE Test

I _b = 10 μ A	V _{ce} = 2.8V
Test range	: 0 - 1000.

Auto Power Off:

If there's no key input or switching movement, the meter will be turned off automatically in 30 minutes and change to be a quartz clock Push "Power" can turn on/off the meter.

2. OPERATION

WARNING

- 1) When measuring voltage ensure that instrument is not connected or switched to a current or resistance range, or to the diode check. Always ensure that the correct terminals are used for the type of measurement to be made.
- 2) Use extreme care when measuring voltage above 50V, especially from sources where high energy is existed.
- 3) Avoid making connections to "live" circuits whenever possible.
- 4) When making current measurements ensure that the circuit not "live" before opening it in order to connect the test leads.
- 5) Before making resistance measurements or diode test, ensure that the circuit under test is de -- energized.
- 6) Always ensure that the correct function and range is selected. If in doubt about the correct range to use, start with the highest and work downwards.
- 7) Extreme care should be taken when using the instrument to conjunction with a current transformer connected to the terminals if an open circuit occurs.
- 8) Ensure that the test leads and probes are in good condition with no damage to the insulation.
- 9) Take care not to exceed the over-load limits as given in the specifications.
- 10) **FUSE FOR REPLACEMENT MUST BE OF THE CORRECT TYPE AND RATING.**
- 11) To use only with the supplied test probes model NO. DIGITEK 96923.
- 12) Before opening the case of the instrument to replace battery or fuse, disconnect the test leads from any external circuit, set the selector switch to "OFF" position.

2.1 Insert the 9-volt battery.

If the battery is weak, a "BATT" symbol will appear on the right of the display. It means that the battery should be replaced.