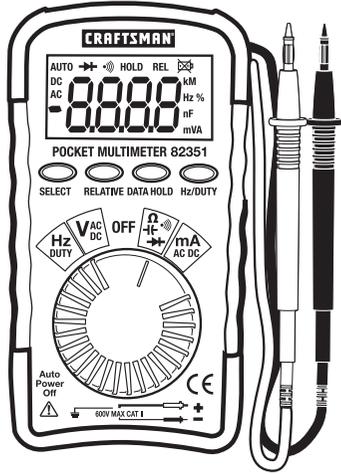


CRAFTSMAN

Pocket Multimeter
Model: 82351



CAUTION: Read, understand and follow Safety Rules and Operating Instructions in this manual before using this product.

- Safety
- Operation
- Maintenance
- Español

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www.craftsman.com 061906

ONE YEAR FULL WARRANTY

ONE YEAR FULL WARRANTY ON CRAFTSMAN MULTIMETER
If this CRAFTSMAN Multimeter fails to give complete satisfaction within one year from the date of purchase, RETURN IT TO THE NEAREST SEARS STORE OR OTHER CRAFTSMAN OUTLET IN THE UNITED STATES, and Sears will replace it, free of charge.
This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.
Sears, Roebuck and Co., Dept. 817WA, Hoffman Estates, IL 60179

For Customer Assistance Call 9am - 5pm (ET)
Monday through Friday 1-888-326-1006

WARNING: USE EXTREME CAUTION IN THE USE OF THIS DEVICE.
Improper use of this device can result in injury or death. Follow all safeguards suggested in this manual in addition to the normal safety precautions used in working with electrical circuits. DO NOT service this device if you are not qualified to do so.

SAFETY INSTRUCTIONS

This meter has been designed for safe use, but must be operated with caution. The rules listed below must be carefully followed for safe operation.

1. **NEVER** apply voltage or current to the meter that exceeds the specified maximum:

Input Protection Limits	
Function	Maximum Input
V DC or V AC	600V AC and DC
mA AC/DC	500mA DC/AC
A AC/DC	10A DC/AC (for 30 seconds max. every 15 minutes)
Resistance, Diode Test, Continuity	250V DC/AC
Temperature	250V DC/AC

2. **USE EXTREME CAUTION** when working with high voltages.
3. **DO NOT** measure voltage if the voltage on the "COM" input jack exceeds 600V above earth ground.
4. **NEVER** connect the meter leads across a voltage source while the function switch is in the current, resistance, or diode mode. Doing so can damage the meter.
5. **ALWAYS** discharge filter capacitors in power supplies and disconnect the power when making resistance or diode tests.
6. **ALWAYS** turn off power and disconnect test leads before opening the covers to replace the fuse or battery.
7. **NEVER** operate the meter unless the back cover and the battery and fuse covers are in place and fastened securely.
8. If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

SAFETY SYMBOLS



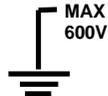
This symbol adjacent to another symbol, terminal or operating device indicates that the operator must refer to an explanation in the Operating Instructions to avoid personal injury or damage to the meter.

WARNING

This **WARNING** symbol indicates a potentially hazardous situation, which if not avoided, could result in death or serious injury.

CAUTION

This **CAUTION** symbol indicates a potentially hazardous situation, which if not avoided, may result damage to the product.



This symbol advises the user that the terminal(s) so marked must not be connected to a circuit point at which the voltage with respect to earth ground exceeds 600V.

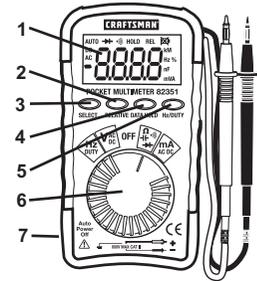
This symbol adjacent to one or more terminals identifies them as being associated with ranges that may, in normal use, be subjected to particularly hazardous voltages. For maximum safety, the meter and its test leads should not be handled when these terminals are energized.



This symbol indicates that a device is protected throughout by double insulation or reinforced insulation.

CONTROLS AND JACKS

1. 3 3/4 Digit (4000 count)
2. RELATIVE button
3. SELECT button
4. DATA HOLD button
5. Hz/DUTY button
6. Function switch
7. Rubber holster



SPECIFICATIONS

Function	Range	Accuracy
DC Voltage	400.0mV	±(0.7% reading + 3 digits)
	4.000V, 40.00V, 400.0V, 500V	±(1.0% reading + 3 digits)
	400.0V, 500V	±(1.3% reading + 3 digits)
AC Voltage (40-400Hz)	4.000V, 40.00V	±(1.0% reading + 10 digits)
	400.0V, 500V	±(2.3% reading + 5 digits)
DC Current	40.00mA	±(2.0% reading + 5 digits)
	400.0mA	±(2.0% reading + 5 digits)
AC Current (50-60 Hz)	40.00mA	±(2.5% reading + 10 digits)
	400.0mA	±(2.5% reading + 10 digits)
Resistance	400.0Ω, 4.000kΩ, 40.00kΩ, 400.0kΩ	±(2.0% reading + 5 digits)
	4.000MΩ	±(5.0% reading + 5 digits)
	40.00MΩ	±(10.0% reading + 5 digits)
Capacitance	4.000nF	±(5.0% reading + 0.3nF)
	40.00nF	±(5.0% reading + 30 digits)
	400.0nF	±(3.0% reading + 15 digits)
Frequency	4.000μF, 40.00μF, 200.0μF	±(10.0% reading + 15 digits)
	9.999Hz, 99.99Hz, 999.9Hz, 9.999kHz, 99.99kHz, 999.9kHz, 10MHz	±(2.0% reading + 5 digits)
Duty Cycle	0.1-99%	±(2.0% reading + 5 digits)

Max input voltage 500V AC/DC
Input Sensitivity, (Frequency Ranges) 10Vrms min. <9.999KHz
40Vrms min. >99.99KHz
Diode Test Test current 1mA max., open circuit voltage of 1.5V typical

Continuity Check Audible signal if the resistance is < 60Ω
Display 4000 count 3 3/4 digit LCD
Over range indication LCD displays "OL"
Polarity Minus (-) sign for negative polarity.
Low Battery Indication "BAT" symbol indicates low battery condition.
Battery CR2032 3V Lithium
Operating Temperature 41°F to 104°F (5°C to 40°C)
Storage Temperature 14°F to 122°F (-10°C to 50°C)
Operating Humidity Max 80% up to 87°F (31°C) decreasing linearly to 50% at 104°F (40°C)

Storage Humidity <80%
Operating Altitude 7000ft. (2000meters) maximum.
Weight 1.7oz (50g)
Size 4.25x2.2x.5" (108x56x11.5mm)
Safety For indoor use and in accordance with the requirements for double insulation to IEC1010-1 (1995): EN61010-1 (1995) Overvoltage Category II 600V, Pollution Degree 2. UL, CE Approved

BATTERY INSTALLATION

WARNING: To avoid electric shock, disconnect the test leads from any source of voltage before removing the battery cover.

1. Remove the rubber holster (if in place)
2. Remove Phillips head screw and lift off the rear housing of the meter.
3. Replace old battery with fresh CR2032 type button battery.
4. Replace the rear cover and secure the screw.

OPERATING INSTRUCTIONS

WARNING: Risk of electrocution. High-voltage circuits, both AC and DC, are very dangerous and should be measured with great care.

1. ALWAYS turn the function switch to the OFF position when the meter is not in use.
2. Press the HOLD button to freeze a displayed reading

NOTE: On some low AC and DC voltage ranges, with the test leads not connected to a device, the display may show a random, changing reading. This is normal and is caused by the high-input sensitivity. The reading will stabilize and give a proper measurement when connected to a circuit.

AC OR DC VOLTAGE MEASUREMENT

WARNING: Risk of Electrocution. The probe tips may not be long enough to contact the live parts inside some 240V outlets for appliances because the contacts are recessed deep in the outlets. As a result, the reading may show 0 volts when the outlet actually has voltage on it. Make sure the probe tips are touching the metal contacts inside the outlet before assuming that no voltage is present.

CAUTION: Do not measure AC voltages if a motor on the circuit is being switched ON or OFF. Large voltage surges may occur that can damage the meter.

CAUTION: Do not measure DC voltages if a motor on the circuit is being switched ON or OFF. Large voltage surges may occur that can damage the meter.

1. Set the function switch to the "VAC/DC" position
2. Press the SELECT button to select AC or DC voltage measurement
3. Touch the test probe tips to the circuit under test. Be sure to observe the correct polarity (red lead to positive, black lead to negative).
4. Read the voltage on the display

RESISTANCE/CONTINUITY MEASUREMENT

WARNING: To avoid electric shock, disconnect power to the unit under test and discharge all capacitors before taking any resistance measurements. Remove the batteries and unplug the line cords.

1. Set the function switch to the " Ω \rightarrow \bullet)" position.
2. Connect the test leads to the circuit to be measured.
3. Read the value on the display.
4. For Continuity tests, press the SELECT button until the " \bullet)" symbol appears in the display.
5. If the resistance is less than 60 ohms, an audible tone will sound.

CAPACITANCE MEASUREMENT

WARNING: To avoid electric shock, disconnect power to the unit under test and discharge all capacitors before taking any capacitance measurements. Remove the batteries and unplug the line cords.

1. Set the function switch to the " Ω \rightarrow \bullet)" position.
2. Press the SELECT button until "nF" appears in the display.
3. Press the RELATIVE button to zero the display
4. Connect the test leads to the capacitor to be measured.
5. Read the value on the display.

DIODE TEST

WARNING: To avoid electric shock, do not test any diode that has voltage on it.

1. Set the function switch to " Ω \rightarrow \bullet)" position.
2. Press the SELECT button once to enter Diode Test. The " \rightarrow " symbol will appear in the display.
3. Touch the test probe tips to the diode or semiconductor junction you wish to test. Note the meter reading.
4. Touch the test probes to the diode under test. Forward voltage will typically indicate 0.400 to 0.700V. Reverse voltage will indicate "OL". Shorted devices will indicate near 0V and an open device will indicate "OL" in both polarities.

AC OR DC CURRENT MEASUREMENT

1. Set the function switch to the "mA AC/DC" position.
2. Press the SELECT button to measure AC or DC mA.
3. Remove power from the circuit under test and open the circuit at the point where you wish to measure current.
4. Touch the black test probe tip to the negative side of the circuit and touch the red test probe tip to the positive side of the circuit.
5. Apply power to the circuit.
6. Read the value on the display

FREQUENCY/DUTY CYCLE MEASUREMENT

1. Set the function switch to the "HZ/DUTY" position.
2. Press the Hz/DUTY button once to display Duty Cycle %. Pressing the button again will toggle the display to frequency (Hz).
3. Touch the test probe tips to the circuit under test. Be sure to observe the correct polarity (red lead to positive, black lead to negative).
4. Read the value on the display.

RELATIVE BUTTON

The relative measurement feature allows you to make measurements relative to a stored reference value. A reference voltage can be stored and measurements made in comparison to that value. The displayed value is the difference between the reference value and the measured value.

1. Perform the measurement as described in the operating instructions.
2. Press the RELATIVE button to store the reading in the display and the "REL" indicator will appear on the display.
3. The display will now indicate the difference between the stored value and the measured value.
4. Press the RELATIVE button to exit the relative mode.

Note: The Relative function does not operate in the Frequency function.

DATA HOLD BUTTON

The Data Hold function allows the meter to "freeze" a measurement for later reference

1. Press the "DATA HOLD" button to "freeze" the display, the "HOLD" indicator will appear.
2. Press the "DATA HOLD" button to return to normal operation.

AUTO POWER OFF

1. To save power, the display automatically turns off in 30 minutes.
2. Press the SELECT button to turn display back on.
3. To cancel Auto Power Off, set the function switch to the off position. Hold down the SELECT button and turn the function switch to the desired position and release the SELECT button after 3 seconds.

MAINTENANCE

WARNING: To avoid electric shock, disconnect the test leads from any source of voltage before removing the back cover or the battery or fuse covers.

WARNING: To avoid electric shock, do not operate your meter until the battery and fuse covers are in place and fastened securely.

This MultiMeter is designed to provide years of dependable service, if the following care instructions are performed:

1. **KEEP THE METER DRY.** If it gets wet, dry it immediately.
2. **USE AND STORE THE METER IN NORMAL TEMPERATURES.** Temperature extremes can shorten the life of the electronic parts and distort or melt plastic parts.
3. **HANDLE THE METER GENTLY AND CAREFULLY.** Dropping it can damage the electronic parts or the case.
4. **KEEP THE METER CLEAN.** Wipe the case occasionally with a damp cloth. DO NOT use chemicals, cleaning solvents, or detergents.
5. **USE ONLY FRESH BATTERIES OF THE RECOMMENDED SIZE AND TYPE.** Remove old or weak batteries so they do not leak and damage the unit.
6. **IF THE METER IS TO BE STORED FOR A LONG PERIOD OF TIME,** the batteries should be removed to prevent damage to the unit.

UL LISTED

The UL mark does not indicate that this product has been evaluated for the accuracy of its readings.

TROUBLESHOOTING

There may be times when your meter does not operate properly. Here are some common problems that you may have and some easy solutions to them.

Meter Does Not Operate:

1. Always read all the instructions in this manual before use.
2. Check to be sure the battery is properly installed.
3. Check to be sure the battery is good.
4. If the battery is good and the meter still doesn't operate, check to be sure that both ends of the fuse are properly installed.

If You Do Not Understand How the Meter Works:

1. Purchase "Multitesters and Their Use for Electrical Testing", (Item No. 82303).
2. Call our Customer Service Line 1-888-326-1006.