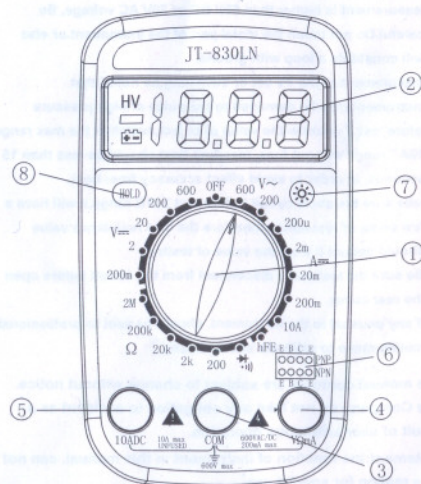


INSTRUCTION MANUAL

DIGITAL MULTIMETER

JT-830 SERIES



Thank you very much for your purchasing our product, It is very good for you to read and understand the operation and maintenance before using the instrument.

FRONT PANEL DESCRIPTION

1. FUNCTION AND RANGE SWITCH

This switch is used to select the function and desired range as well as to turn on the instrument.

To extend the life of this battery, the switch should be in the "OFF" position when the instrument is not in use.

2. DISPLAY

3 1/2 digit, 7 segment, 0.5" high LCD.

3. "Common" JACK

Plug in connector for black (negative) test lead.

4. "VΩmA" JACK

Plug in connector for red (Positive) test lead for all voltage and resistance and current (except 10A) measurements.

5. "10A" JACK

Plug in connector to red (positive) test lead for 10A measurement.

6. Transistor test

7. With backlight function

8. Hold key

GENERAL FEATURES

Item \ Function	DCV	ACV	DCA	Ω	hFE	BAT	HOLD	℃
JT830BN	√	√	√	√	√	√	√	√
JT830DN	√	√	√	√	√	√	√	√
JT830LN	√	√	√	√	√	√	√	√
JT831B	√	√	√	√	√	√	√	√
JT831D	√	√	√	√	√	√	√	√
JT831L	√	√	√	√	√	√	√	√
JT830CN	√	√	√	√	√	√	√	√
JT831CN	√	√	√	√	√	√	√	√

1. Display: 3 1/2 LCD display provided MAX. indication: 1999.

Indication of polarity: automatic polar display.

2. Automatic over range indication with the "1" displayed.

3. Work temperature: 0~40℃, the humidity <75%RH

Storage temperature: -15~50℃

4. Power supply: 9V battery

5. Low battery indication: appears on the display

6. Data hold

7. Size: 105*60*27mm

8. Weight: 140g (including holster and battery)

Specifications

Accuracies are guaranteed for 1 year, 23℃±5℃, less than 75%RH

1. DC Voltage

RANGE	RESOLUTION	ACCURACY
200mV	100uV	±(0.5%+2)
2V	1mV	±(0.5%+2)
20V	10mV	±(0.5%+2)
200V	100mV	±(0.5%+2)
600V	1V	±(0.8%+2)

Input resistance: ≥1MΩ

Max input voltage: DC 600V or the AC 600V RMS

2. DC CURRENT

RANGE	RESOLUTION	ACCURACY
20uA	10nA	±(1%+2)
200uA	100nA	±(1%+2)
2mA	1uA	±(1%+2)
20mA	10uA	±(1%+2)
200mA	100uA	±(1.2%+2)
10A	10mA	±(2%+2)

Overload protection: 0.2A/250V fuse, (10A range not fused)

3. AC VOLTAGE

RANGE	RESOLUTION	ACCURACY
200V	100mV	±(1.2%+10)
600V	1V	±(1.2%+10)

Frequency range: 45 to 400Hz

Max input voltage: AC 600V RMS

Indication: Average (rms of sine wave).

4. RESISTANCE

RANGE	RESOLUTION	ACCURACY
200Ω	0.1Ω	± (1%+5)
2KΩ	1Ω	± (1%+2)
20KΩ	10Ω	± (1%+5)
200KΩ	100Ω	± (1%+5)
2MΩ	1KΩ	± (1%+5)

Open voltage: less than 2.8V

Overload protection: 10 seconds max 250V rms

5. TEMPERATURE

RANGE	RESOLUTION	ACCURACY
-20℃~1000℃	1℃	±(3%+2)<150℃ ±3% ≥150℃

6. TRANSISTOR HFE DATA TEST

RANGE	DISPLAY	TEST CONDITION
NPN OR PNP	0~1000	Basic Current is Approx. 10μA.Vce is Approx. 3V

7. Diode & continuous buzzer

The voltage is 2.4V,current is 1.5mA,Display of diode resembling forward conduction voltage.Inside buzzer shall alarm if test resistance below 70Ω.

8. Square wave is 50Hz,The output voltage is 3Vp-p.

9. BATTERY TEST: 1.5V/9V

METHOD OF MEASUREMENT

1. DCV, ACV MEASUREMENT

- 1)Set the Function– Range switch at the required position.
- 2)Connect black test lead to “COM” terminal and red test lead to the “VΩ mA” input terminal.
- 3)Connect test leads to measuring point and read value

2. DCA MEASUREMENT

- 1) Connect the black test lead to “COM” terminal and the red test lead to “VΩ mA” terminal for a maximum of 200mA. For a maximum of 10A, move the red test lead to “10A” terminal.
- 2) Set the Function – Range switch at the required position.
- 3) Connect test leads to measuring points and read the value.

3. RESISTANCE MEASUREMENT

- 1) Connect black test lead to “COM” terminal and red test lead to “VΩmA” input terminal.
- 2) Set the Function – Range switch to the Ω range.
- 3) Connect the test leads across the resistance under test
- 4)Before checking in-circuit resistance, be sure the circuit under test has all power removed and all capacitors have been discharged fully.


4.TEMPERATURE MEASUREMENT

- 1) Connect black test lead to “COM” terminal and red test lead to “VΩmA” input terminal.
- 2) Set the Function – Range switch at the “℃” position.
- 3) Put K-Type sensor into the temperature testing holes, connect the object being test.The value of the temperature is shown on the display in degrees centigrade(℃).

5.TRANSISTOR hFE TEST

- 1) Set the Function – Range switch to the “hFE” position.
- 2) Transistor correct insert to E.B.C. connector.


6. DIODE MEASUREMENT

- 1) Connect black test lead to “COM” terminal and red test lead to “VΩmA” input terminal.
- 2) Set the Function – Range switch at the “ ” position.
- 3) The forward voltage drop in mV will be displayed. If the diode is reversed, figure “1” will be shown.
- 4) Connect the test leads. Inside buzzer shall alarm if test resistance below 70Ω.

7. BATTERY TEST


- 1) Connect black test lead to “COM” terminal and red test lead to “VΩmA” input terminal.
- 2) Set the Function – Range switch at the “BATT” position.
- 3). Connect the polarity of battery with test leads;

8.50Hz SQUARE WAVE OUTPUT

- 1) Connect black test lead to “COM” terminal and red test lead to “VΩ mA” input terminal.
- 2) RANGE switch to  position.
Warning: A.It is a output signal.Do not test voltage.
B.There is no short-circuit protect.
C.Output signal peak reverse voltage can not exceed 40VP-P


BATTERY AND FUSE REPLACEMENT

Fuse rarely need replacement and blow almost always as a result of operator error.

If  appears in display, it indicates that the battery should be replaced.

To replace battery & Fuse (500mA/250V) remove the 2 screws in the bottom of the case, simply remove the old, and replace with a new one. Be careful to observe polarity.

CAUTION

- 1.Instrument must match test leads to fit for safe standard requirement.If the test leads are damage. please replace the same type the test leads immediately.
- 2.Before use,please pay attention to symbol ,that's warning of no exceed the voltage or accurate value.
- 3.Be sure do not exceed each range
- 4.Do not touch the unused socket when test.
- 5.Measurement is higher than 60V DC or 30V AC voltage, Be careful.Do not touch the metal part of the instrument.or else it will constitute a loop with ground.
- 6.Measurement of the TV set or switching,be noted that instrument may be damaged to the pulse of high pressure
- 7.Before test if unknow the value of object,switch at the max range.
- 8.“10A” range without fuse, measure time should be less than 15 seconds, in order to avoid effect accuracy from heat.
- 9.Make sure the short circuit before test 200Ω range,it will have a few ohms of resistance,therefore the true resistance value should deduct it from the value of testing.
- 10.Be sure the test leads disconnect from the circuit before open the rear cover.
- 11.If any unusual to the instrument. should be sent to professional maintenance to calibrate and maintain.

The manual contents are subject to change without notice.
The Company do not take any obligation to accident as a result of user erroneous operation.

Statement:the function of instrument in this manual. can not be a reason for special use.