

SEW

PT-30

Pen-type

DIGITAL MULTITESTER



INSTRUCTION MANUAL

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1. Introduction

NOTE

This meter has been designed and tested According to CE Safety Requirements for Electronic Measuring Apparatus, IEC / EN 61010-1 and other safety standards. Follow all warnings to ensure safe operation.

WARNING

READ "SAFETY NOTES" (NEXT PAGE) BEFORE USING THE METER.

2. Safety Notes

- Read the following safety information carefully before attempting to operate or service the meter.
- Use the meter only as specified in this manual. Otherwise, the protection provided by the meter may be impaired.
- Rated environmental conditions :
 - (1) Indoor Use.
 - (2) Installation Category III.
 - (3) Pollution Degree 2.
 - (4) Altitude up to 2000 meters.
 - (5) Relative humidity 80% max.
 - (6) Ambient temperature 0°C~40°C.

- Observe the International Electrical Symbols listed below :



Meter is protected throughout by double insulation or reinforced insulation.



Warning ! Risk of electric shock.



Caution ! Refer to this manual before using the meter.



AC... Alternating current.



DC... Direct current.

3. Features

- 4000 - count LCD.
- Full automatic measurement.
Voltage measurement.
Resistor measurement.
- Data Hold function.
- Continuity check.
- Diode measurement.
- Low battery indication.
- Pen light provided.
- Back light LCD.
- 3V DC power supply.
- Input impedance : 10M Ω

- Safety Standard :
EN 61010-1 CAT III 600V
EN 61326-1 : 2006
IEC 61000-4-2
IEC 61000-4-3
CISPR11

4. Specifications (All at 23°C±5°C, ≤ 80%R.H)

- AC Voltage

Range	Resolution	Accuracy
4 V	1 mV	± (1.5% rdg+5dgt)
40 V	10 mV	
400 V	100 mV	
600 V	1 V	

Input impedance : 10MΩ

- DC Voltage

Range	Resolution	Accuracy
4 V	1 mV	± (1% rdg+3dgt)
40 V	10 mV	
400 V	100 mV	
600 V	1 V	

Input impedance : 10MΩ

- Resistance

Range	Resolution	Accuracy
400 Ω	0.1 Ω	$\pm (1.5\% \text{ rdg} + 3\text{dgt})$
4 K Ω	1 Ω	
40 K Ω	10 Ω	
400 K Ω	100 Ω	
4 M Ω	1 K Ω	
40 M Ω	10 K Ω	$\pm (2.5\% \text{ rdg} + 4\text{dgt})$

Overload Protection 500V DC

- Continuity Test

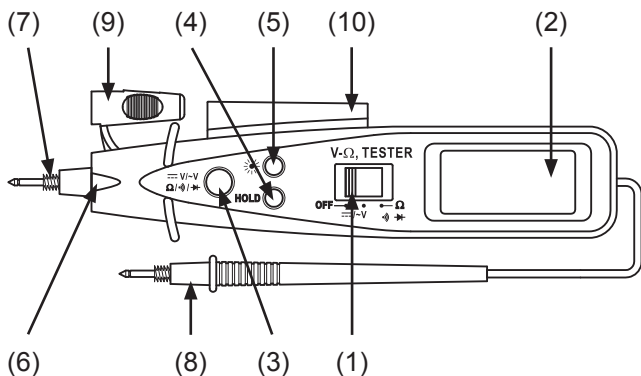
Range	Audible threshold
400 Ω	Less than 25 Ω

5. General

- Dimensions :
196mm(L) x 35.8mm(W) x 28.3mm(D)
- Weight :
Approx. 105g (battery included)
- Power source :
CR2032 battery 3V x 1
- Low Battery Indication :
"BATT" sign appears on the display when the battery voltage drops below accurate operating level.

- Accessories :
 Battery
 Carrying case
 Instruction Manual
 Fixture

6. Instrument Layout



- | | |
|-------------------------------|-------------------------|
| (1) Function Selection Switch | (6) LED Light |
| (2) LCD Display | (7) Red Test Pin (+) |
| (3) Select Button | (8) Black Test Lead (-) |
| (4) HOLD Button | (9) Cap |
| (5) Back Light Button | (10) Fixture |

- (1) Function selection switch
The function selection switch selects the function.
- (2) LCD Display
3999 count LCD with LOW BATTERY indication.
- (3) Select Button
For AC/DC function selection. In the resistance + continuity + diode function, press the Select button to select resistance, continuity or diode function.
- (4) HOLD Button
Press the HOLD button (HOLD annunciator turns on) to make the meter stop updating the LCD display.

This mode can be nested in most of the special modes. Enabling HOLD function in automatic mode makes the meter switch to manual mode, but the full scale range remains the same. HOLD function can be cancelled by changing the measurement mode, pressing range, or push HOLD again.
- (5) Pen Light / Back Light Button
ON : Press the pen light / back light button.
The pen light and LCD backlight will light.
OFF : The lights will be off automatically in about 50 seconds. If you press the button when the lights are on, the lights will be off as well.

(6) LED Light

For penlight function in dark place.

(7) Red Test Pin (+)

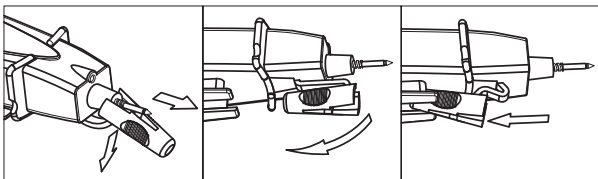
Red Test Pin for positive polarity connection.

(8) Black Test Lead (-)

Black test lead (-) negative polarity connection.

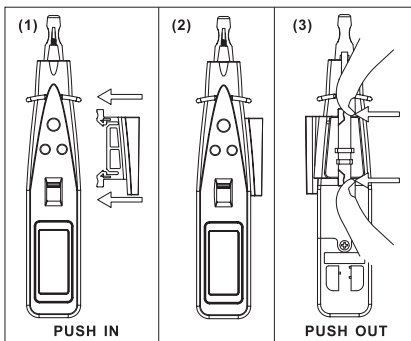
(9) Cap

For protection of the tip of the red test pin.



(10) The fixture of the black test lead

The fixture is used to fix the black test lead for testing.



7. Measurement

Before proceeding with measurement , read the safety notes.

(1) Voltage measurement

Switch to V function for ACV or DCV function.

Use the test lead tip to the circuit and read the reading of display directly.

If the readings exceed AC 600V(DC 600V), maybe the reading value is wrong and it is dangerous.

(Refer to the safety notes)

(2) Resistance Measurement

Switch to OHM range and make sure there is no power in the circuit being measured. Insert the

Connect the test leads to the circuit or device under test and read the display directly.

(3) Continuity Check

Continuity check shares the same configuration with 400.0 Ω manual resistance measurement mode, but with buzzer output to indicate continuity.

The buzzer generates a 2KHz sound whenever the digit number less than 25 Ω . Because the cycle time of measurement is only 50ms, the least significant digit will not display.

(4) Diode Measurement

Diode measurement mode shares the same configuration with 4.000V manual voltage measurement mode.

If the test circuit is open or the voltage drop between the two ports of the device (diode) under test are larger than 2V, the LCD panel will show "OL".

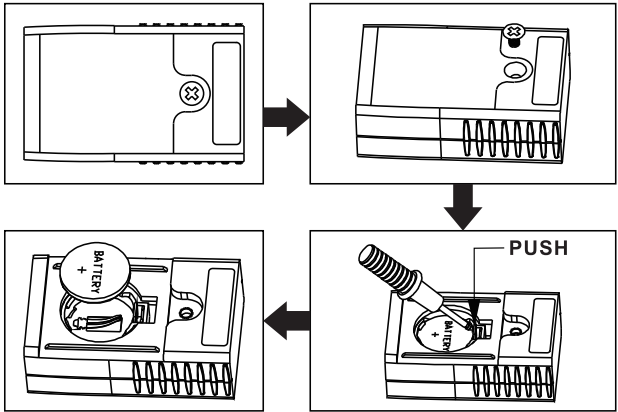
The buzzer generates a 2KHz sound whenever the digit number is less than 0.25V. Because the cycle time of measurement is only 50ms, the least significant digit will not display.

8. Maintenance

- Battery replacement

When low battery warning appears, change new battery as follows :

- (1) Disconnect the test leads from the instrument and turn off power.
- (2) Unscrew the case and replace new battery.
- (3) Close the case and lock the screw.



- Cleaning and Storage

WARNING

To avoid electrical shock or damage to the meter,
Do not get water inside the case.

Periodically wipe the case with a damp cloth and detergent. Do not use abrasives or solvents.
If the meter is not used for over 60 days, remove the battery for storage.

9. Fuse Replacement

Only replace with the same specification fuse.