

UT118A/B Pen Type Meters

Operating Manual

Overview

This Operating Manual covers information on safety and cautions. Please read the relevant information carefully and observe all the Warnings and Notes strictly.

Warning

To avoid electric shock or personal injury, read the "Safety Information" and "Rules for Safe Operation" carefully before using the Meter.

The Model UT118A and UT118B (hereafter referred to as "the Meter") are 3000 counts pen type digits millimeters. The Meter uses large scale of integrated circuit with professional multimeter IC as its core and has full range overload protection.

The Meter measures or tests the following:

- AC/DC voltage
- EF Function (UT118B only)
- Resistance
- Diode
- Continuity
- Capacitance

Unpacking Inspection

Open the package case and take out the Meter. Check the following items carefully to see any missing or damaged part:

Item	Description	Qty
1	English Operating Manual	1 piece
2	Test Lead	1 pair

In the event you find any missing or damage, please contact your dealer immediately.

Safety Information

This Meter complies with standards EN61010: in pollution degree 2, over voltage category (CATIII 300V) and double insulation.

CATIII: Distribution level, fixed installation, with smaller transient over voltages than CAT IV.

Use the Meter only as specified in this operating manual, otherwise the protection provided by the Meter may be impaired.

In this manual, a Warning identifies conditions and actions that pose hazards to the user, or may damage the Meter or the equipment under test.

A Note identifies the information that user should pay attention on.

Rules For Safe Operation

Warning

To avoid possible electric shock or personal injury, and to avoid possible damage to the Meter or to the equipment under test, adhere to the following rules:

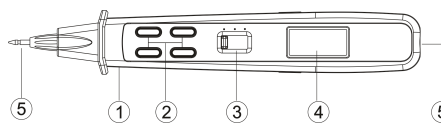
- Before using the Meter inspect the case. Do not use the Meter if it is damaged or the case (or part of the case) is removed. Look for cracks or missing plastic. Pay attention to the insulation around the connectors.
- Inspect the test leads for damaged insulation or exposed metal. Check the test leads for continuity. Replace damaged test leads with identical model number or electrical specifications before using the Meter.
- When using the test leads, keep your fingers behind the finger guards.
- Do not apply more than the rated voltage, as marked on the Meter, between the terminals or between any terminal and grounding.
- When the Meter working at an effective voltage over 60V DC or 30V AC, special care should be taken for there is danger of electric shock.
- Use the proper function, and range for your measurements.
- Disconnect circuit power and discharge all high voltage capacitors before testing current, resistance, diodes or continuity.

- Replace the battery as soon as the battery indicator appears. With a low battery, the Meter might produce false readings that can lead to electric shock and personal injury.
- When servicing the Meter, use only the same model or identical electrical specifications replacement parts.
- The internal circuit of the Meter shall not be altered at will to avoid damage of the Meter and any accident.
- Soft cloth and mild detergent should be used to clean the surface of the Meter when servicing. No abrasive and solvent should be used to prevent the surface of the Meter from corrosion, damage and accident.
- Do not use or store the Meter in an environment of high temperature, humidity, explosive, inflammable and strong magnetic field. The performance of the Meter may deteriorate after dampened.

International Electrical Symbols

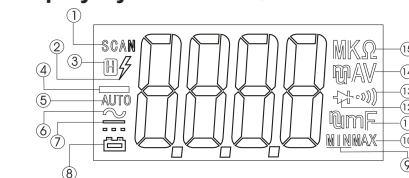
	Deficiency of Built-In Battery
	Grounding
	AC (Alternative Current)
	DC (Direct Current)
	Double Insulated
	Continuity Test
	AC or DC
	Diode
	Conforms to Standards of European
	Warning. Refer to the Operating Manual

The Meter Structure (see figure 1)



1. Front Housing
2. Functional buttons
3. Switch
4. LCD Display
5. Input Terminals

Display Symbols (see figure 2)



1. Indicates auto scan mode
2. High voltage indicator
3. Data hold is active
4. Indicates negative reading
5. The meter is in the autorange mode
6. Indicator for AC voltage
7. Indicator for DC voltage
8. The battery is low

Warning: To avoid false readings, which could lead to possible electric shock or personal injury, replace the battery as soon as the battery indicator appears.

9. Minimum reading.
10. Maximum reading.
11. The unit of Capacitance
12. Test of diode
13. The continuity buzzer is on.
14. V : Volts. The unit of voltage.
15. mV : Millivolt. 1×10^{-3} or 0.001 volts.
16. Ω: Ohm. The unit of resistance
17. kΩ : kilohm. 1×10^3 or 1000 ohms.
18. MΩ: Megaohm. 1×10^6 or 1,000,000 ohms

Button function and auto power off

1.SELECT

Press **SELECT** to switch between resistance, AC/DC voltage, continuity buzzer and diode measurement modes. Press and hold more than 2 seconds in or exit "sleep" mode.

2. HOLD

Press **HOLD** to enter and exit hold mode (except under auto scan mode).

Press and hold the **HOLD** button more than 2 seconds, the meter automatically holds the value which obtains at 6 seconds later, at this time, is displayed and flickering.

If enter "sleep" mode under hold mode, the meter still in the hold mode when it be turned on.

3. MAX/MIN

The MAX/MIN mode stores minimum (MIN) and maximum (MAX) input values (except under auto scan mode). Manual ranging comes when you select this function.

Press **MAX/MIN** button MAX → MIN → MAX/MIN and vice versa.

Under hold mode and max/min mode, should exit hold mode first then press and hold MAX/MIN more than 1 second to exit max/min mode.

4. Backlight

Display Backlight and test lead light button, Press once to turn the display backlight and test lead light on and press again to turn the display backlight and test lead light off. It will automatically off after around 1 minute.

5. AUTO POWER OFF

To preserve battery life, the Meter automatically goes into a "sleep" mode if you do not press any button for around 10 minutes. The Meter can be activated by pressing any button, then returns to the display for the function selected previously

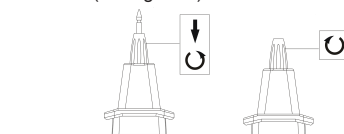
6. BUZZER

The buzzer phonate go with every time button be effectual pressed. When the meter will auto power off in 20 seconds the buzzer beeps three times. Before power off there will be a long time buzzer beeps.

Measurement Operation

Before measurement, anticlockwise circumgyrate the red cover and rock the input terminal.

When all themasurement has been completed, deasil circumgyrate the red cover then hide the input terminal. (see figure 3)



1. AC / DC Voltage auto Measurement.

Warning

To avoid harm to the Meter, never input higher than 300V voltage although it is possible to measure higher voltage.

To measure Voltage, connect the Meter as follows:

- Set the switch to **V** .
- Auto measurement mode is a default. Under this mode can measure AC voltage and DC voltage.
- Connect the test leads across with the object being measured. The measured value shows on the display.
- When voltage measurement has been completed, disconnect the connection between the testing leads and the circuit under test, and remove the testing leads away from the input terminal of the meter.

Note:

The threshold voltage of AC voltage is around 400mV.

2. DC Voltage Measurement

Warning

To avoid harm to the Meter, never input higher than 300V voltage although it is possible to measure higher voltage.

- Set the switch to **V** .
- Press **SELECT** to select DC voltage measurement mode.
- Connect the test leads across with the object being measured. The measured value shows on the display.
- When voltage measurement has been completed, disconnect the connection between the testing leads and the circuit under test, and remove the testing leads away from the input terminal of the meter.

Warnings | safety information

All information regarding operation and use can be found in the operating instructions or on the product label. Read these instructions carefully before using the products and follow the instructions contained therein.

Also read the following information before use:

Safety of use.

1. Use measuring tools for their intended purpose. Do not use measuring tools for tasks for which they are not designed to avoid damage or incorrect measurement results.
2. Always ensure that the tool is in good working order before use. Damaged tools, such as cracked housings or damaged displays, can lead to incorrect measurements or the risk of accidents.
3. Calibrate measuring tools regularly to ensure their accuracy and reliability. Incorrectly calibrated devices can lead to incorrect results.

Precautions

1. Use appropriate eye protection, especially when working with measuring tools that may emit radiation.
2. Keep measuring tools away from children and untrained persons to prevent accidental damage or misuse.
3. Avoid using measuring tools in extreme temperature or humidity conditions or in atmospheres with high dust concentrations, which may affect their accuracy and functionality.
4. When working with measuring tools, take care not to damage delicate measuring elements (e.g. sensors, probes).

Safe use

1. Always ensure that the measuring tool is correctly positioned and secured to avoid measurement errors or damage.
2. Use measuring tools only in designated areas that provide adequate stability and minimise the risk of accidents, such as slippery or uneven surfaces.
3. Never take measurements on live components or in conditions that may pose a safety hazard.

Rules for use in appropriate conditions

1. Store measuring tools in a dry, cool place, away from moisture and direct sunlight, which may damage the devices or affect their accuracy.
2. When using measuring tools, make sure they are securely seated and will not be exposed to shocks or impacts that could damage them.
3. Avoid using measuring tools in extreme conditions, such as high vibrations, hot surfaces, dust or humidity, unless the tool is designed for such conditions by the manufacturer.

Maintenance instructions

1. Regularly check the condition of measuring tools, especially measuring elements (e.g. sensors, probes, displays) and batteries.
2. Follow the cleaning instructions provided by the manufacturer. Use appropriate cleaning materials (e.g. soft cloths) to avoid damaging delicate components.
3. Calibrate measuring tools regularly in accordance with the manufacturer's recommendations to maintain measurement accuracy.

Safe disposal

1. Dispose of used or damaged measuring tools in accordance with applicable environmental and electronic recycling regulations.
2. Do not dispose of measuring tools in normal waste bins, as they may contain components that are harmful to the environment.
3. Contact your local authorities or recycling companies for information on the proper disposal of used measuring tools.

Declaration of conformity

The products have been designed in accordance with the safety requirements set out in Regulation (EU) 2023/988 on general product safety, ensuring their compliance with applicable standards for the safety and health of users.

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