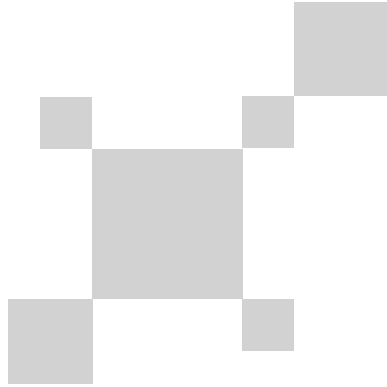


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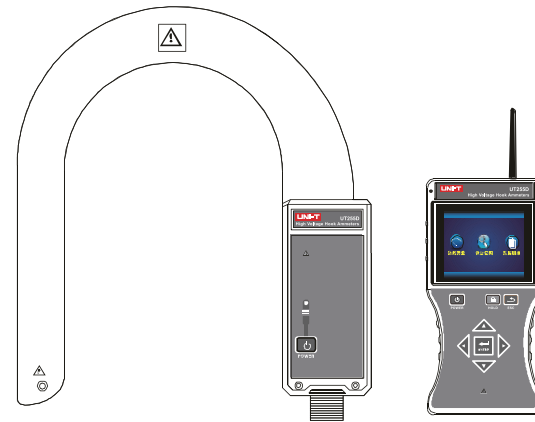


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High Voltage Hook Ammeters

UT255D UT255E

Operating Manual



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Safety Precautions

- High voltage! DANGER! The operation must be performed by a trained certified personnel.
- Please fully understand the user manual before performing on-site test.
- Insulation rod must be used if the circuit voltage under test exceeds 600V.
- It is forbidden to test bare conductor or bus bar with voltage over 35kV. It is allowed to test bare conductor or bus bar with voltage equal to or lower than 60kV, or to test sheath-insulated cable with voltage lower than 110kV.
- The maximum outer diameter of conductor or cable the ammeter can test is 168mm, and the maximum size of bus bar the ammeter can test is 168mm×245mm.
- Please use dedicated insulation rod to connect the ammeter.
- After the ammeter is connected to stretched insulation rod, please handle it with care to avoid impact with the ground.
- Do not place and keep the detector in places with high temperature, high humidity, dews and direct sunlight.
- If the ammeter is not used for long, please charge the battery regularly or remove the battery.

- Please note the polarity when replacing battery. If battery replacement cannot be performed, please contact the manufacturer.
- Disassembly and repair of the ammeter should be operated by authorized qualified personnel, and the ammeter should be maintained regularly.
- It is forbidden to use if the ammeter and other components are damaged.
- If safety risk occurs due to the detector, please stop using the detector and seal it, then send it to authorized body for maintenance.
- It is recommended that insulation strength test shall be performed for the insulation rod once a year at least (With AC 110kV/rms insulation rod totally stretched, between the two ends).
- Method of inspecting leakage current of multicore cable: Hook the detector onto the cable, and then perform inspection alongside the cable. If a large current displayed on the receiver is changed to a small or zero current suddenly, then the inspected point on the cable is subject to current leakage.

I . Introduction

UT255 High Voltage Hook Ammeter consists of large-aperture hook ammeter, wireless receiver and stretchable insulation rod. The iron core of ammeter is made by new materials: portable, high-precision, wide measurement range and good linearity. When the ammeter is connected to extensible insulation rod, it can test leakage current, current, frequency and load of bare conductor or bus bar under 35kV, or cable with safe insulation sheath under 110kV. Besides, it is particularly suitable for inspecting leakage current of multicore thick cables underground and outdoors, and inspecting transformer load. The straight-line distance to receive wireless data is 150m, the measureable alternating current range is between 0A to 6000A or 0A to 20000A, the maximum outer diameter of conductor or cable the ammeter can measure is 168mm, and the maximum size of the bus bar the ammeter can measure is 168mm×245mm.

The ammeter can be hanged onto the line to carry out tests, which saves the physical efforts. The receiver adopts 3.5-inch true-color LCD, providing intuitive and clear image interface display. The insulation rod is portable and characterized by moisture resistance, high-temperature resistance, impact

resistance, high insulation and extensibility. In addition, the ammeter has multiple functions such as data hold, data store and so on, applied widely in current detection and outdoor electrical operations in substations, power generation plants, industrial and mining enterprises, detection stations and electrical maintenance departments .

II. Models

Model	Current measurement range	Remark
UT255D	AC 0~6000A	/
UT255E	AC 0~20000A	Wider current range

III. Technical Specifications

Function	Perform test for High/low voltage leakage current, current, frequency, grounding current of iron core, transformer load, inspect leakage current of multicore cable outdoors or underground.
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Power supply	DC 3.7V rechargeable lithium battery Designed with USB charging port Working time: 10 hours approximately
Testing mode	Hook-type CT (can be used to hang onto the conductor to perform test)
Transmission mode	Wireless transmission at frequency of 433MHz
Transmission distance	About 150m (Straight-line distance)
Display mode	3.5-inch true-color LCD display Press \uparrow \downarrow button to adjust the backlight.
Measurable conductor diameter	Φ 168mm conductor, or 168mm \times 245mm bus bar
Measurement range	Current: AC 0~6000A or AC 0~20.0kA (50/60Hz, automatically)
	Frequency: 45Hz~75Hz
Resolution	10mA; 0.1Hz
Current accuracy	0.00A~99.9A: $\pm 2\% \pm 5$ dgt (23°C \pm 5°C, <80%RH)
	100A~6000A: $\pm 3\% \pm 5$ dgt (23°C \pm 5°C, <80%RH)
	6.00kA~20.0kA: $\pm 4\% \pm 5$ dgt (23°C \pm 5°C, <80%RH)
Frequency	± 1 Hz

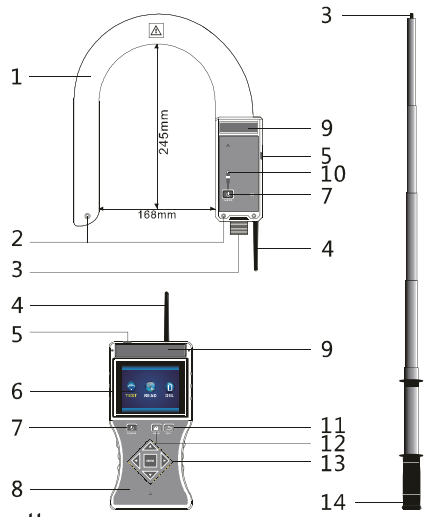
precision	
Mode switching	Automatic switching
Insulation rod length	Extended length: 5m approximately Retracted length: 1m approximately (5 rods)
Data storage	9999 groups
Sample frequency	2 times/s
Dimension	Ammeter: 310×270×52mm(L*W*H) Receiver: 250×100×40mm (L*W*H)
Circuit voltage	Bare conductor with voltage under 35KV; Sheath-insulated cable with voltage under 110kV (With insulation rod installed)
Data hold	Under testing mode, press HOLD button to hold data, press again to disable data hold.
Exit function	Press ESC button to exit from current interface
Position error	No position error in Area A About 0.2% increase in Area B about 2% increase in Area C
Data viewing	After entering data viewing mode, press arrow button to read the stored data.
Over range display	The symbol “OL A” is displayed.
No-signal	If the receiver does not receive transmission

indication	signal, it will display the symbol “----” dynamically.
Auto power off	About 15 minutes after startup, the ammeter will power off automatically to reduce battery consumption.
Battery voltage	When the battery voltage is lower than 3.2V, the low battery voltage symbol will be displayed to indicate charging the battery.
Weight	Ammeter: 496g (including battery) Receiver: 395g (including battery) Insulation rod: 1.45kg Total weight: 11.5kg (including ammeter box)
Working humidity temperature	-10°C~40°C; below 80%RH
Storage humidity temperature	-10°C~60°C; below 70%RH
Interference	No co-channel interference to the frequency of 433MHz
Insulation intensity	Insulation rod: AC 110kV/rms (between both ends, with 5 rods extended) Ammeter: 2000V/rms (between the connector of insulation rod and the top of

	ammeter) Receiver: 2000V/rms (before the front and back ends of the casing)
Structure	Anti-leak Type II

IV. Structure

- 1: Ammeter
- 2: Fastening hole
- 3: Insulation rod connector
- 4: Antenna
- 5: Charging port
- 6: LCD
- 7: POWER button
- 8: Receiver
- 9: Model number area
- 10: Indicator light
- 11: ESC button
- 12: HOLD button
- 13: Arrow button & ENTER button
- 14: Insulation rod handle



V. Operating Instructions

1. Basic Operation

Press **POWER** button to power on/off the receiver and ammeter.

After the ammeter is powered on, the LED indicator light is lit up and the ammeter enters testing mode. If LED flashes slowly after startup, that indicates low battery, please charge the battery, the LED flashes quickly during charging. After the ammeter is turned on for 15 minutes, the LED will keep flashing slowly to indicate that the ammeter will powers off automatically, in such situation, if **POWER** button is pressed, the ammeter can keep working.

After the receiver is turned on, press **↑ or ↓** button to adjust LCD backlight. After the receiver is turned on for 15 minutes, the LCD will flash to indicate that the receiver will power off automatically, in such situation, if **POWER** button is pressed, the receiver can keep working.


Press **HOLD** button to lock and store the data. HOLD symbol is displayed when locking data. The receiver can store up to 9999 groups of data.

Press **Arrow** buttons to move the cursor or view the data, press **← or →** button to select stepping value as 5, 10, 100 and 1000. Press **↑ or ↓** button to read the stored data.

Press **ENTER** button to confirm carrying out current operation.
Press **ESC** button to exit from current directory.

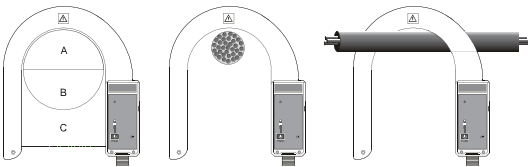
In data deletion mode, select "**Yes**" and press **ENTER** button to confirm deleting all the stored data. Please note that the deleted data cannot be recovered.

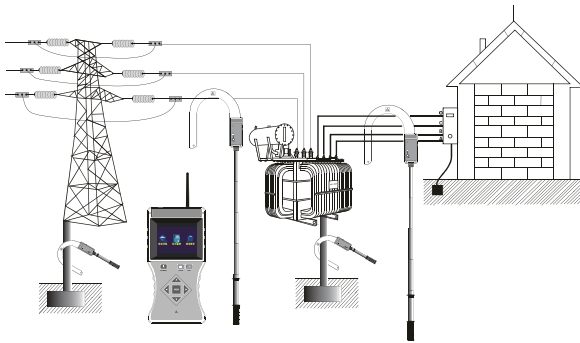
2. Testing

	<p>Danger! High voltage! The operation must be performed by authorized trained personnel, the operator must observe the safety regulation. Otherwise there will be electric shock hazard, which may cause personal injury.</p>
	<p>Danger! It is forbidden to test bare conductor or bus rod over 35kV. Otherwise there will be electric shock hazard, which will cause personal injuries or equipment damages.</p>

Hang the ammeter onto the conductor and set the conductor at Area A of the ammeter as shown in the figure below. No position error in Area A; about 0.2% increase in Area B; about 2% increase in Area C.

Method of inspecting leakage current of multicore cable: Hook the ammeter onto the cable, and then perform inspection alongside the cable. If a large current displayed on the receiver is changed to a small or zero current suddenly, then the inspected point on the cable is subject to current leakage.





- Hook the neutral and live wires together to measure single-phase leakage current of electrical appliance.
- Hook a grounding wire to measure the leakage current of the grounding wire of the equipment.
- Hook four three-phase wires together to test the total leakage current.
- Hook a main line to measure the current of the main circuit.

VI Battery Charging and Replacement

- **Charge the battery once every three months if the ammeter is not used for long.**
- **Warning! It is forbidden to perform test if the battery cover is not closed well. Otherwise, it may cause danger.**
- **Please pay attention to the battery polarity when**

replacing battery, if the polarity is incorrect, it may cause damage to the ammeter.

1. When the battery voltage is lower than 3.2V, please charge the battery timely, it takes about 4 hours to charge the battery fully.

2. Please be sure that the ammeter is in shutdown status before replacing battery, the replacement steps are as follows:

- Loosen the screw of battery cover.
- Open the battery cover and replace with new battery (Note the battery specification and polarity)
- Rejoin the battery cover and tighten the screws.

3. Press POWER button to check if the ammeter can be powered on normally, if not, please repeat Step 2.

VII Packaging List

Ammeter	1set
Receiver	1set
Antenna	2pcs
Extensible insulation rod	1pcs
Tool box	1pcs
USB charging adaptor	1pcs
USB charging cable	1pcs
Lithium battery (inside the ammeter)	2pcs
User manual	1 pcs

Note:

The company is not responsible for other losses caused by use.

The content of this user manual cannot be used as a reason for using the product for special purposes.

The company reserves the right to modify the contents of the user manual. If there are changes, no further notice will be given.