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Datasheet
UT5583 Insulation Resistance Tester

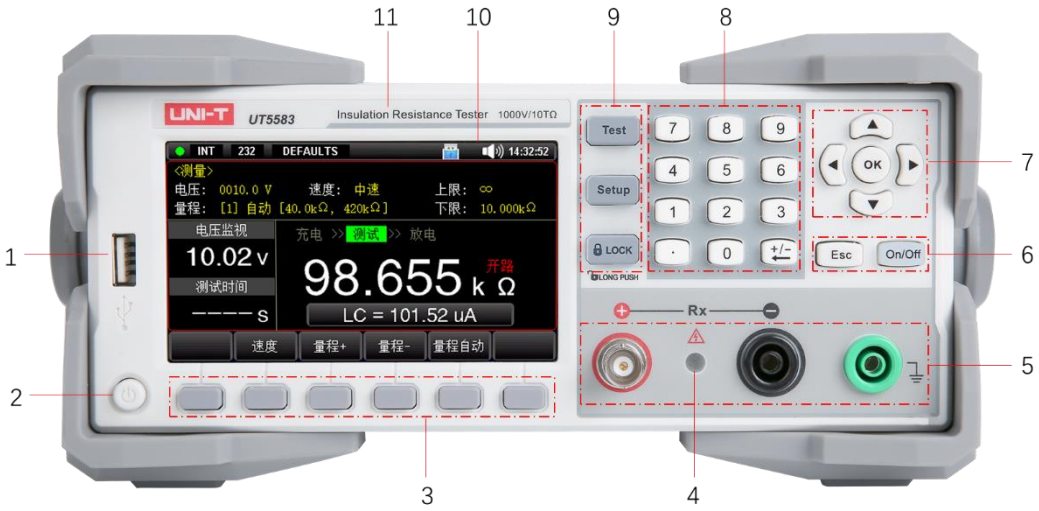
1. Characteristics

- 4.3 inch TFT-LCD, easy operation panel
- Real-time monitoring output voltage
- Dual display of insulation resistance and leakage current
- Charge time, test time and discharge time can be adjusted
- Calibration function, full range open circuit zero clearing
- Contact detection for capacitive materials
- Digit display function (5 digits/4 digits)
- Comparator function: sorting qualification and disqualification
- Sound setting of sorting judgement
- Quick discharge battery function
- USB data record
- Save 100 test files, USB supports file access
- Various interfaces, support two protocols, SCPI and MODBUS

2. Product Introduction

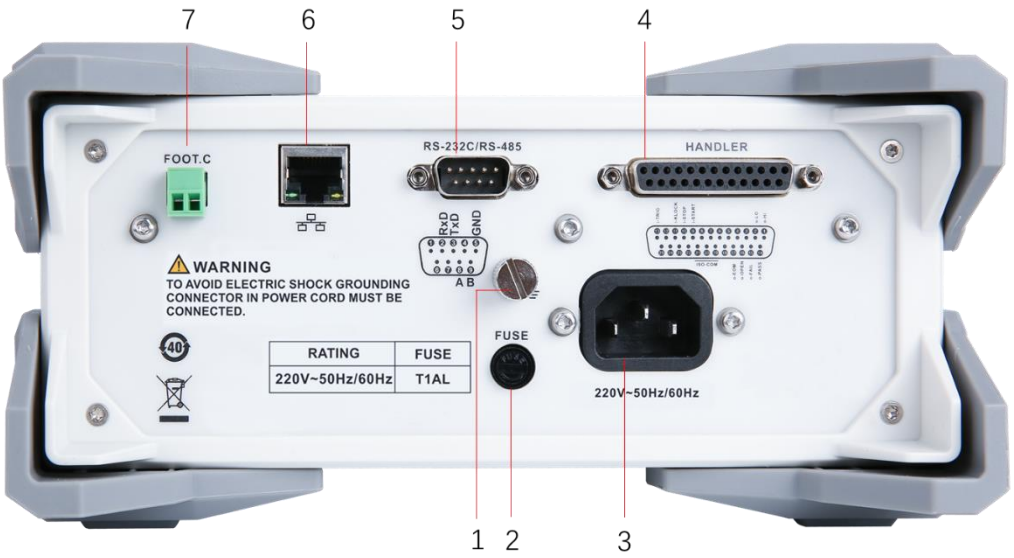
UT5583 insulation resistance tester adopts high-performance controller, it has 4.3 inch TFT-LCD display. Output voltage can freely set 1V~1000V to meet most of the test requirements. Six range measurement, insulation resistance measurement range can reach to 10 kΩ~10 TΩ, sampling rate up to 30 ms/time. UT5583 has a wide range of communication interfaces, providing a preferred test solution for automated production.

Front Panel



No.	Description
1	USB interface
2	Power switch
3	Functional keys (at the bottom of the screen)
4	High voltage indicator (It will illuminate with red when monitoring voltage is greater than 10V.)
5	Test terminal is used to connect test cable for measurement. (+) positive terminal (current sampling terminal) (-) negative terminal (voltage output terminal, dangerous high voltage!) GND Ground terminal (block the object to be test if the part under test is a cable or a capacitor, the end is not connected.) **Warning: Do not connect negative termainl with ground terminal.**
6	Exit and start/stop key (the key has indicator, it will will illuminate with green when it activated.)
7	Arrow keys and OK key
8	Numeric keyboard
9	Specific functional shortcut key
10	Screen
11	Emblem

Rear Panel

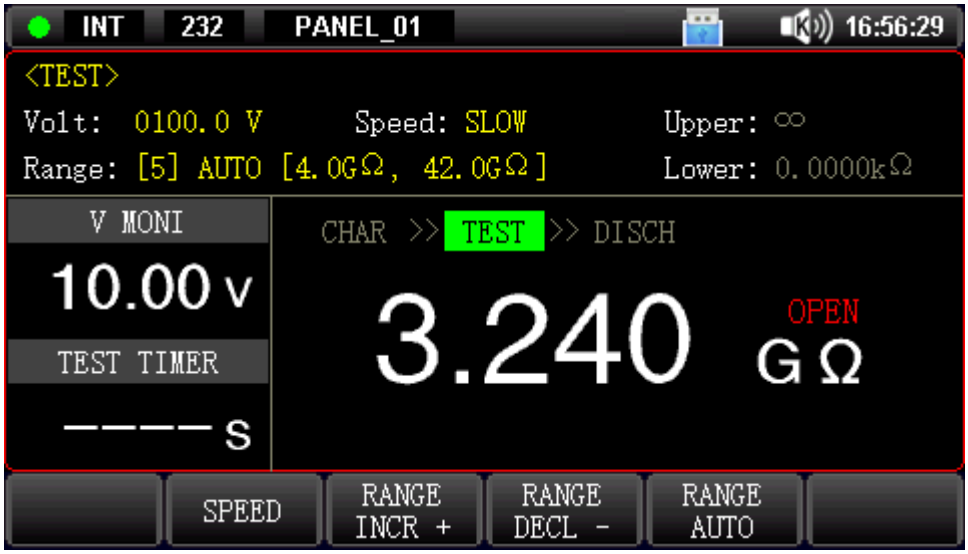


No.	Description
1	Protective ground terminal
2	Fuse
3	Power socket
4	Handler interface
5	RS-232C /RS-485 interface (option)
6	LAN interface
7	Footswitch interface

3. Design Highlights

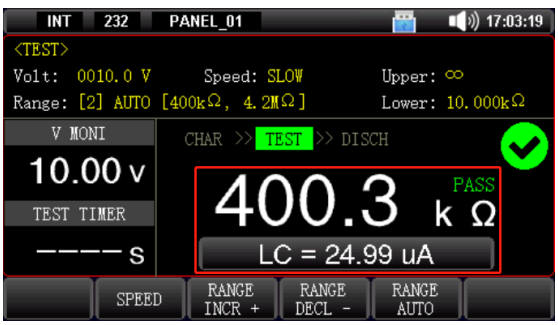
Contact Inspection

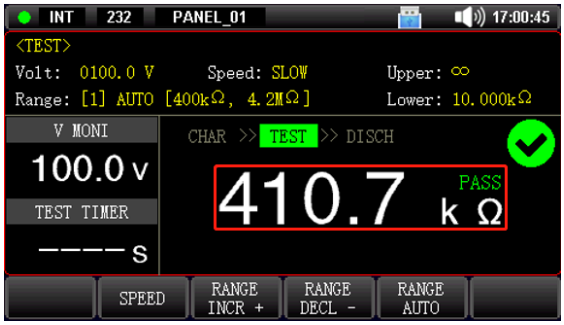
Contact inspect the capacitive measured object to avoid poor contact.
Contact inspect the capacitive measurement objects to avoid measuring error due to poor contact.
For capacitive materials such as capacitors and cables (equivalent capacitance greater than 100PF), the contact inspection is a good way to read whether the device is making good contact, thus reducing the occurrence of erroneous tests, and the contact inspection does not add any test time.
When the contact inspection function is turned on, if poor contact occurs, the comparator status displays [Open].



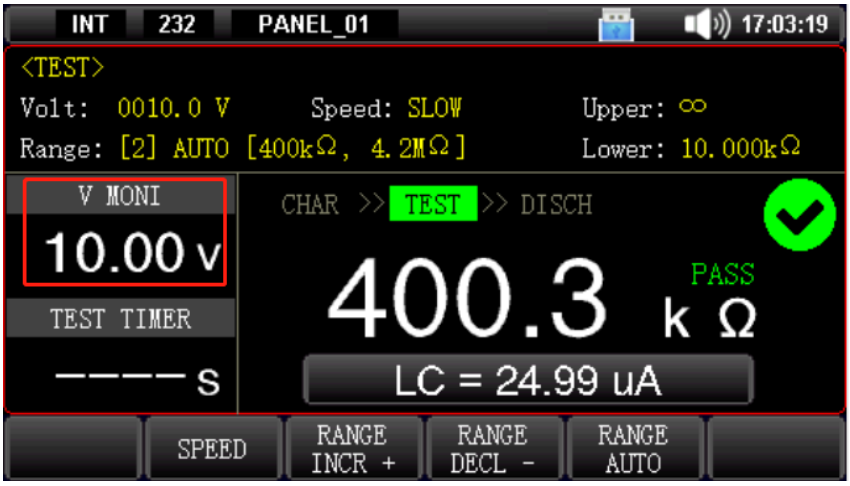
Display Mode

Two display modes can be set in setup page, resistance, and resistance/current.
Resistance/current: simultaneous display the insulation resistance and leakage current in test page.
Resistance: only display the insulation resistance in test page.



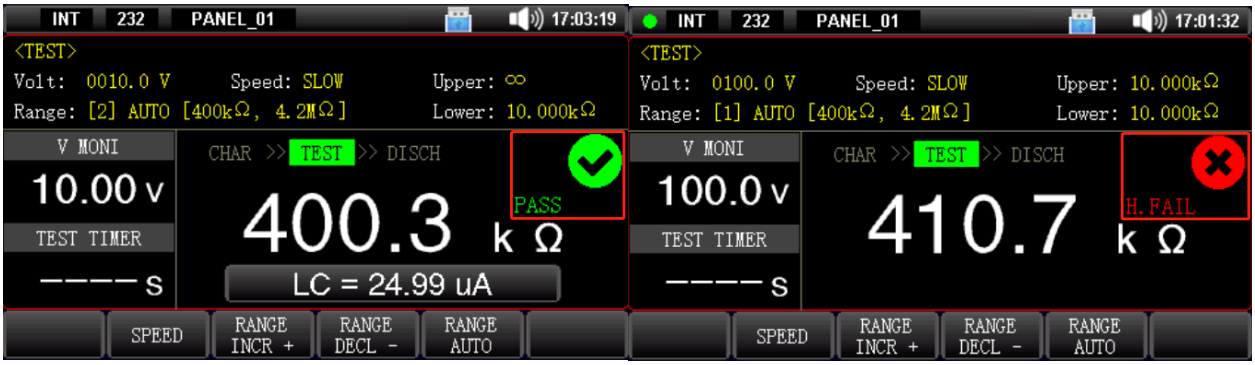


Real-time Monitoring Output Voltage



Comparator Function, Sorting Qualified/Disqualified

Open the comparator to set the upper/lower limit of insulation specification, which is to sorting qualified/disqualified.



4. Technical Index

Measurement parameter	Insulation resistance, leakage current	
Output voltage	Range control 1V～1000V (DC): When voltage ≥10V, adjusting step 1V When voltage <10V, adjusting step 0.1V	
Accuracy of voltage	When voltage≥10V, 1%±1V When voltage <10V, 10%±0.1V	
Measurement range	Resistance: 10 kΩ～10 TΩ Current: 100 pA～250 uA	
Accuracy of measurement	1V ≤ Voltage <10V	5% (less than 1M); 1% (1M~100M); 5% (100M~10G); 10% (greater than 10G)
	10V ≤ Voltage ≤1000V	5% (less than 1M); 1% (1M~1G); 3% (1G~10G); 5% (10G~100G); 10% (100G~1T); 15% (greater than 10G)
Test speed	Fast speed: 30 ms/time; Middle speed: 100 ms/time; Slow speed: 500 ms/time	
Range mode	Automatic, lock, nominal (select the best range according to the comparator setting)	
Maximum of charging current	25 mA ± 5 mA	
Display result	Voltage, current, resistance, sorting result, audible and visual alarm	
Trigger mode	Internal trigger, manual trigger, external trigger, bus trigger	
Charge time	0～999s	
Test time	0～999s	
Discharge time	0～999s	
Comparator function	Record of 1 group, judge the upper limit (UFAIL), qualified (PASS), the lower limit (LFAIL)	
Calibration function	Full range open-circuit zero clearing	
Screen display	4.3 inch TFT-LCD	
Sotrage and Interface		
USB HOST	√ (support USB 128G)	
File management	Save 100 test files, USB supports file access	
USB data record	√	
Control interface	HANDLER, FOOT	
Communication protocol	SCPI, Modbus RTU	
Communication interface	RS232C, USB HOST, LAN (option RS485)	

5. Accessories

Article	Quantity	Remarks
Insulation resistance tester	1 piece	
Power cord	1 piece	
RS232 communication line	1 piece	
Test line	1 set	1 piece of red, green and black
Spare fuse	2 pieces	T1AL for 220V Or T2AL for 110V
Pluggable wiring terminal	1 piece	Footswitch
Download manual	1 piece	
User's manual	0 piece	Electronic user's manual can download from the official website.

6. Contact Us

UNI-T Technical Support Hotline: 400-876-7822

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