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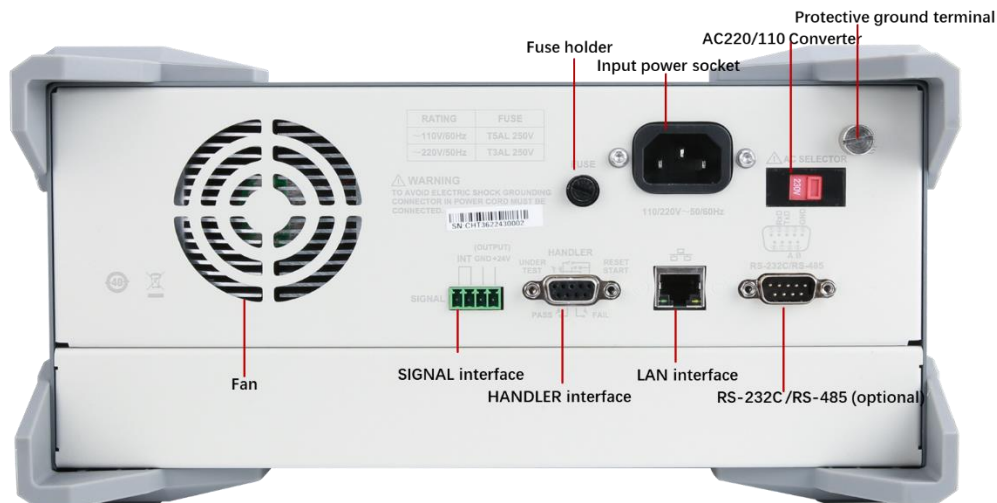
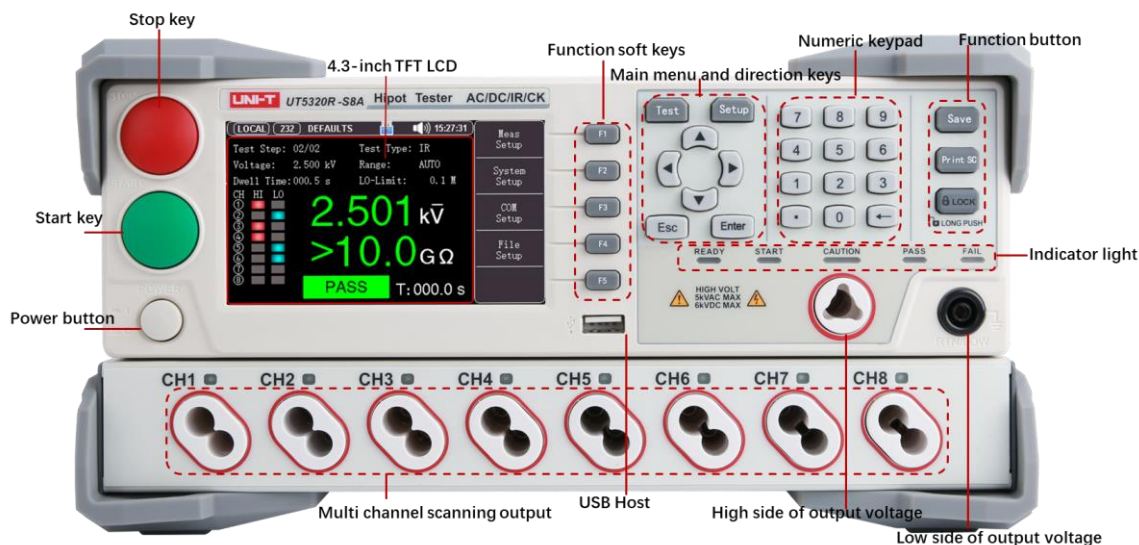
Datasheet

UT5320R-SxA Series Hipot Tester

Main Features

- 4.3 inch TFT true color LCD
- 4/8 channels, multiple outputs
- Support AC/DC withstand voltage test, IR insulation test, contact test
- Fully isolated and floating output
- AC withstand voltage (ACW): 5kV/20mA
- DC withstand voltage (DCW): 6kV/10mA
- Insulation resistance (IR): 2.5kV/10G Ω (optional to 5kV)
- Rise up time/slope down time/test time/compensation return to zero, multiple functions can be set flexibly
- Intelligent judgment: over-upper limit/over-lower limit/arc/over-charging lower limit (sound and light indication)
- Overvoltage/short circuit protection/rapid discharge/earth failure multiple protection
- Anti-electric wall technology detects the circuit at any time to prevent electric shock and ensure personnel safety
- Overvoltage, overcurrent protection, current base reset function
- Can store 100 test files, each file can store 20 test steps, test modes can be combined arbitrarily
- Comply with standard SCPI and Modbus communication protocols
- Equipped with Handler (PLC) interface, RS-232C and LAN interface

Panel Structure



Product Introduction

UT5320R-SxA series is an instrument that integrates multiple testing functions of electrical strength (AC/DC withstand voltage) and insulation resistance. It can be widely used in the safety performance inspection of household appliances, transformers, electrical equipment and components.

Multiple test modes

Support multiple test modes, support AC, DC withstand voltage test, insulation resistance test. high accuracy and fast measurement speed

| <RESULT LIST> ! Use the ▲/▼ key to turn page | | | | | |
|---|-----------|------------|----------|----------|-------|
| STEPS | Test Type | Dwell Time | VOLT | DATA | JUDGE |
| 01 | ACW | 000.5 s | 0.049 kV | 0.005 mA | PASS |
| 02 | ACW | 000.5 s | 0.050 kV | 0.005 mA | PASS |
| 03 | DCW | 005.0 s | 6.001 kV | 0.1 uA | PASS |
| 04 | IR | 005.0 s | 2.500 kV | >10.0 GΩ | PASS |
| 05 | | | | | |
| 06 | | | | | |
| 07 | | | | | |
| 08 | | | | | |
| 09 | | | | | |
| 10 | | | | | |

Easy to operate

With 4.3 inch LCD screen, numeric keys and function keys, it is convenient to set up, select and control the test process. The screen is large and the displayed content is specific and clear.



File management

Programmable 100 groups of test files, each group can contain 20 steps of test operations. Create favorable conditions for programmatic control of safety testing operations.

| <FILE> ! Use the arrow keys in the list to select | | | |
|--|-----------|-------------------|------|
| NO. | File Name | Save Time | LOAD |
| 94 | | | |
| 95 | | | |
| 96 | | | |
| 97 | | | |
| 98 | | | |
| 99 | | | |
| 100 | DEFAULTS | CREATED BY SYSTEM | YES |

SAVE

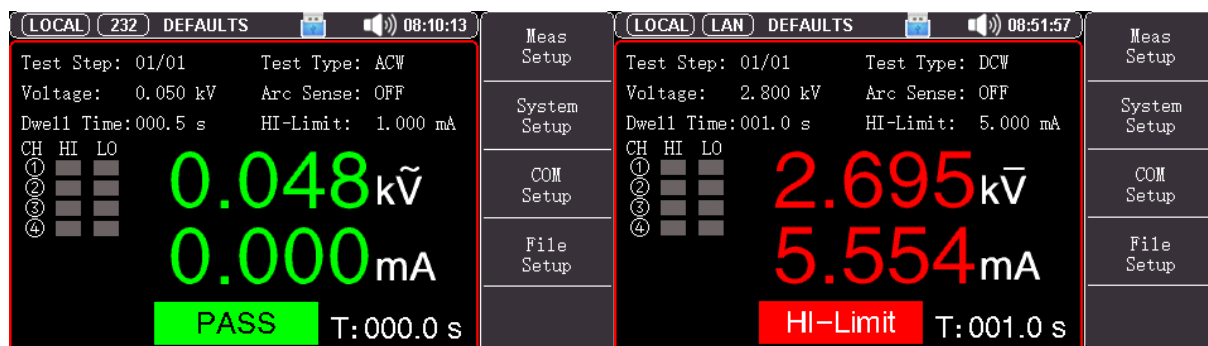
RECALL

ERASE

RENAME

Intelligent judgment

Upper and lower limit intelligent judgment function, and provide sound and light alarm at the same time. Provide a good prompt for the measurement work, and broadcast the results immediately.



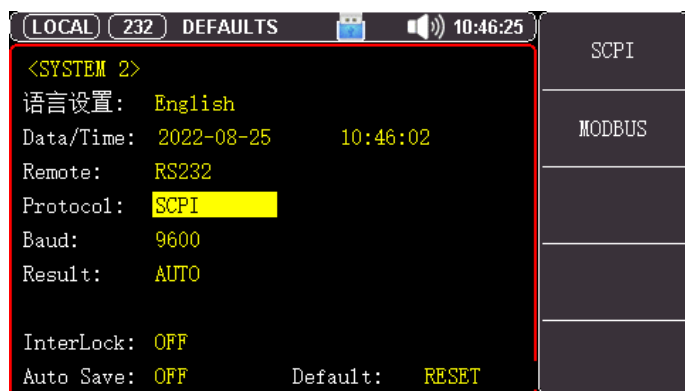
IR measurement

Insulation resistance test voltage is 2.5kV as standard, 5.0kV is optional, suitable for more test occasions.



Rich interface

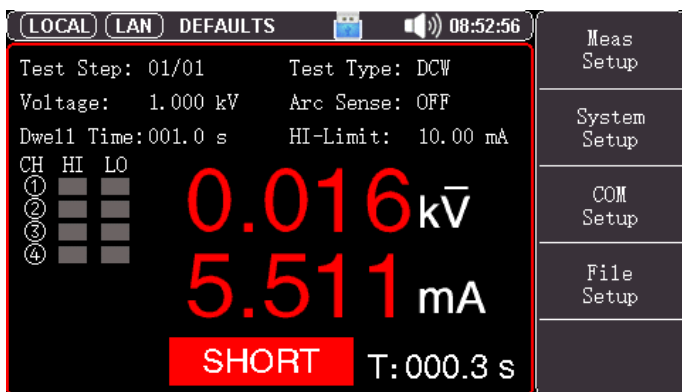
Equipped with Handler (PLC) interface for industrial control, RS485 (option), RS-232C and LAN interface for connecting to a computer. At the same time, it supports two communication protocols, SCPI and Modbus RTU, and efficiently completes the functions of remote control and data acquisition.



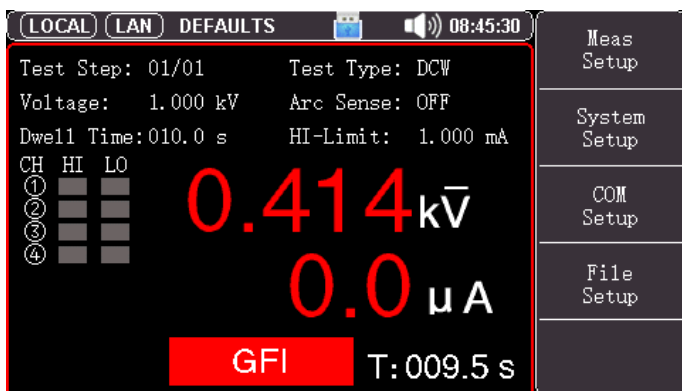
Multiple Protection Mode

Multiple protection functions provide you with a safer test environment

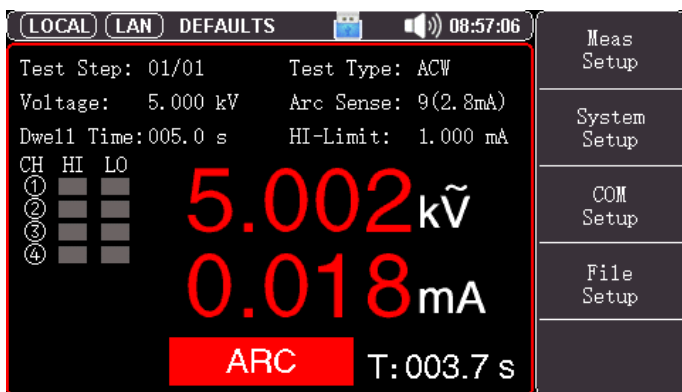
Short protection



GFI(Ground Fault Interruption)

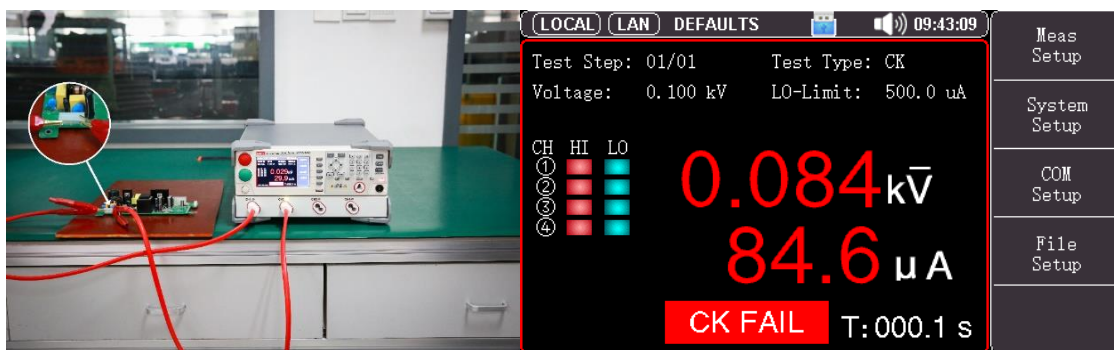


Arc Test



Contact Test

Unique hardware contact test, fast and reliable



Technical Parameter

| | | | | |
|-------------------------|-------------------------|---|---------------------------------|--|
| Model | | UT5320R-SxA series | | |
| Withstand voltage test | | | | |
| Output voltage | AC | Voltage range | 0.050kV—5.000kV | |
| | | Voltage waveform | Sine wave | |
| | | Distortion | < 3% | |
| | | Operating frequency | 50、60Hz optional | |
| | | Frequency accuracy | ±1% | |
| | | Output power | 100VA (5.000kV 20mA) | |
| | | Voltage regulation | ±(1.0%+50V)(rated power) | |
| | DC | Voltage range | 0.050 kV—6.000kV | |
| | | Signal source frequency | 600Hz | |
| | | Output power | 60VA (6.000kV 10mA) | |
| | | Voltage regulation | ±(1.0% +100V) (rated power) | |
| | Voltage resolution | | 1V | |
| | Voltage output accuracy | | ±(1.0%set value+5V) (no load) | |
| | Voltage test accuracy | | ±(1.0%reading+5V) | |
| Voltage generation mode | | DDS signal source plus AB class amplifier | | |
| Current test range | AC | Current range | 0.001mA – 20mA | |
| | | Short-circuit current (moment) | >40 mA(set output voltage>500V) | |
| | | Current resolution | 0.001 mA | |
| | | Current accuracy | ±(2.0% reading + 5 digits) | |
| | | Actual current | OFF, 0.001 mA-20mA | |
| | DC | Current range | 0.1uA – 10.00mA | |
| | | Current accuracy | ±(2.0% reading + 5 digits) | |
| | | Discharge function | Automatic discharge after test | |
| | | Insulation resistance test | | |

| | | |
|---|--|------------------------|
| Output voltage | 0.050kV – 2.500kV(Optional 5.00kV) | |
| Voltage resolution | 1V | |
| Voltage test accuracy | ±(1.0% reading +2V) | |
| Maximum output current | 10mA | |
| Maximum output power | 25VA (2500V/10mA) | |
| Output instantaneous short-circuit current | >20mA(Set output voltage>500V) | |
| Load regulation | ≤1% (rated power) | |
| Ripple (1kV) | ≤3% (1kV, no load) | |
| Discharge function | Discharge automatically after the test | |
| Resistance measurement range | 0.1MΩ– 10GΩ | |
| Resistance display range(1000V) | 10mA | 0.1 MΩ-0.5 MΩ |
| | 2mA | 0.5 MΩ-5 MΩ |
| | 200uA | 5 MΩ-50 MΩ |
| | 20uA | 50 MΩ-500 MΩ |
| | 2uA | 500 MΩ-10GΩ |
| Accuracy of resistance measurement | ≥500V | |
| | 1MΩ– 1GΩ | ±(5% reading+5digits) |
| | 1GΩ– 10GΩ | ±(10% reading+5digits) |
| | < 500V | |
| | 0.1MΩ– 1GΩ | ±(10% reading+5digits) |
| 1GΩ– 10GΩ | For reference only, no accuracy requirements | |
| Accuracy of current measurement | ±(1.5% reading+5digits) (After clearing) | |
| ARC Detector | | |
| Measuring range | AC | OFF, 1-9 level |
| | DC | OFF, 1-9 level |
| Comparator | | |
| Discrimination mode | window comparison method I _{down} ON: when I _{down} < I _x < I _{up} , PASS; when I _x ≤ I _{down} or I _x ≥ I _{up} , FAIL; (I _{down} < I _{up}) I _{down} OFF: when I _x < I _{up} , PASS; when I _x ≥ I _{up} , FAIL; Insulation resistance discrimination method is the same as above | |
| Current upper limit setting I _{up} | AC | 0.001mA – 20mA |
| | DC | 0.1uA – 10mA |
| Current lower limit setting I _{down} (LOWER OFF) | AC | 0.001mA – 20mA |
| | DC | 0.1uA –10mA |
| Resistance upper limit setting | OFF, 0.1MΩ - 10GΩ | |
| Resistance lower limit setting | 0.1MΩ– 10GΩ | |
| Discrimination output | PASS/FAIL LCD and LED Separate display and sound alarm | |

| | |
|------------------------------|--|
| Parameter setting | |
| Voltage rise time | 0.1s – 999.9s |
| Voltage drop time | 0 s – 999.9s, (Only after withstand voltage PASS) |
| Voltage waiting time | 0.3s – 999.9s (Only DC withstand voltage, and meet the rise time + test time > waiting time) |
| Test time setting | 0.1s – 999.9s (when TIMER ON) |
| Time accuracy | ± (0.2% set value ± 0.1s) |
| Measurement function | |
| Keyboard lock | Prevent accidental modification of test conditions, or prohibit test conditions from being modified |
| Base number clearing | The current flowing through the insulation resistance and distributed capacitance between the output lines can be reset to zero |
| Start wait delay | When starting the test (pressing START), the high voltage start signal is output first, and the high voltage output starts after a certain period of time. |
| Current over-range judgment | Hardware quickly judges insulation breakdown, which is faster and safer than voltage sampling, and reduces impact damage to products |
| ARC detection | Sampling the sudden change signal of the current to judge the potential hidden dangers and approximate scale of the circuit |
| Ground current detection | Protect personal safety in case of accidental electric shock or high voltage leakage to the casing |
| Alarm volume adjustment | Off, Low, Medium, High |
| High voltage indication | Window indication and LED light indication |
| Storage and interface | |
| File programming and storage | Programmable 100 test files, each file can have 20 test items. |
| USB HOST interface | Yes (maximum support 128G) |
| Save boot parameters | The set parameters are saved as default parameters, and they can be automatically restored next time the machine is turned on. |
| Display | 4.3inch (480x272) TFT LCD |

| | |
|-------------------------|--------------------------------------|
| Control interface | HANDLER, SIGNAL |
| Communication protocol | SCPI, Modbus RTU |
| Communication Interface | RS232C, LAN, optional RS485 |
| Environment | Specifications Temperature 18°C~28°C |
| | Operation Temperature 10 °C ~40 °C |
| | Humidity 10~80% RH |
| | Storage Temperature 0 °C ~50 °C |
| | Humidity 10~90% RH |
| Power | 100V-121V, 198V-242V, 47.5-63Hz |
| Power dissipation | ≤400VA |
| Size | 280mm*138mm*428mm |
| Weight | 16.27kg(S4A)/16.87kg(S8A) |

Order Information

| | Description | Standard Quantity per Carton | Order No. |
|-----------------------------|---|------------------------------|-------------|
| Model | UT5320R-S4A (AC/DC/IR, Programmable, 20mA, 4CH) | 1 pcs | UT5320R-S4A |
| | UT5320R-S8A (AC/DC/IR, Programmable, 20mA, 8CH) | 1 pcs | UT5320R-S8A |
| Standard accessories | Power cord that conforms to the standard of the destination country | 1 pcs | -- |
| | RS232C Data Cable | 1 pcs | -- |
| | High voltage test probe | 1 pcs | |
| | High voltage test clips | 1 pair | -- |
| | Double head high voltage test wire (no clips) | 4 pcs(S4A)/8 pcs(S8A) | -- |
| | Double head high voltage test wire (with clips) | 1 pair | |
| | Fuse | 2 pcs | -- |
| Optional accessories | Remote control high voltage rod test line (support remote start) | -- | UT-L62 |

Note: All mainframes, accessories and options can be ordered from your local UNI-T dealer.

Warranty

Three-years warranty, excluding probes and accessories. Please visit https://instruments.uni-trend.com/list_190/65.html to learn more information. To protect your investment, please purchase from UNI-T official authorized global distributors.

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