

# UNI-T®

## UT513B/UT513C

### 5kV Insulation Resistance Testers

UT513B/UT513C are digital high-voltage insulation resistance testers with high-voltage output ranges of 250V, 500V, 1000V, 2500V, and 5000V. They are commonly used and essential instruments for power, telecommunications, meteorology, computer rooms, oil fields, electromechanical installation and maintenance, and power supply departments of industrial and mining enterprises.

#### Main features:

- Output voltage: Up to 5kV
- PI & DAR measurement
- Automatic leakage current display
- Stepping voltage: 10% of the range
- Comparison function
- Timer measurement
- Data storage: 999 sets
- PC software analysis: via USB cable
- Automatic discharge
- High voltage output alarm function
- Rechargeable lithium battery 14.8V, 5200mAh
- Overvoltage category: CAT IV 600V



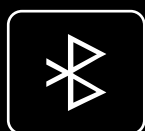
UT513B



UT513C



Output voltage  
(up to 5KV)



Bluetooth APP  
(UT513C)



Comparison  
function



Lithium battery  
(5200mAh)



Anti-Misplug

## Technical Specifications

| Rated voltage                     | UT513B                                                                                                                                                                                             | UT513C                                                                                                                                                                             |
|-----------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 250V                              | <0.25MΩ: reference only                                                                                                                                                                            | <0.25MΩ: reference only                                                                                                                                                            |
|                                   | 0.25MΩ~2.49GΩ: ±(5%+5)                                                                                                                                                                             | 0.25MΩ~4.99GΩ: ±(5%+5)                                                                                                                                                             |
|                                   | 2.50GΩ~24.9GΩ: ±(10%+10)                                                                                                                                                                           | 5.00GΩ~49.9GΩ: ±(10%+10)                                                                                                                                                           |
|                                   | 25.0GΩ~100GΩ: reference only                                                                                                                                                                       | 50.0GΩ~250GΩ: reference only                                                                                                                                                       |
| 500V                              | <0.50MΩ: reference only                                                                                                                                                                            | <0.50MΩ: reference only                                                                                                                                                            |
|                                   | 0.50MΩ~4.99GΩ: ±(5%+5)                                                                                                                                                                             | 0.50MΩ~4.99GΩ: ±(5%+5)                                                                                                                                                             |
|                                   | 5.00GΩ~49.9GΩ: ±(10%+10)                                                                                                                                                                           | 5.00GΩ~99.9GΩ: ±(10%+10)                                                                                                                                                           |
|                                   | 50.0GΩ~200GΩ: reference only                                                                                                                                                                       | 100GΩ~500GΩ: reference only                                                                                                                                                        |
| 1000V                             | <1.00MΩ: reference only                                                                                                                                                                            | <1.00MΩ: reference only                                                                                                                                                            |
|                                   | 1.00MΩ~9.99GΩ: ±(5%+5)                                                                                                                                                                             | 1.00MΩ~9.99GΩ: ±(5%+5)                                                                                                                                                             |
|                                   | 10.0GΩ~99.9GΩ: ±(10%+10)                                                                                                                                                                           | 10.0GΩ~199GΩ: ±(10%+10)                                                                                                                                                            |
|                                   | 100GΩ~400GΩ: reference only                                                                                                                                                                        | 200GΩ~1.00TΩ: reference only                                                                                                                                                       |
| 2500V                             | <2.50MΩ: reference only                                                                                                                                                                            | <2.50MΩ: reference only                                                                                                                                                            |
|                                   | 2.50MΩ~24.9GΩ: ±(5%+5)                                                                                                                                                                             | 2.50MΩ~24.9GΩ: ±(5%+5)                                                                                                                                                             |
|                                   | 25.0GΩ~249GΩ: ±(15%+10)                                                                                                                                                                            | 25.0GΩ~499GΩ: ±(15%+10)                                                                                                                                                            |
|                                   | 250GΩ~1.00TΩ: reference only                                                                                                                                                                       | 500GΩ~2.50TΩ: reference only                                                                                                                                                       |
| 5000V                             | <5.00MΩ: reference only                                                                                                                                                                            | <5.00MΩ: reference only                                                                                                                                                            |
|                                   | 5.00MΩ~49.9GΩ: ±(5%+5)                                                                                                                                                                             | 5.00MΩ~49.9GΩ: ±(5%+5)                                                                                                                                                             |
|                                   | 50.0GΩ~499GΩ: ±(15%+20)                                                                                                                                                                            | 50.0GΩ~999GΩ: ±(15%+20)                                                                                                                                                            |
|                                   | 500GΩ~2.00TΩ: reference only                                                                                                                                                                       | 1.00TΩ~5.00TΩ: reference only                                                                                                                                                      |
| Capacitance test                  | NA                                                                                                                                                                                                 | 0.01uF~15.0uF                                                                                                                                                                      |
| Output voltage                    | stepping voltage range                                                                                                                                                                             |                                                                                                                                                                                    |
| 250V                              | 250V, 275V, 300V                                                                                                                                                                                   | Step by 10% of each range each time, and adjust the voltage range to 50%~120% of each range<br>UT513B + UT513C:<br>Display accuracy: ±(10% read+10V)<br>Output accuracy: +(0%~20%) |
| 500V                              | 250V, 300V, 350V, 400V, 450V, 500V, 550V, 600V                                                                                                                                                     |                                                                                                                                                                                    |
| 1000V                             | 500V, 600V, 700V, 800V, 900V, 1000V, 1100V, 1200V                                                                                                                                                  |                                                                                                                                                                                    |
| 2500V                             | 1250V, 1500V, 1750V, 2000V, 2250V, 2500V, 2750V, 3000V                                                                                                                                             |                                                                                                                                                                                    |
| 5000V                             | 2500V, 3000V, 3500V, 4000V, 4500V, 5000V                                                                                                                                                           |                                                                                                                                                                                    |
| DC voltage                        | 30~1000VDC: ±(3%+5)                                                                                                                                                                                |                                                                                                                                                                                    |
| AC voltage                        | 30~750VAC(50Hz/60Hz): ±(3%+5)                                                                                                                                                                      |                                                                                                                                                                                    |
| Current                           | 0.01nA~3.5mA                                                                                                                                                                                       | 0.01nA~5.0mA                                                                                                                                                                       |
| Short-circuit current             | about 3.5mA                                                                                                                                                                                        | about 5.0mA                                                                                                                                                                        |
| Main features                     |                                                                                                                                                                                                    |                                                                                                                                                                                    |
| PI test                           | √                                                                                                                                                                                                  |                                                                                                                                                                                    |
| DAR test                          | √                                                                                                                                                                                                  |                                                                                                                                                                                    |
| Timing measurement                | √                                                                                                                                                                                                  |                                                                                                                                                                                    |
| Resistance Comparison             | √                                                                                                                                                                                                  |                                                                                                                                                                                    |
| Voltage step                      | √                                                                                                                                                                                                  |                                                                                                                                                                                    |
| Monitoring function               | Monitor the voltage of measured object and the discharge state after testing. If voltage is higher than 36V, it is forbidden to test for protecting the tester and the operator                    |                                                                                                                                                                                    |
| Timer testing                     | Record testing time automatically. Timing range: 0s~99m and 59s                                                                                                                                    |                                                                                                                                                                                    |
| Data storage                      | 999 set                                                                                                                                                                                            |                                                                                                                                                                                    |
| USB interface (data transmission) | √                                                                                                                                                                                                  |                                                                                                                                                                                    |
| Bluetooth APP                     | N/A                                                                                                                                                                                                |                                                                                                                                                                                    |
| Low Battery indication            | √                                                                                                                                                                                                  |                                                                                                                                                                                    |
| Auto power off                    | Around 15 minutes                                                                                                                                                                                  |                                                                                                                                                                                    |
| Overvoltage category              | CAT IV 600V                                                                                                                                                                                        |                                                                                                                                                                                    |
| General Characteristics           |                                                                                                                                                                                                    |                                                                                                                                                                                    |
| Power supply                      | 14.8V, 5200mAh lithium battery                                                                                                                                                                     |                                                                                                                                                                                    |
| Product color                     | Black+Red                                                                                                                                                                                          |                                                                                                                                                                                    |
| Product weight                    | About 1800g (including battery)                                                                                                                                                                    |                                                                                                                                                                                    |
| Product dimension                 | 238 x 166 x 90.5mm (L x W x D)                                                                                                                                                                     |                                                                                                                                                                                    |
| Package quantity                  | 1pcs                                                                                                                                                                                               |                                                                                                                                                                                    |
| Package size                      | 415 x 155 x 370mm (L x W x D)                                                                                                                                                                      |                                                                                                                                                                                    |
| Accessories                       | User manual 1pcs; Test lead (red, black, green, 1 for each) 3pcs; USB cable 1pcs; Lithium battery charger 1pcs; Lithium battery pack 1pcs; Adapting charging stand(optional); Carrying strap 1pcs; |                                                                                                                                                                                    |