# UNI-T UT-P31 Differential Probe Active Probe Instruction Manual



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**UNI-T UT-P31 Differential Probe Active Probe**

## Features

The UT-P31 differential probe provides a safety means for measuring differential voltage to all models of oscilloscopes. It can convert the high differential voltage(≤1500Vp-p) into a low voltage(≤7V)and display on the oscilloscope. Its bandwidth is up to 100MHz, which is ideal for big power testing, development and maintenance. The UT-P31 is designed to operate with the 1MΩ impedance oscilloscopes. When combine with the 50Ω load, the attenuation will be 2 times. UT-P31 is recommended to use with our own manufactured PL-10 to expand the measuring with the electricity meter to observe more accurate measurement. The accuracy of oscilloscope is 1%and the electricity meter is about 10 times)

## Specifications

1. Bandwidth:DC-100MHz
2. Attenuation: X100,X1000
3. Accuracy:+/-1%
4. Input voltage range(DC+AC PEAK TO PEAK)
    - ≤150Vfor x100, (about 50V RMS )
    - ≤1500Vfor x1000, (about 500V RMS )
5. Permitted max input voltage:
    - Max differential voltage: 1500V(DC+AC PEAK TO PEAK)
    - Max voltage between each input terminal and ground: 5KV RMS
6. Input Impedance:
    - Differential: 8MΩ /1pF
    - Between terminal and ground:4MΩ /2pF
7. Output voltage: ≤7V
8. Output impedance: 50Ω
9. Rise time:
    - 3.5ns for x100
    - 3.5ns for x10
10. Rejection rate on common mode:
    - 60Hz: 80dB;100Hz: 60dB;1MHz: 50dB
11. Power Supply:Only External 6V DC power supply.

12. Consumption: 150mA max (0.9 Watt)

### Operatingenvironmental conditions

| | Reference | Use | Storage |
|---|---|---|---|
| Temperature | +20°C…+30°C | 0°C….+50°C | -30°C….+70°C |
| Relative Humidity | ≤70%RH | 10%…85%RH | 10%…90%RH |

1. Dimensions and weight 69x26x165mm; 500g
2. Electrical safety to IEC 1010-1
    - Dual insulation
    - Installation category Ⅲ
    - Degree of Pollution 2
    - Related voltage or max line-earth 5KV RMS CE  EN50081-1 and 50082-1

### Operating procedure

- Connect the probe to the oscilloscope with the insulated BNC/BNC lead.
- Adjust the vertical zero adjustments of the oscilloscope if necessary.
- Select the attenuation ratio* and the vertical deviation of the oscilloscope in accordance with the conversion table below.
- NB: The POWER light must come on.

| Attenuation ratio | X1000 | X100 |
|---|---|---|
| Voltage Input Range<br>(DC+AC Peak to PEAK) | 1500V | 150V |

**[N.B]**
The real vertical deviation in V/div is equal to the attenuation factor multiplied by the range of vertical deviation selected on the oscilloscope. It will be doubled in the case of use of a 50 Ω load.

### Maintenance

For maintenance, only use specified spare parts. The manufacturer can not be held responsible for any accident arising following a repair made other than its after-sales service or approved repairs.

### Cleaning

This probe does not require any particular cleaning. If necessary, clean the case with a cloth slightly moistened with soapy water.

### Warranty

Unless notified to the country, our instruments are guaranteed against any manufacturing defect or material

defect. They do not bear the specification known as the safety specification. Our guarantee, which may not under any circumstances exceed the amount of the invoiced price, goes on further than the repair of our faulty equipment, and carriage paid to our workshops.

## Repair

Maintenance, repairs under or out of guarantee. Please return the product to the manufacturer.

## Documents / Resources

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|---|---|
|  | UNI-T UT-P31 Differential Probe Active Probe [pdf] Instruction Manual<br>UT-P31, Differential Probe Active Probe, UT-P31 Differential Probe Active Probe, Probe Active Probe, Active Probe, Probe |