

# HIGH VOLTAGE DIFFERENTIAL PROBE 高压差分探头

CE

**OIDP-25** 1400Vp-p/25MHz

**OIDP-50** 7000Vp-p/50MHz

**OIDP-100** 7000Vp-p/100MHz



## INSTRUCTION MANUAL 使用说明书

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## **OIDP-25 / OIDP-50 /OIDP-100**

### **VOLTAGE DERATING CURVE** ——— 40

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## ● **Differential Voltage Probe,**

**Read the instructions before using the instrument:**

1. Must acquire a differential voltage probe & get the best service from instrument.
2. Read carefully the Instruction Manual.
3. Respect the safety precautions.

## ● **SAFETY PRECAUTIONS**

**WARNING:** Risk of Electric Shock,

1. Do not use the probe in damp environment or where there is risk of explosion.
2. Do not use the probe with its case open.
3. Disconnect the inputs and outputs of the probe before opening the case.
4. The probes are for indoor use only.

**Respect the max input voltages:**

**OIDP-25:**

1. Max differential voltage: 1400V (DC + AC peak) or 450 Vrms
2. Max voltage between each input terminal and ground: 600 Vrms

**OIDP-50 & OIDP-100:**

1. Max differential voltage: 7000V (DC + AC peak) or 2200 Vrms
2. Max voltage between each input terminal and ground: 6500 Vrms

## ● **TO ORDER Differential Voltage Probe and Accessories:**

- 1 x An Insulated BNC/BNC lead, length 100cm, BP250
- 1 x Supplied a Adapter preset 9 V DC ( 230 V)
- 2 x high voltage IC clips, BP266
- 2 x Banana to Banana high voltage plug, BP366
- 2 x Alligator plug, BP276

# ***OIDP-25***

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***High Voltage Differential Probe***

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# OIDP-25 HIGH VOLTAGE DIFFERENTIAL PROBE

## 1. FEATURES

- The OIDP-25 differential probe provides a safety means for measuring differential voltage to all models of oscilloscopes.
- The OIDP-25 converts the high differential voltage ( $\leq 1400V_{peak}$ ) into a low voltage ( $\leq 7.0V$ , with reference to the earth) and display on the oscilloscopes.
- The OIDP-25 is designed to operate with the  $1M\Omega$  impedance oscilloscopes. When combine with the  $50\Omega$  load, the attenuation will be 2 times.
- We recommend to use OITEK PL-10 with OIDP-25 to expand the measuring with DMM to observe more accurate measurement. The accuracy of oscilloscope is 3% and the DMM is less than 1%.

**NOTE:** If you connect OIDP-25 to the DMM without PL-10, the accuracy will be higher than 10%.

## 2. SPECIFICATIONS

(1) Bandwidth:

DC - to 25 MHz (-3 dB) for x 50, or x 200

DC - to 15 MHz (for attenuation x 20)

(2) Attenuation: x 20, x 50, or x 200

(3) Accuracy:  $\pm 2\%$

(4) Voltage Input Ranges (DC + AC peak to peak)

$\leq 140 V_{p-p}$  for x 20, (i.e about 45 Vrms or DC)

$\leq 350 V_{p-p}$  for x 50, (i.e about 110 Vrms or DC)

$\leq 1400 V_{p-p}$  for x 200, (i.e about 450 Vrms or DC)

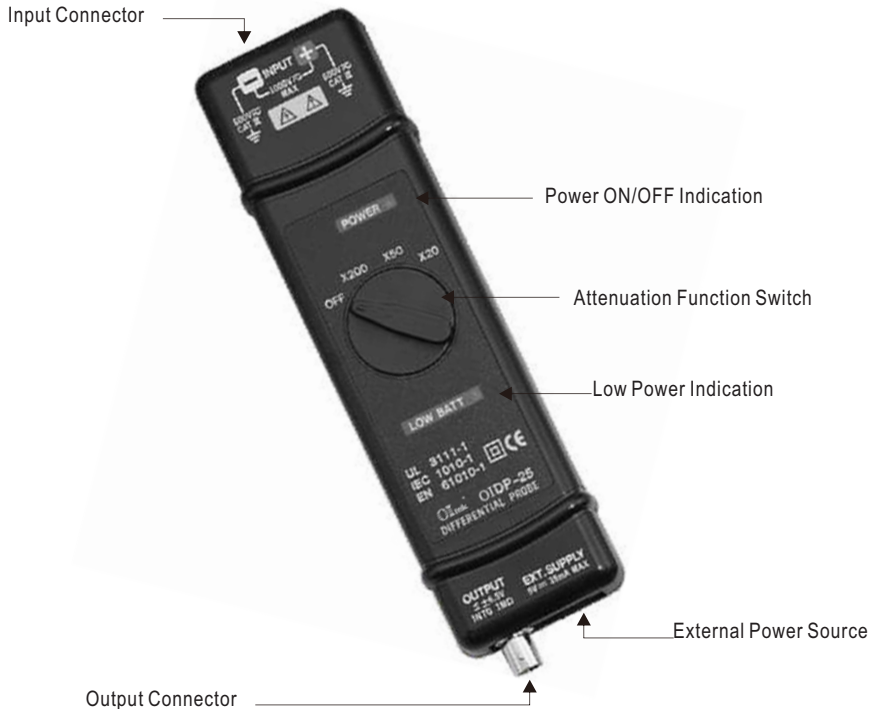
(5) Permitted Max Input Voltage

Max differential voltage: 1400 V (DC + AC peak to peak) or 450Vrms

Max voltage between each input terminal and ground:  
600 Vrms

- (6) Input Impedance:  
 Differential:  $4\text{ M}\Omega / 1.2\text{ pF}$   
 Between terminals and ground:  $2\text{ M}\Omega / 2.3\text{ pF}$
- (7) Output:  $\leq \pm 7.0\text{ V}$
- (8) Output Impedance:  $50\ \Omega$
- (9) Rise Time:  $14\text{ ns}$  for  $\times 50$  , and  $\times 200$  ;  $23.4\text{ ns}$  for  $\times 20$
- (10) Rejection Rate on Common Mode:  
 $60\text{ Hz}$ :  $> 80\text{ dB}$  ;  $100\text{ Hz}$ :  $> 60\text{ dB}$  ;  $1\text{ MHz}$ :  $> 50\text{ dB}$
- (11) Power Supply: Only External  $9\text{ V DC}$  power supply .
- (12) Consumption:  $35\text{ mA max}$  (  $0.4\text{ WATT}$  )

### 3. PANEL DESCRIPTION



## 4. OPERATING ENVIRONMENTAL 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:

195 x 55 x 30 mm; 250g

### (2) Electrical Safety to IEC 1010-1

- Dual Insulation
- Installation Category III
- Degree of Pollution 2
- Rated Voltage or Max Line-Earth: 600 Vrms

### (3) CE Mark

Conforms to EN 50081-1 and 50082-1 standards

### (4) Indoor use only.

## 5. OPERATING PROCEDURE

- Connect the leads to the input and place the wire-grip on the circuit to be tested.
- Connect the probe to the oscilloscope with the insulated BNC/BNC lead.
- Adjust the vertical zero adjustment 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.

**The conversion table gives the real vertical deviation.**

Attenuation	X 200	X 50	X 20
Voltage Input Range (DC+AC Peak)	1400Vp-p (±700VDC)	350Vp-p (±175VDC)	140Vp-p (±70VDC)



Vertical Deviation on the Oscilloscope in V/div	Real Deviation In V/div		
	x 200	x 50	x 20
1	200	50	20
0.5	100	25	10
0.2	40	10	4
0.1	20	5	2
50 m	10	2.5	1
20 m	4	1	0.4
10 m	2	0.5	0.2
5 m	1	0.25	0.1
2 m	0.4	0.1	40 m

**[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  $\Omega$  load.

**Example:**

With the probe on factor x 200, the oscilloscope on 0.5 V/div, the real vertical deviation is  $200 \times 0.5 = 100$  V/div.

With a 50  $\Omega$  load on the input of the oscilloscope the deviation becomes 200 V/div.

**6. 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 repairers.

## **7. CLEANING**

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

## **8. STORAGE**

If the probe is not use more than 60 days, please store the probe in a dehumidified environment to keep dry.

## **9. WARRANTY**

Unless notified to the contrary, 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 no further than the repair of our faulty equipment, carriage paid to our workshops.

It is applicable for normal use of our instruments, and does not apply to damage or destruction caused, notably by error in mounting, mechanical accident, faulty maintenance, defective use, overload or exceed voltage.

Our responsibility being strictly limited to the pure and simple replacement of the faulty parts of our equipment, the buyer expressly renounces any attempt to find us responsible for damages or losses caused directly or indirectly.

Our guarantee is applicable for twelve (12) months after the date at which the equipment is made available. The repair, modification or replacement of a part during the guarantee period will not result in this guarantee being extended.

## **10. REPAIR**

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

## 11. ACCESSORIES

- ADP-220V: AC Adapter.
- BP250: BNC Plug to BNC Plug; 50  $\Omega$  Resistance , RG58C UL, Length 100cm.
- BP366: Banana Plug to Banana Plug Silicon Wire; UL 6KV, 18AWG, Length 60cm.(Red x 1pc , Black x 1pc)
- BP266: IC Clip, UL 1000V CAT III.(Red x 1pc , Black x 1pc)
- BP276: Alligator Clip, UL 1000V CAT II, 10A.(Red x 1pc , Black x 1pc)
- Instruction Manual(Oltek221201S1).

# ***OIDP-50***

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***High Voltage Differential Probe***

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# OIDP-50 HIGH VOLTAGE DIFFERENTIAL PROBE

## 1. FEATURES

- The OIDP-50 differential probe provides a safety means for measuring differential voltage to all models of oscilloscopes.
- The OIDP-50 converts the high differential voltage ( $\leq 7000V_{\text{peak}}$ ) into a low voltage ( $\leq 7.0V$ , with reference to the earth) and display on the oscilloscopes.
- The OIDP-50 is designed to operate with the  $1M\Omega$  impedance oscilloscopes. When combine with the  $50\Omega$  load, the attenuation will be 2 times.
- We recommend to use OIDPTEK PL-10 with OIDP-50 to expand the measuring with DMM to observe more accurate measurement. The accuracy of oscilloscope is 3% and the DMM is less than 1%.

**NOTE:** If you connect OIDP-50 to the DMM without PL-10, the accuracy will be higher than 10%.

## 2. SPECIFICATIONS

(1) Bandwidth:

DC - to 50 MHz (-3 dB) for x 200, x 500 and x 1000

DC - to 25 MHz (for attenuation x 100)

(2) Attenuation: x 100, x 200, x 500, x1000

(3) Accuracy:  $\pm 2\%$

(4) Voltage Input Ranges (DC + AC peak to peak)

$\leq 700 V_{\text{p-p}}$  for x 100, (i.e about 230 Vrms or DC)

$\leq 1400 V_{\text{p-p}}$  for x 200, (i.e about 460 Vrms or DC)

$\leq 3500 V_{\text{p-p}}$  for x 500, (i.e about 1140 Vrms or DC)

$\leq 7000 V_{\text{p-p}}$  for x 1000, (i.e about 2300 Vrms or DC)

(5) Permitted Max Input Voltage

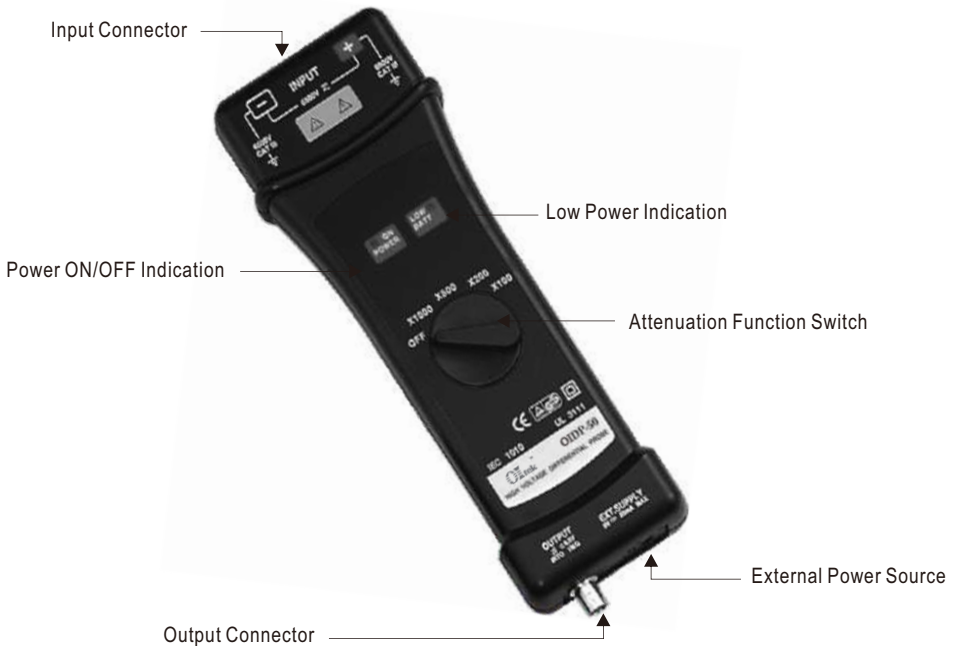
Max differential voltage: 7000 V (DC + AC peak to peak)

Max voltage between each input terminal and ground:

6500 Vrms

- (6) Input Impedance:  
 Differential:  $54\text{ M}\Omega / 1.2\text{ pF}$   
 Between terminals and ground:  $27\text{ M}\Omega / 2.3\text{ pF}$
- (7) Output:  $\leq \pm 7.0\text{ V}$
- (8) Output Impedance:  $50\ \Omega$
- (9) Rise Time:  $7\text{ ns}$  for x 200 , x 500 , and x 1000 ;  $14\text{ ns}$  for x 100
- (10) Rejection Rate on Common Mode:  
 60 Hz:  $> 80\text{ dB}$  ; 100 Hz:  $> 60\text{ dB}$  ; 1 MHz:  $> 50\text{ dB}$
- (11) Power Supply: Only External 9 V DC power supply .
- (12) Consumption:  $35\text{ mA max}$  ( 0.4 WATT)

### 3. PANEL DESCRIPTION



## 4. OPERATING ENVIRONMENTAL 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:

240 x 80 x 30 mm; 280g

### (2) Electrical Safety to IEC 1010-1

- Dual Insulation
- Installation Category III
- Degree of Pollution 2
- Rated Voltage or Max Line-Earth: 6500 Vrms

### (3) CE Mark

Conforms to EN 50081-1 and 50082-1 standards

### (4) Indoor use only.

## 5. OPERATING PROCEDURE

- Connect the leads to the input and place the wire-grip on the circuit to be tested.
- Connect the probe to the oscilloscope with the insulated BNC/BNC lead.
- Adjust the vertical zero adjustment 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.

**The conversion table gives the real vertical deviation.**

Attenuation	X 1000	X 500	X 200	X 100
Voltage Input Range (DC+AC Peak)	7000Vp-p (±3500VDC)	3500Vp-p (±1750VDC)	1400Vp-p (±700VDC)	700Vp-p (±350VDC)

Vertical Deviation on the Oscilloscope in V/div	Real Deviation In V/div			
	x 1000	x 500	x 200	x 100
1	1000	500	200	100
0.5	500	250	100	50
0.2	200	100	40	20
0.1	100	50	2	10
50 m	50	25	10	5
20 m	20	10	4	2
10 m	10	5	2	1
5 m	5	2.5	1	0.5
2 m	2	1	0.4	0.2

**[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.

**Example:**

With the probe on factor x 200, the oscilloscope on 0.5 V/div, the real vertical deviation is  $200 \times 0.5 = 100$  V/div.

With a 50Ω load on the input of the oscilloscope the deviation becomes 200 V/div.

**6. 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 repairers.



## **7. CLEANING**

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

## **8. STORAGE**

If the probe is not use more than 60 days, please store the probe in a dehumidified environment to keep dry.

## **9. WARRANTY**

Unless notified to the contrary, 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 no further than the repair of our faulty equipment, carriage paid to our workshops.

It is applicable for normal use of our instruments, and does not apply to damage or destruction caused, notably by error in mounting, mechanical accident, faulty maintenance, defective use, overload or exceed voltage.

Our responsibility being strictly limited to the pure and simple replacement of the faulty parts of our equipment, the buyer expressly renounces any attempt to find us responsible for damages or losses caused directly or indirectly.

Our guarantee is applicable for twelve (12) months after the date at which the equipment is made available. The repair, modification or replacement of a part during the guarantee period will not result in this guarantee being extended.

## **10. REPAIR**

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

## 11. ACCESSORIES

- ADP-220V: AC Adapter.
- BP250: BNC Plug to BNC Plug; 50  $\Omega$  Resistance, RG58C UL, Length 100cm.
- BP276: Alligator Clip, UL 1000V CAT II, 10A.  
(Red x 1pc , Black x 1pc)
- BP266: HV IC Clip, MAX. 6500V(DC+ACp-p).  
(Red x 1pc , Black x 1pc)
- BP366: HV Banana Plug to Banana Plug Silicon Wire, 18AWG, UL 20KV, Length 60cm.(Red x 1pc , Black x 1pc)
- Instruction Manual(Oltek221201S1).

# ***OIDP-100***

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***High Voltage Differential Probe***

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# OIDP-100 HIGH VOLTAGE DIFFERENTIAL PROBE ———

## 1. FEATURES

- The OIDP-100 differential probe provides a safety means for measuring differential voltage to all models of oscilloscopes.
- The OIDP- 100 converts the high differential voltage ( $\leq 7000V_{\text{peak}}$ ) into a low voltage ( $\leq 7.0V$ , with reference to the earth) and display on the oscilloscopes.
- The OIDP-100 is designed to operate with the  $1M\Omega$  impedance oscilloscopes. When combine with the  $50\Omega$  load, the attenuation will be 2 times.
- We recommend to use OITEK PL-10 with OIDP-100 to expand the measuring with DMM to observe more accurate measurement. The accuracy of oscilloscope is 3% and the DMM is less than 1%.  
**NOTE:** If you connect OIDP-100 to the DMM without PL-10, the accuracy will be higher than 10%.

## 2. SPECIFICATIONS

- (1) Bandwidth:
  - DC - to 100 MHz (-3 dB) for x 200, x 500 and x 1000
  - DC - to 50 MHz (for attenuation x 100)
- (2) Attenuation: x 100, x 200, x 500, x1000
- (3) Accuracy:  $\pm 2\%$
- (4) Voltage Input Ranges (DC + AC peak to peak)
  - $\leq 700 V_{\text{p-p}}$  for x 100, (i.e about 230 Vrms or DC)
  - $\leq 1400 V_{\text{p-p}}$  for x 200, (i.e about 460 Vrms or DC)
  - $\leq 3500 V_{\text{p-p}}$  for x 500, (i.e about 1140 Vrms or DC)
  - $\leq 7000 V_{\text{p-p}}$  for x 1000, (i.e about 2300 Vrms or DC)
- (5) Permitted Max Input Voltage
  - Max differential voltage: 7000 V (DC + AC peak to peak)
  - Max voltage between each input terminal and ground:  
6500 Vrms

(6) Input Impedance:

Differential: 54 M $\Omega$  / 1.2 pF

Between terminals and ground: 27 M $\Omega$  / 2.3 pF

(7) Output:  $\leq \pm 7.0$  V

(8) Output Impedance: 50  $\Omega$

(9) Rise Time: 3.5 ns for x 200 , x 500 , and x 1000 ; 7ns for x 100

(10) Rejection Rate on Common Mode:

60 Hz: > 80 dB ; 100 Hz: > 60 dB ; 1 MHz: > 50 dB

(11) Power Supply: Only External 9 V DC power supply .

(12) Consumption: 35 mA max ( 0.4 WATT)

### 3. PANEL DESCRIPTION



## 4. OPERATING ENVIRONMENTAL 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:

240 x 80 x 30 mm; 280g

### (2) Electrical Safety to IEC 1010-1

- Dual Insulation
- Installation Category III
- Degree of Pollution 2
- Rated Voltage or Max Line-Earth: 6500 Vrms

### (3) CE Mark

Conforms to EN 50081-1 and 50082-1 standards

### (4) Indoor use only.

## 5. OPERATING PROCEDURE

- Connect the leads to the input and place the wire-grip on the circuit to be tested.
- Connect the probe to the oscilloscope with the insulated BNC/BNC lead.
- Adjust the vertical zero adjustment 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.

**The conversion table gives the real vertical deviation.**

Attenuation	X 1000	X 500	X 200	X 100
Voltage Input Range (DC+AC Peak)	7000Vp-p (±3500VDC)	3500Vp-p (±1750VDC)	1400Vp-p (±700VDC)	700Vp-p (±350VDC)

Vertical Deviation on the Oscilloscope in V/div	Real Deviation In V/div			
	x 1000	x 500	x 200	x 100
1	1000	500	200	100
0.5	500	250	100	50
0.2	200	100	40	20
0.1	100	50	2	10
50 m	50	25	10	5
20 m	20	10	4	2
10 m	10	5	2	1
5 m	5	2.5	1	0.5
2 m	2	1	0.4	0.2

**[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.

**Example:**

With the probe on factor x 200, the oscilloscope on 0.5 V/div, the real vertical deviation is  $200 \times 0.5 = 100$  V/div.

With a 50Ω load on the input of the oscilloscope the deviation becomes 200 V/div.

**6. 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 repairers.

## **7. CLEANING**

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

## **8. STORAGE**

If the probe is not use more than 60 days, please store the probe in a dehumidified environment to keep dry.

## **9. WARRANTY**

Unless notified to the contrary, 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 no further than the repair of our faulty equipment, carriage paid to our workshops.

It is applicable for normal use of our instruments, and does not apply to damage or destruction caused, notably by error in mounting, mechanical accident, faulty maintenance, defective use, overload or exceed voltage.

Our responsibility being strictly limited to the pure and simple replacement of the faculty parts of our equipment, the buyer expressly renounces any attempt to find us responsible for damages or losses caused directly or indirectly.

Our guarantee is applicable for twelve (12) months after the date at which the equipment is made available. The repair, modification or replacement of a part during the guarantee period will not result in this guarantee being extended.

## **10. REPAIR**

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



## 11. ACCESSORIES

- ADP-220V: AC Adapter.
- BP250: BNC Plug to BNC Plug; 50  $\Omega$  Resistance, RG58C UL, Length 100cm.
- BP276: Alligator Clip, UL 1000V CAT II, 10A.  
(Red x 1pc , Black x 1pc)
- BP286: Test Lead UL 1000V, CAT III.(Red x 1pc , Black x 1pc)
- BP266: HV IC Clip, MAX. 6500V(DC+ACp-p).  
(Red x 1pc , Black x 1pc)
- BP366: HV Banana Plug to Banana Plug Silicon Wire, 18AWG, UL 20KV, Length 60cm.(Red x 1pc , Black x 1pc)
- Carry Case(PX-502).
- Instruction Manual(Oltek221201S1).

# 差分探头

## ●使用前请仔细阅读使用说明

1. 请先获得一支差分探头。
2. 从使用说明取得最佳维修及服务。
3. 请详读使用说明书。
4. 请注意安全注意事项。

## ●安全注意事项:

请小心注意触电!

请注意最高输入电压!

### OIDP-25:

最高差分电压:1400V(DC+AC peak)或450Vrms

输入端及接地端间的最大差分电压:600Vrms

### OIDP-50 及 OIDP-100:

最高差分电压:7000V(DC+AC peak)或2200Vrms

输入端及接地端间的最大差分电压:6500Vrms

**请勿使用此产品在潮湿的环境下或在易爆的风险下操作!**  
**请勿使用此产品，当此产品的盒盖被打开!**  
**当打开此产品的盒盖时，请将输出及输入端切断!**

## ●标准配件

- 双端BNC接头的测试缆线,长度100CM(BP250)
- 一个9VDC转换器(230V输入)
- 一对高电压专用的IC夹(BP266)
- 一对指定规格的双端香蕉插头高电压传输线(BP366)
- 一对高电压专用的鳄鱼夹(BP276)

*OIDP-25*

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**差分探头**

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# OIDP-25 差分探头

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## 1. 简述:

- OIDP-25差分探头提供一个安全的仪器给所有的示波器使用,它可以转换由高输入的差分电压( 1400 峰值)进入一个低电压( 7.0V),并且显示波形在示波器上,使用频率高达25MHz,非常适合大电力测试、研发使用。
- 差分探头输出值是设计在操作示波器1M 的输入阻抗的相对衰减比,当使用50 匹配器时衰减比刚好为2倍。
- OIDP-25差分探头,也建议选购OItek生产的PL-10阻抗匹配器,可以延伸差分探头的应用范围-可以在数字万用表上观测更精确的实际测试电压值(示波器精确度为3%,数字万用表约精准3倍)。  
[注意]如果没有使用PL10阻抗匹配器,而直接连接数字万用表,读值的误差将大于10%。

## 2. 规格:

(1)带宽:DC-25MHz(-3dB),(衰减 $\times 50$  ,  $\times 200$ 档)

DC-15MHz(衰减 $\times 20$ 档)

(2)衰减: $\times 20$ , $\times 50$ ,或 $\times 200$

(3)精确度: $\pm 2\%$

(4)输入电压范围(DC+AC峰峰值)

140Vp-p在  $\times 20$ 档, (约45Vrms或DC)

350Vp-p在  $\times 50$ 档, (约110Vrms或DC)

1400Vp-p在  $\times 200$ 档, (约450Vrms或DC)

(5)允许最高输入电压:

最高差分电压:1400V(DC+AC 峰峰值)或450Vrms

输入端及接地端间最高电压:600Vrms

(6)输入阻抗:

差分:4M /1.2pF

单端到接地端间的输入阻抗:2M /2.3pF

(7)输出电压:  $\pm 7.0V$

(8)输出阻抗:50

(9)上升时间:

14ns , 在×50及×200档

23.4ns , 在×20档

(10)共模抑制比:

60Hz:>80dB; 100 Hz:>60 dB; 1MHz:>50dB

(11)电源:

指定外接9VDC电源(220V输入)

(12)耗电:最大耗电量35mA ( 0.4瓦特 )

### 3. 差分探头面板说明



## 4. 操作环境及状况

	一般状态	使用操作中	储存
温度	+20°C ~ +30°C	0°C ~ +50°C	-30°C ~ +70°C
湿度	≤ 70 % RH	10 % ~ 85 % RH	10 % ~ 90 % RH

(1)尺寸及重量:195 ×55×30 mm;250g

(2)电子安全规范 IEC 1010-1

- 双层绝缘
- 安装类目III
- 污染程度2
- 相关电压或最大接地:600 Vrms
- CE:EN50081-1及50082-1

(3)请使用于室内环境。

## 5. 操作程序

- 将附件BP366与BP266(或BP276)接起来后插入OIDP-25的输入端,并将BP266(或BP276)与待测物接触。
- 将BP250与OIDP-25的输出端连接,并与示波器连接。
- 如有需要先调整示波器上的垂直开关。
- 将示波器上的衰减比及垂直开关调整到一致的位置,如下表。
- 注意:电源必须打开。

衰减比	× 200	× 50	× 20
最大输入电压 (DC+AC 峰值)	1400Vp-p (±700VDC)	350Vp-p (±175VDC)	140Vp-p (±70VDC)

示波器上的 垂直刻度(V/DIV)	实际刻度(V/DIV)		
	× 200	× 50	× 20
1	200	50	20
0.5	100	25	10
0.2	40	10	4
0.1	20	5	2
50 m	10	2.5	1
20 m	4	1	0.4
10 m	2	0.5	0.2
5 m	1	0.25	0.1
2 m	0.4	0.1	40 m

### [注意]

实际的垂直刻度是等于衰减比乘上示波器上所选择的垂直刻度,如果是使用PL-50(50 负载器)时,实际刻度值 $\times 2$ (等于2倍量)。

例如:

差分探头是 $\times 200$ ,示波器的垂直刻度在0.5,其实际的垂直刻度为:

$$200 \times 0.5 = 100\text{V/div}$$

示波器输入的负载是50 ,刻度就为200V/div

## 6. 维护:

保养此产品时请使用原厂指定的工具,原厂将不负任何责任由其他不被认可的维修人员所做的维修。

本产品如超过60天不使用,请将本产品防潮箱存放。

## 7. 清洁:

此产品不需要任何特定的清洁,如有需要,请用轻软干净的布沾上微量的清洁液轻轻的在产品外观擦拭。

## 8. 保修:

除了人为损坏外,本产品是受保修并可以维修的,并不包含在安全规范的责任。

保修是以不超出发票上的金额,零件的更换及运送的费用。

保修是仅在正常操作下而造成的损坏,并不包含任何刻意的损坏,操作上的错误,机械上的操作不当,保养不当,负载或过压。

原厂的保修仅包含有限的单纯更换损坏的零件,使用者将不可归据直接或间接的责任在原厂。

原厂的保修是卖出后的6个月内,如有任意的非原厂的维修或更换零件,原厂保修将自然取消。

## 9. 维修:

有任何的维修,保养或更换零件是在保修以外,请将产品退回原厂维修。

## 10. 标准附件:

- ADP-220V:AC电源转换器(1个)。
- BP250:双端BNC同轴线;50 阻抗,RG58C UL,长度10CM,1根。
- BP366:双端香蕉插头硅线,UL 6KV,18AWG,长60cm(红色,黑色各一)。
- BP266:安规IC夹,UL1000V CAT III(红色,黑色各一)。
- BP276:安规鳄鱼夹,UL1000V CAT II,10A(红色,黑色各一)。
- 使用说明书(OItek221201S1)。



*OIDP-50*

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**差分探头**

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# OIDP-50差分探头

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## 1. 简述:

- OIDP-50差分探头提供一个安全的仪器给所有的示波器使用,它可以转换由高输入的差分电压( 7000 峰值)进入一个低电压( 7.0V),并且显示波形在示波器上,使用频率高达50MHz,非常适合大电力测试、研发使用。
- 差分探头输出值是设计在操作示波器1M $\Omega$  的输入阻抗的相对衰减比,当使用50 $\Omega$  匹配器时衰减比刚好为2倍。
- OIDP-50差分探头,也建议选购OItek生产的PL-10阻抗匹配器,可以延伸差分探头的应用范围-可以在数字万用表上观测更精确的实际测试电压值(示波器精确度为3%,数字万用表约精准3倍)。  
[注意]如果没有使用PL10阻抗匹配器,而直接连接数字万用表,读值的误差将大于10%。

## 2. 规格:

(1)带宽:DC-50MHz(-3dB),(衰减 $\times 200$ , $\times 500$ ,及 $\times 1000$ 档)

DC-25MHz(衰减 $\times 100$ 档)

(2)衰减: $\times 100$ , $\times 200$ , $\times 500$ ,或 $\times 1000$

(3)精确度: $\pm 2\%$

(4)输入电压范围(DC+AC峰峰值)

700V<sub>p-p</sub>在  $\times 100$ 档, (约230V<sub>rms</sub>或DC)

1400V<sub>p-p</sub>在  $\times 200$ 档, (约460V<sub>rms</sub>或DC)

3500V<sub>p-p</sub>在  $\times 500$ 档, (约1140V<sub>rms</sub>或DC)

7000V<sub>p-p</sub>在  $\times 1000$ 档, (约2300V<sub>rms</sub>或DC)

(5)允许最高输入电压:

最高差分电压:7000V(DC+AC 峰峰值)

输入端及接地端间最高电压:6500V<sub>rms</sub>

(6)输入阻抗:

差分:54M $\Omega$  /1.2pF

单端到接地端间的输入阻抗:27M $\Omega$  /2.3pF

- (7)输出电压:  $\pm 7.0\text{V}$
- (8)输出阻抗:50
- (9)上升时间:
  - 7ns , 在 $\times 200, \times 500$ 及 $\times 1000$ 档
  - 14ns , 在 $\times 100$ 档
- (10)共模抑制比:
  - 60Hz: $>80\text{dB}$ ; 100 Hz: $>60\text{ dB}$ ; 1MHz: $>50\text{dB}$
- (11)电源:
  - 指定外接9VDC电源(220V输入)
- (12)耗电:最大耗电量35mA ( 0.4瓦特 )

### 3. 差分探头面板说明



#### 4. 操作环境及状况

	一般状态	使用操作中	储存
温度	+20°C ~ +30°C	0°C ~ +50°C	-30°C ~ +70°C
湿度	≤ 70 % RH	10 % ~ 85 % RH	10 % ~ 90 % RH

(1)尺寸及重量:240 ×80×30 mm;280g

(2)电子安全规范 IEC 1010-1

- 双层绝缘
- 安装类目III
- 污染程度2
- 相关电压或最大接地:6500 Vrms
- CE:EN50081-1及50082-1

(3)请使用于室内环境。

#### 5. 操作程序

- 将附件BP366与BP266(或BP276)接起来后插入OIDP-50的输入端,并将BP266(或BP276)与待测物接触。
- 将BP250与OIDP-50的输出端连接,并与示波器连接。
- 如有需要先调整示波器上的垂直开关。
- 将示波器上的衰减比及垂直开关调整到一致的位置,如下表。
- 注意:电源必须打开。

衰减比	×1000	× 500	× 200	×100
最大输入电压 (DC+AC 峰值)	7000Vp-p (±3500VDC)	3500Vp-p (±1750VDC)	1400Vp-p (±700VDC)	700Vp-p (±350VDC)

示波器上的 垂直刻度(V/DIV)	实际刻度(V/DIV)			
	×1000	× 500	×200	× 100
1	1000	500	200	100
0.5	500	250	100	50
0.2	200	100	40	20
0.1	100	50	2	10
50 m	50	25	10	5
20 m	20	10	4	2
10 m	10	5	2	1
5 m	5	2.5	1	0.5
2 m	2	1	0.4	0.2

**[注意]**

实际的垂直刻度是等于衰减比乘上示波器上所选择的垂直刻度,如果是使用PL-50(50 负载器)时,实际刻度值×2(等于2倍量)。

例如:

探头是×200,示波器的垂直刻度在0.5,其实际的垂直刻度为: $200 \times 0.5 = 100\text{V/div}$

示波器输入的负载是50 ,刻度就为200V/div

**6. 维护:**

保养此产品时请使用原厂指定的工具,原厂将不负任何责任由其他不被认可的维修人员所做的维修。

本产品如超过60天不使用,请将本产品防潮箱存放。

## 7. 清洁:

此产品不需要任何特定的清洁,如有需要,请用轻软干净的布沾上微量的清洁液轻轻的在产品外观擦拭。

## 8. 保修:

除了人为损坏外,本产品是受保修并可以维修的,并不包含在安全规范的责任。

保修是以不超出发票上的金额,零件的更换及运送的费用。

保修是仅在正常操作下而造成的损坏,并不包含任何刻意的损坏,操作上的错误,机械上的操作不当,保养不当,负载或过压。

原厂的保修仅包含有限的单纯更换损坏的零件.使用者将不可归据直接或间接的责任在原厂。

原厂的保修是卖出后的6个月内,如有任意的非原厂的维修或更换零件,原厂保修将自然取消。

## 9. 维修:

有任何的维修,保养或更换零件是在保修以外,请将产品退回原厂维修。

## 10. 标准附件:

- ADP-220V:AC电源转换器(1个)。
- BP250:双端BNC同轴线;50 阻抗,RG58C UL,长度100cm1根。
- BP276:安规鳄鱼夹,UL1000V CAT II,10A(红色,黑色各一)。
- BP266:高压专用IC夹,最大6500V(DC+ACp-p)(红色,黑色各一)。
- BP366:高压专用双端香蕉插头硅线,18AWG,UL 20KV,长60cm(红色,黑色各一)。
- 使用说明书(OItek221201S1)。

*OIDP-100*

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**差分探头**

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# OIDP-100差分探头

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## 1. 简述:

- OIDP-100差分探头提供一个安全的仪器给所有的示波器使用,它可以转换由高输入的差分电压( 7000 峰值)进入一个低电压( 7.0V),并且显示波形在示波器上,使用频率高达100MHz,非常适合大电力测试、研发使用。
- 差分探头输出值是设计在操作示波器1M 的输入阻抗的相对衰减比,当使用50 匹配器时衰减比刚好为2倍。
- OIDP-100差分探头,也建议选购Oitek生产的PL-10阻抗匹配器,可以延伸差分探头的应用范围-可以在数字万用表上观测更精确的实际测试电压值(示波器精确度为3%,数字万用表约精准3倍)。

[注意]如果没有使用PL10阻抗匹配器,而直接连接数字万用表,读值的误差将大于10%。

## 2. 规格:

(1)带宽:DC-100MHz(-3dB),(衰减 $\times 200$ , $\times 500$ ,及 $\times 1000$ 档)

DC-50MHz(衰减 $\times 100$ 档)

(2)衰减: $\times 100$ , $\times 200$ , $\times 500$ ,或 $\times 1000$

(3)精确度: $\pm 2\%$

(4)输入电压范围(DC+AC峰峰值)

700Vp-p在  $\times 100$ 档, (约230Vrms或DC)

1400Vp-p在  $\times 200$ 档, (约460Vrms或DC)

3500Vp-p在  $\times 500$ 档, (约1140Vrms或DC)

7000Vp-p在  $\times 1000$ 档, (约2300Vrms或DC)

(5)允许最高输入电压:

最高差分电压:7000V(DC+AC 峰峰值)

输入端及接地端间最高电压:6500Vrms

(6)输入阻抗:

差分:54M /1.2pF

单端到接地端间的输入阻抗:27M /2.3pF



- (7)输出电压:  $\pm 7.0V$
- (8)输出阻抗:50
- (9)上升时间:  
3.5ns , 在 $\times 200, \times 500$ 及 $\times 1000$ 档  
7ns , 在 $\times 100$ 档
- (10)共模抑制比:  
60Hz: $>80dB$ ; 100 Hz: $>60 dB$ ; 1MHz: $>50dB$
- (11)电源:  
指定外接9VDC电源(220V输入)
- (12)耗电:最大耗电量35mA ( 0.4瓦特 )

### 3. 差分探头面板说明



## 4. 操作环境及状况

	一般状态	使用操作中	储存
温度	+20°C ~ +30°C	0°C ~ +50°C	-30°C ~ +70°C
湿度	≤ 70 % RH	10 % ~ 85 % RH	10 % ~ 90 % RH

(1)尺寸及重量:240 ×80×30 mm;280g

(2)电子安全规范 IEC 1010-1

- 双层绝缘
- 安装类目III
- 污染程度2
- 相关电压或最大接地:6500 Vrms
- CE:EN50081-1及50082-1

(3)请使用于室内环境。

## 5. 操作程序

- 将附件BP366与BP266(或BP276)接起来后插入OIDP-100的输入端,并将BP266(或BP276)与待测物接触。
- 将BP250与OIDP-100的输出端连接,并与示波器连接。
- 如有需要先调整示波器上的垂直开关。
- 将示波器上的衰减比及垂直开关调整到一致的位置,如下表。
- 注意:电源必须打开。

衰减比	×1000	× 500	× 200	×100
最大输入电压 (DC+AC 峰值)	7000Vp-p (±3500VDC)	3500Vp-p (±1750VDC)	1400Vp-p (±700VDC)	700Vp-p (±350VDC)

示波器上的 垂直刻度(V/DIV)	实际刻度(V/DIV)			
	×1000	× 500	×200	× 100
1	1000	500	200	100
0.5	500	250	100	50
0.2	200	100	40	20
0.1	100	50	2	10
50 m	50	25	10	5
20 m	20	10	4	2
10 m	10	5	2	1
5 m	5	2.5	1	0.5
2 m	2	1	0.4	0.2

**[注意]**

实际的垂直刻度是等于衰减比乘上示波器上所选择的垂直刻度,如果是使用PL-50(50 负载器)时,实际刻度值×2(等于2倍量)。

例如:

探头是×200,示波器的垂直刻度在0.5,其实际的垂直刻度为: $200 \times 0.5 = 100\text{V/div}$

示波器输入的负载是50 ,刻度就为200V/div

**6. 维护:**

保养此产品时请使用原厂指定的工具,原厂将不负任何责任由其他不被认可的维修人员所做的维修。

本产品如超过60天不使用,请将本产品放在防潮箱存放。

## 7. 清洁:

此产品不需要任何特定的清洁,如有需要,请用轻软干净的布沾上微量的清洁液轻轻的在产品外观擦拭。

## 8. 保修:

除了人为损坏外,本产品是受保修并可以维修的,并不包含在安全规范的责任。

保修是以不超出发票上的金额,零件的更换及运送的费用。

保修是仅在正常操作下而造成的损坏,并不包含任何刻意的损坏,操作上的错误,机械上的操作不当,保养不当,负载或过压。

原厂的保修仅包含有限的单纯更换损坏的零件.使用者将不可归据直接或间接的责任在原厂。

原厂的保修是卖出后的6个月内,如有任意的非原厂的维修或更换零件,原厂保修将自然取消。

## 9. 维修:

有任何的维修,保养或更换零件是在保修以外,请将产品退回原厂维修。

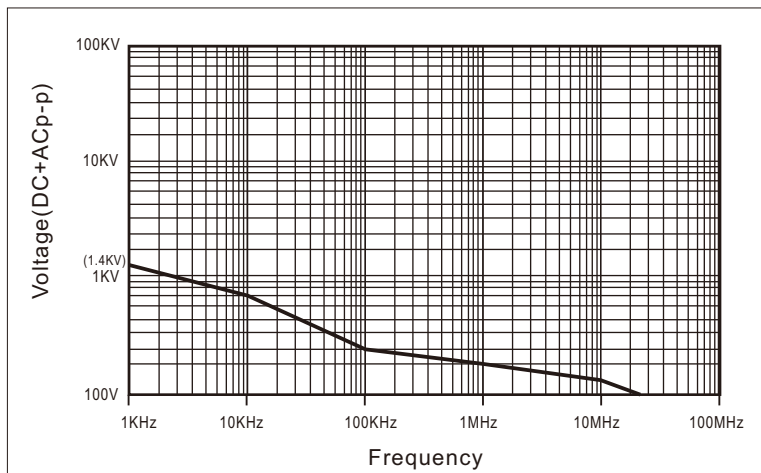
## 10. 标准附件:

- ADP-220V:AC电源转换器(1个)。
- BP250:双端BNC同轴线;50 阻抗,RG58C UL,长度100cm1根。
- BP276:安规鳄鱼夹,UL1000V CAT II,10A(红色,黑色各一)。
- BP286:安规接触探头棒,UL1000V CAT III(红色,黑色各一)。
- BP266:高压专用IC夹,最大6500V(DC+ACp-p(红色,黑色各一)。
- BP366:高压专用双端香蕉插头硅线,18AWG,UL 20KV,长60cm(红色,黑色各一)。
- 工具箱(PX-502)。
- 使用说明书(OItek221201S1)。

# Voltage Derating Curve / 耐压曲线参考图

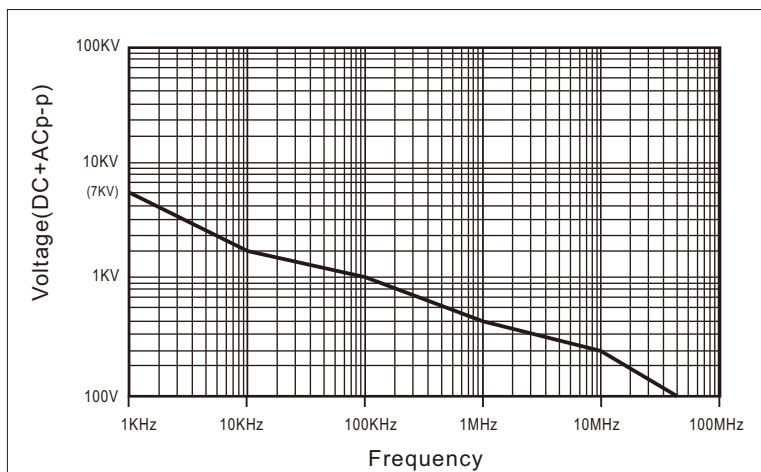
## OIDP-25

1.4KV:1KHz / 700V:10KHz / 300V:100KHz / 200V:1MHz / 150V:10MHz /  
100V:25MHz )



## OIDP-50

7KV:1KHz / 2KV:10KHz / 1KV:100KHz / 500V:1MHz / 300V:10MHz /  
100V:50MHz )



# Voltage Derating Curve / 耐压曲线参考图

## OIDP-100

7KV:1KHz / 2KV:10KHz / 1KV:100KHz / 500V:1MHz / 300V:10MHz / 100V:100MHz )

