

DIFFERENTIAL PROBE

差動測試棒



DP-200pro

Super High Frequency Model
20mVp-p~2KVp-p
DC~200MHz

DP-150pro

Super High Range Model
10mVp-p~10KVp-p
DC~150MHz



INSTRUCTION MANUAL

使用説明書

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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 USER MANUAL.
3. Respect the safety precautions.

• SAFETY PRECAUTIONS

Warning, Risk of Electric Shock,

Respect the max input voltages

DP-150pro:

1. Max differential voltage: 10KV (DC + AC peak) or 3.5KV RMS
2. Max voltage between each input terminal and ground: 3.5KV RMS

DP-200pro:

1. Max differential voltage: 2KV (DC + AC peak) or 700V RMS
2. Max voltage between each input terminal and ground: 600V RMS

Do not use the probe in damp environment or where there is risk of explosion.

Do not use the probe with its case open.

Disconnect the inputs and outputs of the probe before opening the case.

• TO ORDER Differential Voltage Probe and Accessories:

- An Insulated BNC/BNC lead and two ϕ 4 mm, length 3 inches.(BP-250)
- Supplied a Adapter preset 9 V DC (115 V or 230 V)
- 2 x high voltage IC clips.(BP-256N/BP-266)
- 2 x Banana to Banana high voltage plug.(BP-356N/BP-366)
- 2 x Alligator plug.(BP-276N)
- 2 x Test Lead.(BP-286)
- Instruction Manual.
- Carry Box.(PX-501/PX-502)

DP-150pro

Differential Probe
(Super High Range Model)

DP-150pro DIFFERENTIAL PROBE

1. FEATURES

- The DP-150 differential voltage probe provides a safety means of measuring floating potentials for all models of oscilloscopes incomplete safety.
- It converts the high differential voltage ($\leq 10\text{KV}$ peak) into a low voltage ($\leq \pm 5\text{V}$) with reference to the earth for display on the oscilloscopes.
- The BNC output is designed to operate on an input with an impedance of $1\text{ M}\Omega$. It is 2 times of the $50\ \Omega$.
- Recommend to use PINTEK PL-10 with DP-150, and expand the measuring ranges. From DMM can observe more exact measured testing voltage. (Oscilloscope accuracy is 3%, and DMM is 10 times).

2. SPECIFICATIONS

(1) Bandwidth:

DC - to 150 MHz (-3 dB) for x30, x100, x300, x1000

DC - to 100 MHz (for attenuation x10)

(2) Attenuation: x10, x30, x100, x300, x1000, 5 range

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

(4) Voltage Input Ranges

RANGE	MAX. DC	MAX. AC RMS	MAX. AC p-p
x1000	$\pm 5\text{KV}$	3.5KV	10KV
x300	$\pm 1.5\text{KV}$	1KV	3KV
x100	$\pm 500\text{V}$	350V	1KV
x30	$\pm 150\text{V}$	100V	300V
x10	$\pm 50\text{V}$	35V	100V

(5) Permitted Max Input Differential Voltage

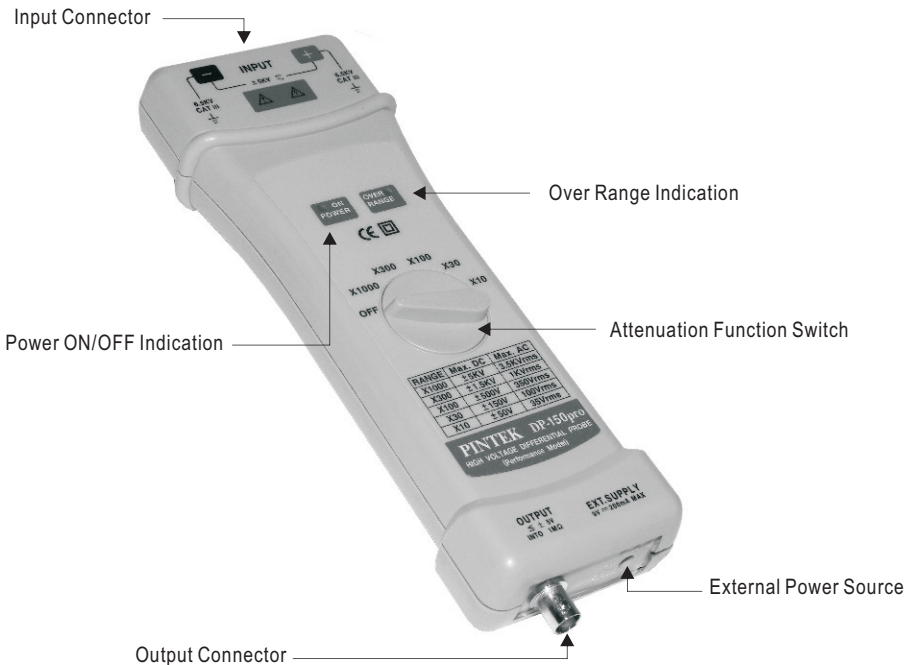
Max differential voltage: 10KV (DC + AC peak to peak)

Max voltage between each input terminal and ground: 3.5KV RMS.

NOTE: The Max. operation voltage between terminal and ground of each range are the same as the Max. AC RMS input.

- (6) Input Impedance:
 Differential: $100M\Omega // 1.0\text{ pF}$
 Between terminals and ground: $50M\Omega // 2.0\text{ pF}$
- (7) Output: $\leq \pm 6\text{ V}$
- (8) Output Impedance: $50\ \Omega$
- (9) Rise Time: 3.5 ns for x10, and 2.4 ns for x30, x100, x300, x1000
- (10) Rejection Rate on Common Mode:
 60 Hz: $> 80\text{ dB}$; 100 Hz: $> 60\text{ dB}$; 1 MHz: $> 50\text{ dB}$
- (11) EXT. Power Supply:
 External 9 V DC power supply.
- (12) Consumption: 150 mA max (1.4 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:

245 x 76 x 32 mm; 350g

(2) Electrical Safety to IEC 1010-1

- Dual Insulation
- Installation Category III
- Degree of Pollution 2
- Rated Voltage or Max Live-Earth: 3.5 KV RMS

(3) CE Mark

Conforms to EN 50081-1 and 50082-1 standards

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 accessory 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.
- NOTE: The POWER light must be “ON”, and note the Max. input voltage of each range.

The conversion table gives the real vertical deviation.

Attenuation	x 1000	x 300	x 100	x 30	x 10
Max. Input: DC	±5KV	±1.5KV	±500V	±150V	±50V
Max. Input: AC p-p	10KV	3KV	1KV	300V	100V
Max. Input: AC RMS	3.5KV	1KV	350V	100V	35V

Vertical Deviation on the Oscilloscope in V/div	Real Deviation In V/div				
	x 1000	x 300	x 100	x 30	x 10
1V	1KV	300V	100V	30V	10V
0.5V	500V	150V	50V	15V	5V
0.2V	200V	60V	20V	6V	2V
0.1V	100V	30V	10V	3V	1V
50 mV	50V	15V	5V	1.5V	0.5V
20 mV	20V	6V	2V	0.6V	0.2V
10 mV	10V	3V	1V	0.3V	0.1V
5 mV	5V	1.5V	0.5V	150mV	50mV

[NOTE]

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 a 50Ω load.

Example:

With the differential probe on factor x 10, the oscilloscope on 0.5 V/div, the real vertical deviation is 10 x 0.5 = 5 V/div.

With a 50Ω load on the input of the oscilloscope the deviation becomes 10 V/div.

6. EXT. POWER SOURCE

- Power consumption of the probe are 150mA(1.4W), thus it not suit for battery, please use the accessory adapter only.
- If there are any damage on the adaptor, please contact us and use the adaptor supply by us only. If the input power over 12V DC or the opposite polarity will caused to the probe hard damage.

7. 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.

8. CLEANING

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

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 to product to your distributor.

DP-200pro

Differential Probe
(Super High Frequency Model)

DP-200pro DIFFERENTIAL PROBE

1. FEATURES

- The DP-200 differential voltage probe provides a safety means of measuring floating potentials for all models of oscilloscopes incomplete safety.
- It converts the high differential voltage ($\leq 2\text{KV}$ peak) into a low voltage ($\leq \pm 5\text{V}$) with reference to the earth for display on the oscilloscopes.
- The BNC output is designed to operate on an input with an impedance of $1\text{ M}\Omega$. It is 2 times of the 50Ω .
- Recommend to use PINTEK PL-10 with DP-200, and expand the measuring ranges. From DMM can observe more exact measured testing voltage. (Oscilloscope accuracy is 3%, and DMM is 10 times).

2. SPECIFICATIONS

(1) Bandwidth:

DC - to 200MHz (-3 dB) for x50, x100, x200

DC - to 100MHz (for attenuation x 20)

(2) Attenuation: x20, x50, x100, x200

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

(4) Voltage Input Ranges

RANGE	MAX. DC	MAX. AC RMS	MAX. AC p-p
x200	$\pm 1000\text{V}$	700V	2000V
x100	$\pm 500\text{V}$	350V	1000V
x50	$\pm 250\text{V}$	175V	500V
x20	$\pm 100\text{V}$	70V	200V

(5) Permitted Max Input Differential Voltage

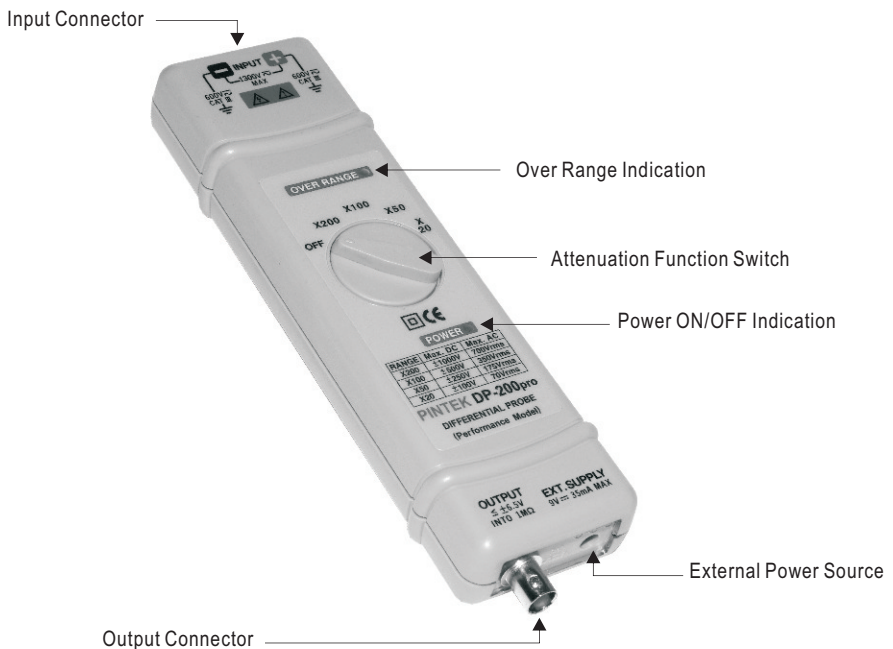
Max differential voltage: 2KV (DC + AC peak to peak)

Max voltage between each input terminal and ground: 700 V RMS.

NOTE: The Max. operation voltage between terminal and ground of each range are the same as the Max. AC RMS input.

- (6) Input Impedance:
 - Differential: $18M\Omega // 1.7\text{ pF}$
 - Between terminals and ground: $9M\Omega // 3.4\text{ pF}$
- (7) Output: $\leq \pm 6\text{ V}$
- (8) Output Impedance: 50Ω
- (9) Rise Time: 3.5 ns for x20, and 1.7 ns for x50, x100, x200
- (10) Rejection Rate on Common Mode:
 - 60 Hz: $> 80\text{ dB}$; 100 Hz: $> 60\text{ dB}$; 1 MHz: $> 50\text{ dB}$
- (11) EXT. Power Supply:
 - External 9 V DC power supply.
- (12) Consumption: 150 mA max (1.4 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:

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 Live-Earth: 700V RMS

(3) CE Mark

Conforms to EN 50081-1 and 50082-1 standards

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 accessory 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.
- NOTE: The POWER light must be “ON”, and note the Max. input voltage of each range.

The conversion table gives the real vertical deviation.

Attenuation	x 200	x 100	x 50	x 20
Max. Input: DC	±1000V	±500V	±250V	±100V
Max. Input: AC p-p	2000V	1000V	500V	200V
Max. Input: AC RMS	700V	350V	175V	70V

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

[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 a 50Ω load.

Example:

With the differential probe on factor x 100, the oscilloscope on 0.5 V/div, the real vertical deviation is 100 x 0.5 = 50 V/div.

With a 50Ω load on the input of the oscilloscope the deviation becomes 100 V/div.

6. EXT. POWER SOURCE

- Power consumption of the probe are 150mA(1.4W), thus it not suit for battery, please use the accessory adapter only.
- If there are any damage on the adaptor, please contact us and use the adaptor supply by us only. If the input power over 12V DC or the opposite polarity will caused to the probe hard damage.

7. 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.

8. CLEANING

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

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 to product to your distributor.

差動測試棒,使用前注意事項:

● 使用前請詳細閱讀使用說明

1. 請先獲得一支差動測試棒
2. 從使用說明取得最佳維修及服務
3. 請詳讀使用者操作手冊
4. 請注意安全注意事項

● 安全注意事項:

請小心注意觸電!

請注意最高輸入電壓!

DP-150pro:

最高差動電壓: 10KV (DC + AC peak) 或 3.5KV RMS

輸入端及接地端間的最大差動電壓: 3.5KV RMS

DP-200pro:

最高差動電壓: 2KV (DC + AC peak) 或 700V RMS

輸入端及接地端間的最大差動電壓: 700V RMS

請勿使用此產品在潮濕的環境下或有易爆的風險下操作!

請勿使用此產品當此產品的盒蓋被打開!

當打開此產品的盒蓋時請將輸出及輸入端切斷!

● 訂購差動測試棒時內含

- 雙端BNC接頭的測試纜線,長度3英尺(BP-250)
- 一個9 V DC 轉換器 (客戶必需指定115 V或230 V)
- 一對高電壓專用的IC夾(BP-256N或BP-266)
- 一對指定規格的雙端香蕉插頭高電壓傳輸線(BP-356N或BP-366)
- 一對高電壓專用的鱷魚夾(BP-276N)
- 一對高壓專用的探針頭(BP-286)
- 使用說明書
- 攜帶盒(PX-501或PX-502)

DP-150pro

差動測試棒

(超高量測範圍機種)

DP-150pro 差動測試棒

1. 簡述:

- DP-150差動測試棒提供一個安全的絕緣儀器給所有的示波器使用，它可以轉換由高輸入的差動電壓($\leq 10KV$ PEAK) 進入一個低電壓($\leq \pm 5V$), 並且顯示波形在示波器上，使用頻率高達 150 MHz.非常適合大電力測試、研發使用。
- 差動測試棒輸出標示是設計在操作示波器 $1M\Omega$ 的輸入阻抗的相對衰減量，當使用 50Ω 匹配器時衰減量剛好為2倍量。
- DP-150差動測試棒，也建議選購本公司生產的PL-10阻抗轉換器，可以延伸差動測試棒的應用範圍-可以在數字電表上觀測更精確的實際測試電壓值(示波器精確度為3%，數字電表約精準10倍)。

2. 規格:

(1) 頻寬:

DC - 150MHz (-3dB) for x30, x100, x300, x1000 檔

DC - 100MHz (-3dB) for x10 檔

(2) 衰減開關: x10, x30, x100, x300, x1000 共5檔

(3) 精確度: $\pm 2\%$

(4) 輸入電壓範圍

檔位	MAX. DC	MAX. AC RMS	MAX. AC p-p
x1000	$\pm 5KV$	3.5KV	10KV
x300	$\pm 1.5KV$	1KV	3KV
x100	$\pm 500V$	350V	1KV
x30	$\pm 150V$	100V	300V
x10	$\pm 50V$	35V	100V

(5) 允許最高輸入差動電壓:

最高差動電壓: 10KV (DC + AC PEAK TO PEAK)

輸入端及接地端間最高電壓: 3.5KV RMS(各檔對地端最大電壓與Max.AC RMS值約略相同)

(6) 輸入阻抗:

差動: $100M\Omega // 1.0 pF$

單端到接地端間的輸入阻抗: $50M\Omega // 2.0 pF$

- (7) 輸出電壓: $\leq \pm 6\text{ V}$
- (8) 輸出阻抗: $50\ \Omega$
- (9) 上升時間:
 2.4 ns for x30, x100, x300, x1000
 3.5 ns for x10
- (10) 雜訊抑制率:
 60 Hz: $> 80\text{ dB}$; 100 Hz: $> 60\text{ dB}$; 1 MHz: $> 50\text{ dB}$
- (11) 電源:
 指定外接9V DC 電源(必須使用本公司指定品)
- (12) 耗電: 最大耗電量150 mA (1.4瓦特)

3. 測試棒面板說明



4. 操作環境及狀況

	一般狀態	使用操作中	儲存
溫度	+20°C ... +30°C	0°C ... +50°C	-30°C ... +70°C
溼度	≤70 % RH	10 % ... 85 % RH	10 % ... 90 % RH

(1) 尺寸及重量: 245 x 76 x 32 mm; 350g

(2) 電子安全規範 IEC 1010-1

- 雙絕緣
- 安裝類目 III
- 污染程度 2
- 相關電壓或最大接地: 3.5KV RMS
- CE: EN50081-1 及 50082-1

5. 操作程序

- 將附件BP-266(IC夾)或BP-276N(鱷魚夾)與BP-366(高壓用連接線)接起來後插入DP-150的輸入端,並將BP-266(或BP-276N)與測量物接觸。
- 將BP-250(雙端BNC纜線)與DP-150的輸出端連接,並與示波器連結。
- 如有需要先調整示波器上的垂直開關。
- 將示波器上的衰減率及垂直開關調整到一致的位置,如下表。
- 注意: 電源必須打開,並注意各檔允許的最大操作電壓值。

衰減檔	x 1000	x 300	x 100	x 30	x 10
最大輸入: DC	±5KV	±1.5KV	±500V	±150V	±50V
最大輸入: AC p-p	10KV	3KV	1KV	300V	100V
最大輸入: AC RMS	3.5KV	1KV	350V	100V	35V

示波器上的 垂直偏向(V/DIV)	換算實際偏向(V/DIV)				
	x1000檔	x300檔	x100檔	x30檔	x10檔
1V	1KV	300V	100V	30V	10V
0.5V	500V	150V	50V	15V	5V
0.2V	200V	60V	20V	6V	2V
0.1V	100V	30V	10V	3V	1V
50 mV	50V	15V	5V	1.5V	0.5V
20 mV	20V	6V	2V	0.6V	0.2V
10 mV	10V	3V	1V	0.3V	0.1V
5 mV	5V	1.5V	0.5V	150mV	50mV

(注意)

實際的垂直偏向是等於衰減乘上示波器上所選擇的垂直偏向。如果另外使用50Ω負載端子時，電壓衰減量剛好是2倍量。

例如：

差動測試棒是 x10，示波器的垂直偏向在 0.5，其實際的垂直偏向為：
 $10 \times 0.5 = 5 \text{ V/div}$

示波器輸入端加裝50Ω負載器時，偏向就為10 V/div

6. 外接電源

- 本產品因耗電量高達150mA，因此指定使用電源轉接器115V專用(ADP-110)或230V專用(ADP-220)。
- 請勿使用非本公司指定品，若因此造成任何損毀，本公司概不負責。
- 注意！電壓超過12V DC或極性相反將會對本機造成致命的損壞，請特別注意電源轉換器正負極性，本公司指定使用“內負外正”極性，請勿使用不相同極性之電源轉換器。

7. 維護：

保養此產品時請使用原廠指定的工具, 若由非合格維修人員以及使用非原廠指定工具所做的維修而造成機器損壞, 本公司將不負任何責任。

8. 清潔：

此產品不需要任何特定的清潔. 如有需要, 請用輕軟乾淨的布沾上微量的清潔液輕輕的在產品外觀擦拭。

9. 保固：

- 除了在人爲上的特意損壞, 本產品是受保固並可以維修的, 並不包含在安全規範的責任。
- 保固是以不超出發票上的金額, 零件的更換及運送的費用。
- 保固是僅在正常操作下而造成的損壞, 並不包含任何刻意的損壞, 操作上的錯誤, 機械上的操作不當, 保養不當, 過負載或過壓。
- 原廠的保固僅包含有限的單純更換損壞的零件. 使用者將不可歸據直接或間接的責任在原廠。
- 原廠的保固是賣出後的12個月內. 如有任意的非原廠的維修或更換零件, 原廠保固將自然取消。

10. 維修：

有任何的維修, 保養或更換零件是在保固以外, 請將產品退回原廠維修。

DP-200pro

差動測試棒

(超高量測頻率機種)

DP-200pro 差動測試棒

1. 簡述:

- DP-200差動測試棒提供一個安全的絕緣儀器給所有的示波器使用, 它可以轉換由高輸入的差動電壓($\leq 2KV$ PEAK) 進入一個低電壓($\leq \pm 5V$), 並且顯示波形在示波器上, 使用頻率高達200 MHz, 非常適合高頻切換式電源電路設計, 高頻網路線電路測試, 超高頻數位電路研發等使用。
- 差動測試棒輸出標示是設計在操作示波器 $1M\Omega$ 的輸入阻抗的相對衰減量, 當使用 50Ω 匹配器時衰減量剛好為2倍量。
- DP-200差動測試棒, 也建議選購本公司生產的PL-10阻抗轉換器, 可以延伸差動測試棒的應用範圍-可以在數字電表上觀測更精確的實際測試電壓值(示波器精確度為3%, 數字電表約精準10倍)。

2. 規格:

(1) 頻寬:

DC - 200MHz (-3dB) for x50, x100, x200檔

DC - 100MHz (-3dB) for x20 檔

(2) 衰減開關: x20, x50, x100, x200 共4檔

(3) 精確度: $\pm 2\%$

(4) 輸入電壓範圍

檔位	MAX. DC	MAX. AC RMS	MAX. AC p-p
x200	$\pm 1000V$	700V	2000V
x100	$\pm 500V$	350V	1000V
x50	$\pm 250V$	175V	500V
x20	$\pm 100V$	70V	200V

(5) 允許最高輸入差動電壓:

最高差動電壓: 2KV (DC + AC PEAK TO PEAK)

輸入端及接地端間最高電壓: 700V RMS(各檔對地端最大電壓與Max.AC RMS值約略相同)

- (6) 輸入阻抗:
 差動: $18M\Omega // 1.7\text{ pF}$
 單端到接地端間的輸入阻抗: $9M\Omega // 3.4\text{ pF}$
- (7) 輸出電壓: $\leq \pm 6\text{ V}$
- (8) 輸出阻抗: $50\ \Omega$
- (9) 上升時間:
 1.7 ns for x50, x100, x200
 3.5 ns for x10
- (10) 雜訊抑制率: 60 Hz: $> 80\text{ dB}$; 100 Hz: $> 60\text{ dB}$; 1 MHz: $> 50\text{ dB}$
- (11) 電源: 指定外接9 V DC 電源(必須使用本公司指定品)
- (12) 耗電: 最大耗電量150 mA (1.4瓦特)

3. 測試棒面板說明



4. 操作環境及狀況

	一般狀態	使用操作中	儲存
溫度	+20°C ... +30°C	0°C ... +50°C	-30°C ... +70°C
溼度	≤70 % RH	10 % ... 85 % RH	10 % ... 90 % RH

(1) 尺寸及重量: 195 x 55 x 30 mm; 250g

(2) 電子安全規範 IEC 1010-1

- 雙絕緣
- 安裝類目 III
- 污染程度 2
- 相關電壓或最大接地: 700V RMS
- CE: EN50081-1 及 50082-1

5. 操作程序

- 將附件BP-356N(香蕉插頭連接線)與BP-256N(IC夾)或BP-276N(鱷魚夾)連接起來後插入DP-200的輸入端,並將BP-256N(或BP-276N)與測量物接觸。
- 將BP-250與DP-200的輸出端連接,並與示波器連結。
- 如有需要先調整示波器上的垂直開關。
- 將示波器上的衰減率及垂直開關調整到一致的位置,如下表。

衰減檔	x 200	x 100	x 50	x 20
最大輸入: DC	±1000V	±500V	±250V	±100V
最大輸入: AC p-p	2000V	1000V	500V	200V
最大輸入: AC RMS	700V	350V	175V	70V

示波器上的 垂直偏向(V/DIV)	換算實際偏向(V/DIV)			
	x200檔	x100檔	x50檔	x20檔
1V	200V	100V	50V	20V
0.5V	100V	50V	25V	10V
0.2V	40V	20V	10V	4V
0.1V	20V	10V	5V	2V
50 mV	10V	5V	2.5V	1V
20 mV	4V	2V	1V	0.4V
10 mV	2V	1V	0.5V	0.2V
5 mV	1V	0.5V	0.25V	0.1V

〔注意〕

實際的垂直偏向是等於衰減乘上示波器上所選擇的垂直偏向。如果另外使用50Ω負載端子時，電壓衰減量剛好是2倍量。

例如：

差動測試棒是 x10，示波器的垂直偏向在 0.5，其實際的垂直偏向為：
 $10 \times 0.5 = 5 \text{ V/div}$

示波器輸入端加裝50Ω負載器時，偏向就為10 V/div

6. 外接電源

- 本產品因耗電量高達150mA，因此指定使用電源轉接器115V專用(ADP-110)或230V專用(ADP-220)。
- 請勿使用非本公司指定品，若因此造成任何損毀，本公司概不負責。
- 注意！電壓超過12V DC或極性相反將會對本機造成致命的損壞，請特別注意電源轉換器正負極性，本公司指定使用“內負外正”極性，請勿使用不相同極性之電源轉換器。

7. 維護：

保養此產品時請使用原廠指定的工具, 若由非合格維修人員以及使用非原廠指定工具所做的維修而造成機器損壞, 本公司將不負任何責任。

8. 清潔：

此產品不需要任何特定的清潔. 如有需要, 請用輕軟乾淨的布沾上微量的清潔液輕輕的在產品外觀擦拭。

9. 保固：

- 除了在人爲上的特意損壞, 本產品是受保固並可以維修的, 並不包含在安全規範的責任。
- 保固是以不超出發票上的金額, 零件的更換及運送的費用。
- 保固是僅在正常操作下而造成的損壞, 並不包含任何刻意的損壞, 操作上的錯誤, 機械上的操作不當, 保養不當, 過負載或過壓。
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10. 維修：

有任何的維修, 保養或更換零件是在保固以外, 請將產品退回原廠維修。

● **ACCESSORIES / 附件圖:**

BP-256N
(IC Clip, 1000V)



BP-356N
(Banana Plug to Banana Plug, 6KV/60cm)



BP-250
(BNC Plug to BNC Plug, 50Ω cable 125cm)



BP-266
(HV IC Clip, 6500V)



BP-366
(HV Banana Plug to Banana Plug, 20KV/60cm)



PX-501/PX-502
(Carry Box)



BP-276N
(Alligator Clip, 1000V, 10A)



BP-286
(Test Leader, 1000V)



Adapter
ADP-110/ADP-220
DC 9V/300mA

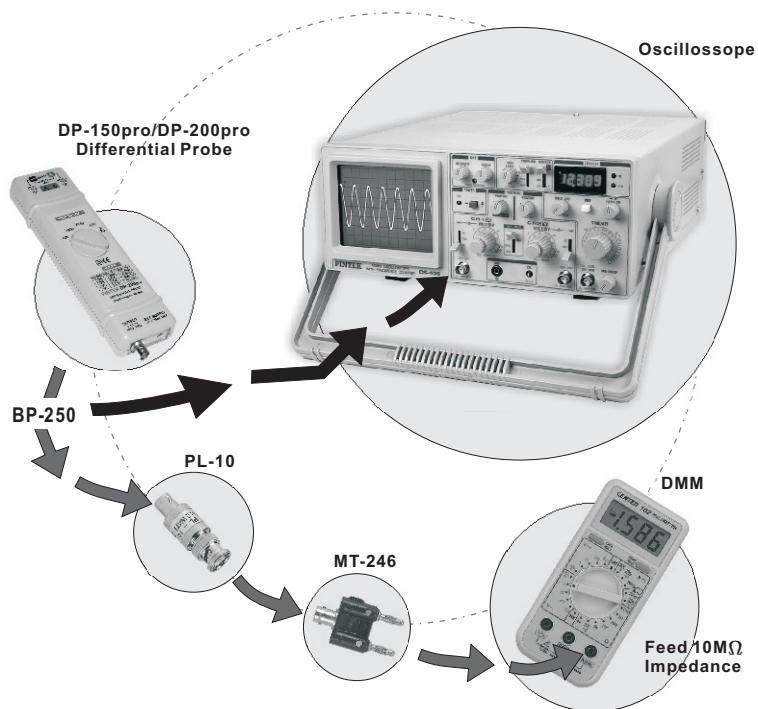


Option PL-10 to Connect With Digital DMM

(可選購PL-10以連接於數字電錶使用)



PL-10



MEMO

TINSE0065S4 Ver.01

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