

**High Voltage For Oscilloscope Probe**

**高壓測試棒(示波器專用型)**

**TR15K**



**CE**

**INSTRUCTION MANUAL**

**使用說明書**

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## 高壓測試棒

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*High Voltage For  
Oscilloscope Probe*

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# 1. SPECIFICATIONS

Max. Working Voltage	DC: 0~15KV DC AC: pulse $\leq$ 20KV peak to peak AC: sine wave $\leq$ 7KV rms	
Single / Noise	DC $\geq$ 60dB(1KHz), $\geq$ 50dB(1MHz)	
Bandwidth	DC~50MHz(-3dB)	
Division Ratio	1 : 1000	
Rise Time	$\leq$ 8.8ns	
Input Resistance	100M $\Omega$ $\pm$ 5%	
Input Capacitance	3.0PF $\pm$ 0.5PF	
Compensation Range	5PF~50PF	
Cable Length	2.0 meter( $\pm$ 0.2M)	
Temperature Coefficient	$\leq$ 200PPM/ $^{\circ}$ C	
Accuracy	DC	$\pm$ 3%(DC to 10KV)
	AC	$\pm$ 3%(1KHz/1KV/1KHz RMS) -3dB: 0~ 40MHz
Safety App.	CE	
Operating Temperature	0 ~ 50 $^{\circ}$ C	
Storage Temperature	-20 ~ +70 $^{\circ}$ C	
Weight / Volume	250g / $\phi$ 75 x 340 mmL.	



## 2.SAFETY PRECAUTIONS

This high voltage probe must only be by personnel who are trained, experienced, or otherwise qualified to recognize hazardous situations and who trained in the safety precautions that necessary to avoid possible injury when using such a device.

Do not work alone when working with high voltage circuits.

For your own safety, inspect the probes for cracks and frayed or broken leads before each use. If defects are noted, DO NOT USE the probe.

Hands, shoes, floor and work bench must be dry. Avoid making measurements under humid, damp or other environmental conditions that might affect the safety of the measurement situation.

If possible, always turn the high voltage source off before connection or disconnection the probe.

The probe body should be kept clean and free of any conductive contamination.

## 3.OPERATION

Connect the divider probe common lead(alligator clip) to a good earth ground or reliable ground.

Connect the BNC connector to the BNC input of your oscilloscope.

Select the desired range of your oscilloscope. Whenever possible, turn the high voltage source off before making any connections.



**When the measuring voltage are DC 8 KV up, or AC 5KVrms up or AC peak 20KV up, do not exceed 60 second and break off 5 minute at least.**

## 4. WARNING

Do not attempt to take measurements from sources when the chassis or return lead is not ground.

This ground connection is critical to the safety operation of the probe. Failure to make this connection may result in personal injury or damage to the probe or voltmeter. This connection must be made before the probe tip comes into contact with the high voltage and must not be removed until after the probe tip has been removed.

Do not connect the ground clip to the high voltage source or the probe tip to the ground for any reason.

**BEFORE** turning the high voltage on, make sure that no part of your body is in contact with the device.

Remembering that the voltage being measured is 1000 times greater than the voltmeter reading.



**When the measuring voltage are DC 8 to 15KV, or AC rms 5 to 7KV or AC peak 8 to 15KV, do not exceed 60 sec. on each measurement.** Otherwise will caused to the probe over heat or damage. Disconnect the probe tip from the high voltage source **BEFORE** removing the ground clip lead.

### High Voltage:

If the equipment is used in a manner not specified by the manufacture, the protection provided by the equipment may be impaired.

## 5. CLEANING

Clean only the exterior probe body and cables. Use a soft cotton cloth lightly moistened with a mild solution of detergent and water. Do not allow any portion of the probe to be submerged at any time.

Dry the probe thoroughly before attempting to make voltage measurement.

Do not subject the probe to solvents or solvent fumes as these can cause deterioration of the probe body and cables.

### Note:

When the measuring Voltage are under the following voltage.

Do not exceed 60sec on each measurement.


**DC: 8~15KV**

**AC RMS: 5~7KV**

**AC PEAK: 8~15KV**

### Symbols on the product:

These symbols may appear on product

 Attention refer to operation instructions.

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高壓測試棒

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## (1) 規格

最大量測電壓	DC: 0~15KV DC AC: $\leq 7KV$ rms, 20KVp-p <b>⚠ 注意!</b> 請依照標題(4)注意事項之第4點說明!	
信號/雜訊	DC $\geq 60dB(1KHz)$ , $\geq 50dB(1MHz)$	
頻寬	DC~50MHz(-3dB)	
衰減比	1:1000	
上昇時間	$\leq 8.8ns$	
輸入阻抗	100M $\Omega$ $\pm 5\%$	
輸入電容	3.0PF $\pm 0.5PF$	
補償電容	5PF~50PF	
纜線長度	2.0 meter( $\pm 0.2M$ )	
溫度係數	$\leq 200PPM/^{\circ}C$	
準確度	DC	$\pm 3\%$ (DC to 10KV)
	AC	$\pm 3\%$ (1KHz/1KV/1KHz RMS) -3dB: 0~40MHz
符合安規	CE	
操作環境溫度	0 ~ 50 $^{\circ}C$	
儲存環境溫度	-20 ~ +70 $^{\circ}C$	
重量/體積	250g / $\phi 75 \times 340$ mm長	



## (2) 安全使用說明


本高壓測試棒僅供已經訓練過並有經驗的人員或合格的工程師使用。

1. 在操作高壓測試時請勿單獨一人作業。
2. 在使用前請先檢查測試棒是否有損壞，或者纜線是否有破損等。
3. 在工作時雙手以及鞋子、地板等須保持乾燥，以免發生觸電危險。
4. 在連接完成以前，請先將高壓電源關閉；欲停止使用前，亦請先關閉電源。
5. 請保持高壓棒本體乾淨，以免發生感應電流，產生觸電危險。

## (3) 操作方法

1. 先將接地線連接在良好的接地點上。
2. 將BNC探頭連接在示波器的輸入端上。
3. 設定示波器所需要的檔位。  
**⚠ 注意!**  
在上述連接完成前，請勿開啓高壓電源。
4. 開啓示波器，待示波器穩定後，連接欲測試的點，並開啓高壓電源。


## (4) 注意事項

1. 在接地線未接好前,請勿進行量測動作。
2. 不論在任何情況下,皆不得將接地線連到高壓電源,或將測試棒尖端接地。
3. 在打開高壓電源之前,請先確認身體的任何部位皆未接觸到此高壓部位。
4. 在量測DC8KV以上或AC5KV以上時,請勿連續超過1分鐘,以免過熱影響量測之準確度,期間需等待散熱約5分鐘後,在進行量測。
5. 在移除接地之前,請確認測試棒之尖端以遠離高壓電源。
6.  高壓:  
如果設備用於不被製造商指定的一種模式,設備提供的保護可能被削弱。

## (5) 清潔

1. 清潔高壓棒本體時,請用柔軟的濕布擦拭,請勿將高壓棒浸入水中。
2. 在量測前請確實擦乾高壓棒。
3. 請勿用任何有機溶劑擦拭清理高壓棒。

產品標示,這些標示將會出現在產品上。

 注意! 請參考操作說明書。

