Differential Probe

■ PT-8020

(70MHz,14000Vp-p)

INSTRUCTION MANUAL

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 the 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,carriage paid to our workshops.

Repair

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

PT-8020 Differential Probe

1.Features

The PT-8020 differential probe provides a safety means for measuring differential voltage to all models of oscilloscopes.It can convert the high differential voltage(≤14000Vp-p) into a low voltage(≤14Vp-p)and display on the oscilloscope.Its bandwidth is up to 70MHz,which is ideal for big power testing,development and maintain.

The PT-8020 is designed to operate with the 1MΩ impedance oscilloscopes. When combine with the 50Ω load , the attenuation will be 2 times.

PT-8020 is recommend to use with our own manufactured PL-10N to expand the measuring with the electricity meter to observe more accurate measurement.The accuracy of oscilloscope is 1% and the DMM is less than 1%)

2.Specifications

(1) Bandwidth:DC-70MHz
(2) Attenuation: X1000,X100
(3) Accuracy:±2%
(4) Input voltage range
≤1400Vp-p for x100,(about 490V RMS or 700V DC)
≤14000Vp-p for x1000,(about 4900V RMS or 7000V DC)
(5) Permitted max input voltage:
Max differential voltage: 14000V(DC+AC PEAK TO PEAK)

Max voltage between each input terminal and ground: 5KV RMS

（6）Input Impedance:

Impedance of each side ground:10MΩ /2pF

Between terminal and ground:20MΩ /1pF

（7）Output voltage: ≤7V

（8）Output impedance: 50Ω

(9) Rise time:

5ns for x1000

5ns for x100

(10)Rejection rate on common mode:

50Hz:＞-80dB;20KHz:＞-60dB

(11)Power Supply: 6V DC power supply.

(12)Consumption: 0.3A max

3.Operating environmental conditions

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

Dimensions and weight：84x38x186mm; 500g

4.Operating procedure

- 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 be on.

Attenuation ratio	X1000	X100
Voltage Input Range (DC+AC Peak)	7000V	700V

[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.

PT-8000 Series Differential Probe Buying Guide

Model	Bandwidth	Attenuation Ratio	Accuracy	Max. input voltage （DC+AC Peak）
PT-8001	25MHZ	1:100/10	2%	700V@1/100 70V@1/10
PT-8002	25MHZ	1:200/20	2%	1400V@1/200 140V@1/20
PT-8010	70MHZ	1:1000/100	2%	7000V@1/1000 700V@1/100 2500Vrms
PT-8020	70MHZ	1:1000/100	2%	7000V@1/1000 700V@1/100 5000Vrms
PT-8101	100MHZ	1:100/10	2%	700V@1/100 70V@1/10
PT-8110	100MHZ	1:1000/100	2%	1400V@1/1000 140V@1/100