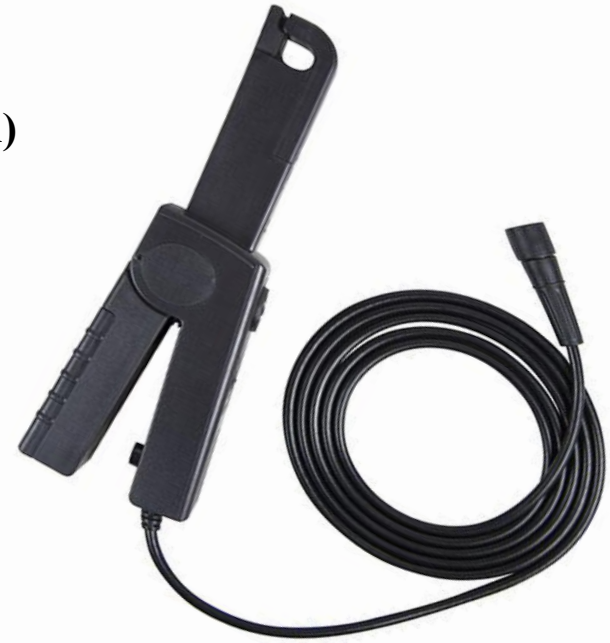
■ PT-710

（100KHz，100A

100mV/A,10mV/A)



INSTRUCTION MANUAL

General Safety Instructions:

Read the following safety instructions to avoid injury and prevent damage to this product or any products connected to it. Use this product only as specified.

Only qualified personnel should perform service procedures.

To Avoid Fire or Personal Injury

Connect and Disconnect Properly.

Connect the probe output to the measurement instrument before connecting the probe to the circuit under test. Disconnect the probe input and the probe ground from the circuit under test before disconnecting the probe from the measurement Instrument.

Observe All Terminal Ratings.

To avoid fire or shock hazard, observe all rating and markings on the product. Consult the

instruction manual for further ratings information before making connections to the product.

Replace Batteries Properly.

Replace batteries only with the proper type and rating specified.

Do Not Operate Without Covers.

Do not operate this product without the covers or panels.

Avoid Exposed Circuitry.

Do not touch exposed connections and components when power is present.

Do Not Operate With Suspected Failures.

If you suspect there is damage to this product, have it inspected by qualified service personnel.

Do Not Operate in Wet/Damp Conditions.

Do Not Operate in an Explosive Atmosphere.

Keep Product Surfaces Clean and Dry.

Safety Terms and Symbols:

Terms in This Manual.

These terms may appear in this manual.

⚠**WARNING.**

Warning statements identify conditions or practices that could result in injury or loss of life.

⚠**CAUTION.**

Caution statements identify conditions or practices that could result in damage to this product or other property.

Terms on the Product.

These terms may appear on the product.

DANGER

Indicates an injury hazard immediately accessible as you read the marking.

WARNING indicates an injury hazard not immediately accessible as you read the marking.

CAUTION

Indicates a hazard to property including the product.

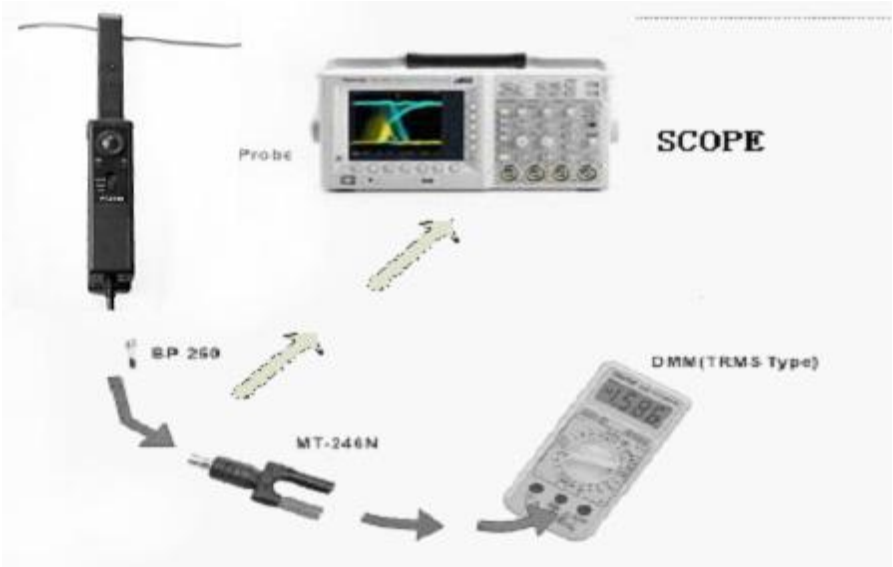
Symbols on the Product.

These symbols may appear on the product: Attention refer to operation Instructions.

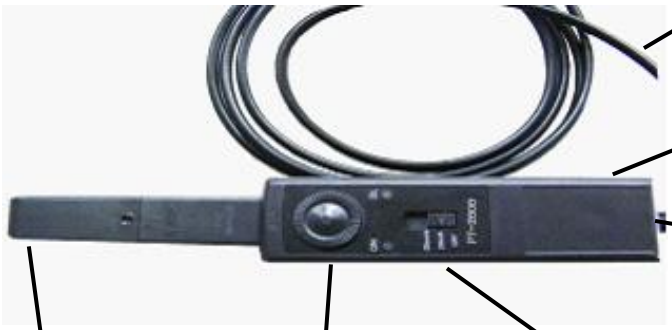
⧈ This instrument has double insulation.

Getting Started:

The current probe enables a general purpose oscilloscope to display AC and DC current signals up to 100 amps Peak (70A RMS). The current probe can also make AC and DC measurements with a multimeter by using the recommended accessory MT-246N (BNC-to-banana) plug adapter.



PIC 1



Shows the controls and indicators on the current probe.

Control/Indicator	Description
I + −	**Current flow symbol.** The arrow shows the probe's polarity convention for measuring current flowing from positive to negative.
+ ZERO −	**Zero adjustment.** Rotate to adjust the probe output to zero when there is no current present. It may also be used to offset a DC signal component. Zeroing is not needed for AC measurements unless your instrument cannot isolate a DC component (if present).
100mv/A 10mv/A OFF	**OFF/Range switch.** Slide the switch from OFF to either the 100 mV/A or 10mV/A range. When either range is selected, the probe is turned on, and the green battery indicator lights. If the indicator does not light, see Battery Notes and Battery Installation.
ON	**Battery indicator.** The green battery indicator lights when the probe is turned on. For more information, see Battery Notes and Battery Installation .
⚠	**Overload indicator.** The red overload indicator lights if the measured signal is greater than the selected range capacity. Switch the probe to 5 mV/A if possible, or remove the probe from the circuit.

These characteristics apply to an adjusted PT-710 AC/DC Current Probe installed on an oscilloscope of any brand. The oscilloscope must be warmed up for at least 20 minutes and be in an environment with the
temperature at 10℃~30℃ and the humidity at 0~80.

Size	231 mm x67 mm x 36 mm
Maximum Conductor	11 mm
Cable Length	200 cm
Weight	310 g (without battery)

Environmental Characteristics

Temperature **Working** **Storage**	 0°C to +50°C (+32°F to +122°F) -20°C to +80°C (-4°F to +176°F)
Humidity	0°C to 40°C, 95% humidity 40°C to 50°C, 45% humidity
Pollution Degree	2

Basic Operation:

Before using the probe, the batteries must be installed.

WARNING!

Do not clamp the probe onto circuits with voltages greater than 600 VAC. Personal injury or damage to the probe may result. Always connect the PT-710 current probe output to the instrument before clamping onto the circuit under test.

1. First connect the current probe BNC connector to BP-250 (double BNC connection cable) then connect to oscilloscope input. Start by setting the oscilloscope voltage input channel to DC volts, and the voltage sensitivity scale to 5m V/div.
2. Move the OFF/ Range switch to the 100mV/A or 10mV/A position to turn on the probe. (※The PT-710 current probe has a green LED power/battery indicator. If the LED does not light, replace the battery or use specified power adaptor.)
3. Use the ZERO adjustment to zero or offset the probe output detection of residual magnetic DC charges.
4. Connect the probe to the circuit by opening the jaws and clamping around the conductor.

NOTE. Clamping around both the "hot" and neutral wires may give you a zero reading. (Remember to unclamp the probe from the conductor before disconnecting it from your meter or instrument).

5. Adjust the probe channel and oscilloscope's time base as necessary to get a clear and stable view of the signal. Set the oscilloscope input to DC volts to see both the AC and DC currents; set the channel to AC to see the AC current only.

6. The current drawn by different devices look much more different than that of others. While the RMS current can only be used in low frequency current, the momentary peaks may be quite high.

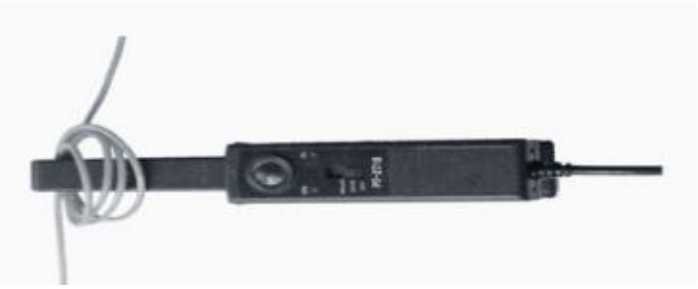
7. PT-710, a multifunctional current probe. When connecting to a digital meter, use the recommended MT-246N (BNC-to-banana adapter). Connect the black lead to the meter COM (black letters on the meter), and the red lead to the VΩ input (red letters on the meter).

8.To measure only AC current, set the meter to measure AC volts.

9.To measure DC current, set the meter to measure DC volts. Note the current convention arrow on the probe to get the proper polarity reading.

10.To increase the measurement sensitivity of the PT-710 current probe, loop additional turns of the wire under test through the jaws. See below pic.

The sensitivity of the PT-710 current probe is multiplied times the number of loops in the jaws. For example: 10mV/A X5 turns=50mV/A



Electrical Characteristics

Current Range	100mV/A ; 10mV/A
DC Accuracy, typical	±2% ±5mV
	(0.2A to 10 A peak at 100mV/A range)
	±2% ± 5mV
	(10A to 100 A peak at 10mV/A range)
Maximum Current	100A
Frequency Range	DC to 100KHz (-3 dB)
Rise time,typical	3.5uS
Noise	2mV
Battery	9V battery

Voltage and current ratings

	Maximum working current(A)		**Maximum Working voltage (V)**	**Maximum floating voltage (V)**
Rating	Range 10mV/	Range 100mV/A	Max. Working voltage (V)	Max. floating voltage (V)
DC	100	10	600	600
DC +peak AC	100	10	600	600
AC peak	100	10	600	600
AC peak-peak	200	20	1200	-
RMS CAT	70	7	600	600
RMS	70	7	600	600
RMS CAT I	70	7	600	600