



Micro Voltage Sensor

Product No.: TS2121

Measuring range: -60mV~+60mV

Resolution: 0.03mV

Accuracy: $\pm 1\%$ F.S



Address: No.14 Junnong Road, Qinhuai District, Nanjing, China.

Website: //www.sinoswr.com

Post Code: 210007

Tel: +86-400-828-8387


Introduction:

Micro Voltage Sensor is used to measure the electric potential difference at both ends of the electrical equipment or circuits. Micro Voltage Sensor divides the voltage it collects to measure the electrical potential difference in DC circuit and low-voltage, low-frequency AC circuit.

The internal resistance of Micro Voltage Sensor is extremely huge. Thus, connecting Micro Voltage Sensor will not affect circuit in most cases. In any part of circuit, Micro Voltage Sensor can be used with current sensor.

Calibration:

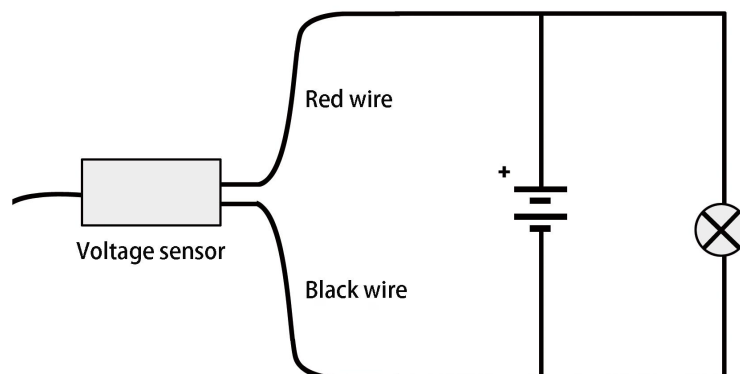
TS2121 Micro Voltage Sensor needs to be calibrated before using. Connect sensor to datalogger. Open SWR iLab. Short connect red and black alligator clips. Click

'calibration' .

Usage:

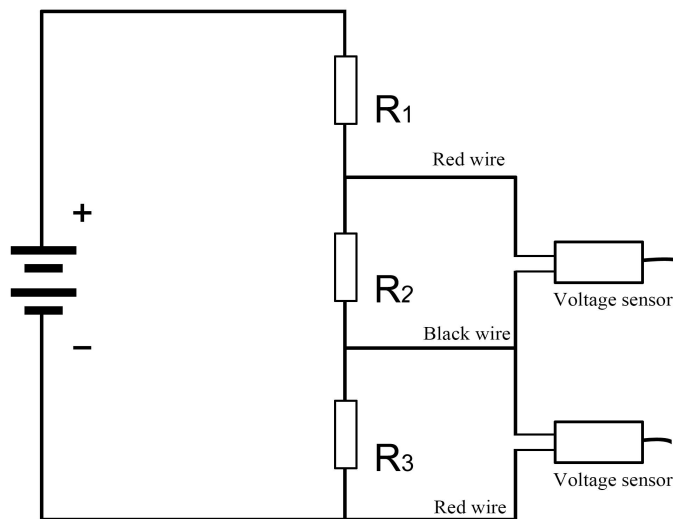
During using, connect red wire to high voltage end and black wire to low voltage end.

In this case, the measured voltage is positive as shown below:



If there are multiple Voltage Sensors in the circuit, to increase the accuracy, make sure

they share the same ground (black wire) as shown below:



Typical experiment:

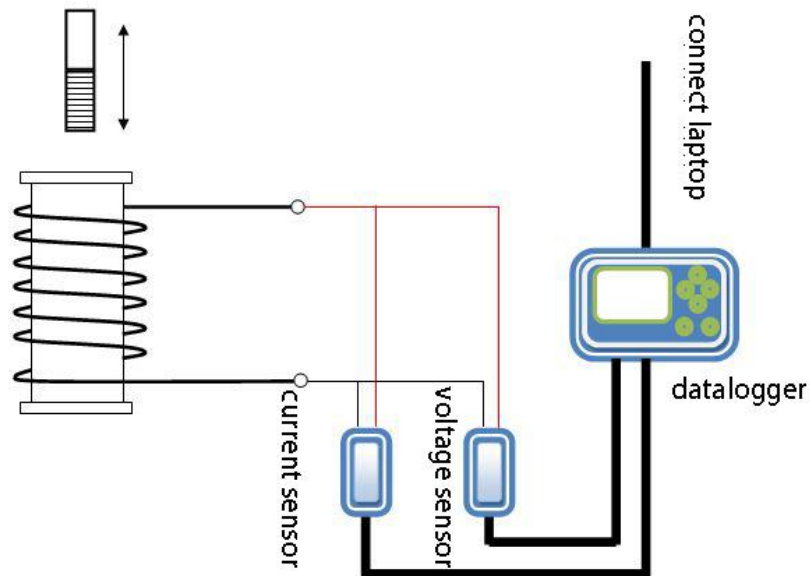
Lenz's law

Electromagnetic induction phenomenon

LC oscillation

Experimental case:

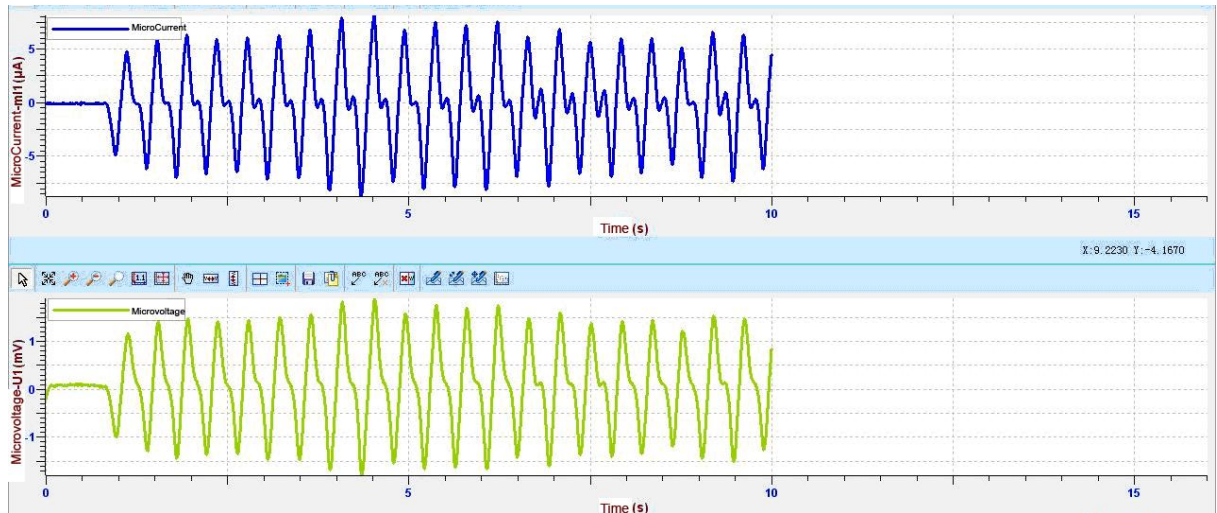
Electromagnetic induction phenomenon



Product General Assembly

Experimental procedures:

1. Connect apparatus as shown above. Calibrate voltage and current Sensor.
2. Open the SWR iLab V8.0. Click 'new' to create new experimental template.
3. Click 'new page' to add new folder.
4. Click 'add line' to add 'Voltage-Time' and 'Current-Time' curve. Set proper experiment time and acquisition interval.
5. Click 'start' and move bar magnet to change the flux passes through circuit.
6. Click 'stop' when collecting is completed. Observe induced voltage, current change with respect to time.
7. Clear up the apparatus.



Induced Current and Voltage Change with Respect to Time

Notes:

1. Micro Voltage Sensor should be parallel connected to the circuit during using. Micro Voltage Sensor needs to be calibrated before using.
2. When measuring, please do not make the measured voltage exceeding the range of the sensor.
3. If possible, ground the negative pole (black alligator clip) to ensure high accuracy.