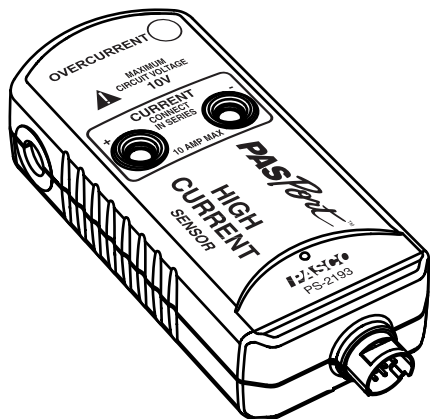


# High Current Sensor

PS-2193



Included Equipment	Part Number
High Current Sensor	PS-2193
Additional Equipment Required	
PASPORT Interface	See <a href="http://www.pasco.com">www.pasco.com</a> or PASCO catalog

## Quick Start

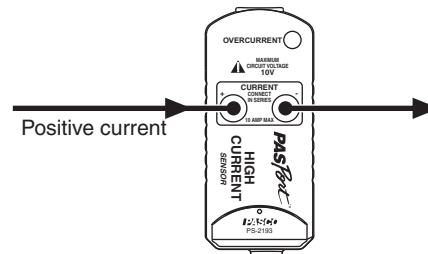
1. Connect the High Current Sensor to your PASPORT interface.
2. If you are using a computer, connect the PASPORT interface to it and start DataStudio.
3. Connect the sensor to a circuit.
4. Press or click the **Start** button to begin recording data.

## Introduction

The PS-2193 High Current Sensor measures current between  $-10$  A and  $+10$  A. The sensor connects to a PASPORT interface and collects data at up to 1000 samples/s.

## Connecting to a Circuit

Use cables with 4 mm banana plugs to place the sensor in a circuit as illustrated. Positive current flows into the positive terminal and out of the negative terminal.



The voltage anywhere within the connected circuit should not exceed 10 V above or below earth ground.

## Overcurrent

If the current through the sensor exceeds  $\pm 10$  A, the overcurrent indicator on the sensor will light up. Reduce the current or disconnect the sensor to prevent damage.

## Over-sampling

The High Current Sensor uses dynamic variable over-sampling to reduce noise and produce smoother data. The degree of over-sampling that takes place within the sensor depends on the sample rate. To maximize over-sampling, set the sample rate as low as possible for a given application. Maximum over-sampling occurs at sample rates of 10 Hz or slower.

## Specifications

<b>Measurable current range</b>	-10 A to +10 A
<b>Measurement resolution</b>	16 bits (approximately 300 $\mu$ A)
<b>Maximum circuit voltage</b>	10 V above or below earth ground
<b>Measurement accuracy</b>	0.5% or 2.5 mA, whichever is greater
<b>Sensing element series resistance</b>	0.01 $\Omega$
<b>Maximum sample rate</b>	1000 samples/s
<b>Maximum continuous current without damage</b>	12 A
<b>Maximum continuous circuit overvoltage without damage</b>	40 V above or below earth ground
<b>Terminals</b>	4 mm banana jacks

## Technical Support

For assistance with any PASCO product, contact PASCO at:

Address: PASCO scientific  
10101 Foothills Blvd.  
Roseville, CA 95747-7100

Phone: 916-786-3800 (worldwide)  
800-772-8700 (U.S.)

Fax: (916) 786-7565

Web: [www.pasco.com](http://www.pasco.com)

Email: [support@pasco.com](mailto:support@pasco.com)

**Limited Warranty** For a description of the product warranty, see the PASCO catalog.

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