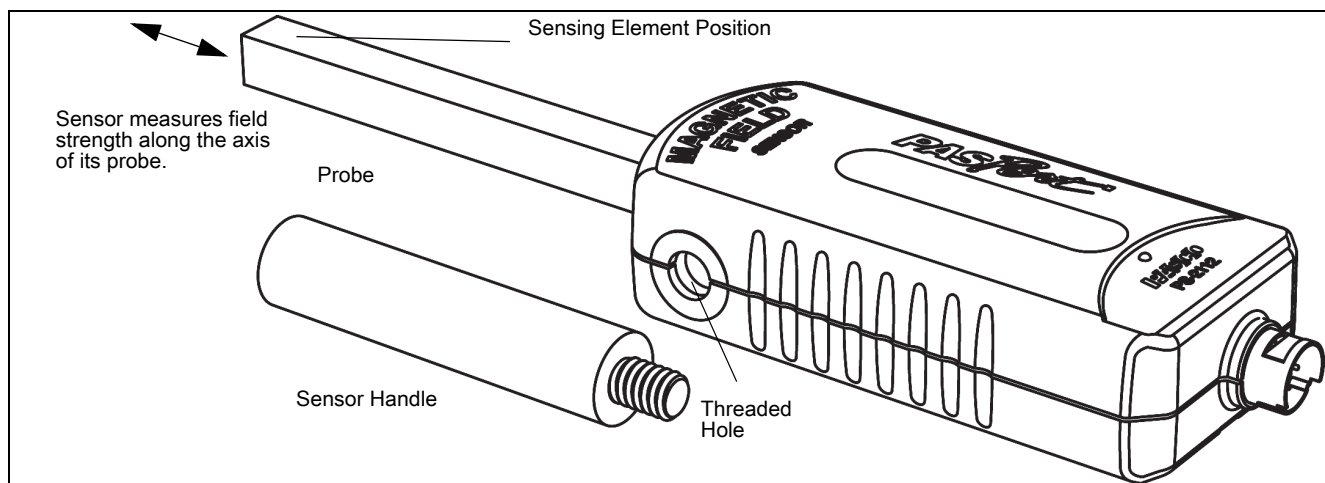


Magnetic Field Sensor

PS-2112



Included Items

Magnetic Field Sensor
Sensor Handle

Required Items*

PASCO Interface
PASCO Data Collection Software

*See the PASCO catalog or the PASCO web site at www.pasco.com for more information.

Other Items*	Other Items*
Rotary Motion Sensor	Air Core Solenoid
Extension Cable	Bar Magnet Set
Coil and Cores Set	Helmholtz Coils

Introduction

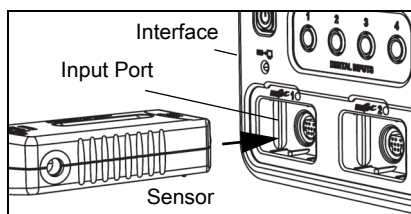
The PS-2112 Magnetic Field Sensor measures magnetic field flux density in tesla, millitesla, or gauss. The sensor measures magnetic field strength along the axis of its probe. The probe has small bumps on its top side every centimeter.

The sensor is designed to work with a PASPORT-compatible interface and PASCO data collection software to measure magnetic field strength.

The sensor includes a sensor handle that screws into the threaded hole on the side of the sensor. The handle is plastic, and the non-threaded end fits on the shaft of a PASCO Rotary Motion Sensor.

Setup the Magnetic Field Sensor

- Plug the Magnetic Field Sensor into one of the input ports of a PASCO interface.




NOTE: If more distance is needed between the sensor and the interface, plug the sensor into a PASPORT Extension Cable, and then plug the cable into the interface.

- Start the PASCO data collection software. Set up a data display in the software.


Software Help

See the SPARKvue Help or PASCO Capstone Help for information about collecting, displaying, and analyzing data.

- In SPARKvue, select the **HELP** button () in any screen including the Home Screen.
- In PASCO Capstone, select **PASCO Capstone Help** from the **Help** menu, or press **F1**.

Collect Data

Using SPARKvue

- In the SPARKvue **Home Screen**, select a measurement from the list under the sensor's name. A graph of the measurement versus time opens.
- In SPARKvue, select the **Start** button () to begin collecting data.

Using PASCO Capstone Software

- In PASCO Capstone, select a display in the main window or from the **Display** palette. In the display, use the **<Select Measurement>** menu to pick a measurement to be shown.
- Select **Record** to begin collecting data.

Suggested Activities

Measure Magnets and Electromagnets

Study the field strength of various permanent magnets and electromagnets.

Field Strength of a Solenoid or of Helmholtz Coils

Use the sensor with a PASCO Rotary Motion Sensor to examine the field strength inside a solenoid or between Helmholtz Coils..

More Information

For the latest information about the Magnetic Field Sensor manual, visit the PASCO web site at

www.pasco.com/manuals

and enter "PS-2112" in the Search window.

Specifications

Item	Value
Range:	± 1000 gauss (G)
Accuracy:	± 3 G or 5% of reading (whichever is greater) at 25°C after 4 minute warm-up)
Resolution	<0.1 gauss (0.01% full-scale)
Units of measure	tesla, millitesla, gauss
Maximum Sample Rate	20 Hz
Operating Temperature	0 to 40°C
Relative Humidity	5 to 95% non-condensing
Repeatability	0.05%

Technical Support

For assistance with any PASCO product, contact PASCO at:

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

Phone: +1 916-786-3800 (worldwide)
800-772-8700 (U.S.)

E-mail: support@pasco.com

Web www.pasco.com

Limited Warranty For a description of the product warranty, see the PASCO catalog. **Copyright** The PASCO scientific *Instruction Sheet* is copyrighted with all rights reserved. Permission is granted to non-profit educational institutions for reproduction of any part of this manual, providing the reproductions are used only in their laboratories and classrooms, and are not sold for profit.

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This electronic product is subject to disposal and recycling regulations that vary by country and region. It is your responsibility to recycle your electronic equipment per your local environmental laws and regulations to ensure that it will be recycled in a manner that protects human health and the environment. To find out where you can drop off your waste equipment for recycling, please contact your local waste recycle/disposal service, or the place where you purchased the product.

The European Union WEEE (Waste Electronic and Electrical Equipment) symbol (to the right) and on the product or its packaging indicates that this product must not be disposed of in a standard waste container.

