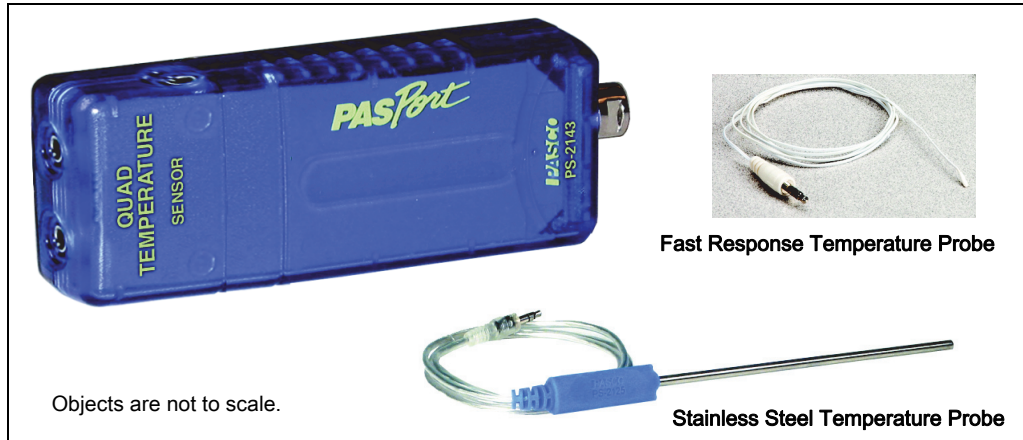


Quad Temperature Sensor

PS-2143



Included Items
Quad Temperature Sensor
Stainless Steel Temperature Probe (2)
Fast Response Temperature Probe (3)
Polyurethane Tubing (0.3 m)
Adhesive Cover Disks (1 sheet)

Required Items*
PASCO Interface
PASCO Data Collection Software

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

Recommended Items*
Sensor Extension Cable (PS-2500)

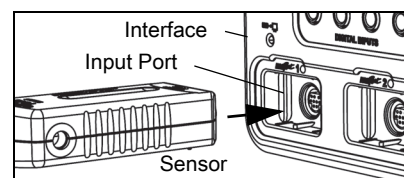
Introduction

The PS-2143 Quad Temperature Sensor measures temperature from up to four temperature probes simultaneously in units of degrees celsius, fahrenheit, and kelvin ($^{\circ}\text{C}$, $^{\circ}\text{F}$, $^{\circ}\text{K}$). The sensor includes two Stainless Steel Temperature Probes (PS-2153), three Fast Response Temperature Probes (PS-2135), a piece of polyurethane tubing, and a sheet of adhesive disk covers. The tubing can be used when a Stainless Steel Temperature Probe is inserted into a stopper, and the adhesive disk covers can be used to hold the end of a Fast Response Temperature Probe in place.

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

Setup the Sensor

- Plug the sensor into one of the PASPORT input ports of a PASCO PASPORT-compatible interface.




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

- Plug one or more temperature probes into the sensor.
- Start the PASCO data collection 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**.

Using SPARKvue Software

Collect Data

- 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

Collect Data

- 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.

More Information

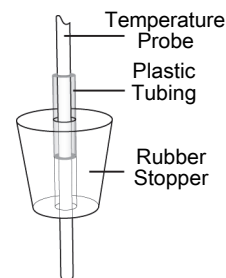
For more information about collecting, recording, displaying and analyzing data, refer to the Online Help System for the data collection software.

Sensor Usage

Caution: To avoid damaging the sensor box, do not put the Quad Temperature Sensor in water, liquids, chemicals, ovens, or fire at any time.

Tip: If the Quad Temperature Sensor is used to take freezer measurements, put the probe(s) in the freezer but deep the sensor box outside of the freezer.

Tip: The Stainless Steel Temperature Probe is slightly smaller than the holes in some rubber stoppers. In order to create a better fit, use a piece of the polyurethane tubing included with the sensor.



Tip: The tip of a Fast Response Temperature Probe can be held in place using one of the adhesive disk covers included with the sensor. Remove one of the disks from the sheet and remove the protecting paper to reveal the adhesive. Place the tip of the probe in the center of the disk. Place the disk on the item being measured.



More Information

For the latest information about the sensor, visit

www.pasco.com

and enter "PS-2143" or the product name in the Search window.

Specifications

Quad Temperature Sensor	Value
Range:	-35°C to 135°C
Accuracy:	±0.5°C
Resolution:	0.0025°C
Repeatability	0.01°C
Stainless Steel Temperature Probe	Value
Range:	-35°C to 135°
Fast Response Temperature Probe	Value
Range:	-10°C to 70°C

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.



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

For the latest version of the manual, visit

www.pasco.com/manuals

and enter “PS-2143” or the product name in the Search window.

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. Reproduction under any other circumstances, without the written consent of PASCO scientific, is prohibited. Version 2016-05-04. **Trademarks** PASCO, PASCO Capstone, PASPORT, and SPARKvue are trademarks or registered trademarks of PASCO scientific, in the United States and/or in other countries. For more information visit www.pasco.com/legal.

Product End of Life Disposal Instructions:

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.