PASPort™

Humidity/Temp/Dew Point Sensor

PS-2124

Specifications:

Humidity:

Range:	0 to 100% (RH), 0 to 50 g/m^3 (AH)
Accuracy*:	± 2% (RH), 10% of reading (AH)
Resolution:	1% or better (RH), 0.1 g/m^3 or better (AH)
Repeatability:	0.5 % or better (RH), 0.1 g/m^3 or better (AH)

Temperature:**

Range:	-20°C to +55°C
Accuracy*:	± 0.5^{o}C
Resolution:	0.1^{o}C or better
Repeatability:	0.1^{o}C or better

Dew Point:**

Range:	-50°C to +55°C
Accuracy*:	± 2°C
Resolution:	0.1^{o}C or better
Repeatability:	0.1^{o}C or better

AH = absolute humidity; RH = relative humidity

*Accuracy specifications are given for typical temperature and RH conditions.

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Humidity Quick Start

The PS-2124 Humidity Sensor measures relative and absolute humidity, dew point, and the temperature of gases, such as air.

Additional Equipment Needed

- USB Link (PS-2100) with USB-compatible computer or an Xplorer (PS-2000)
- EZscreen or DataStudio™ software (version 1.7 or later)

Equipment Setup

1. Connect the USB Link to a USB port on your computer or to a USB hub.
2. Connect the sensor to a USB Link or an Xplorer.
3. The software launches when it detects a PASPORT sensor. Select **EZscreen** or **DataStudio**.

Testing Humidity Changes in a Car
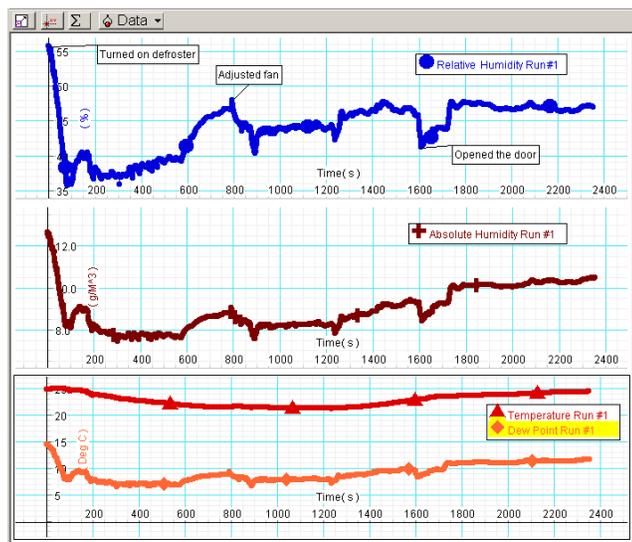
DataStudio/DS Lite	Procedure
View a measurement:	From the Data list, drag the desired measurement icon(s) to the open display.
Scale-to-Fit the data:	Double-click on the **Scale-to-Fit** button.
View data statistics:	Click on the **Statistics** Σ button and view Minumum, Maximum, and Mean.

Humidity Activity

DataStudio/DS Lite/Xplorer Activity

⚠️ **CAUTION:** Do not place the Humidity Sensor in liquids, such as water, or other mixed solutions. The Humidity Sensor is only designed for measuring the humidity of gases, such as air. Immersing the Humidity Sensor in a liquid may cause permanent damage to the sensor. *Using the sensor in bright light, like direct sunlight, will cause erroneous measurements.*

1. Connect the Humidity Sensor to a USB link or Xplorer. In DataStudio, click the **Start** button to take a reading of the humidity and dew point in your classroom.
2. Connect the Humidity Sensor to a PASPORT Xplorer (if available). Go outdoors and take humidity and dew point readings in the open air.
3. If an Xplorer is available, take a humidity reading in a freezer (for no more than 10 seconds).
4. Compare your humidity and dew point readings at the three locations. At which point is the air most saturated? Why?

Other Experiments/Applications

- Measuring and comparing relative humidity, temperature, and dew point
- Monitoring weather conditions
- Monitoring greenhouse conditions
- Testing in environmental conditions likely to affect static electricity discharge

For more information or experiment ideas, see PASCO's web site at http://www.pasco.com.