RH Anemometer Pen

850021

Instruction Manual
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Sper Scientific warrants this product against defects in materials and workmanship for a period of five (5) years from the date of purchase, and agrees to repair or replace any defective unit without charge. If your model has since been discontinued, an equivalent Sper Scientific product will be substituted if available. This warranty does not cover probes, batteries, or damage resulting from accident, misuse, or abuse of the product. In order to obtain warranty service, simply ship the unit postage prepaid to:

SPER SCIENTIFIC LTD.
7720 East Redfield, Suite 7
Scottsdale, AZ 85260
Email: info@sperscientific.com,
Phone: (480) 948-4448

Be sure to include your name, address, phone number, and a detailed explanation of why you are returning the item. Mail your warranty card within 10 days or register on line at:

FEATURES

- Anemometer units of measure: m/S, Km/h, FPM, mph, Knots.
- Humidity with Dew point measurement.
- Temperature measurements in ºC and ºF.
- Vane anemometer (built-in) for highly reliable wind speed measurements.
- Low-friction ball vane is accurate for both high and low velocities.
- Fast response time for all measurements.
- One of the three modes can be displayed at one time: Humidity/Temp., Humidity/Dew point and Anemometer/Temp.
- Bright LCD display.
- Microprocessor circuit ensures high accuracy with special functions and features.
- Records Maximum and Minimum readings.
- Durable compact ABS-plastic housing.
- Auto power-off saves battery life.
- Operates on 4 standard AAA alkaline batteries.
**FRONT PANEL DESCRIPTION**

**Figure 1**

1. Vane
2. Humidity/Temp Sensor
3. Power (▲) button
4. Hold (┘) & Unit button
5. REC (▼) & Mode button
6. LCD Display
7. Battery Compartment

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**BATTERY REPLACEMENT**

1. Replace the batteries when the low battery icon (▼) is displayed in the upper left corner of the LCD. Use 4 new AAA alkaline batteries.
2. To replace the batteries, open the Battery Cover by turning counter-clockwise.
3. Ensure the Battery Cover is secured after replacing the batteries.
**SPECIFICATIONS**

**Humidity & Dew Point**

**Humidity**

<table>
<thead>
<tr>
<th>Range</th>
<th>10% to 95% R.H,</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>0.1 % R.H.</td>
</tr>
<tr>
<td>Accuracy</td>
<td>≥ 70% RH</td>
</tr>
<tr>
<td></td>
<td>± (3% reading + 1% RH)</td>
</tr>
<tr>
<td></td>
<td>&lt; 70% RH - 3% RH</td>
</tr>
<tr>
<td></td>
<td>± 3% RH</td>
</tr>
</tbody>
</table>

**Dew point**

<table>
<thead>
<tr>
<th>°C</th>
<th>Range</th>
<th>-25.3 ºC to 48.9 ºC</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resolution</td>
<td>0.01 ºC</td>
</tr>
<tr>
<td>°F</td>
<td>Range</td>
<td>-13.5 ºF to 120.1 ºF</td>
</tr>
<tr>
<td></td>
<td>Resolution</td>
<td>0.01 ºF</td>
</tr>
</tbody>
</table>

* The Dew point display value is automatically calculated from the Humidity and Temperature measurements. Dew point accuracy is directly dependent upon the accuracy of the Humidity and Temperature measurements.

**MEASURING PROCEDURE**

**Mode Selection**

1. Turn on the meter by pressing the **Power** button. To turn the meter off, press the **Power** button again.

2. The meter has three modes that can be selected:

   a. **Humidity / Temperature**
   b. **Humidity / Dew Point**
   c. **Anemometer / Temperature**

3. Press the **Mode** button for at least 2 seconds and both the upper and lower values will start to flash (see diagram below). Use the ↑ button to switch the upper display unit, and use the ↓ button to switch the lower display unit. Then press the ↔ button to accept the selected units.*

   ![Diagram](image)

   * The most recent settings are stored when the power is turned off, and displayed again when power is turned back on.

*
**MEASURING PROCEDURE**

**Unit Selection**

1. Turn on the meter by pressing the **Power** button.

2. Press the Unit button for at least 2 seconds and both the upper and lower values will start to flash (see below). Use the ▲ button to switch the upper display unit, and use the ▼ button to switch the lower display unit. Then press the ← button to accept the selected units.*

![Value Flashing](image)

**Measurement units:**

<table>
<thead>
<tr>
<th>Anemometer</th>
<th>m/S, Km/h, FPM, mph, Knot</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature</td>
<td>°C, °F</td>
</tr>
<tr>
<td>Humidity</td>
<td>%RH</td>
</tr>
<tr>
<td>Dew Point</td>
<td>°C, °F</td>
</tr>
</tbody>
</table>

* The most recent settings are stored when the power is turned off, and displayed again when power is turned back on.

**SPECIFICATIONS**

**Electrical Specifications**

**Anemometer (Air velocity)**

<table>
<thead>
<tr>
<th>Measurement</th>
<th>Range</th>
<th>Resolution</th>
<th>Accuracy</th>
</tr>
</thead>
<tbody>
<tr>
<td>m/S</td>
<td>0.4 to 30.0 m/s</td>
<td>0.1 m/S</td>
<td>≤ 20 m/S : ± 3% F.S.</td>
</tr>
<tr>
<td>Km/h</td>
<td>1.4 to 108.0 km/h</td>
<td>0.1 Km/h</td>
<td>&gt; 20 m/S : ± 4% F.S.</td>
</tr>
<tr>
<td>FPM</td>
<td>80 to 5910 ft/min</td>
<td>1 Ft/min</td>
<td></td>
</tr>
<tr>
<td>mph</td>
<td>0.9 to 67.0 mph</td>
<td>0.1 mph</td>
<td></td>
</tr>
<tr>
<td>Knots</td>
<td>0.8 to 58.3 knots</td>
<td>0.1 knots</td>
<td>(all measurements)</td>
</tr>
</tbody>
</table>

**Temperature**

<table>
<thead>
<tr>
<th>Measuring Range</th>
<th>0 °C to 50 °C / 32 °F to 122 °F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Resolution</td>
<td>0.1 °C / 0.1 °F</td>
</tr>
<tr>
<td>Accuracy</td>
<td>±0.8 °C / 1.5 °F</td>
</tr>
</tbody>
</table>
## SPECIFICATIONS

### General Specifications

<table>
<thead>
<tr>
<th>Feature</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Display</td>
<td>LCD size: 28mm x 19mm</td>
</tr>
<tr>
<td>Sensor Structure</td>
<td><strong>Anemometer</strong>—Vane probe with low friction ball bearing design <strong>Humidity</strong>—Capacitance humidity sensor, semiconductor <strong>Temperature</strong>—Semiconductor</td>
</tr>
<tr>
<td>Sampling Time</td>
<td>Approx. 1 second</td>
</tr>
<tr>
<td>Power off</td>
<td>Auto or manual off</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>0 to 50º C</td>
</tr>
<tr>
<td>Operating Humidity</td>
<td>Less than 80% RH</td>
</tr>
<tr>
<td>Power Supply</td>
<td>4 AAA alkaline batteries</td>
</tr>
<tr>
<td>Weight</td>
<td>182g / .4LB with battery incl.</td>
</tr>
<tr>
<td>Dimension</td>
<td>205 x 48 x 40mm, 8.1&quot; x 1.9&quot; x 1.6&quot;</td>
</tr>
<tr>
<td>Accessories Included</td>
<td>Instruction manual, soft carrying case and batteries</td>
</tr>
</tbody>
</table>

### MEASURING PROCEDURE

#### Anemometer Measurement

1. Turn on the meter by pressing the **Power** button.
2. Set the mode to display: **Anemometer / Temperature**: Upper display shows air velocity value and the lower display shows temperature.

#### Humidity Measurement

1. Turn on the meter by pressing the **Power** button.
2. Set the mode to display: **Humidity / Temperature**: Upper display shows humidity value and the lower display shows temperature.

#### Dew Point Measurement

1. Turn on the meter by pressing the **Power** button.
2. Set the mode to display: **Humidity / Dew point**: Upper display shows humidity value and the lower display shows dew point.
MEASURING PROCEDURE

Data Hold

1. To hold the current reading on the LCD, press the Hold button. The LCD will show the HOLD symbol.

2. Press the Hold button again to resume active measurement.

Data Record (Maximum & Minimum Reading)

1. The data record function records the maximum and minimum readings. Press the REC button to start the Data Record function - REC shows on the display.

2. Press the REC button and the REC MAX symbol, along with the maximum value will appear on the LCD display.

3. Press the REC button again and the REC MIN symbol, along with the minimum value will appear on the LCD display.

4. To exit the memory record function, press the REC button for a minimum of 2 seconds. The display will revert back to the current reading, not showing REC.

MEASURING PROCEDURE

When the LCD display shows REC MAX (or REC MIN), press the Hold button to delete the stored max (or min) value.

Auto Power Off Management

1. The meter has a built-in Auto Power Shut-off function in order to prolong battery life. The meter will switch off automatically if no buttons are pressed within 10 minutes.

2. To disable this feature, select the memory record function during measurement, by pressing the REC button.