

Supco DSP1000

Supco DSP1000 Digital Psychrometer Instruction Manual

Model: DSP1000

1. INTRODUCTION AND OVERVIEW

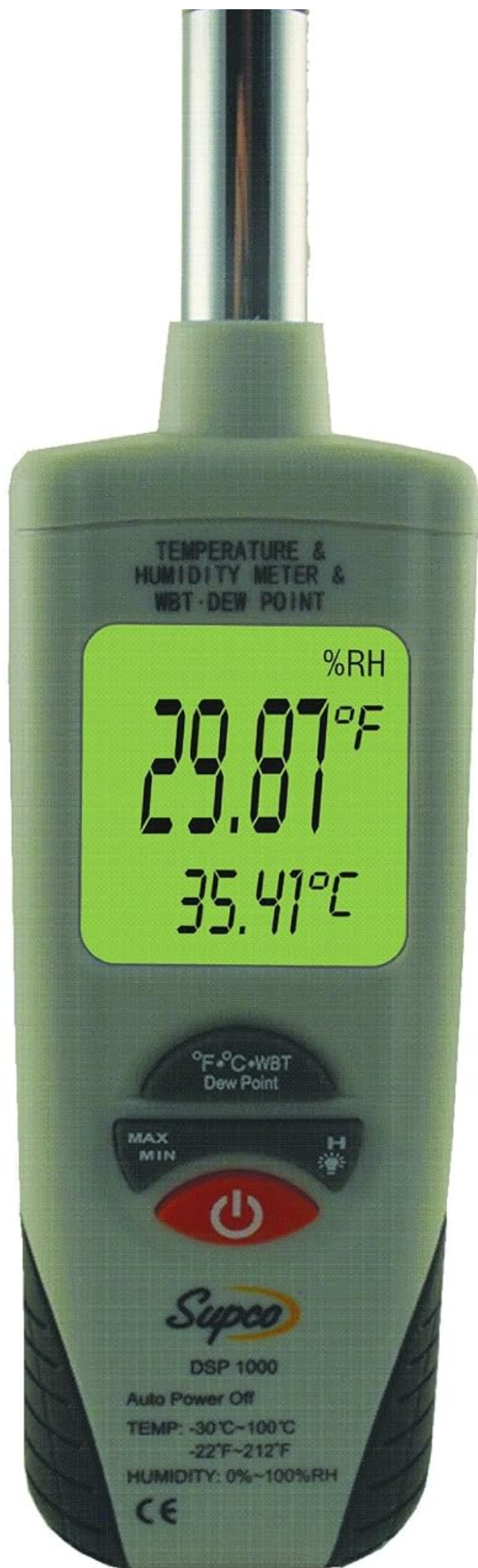
The Supco DSP1000 Digital Psychrometer is designed to provide fast and accurate measurements of critical environmental conditions. This device measures temperature, relative humidity, wet bulb temperature, and dew point temperature. Its microprocessor-based design ensures reliable performance for various applications requiring precise environmental monitoring. Key applications include environments such as cellophane production, chemical processing, laboratories, pharmaceuticals, textiles, paper manufacturing, photography, printing, snowmaking, tobacco storage, indoor air quality assessment, wine storage, floral preservation, and meat processing.

2. PRODUCT FEATURES

- Fast response time for quick readings.
- High accuracy for reliable data.
- Microprocessor-based design for stable performance.
- Dual display shows temperature and humidity simultaneously.
- Measures Wet Bulb Temperature and Dew Point Temperature.
- Max Hold and Data Hold functions.
- No manual twirling, reading charts, or water necessary for wet bulb measurements.
- Auto Power Off feature (with option to disable sleep mode).
- Backlight for improved visibility in low-light conditions.

3. COMPONENTS AND CONTROLS





TEMPERATURE &
HUMIDITY METER &
WBT·DEW POINT

%RH

29.07°F

35.41°C

°F·°C·WBT
Dew Point

MAX
MIN



Supco

DSP 1000

Auto Power Off

TEMP: -30°C~100°C

-22°F~212°F

HUMIDITY: 0%~100%RH

CE

Figure 1: Supco DSP1000 Digital Psychrometer

This image displays the Supco DSP1000 Digital Psychrometer. The device features a large green backlit LCD screen showing temperature in Fahrenheit and Celsius, and relative humidity. Below the screen are control buttons for MAX/MIN, °F/°C/WBT/Dew Point selection, power, and backlight. The top of the device has a protective cap over the sensor probe.

3.1. Device Layout

- **Sensor Probe:** Located at the top, protected by a slotted cap. This probe contains the sensors for temperature and humidity.
- **LCD Display:** Large green backlit screen showing primary and secondary readings. The upper display typically shows relative humidity, while the lower display cycles through temperature, wet bulb, and dew point.
- **Function Buttons:**
 - **MAX/MIN Button:** Toggles between maximum, minimum, and current readings.
 - **°F/°C/WBT/Dew Point Button:** Cycles through temperature units (Fahrenheit/Celsius), Wet Bulb Temperature, and Dew Point Temperature on the lower display.
 - **Power Button ():** Turns the device on or off.
 - **Backlight Button ():** Activates or deactivates the display backlight.

4. SETUP

4.1. Battery Installation

1. Locate the battery compartment cover on the back of the device.
2. Remove the cover by sliding it off or unscrewing it, depending on the design.
3. Insert one 9V battery (NEDA 1604, IEC 6F22 type) into the compartment, ensuring correct polarity (+/-).
4. Replace the battery compartment cover securely.

Note: The device has a parasitic current draw even when turned off. For extended storage periods (e.g., over winter), it is recommended to remove the 9V battery to prevent complete drainage.

5. OPERATING INSTRUCTIONS

5.1. Power On/Off

- To power on the device, press the button.
- To power off the device, press and hold the button until the display turns off.

5.2. Display Readings

Upon powering on, the device will typically display Relative Humidity (%RH) on the upper screen and Temperature (°F or °C) on the lower screen. The lower display can be cycled to show Wet Bulb Temperature (WBT) or Dew Point Temperature.

5.3. Changing Measurement Units and Modes

- Press the **°F/°C/WBT/Dew Point** button to cycle the lower display through:
 - Temperature in Fahrenheit (°F)
 - Temperature in Celsius (°C)
 - Wet Bulb Temperature (WBT)
 - Dew Point Temperature (Dew Point)

5.4. MAX/MIN Function

- Press the **MAX/MIN** button to view the maximum recorded value for the currently displayed parameter.
- Press the **MAX/MIN** button again to view the minimum recorded value.
- Press the **MAX/MIN** button a third time to return to live readings.

5.5. Backlight Operation

- Press the button to turn the display backlight on.
- Press the button again to turn the backlight off.

5.6. Auto Power Off

The DSP1000 features an automatic power-off function to conserve battery life. Refer to the device's specific instructions for disabling this feature if continuous operation is required.

6. MAINTENANCE

6.1. Cleaning

Wipe the device exterior with a soft, damp cloth. Do not use abrasive cleaners or solvents. Ensure no moisture enters the sensor probe area or battery compartment.

6.2. Battery Replacement

When the battery indicator appears on the display, replace the 9V battery as described in the "Battery Installation" section (4.1). Always use a fresh 9V Alkaline battery (NEDA 1604, IEC 6F22).

6.3. Storage

Store the psychrometer in a cool, dry place, away from direct sunlight and extreme temperatures. For prolonged storage, remove the battery to prevent leakage and drainage.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Device does not power on.	Dead or incorrectly installed battery.	Check battery polarity. Replace with a new 9V battery.
Inaccurate readings.	Sensor obstruction or damage; extreme environmental conditions.	Ensure sensor probe is clean and unobstructed. Allow device to stabilize in the environment. If issues persist, contact support.
Display is dim or flickering.	Low battery.	Replace the 9V battery.

8. SPECIFICATIONS

Parameter	Value
Humidity Range	0-100% RH (Non-Condensing)
Temperature Range	-22°F to 212°F (-30°C to 100°C)

Parameter	Value
Dew Point Temperature Range	-22°F to 212°F (-30°C to 100°C)
Wet Bulb Temperature Range	32°F to 176°F (0°C to 80°C)
Humidity Accuracy	±2% RH (20% RH to 80% RH), ±2.5% RH (all other ranges)
Temperature Accuracy	±0.9°F/±0.5°C (at 77°F/25°C), ±1.5°F/±0.8°C (all other ranges)
Resolution	0.01% RH, 0.01°F/0.01°C
Response Time	10 seconds (90% at +77°F (+25°C) still air)
Battery Type	9V Battery NEDA 1604, IEC 6F22 (included)
Operation Temperature	32°F to 104°F (0°C to 40°C) (<80% RH)
Storage Temperature	14°F to 140°F (-10°C to 60°C) (<70% RH)
Dimensions (W x H x D)	1.77" x 8.55" x 1.49" (45mm x 217mm x 38mm)
Weight	7.05 oz (200g)

9. WARRANTY AND SUPPORT

The Supco DSP1000 Digital Psychrometer comes with a **1-year warranty** from the date of purchase, covering defects in materials and workmanship under normal use. This warranty does not cover damage resulting from misuse, unauthorized modification, or improper operation.

For technical assistance, warranty claims, or further information, please contact Supco customer support through their official website or the contact details provided with your purchase.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question