User's Guide

Precision Hygro-Thermometer
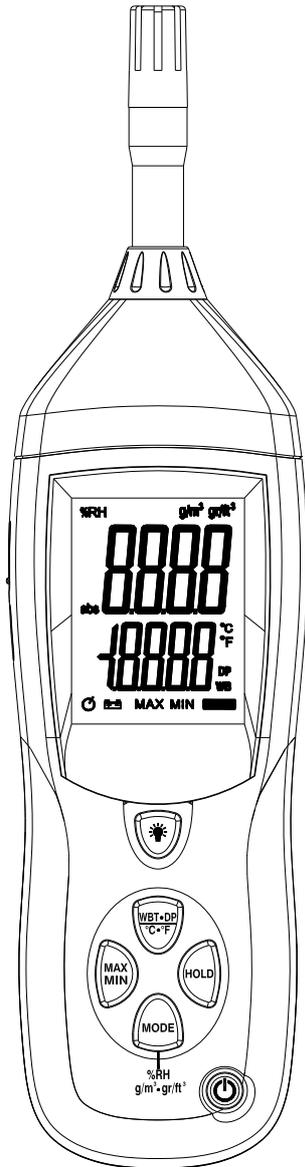
Introduction

Congratulations on your purchase of the Precision Hygro-Thermometer. This device measures Humidity, Air Temperature, Dew Point temperature and Wet Bulb temperature. Advanced features include Data Hold, Auto Power Off, and MAX/MIN reading. Careful use of this meter will provide years of reliable service.

Specifications

Function	Range and Resolution	Accuracy
Humidity	0.0 to 100.0%RH	± 2%RH (40% to 60%) ± 3%RH (20 to 40% and 60 to 80%) ± 4%RH (0 to 20% and 80 to 100%)
Temperature	-4.0 to 140.0^{o}F (-20.0 to 60.0^{o}C)	± 1.8^{o}F (± 1°C)
	-22.0 to – 3.9^{o}F and 140.1 to 212.0^{o}F (-30.0 to -19.9^{o}C and 60.1 to 100.0^{o}C)	± 2.7^{o}F (± 1.5^{o}C)

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Display	Dual LCD
Response Time:	<15 seconds (90% of final value in moving air)
Sensor Type	Humidity: Precision capacitance sensor
	Temperature: Thermistor
Absolute Humidity	0 to 500g/m^3, 0 to 218.5gr/ft^3(calculated from RH and Air temperature measurements)
Wet Bulb	32 to 176°F (0 to 80°C) (calculated from RH and Air temperature measurements)
Dew Point	-22 to 212°F (-30 to 100°C) (calculated from RH and Air temperature measurements)
Operating Conditions	32 to 122°F (0 to 50°C); < 80% RH non-condensing
Storage Conditions	-40 to 185°F (-40 to 85°C); <99% RH non-condensing
Power Supply	9 Volt battery
Battery Life	Approx. 48 hours
Dimensions / Weight	300x 75 x 50 (mm); 400g

Meter Description

1. Humidity & Temperature Sensor
2. LCD Display
3. Backlight button
4. °C/°F /Wet Bulb/Dew Point button
5. MIN/MAX button
6. Power ON/OFF button
7. Relative Humidity/Absolute Humidity button
8. HOLD button

Note: The battery compartment is located
on the rear of the instrument
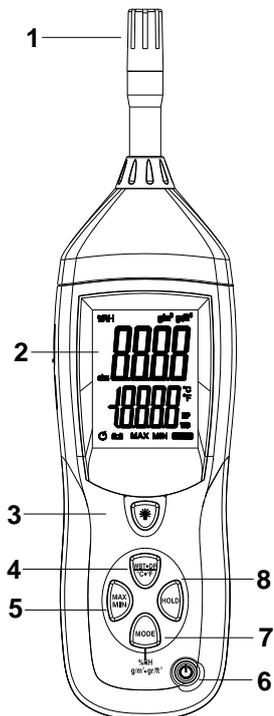
Display Description

1. Relative Humidity %
2. Absolute Humidity. Grams Per Cubic Meters
3. Absolute Humidity. Grains Per Cubic Feet
4. Humidity Display
5. °C
6. °F
7. Dew Point
8. Wet Bulb
9. Hold
10. Minimum
11. Maximum
12. Low Battery
13. Auto Off
14. Temp/WB/DP Display
15. Absolute Humidity
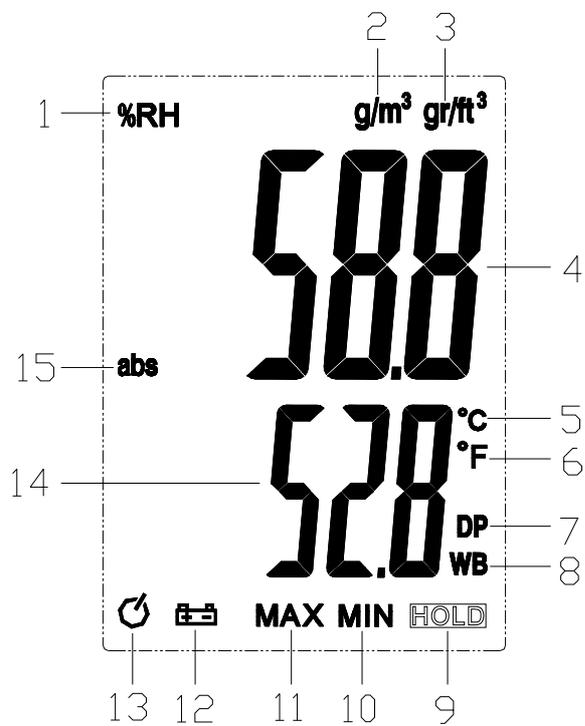
Operation

Power

Press the power button(⏻) to turn power on or off.

Taking measurements

1. Hold the probe in the area to be tested.
2. Allow adequate time for readings to stabilize.
3. Pressing the MODE button toggles the top display between RH%, g/m^3 and gr/ft^3.
4. Pressing the **°C/°F** button toggles the lower display between Temperature (°F), Temperature (°C), Dew Point (°C), Dew Point (°F), Wet Bulb (°C) and Wet Bulb (°F).
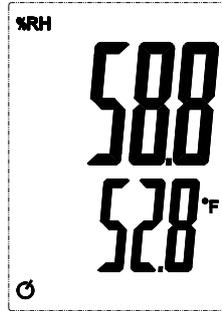
Absolute Humidity measurements

1. To select the Absolute Humidity measurement, press the MODE button until "g/m^3" (or "gr/ft^3") and "abs" appears in the LCD.
2. Absolute Humidity is now displayed.
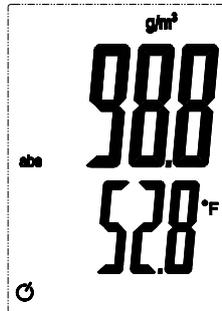
Dew Point measurements

1. To select the Dew Point measurement, press the **°C/°F** button until DP (°F or °C) appears in the lower right.
2. Dew Point temperature is now displayed.

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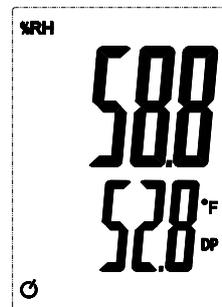
Wet Bulb measurements

1. To select the Wet Bulb measurement, press the °C/°F button until WB (°F or °C) appears in the lower right.
2. Wet Bulb temperature is now displayed.

%RH

58.8

52.8 °F WB
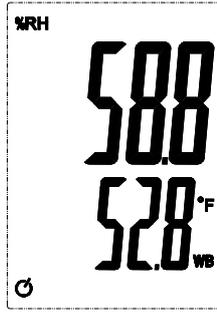
Temperature measurements

1. To select the temperature measurement, press the **°C/°F** button until °C or °F appears in the lower right.
2. Temperature is now displayed.

%RH

58.8

52.8 °F
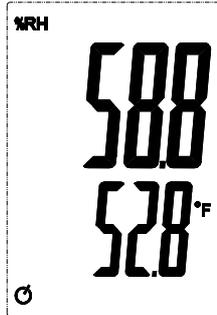
Data Hold

Press the HOLD button momentarily to freeze the displayed readings. "**HOLD"** will appear on the lower right-hand side of the display. Press the HOLD button again to return to normal operation.

%RH

58.8

52.8 °F

HOLD
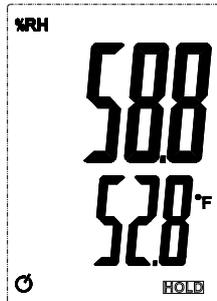
Minimum (MIN) Maximum (MAX) Function

The MIN/MAX mode allows the user to view only the lowest (**MIN**) or highest (**MAX**) readings.

Press the MIN/MAX button once and "**MIN"** appears on the display. The LCD is now displaying the minimum reading of the selected parameter in the display. The display will not change until a lower reading is registered.

Press the MIN/MAX button again and "**MAX"** appears on the display. The LCD is now displaying the maximum reading of the selected parameter in the display. The display will not change until a higher reading is registered.

Press the MIN/MAX button again to exit the MIN/MAX mode, and the "**MAX"** or "**MIN"** icon will disappear.
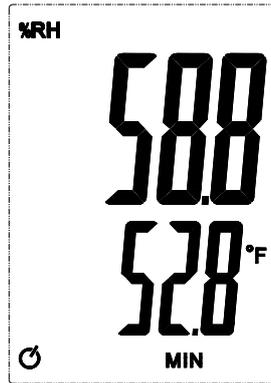
Note: While powering on the meter per time, it restarts recording Minimum and Maximum and the recordings don't stop until the meter is turnned off.

Backlight

Press 💡 to turn on the backlight. To turn the backlight off, press 💡 again.

Automatic Power OFF

The meter has a default setting that automatically shuts the meter off after 10 minutes (indicated by the ⊘ symbol on the display). This battery saving feature can be disabled. To disable the auto power off function, simply press and hold the HOLD button while powering on. The ⊘ symbol will not appear when auto power off has been disabled. The meter will revert to the default auto-off mode when powered off.
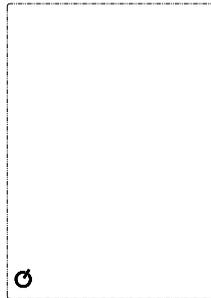
Maintenance

Cleaning and storage

1. The meter should be cleaned with a damp cloth and mild detergent when necessary. Do not use solvents or abrasives.
2. Store the meter in an area with moderate temperature and humidity (refer to the operating and storage range in the specifications chart earlier in this manual).

Battery Replacement

When the battery power falls low, the battery symbol will appear on the LCD. Replace the 9 Volt battery by removing the Philips head screw holding the rear battery compartment cover to access the battery compartment. Ensure that the compartment cover is securely fastened when finished.