

## Humidity Alert Portable Hygro-Thermometer with Dew Point

### Model RH30

#### *Introduction*

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Thank you for selecting the Extech Model RH30. The RH30 monitors relative humidity, air temperature, dew point temperature, and MAX-MIN readings. The RH30 also includes an audible/visual high humidity alarm. This device is shipped fully tested and calibrated and, with proper use, will provide years of reliable service. Please visit the Extech Instruments website ([www.extech.com](http://www.extech.com)) to check for the latest version of this User Guide. Extech Instruments is an ISO-9001 certified company.

#### *Safety*

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##### General Safety

- Please read all safety and instructional information before using this product.
- This product is intended for home use only.
- Unauthorized repairs, modifications, or other changes to the product are not supported.
- This product is not intended for use in medical practices.

##### Caution! Risk of Injury!



- Keep this product and its batteries out of the reach of children and pets.
- Batteries must not be placed in fire, short circuited, taken apart, or discharged. Risk of explosion!
- Batteries can be fatal if swallowed. Contact medical emergency personnel if batteries are swallowed.
- Batteries contain harmful acids. Weak batteries should be changed as soon as possible to prevent damage caused by leaking batteries.

##### Product Safety!

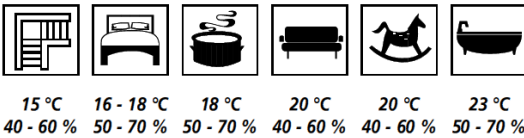
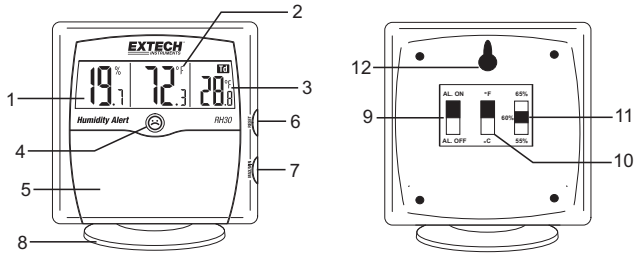


- Do not place this product near extreme temperatures, vibration, or shock
- Never hold a probe directly in or over fire
- Do not immerse the meters in any liquid

# Description

## Meter Description

1. Relative Humidity reading
2. Air Temperature reading
3. Dew Point reading (Td)
4. Humidity Alarm indicator
5. Battery compartment
6. Reset button
7. MIN-MAX button
8. Meter stand
9. Alarm ON/OFF switch (rear)
10. Temperature Units switch (rear)
11. RH Alarm setting switch (rear)
12. Wall mount access hole (rear)



Temperature and Humidity chart (For general reference only)

## Operation

### Display Protective Foil

The LCD display may include a protective foil covering. Carefully remove this film before use.

### Powering the meter

Open the battery compartment by sliding the front battery compartment cover downward. If the meter is new and batteries are installed, the battery insulation strip must be removed before use so that the batteries can make proper circuit contact and power the meter. If no batteries are installed, please insert two 1.5V AA batteries oriented for proper polarity.

The instrument should now be powered up and relative humidity, temperature, and dew point temperature should be displayed left to right on the LCD.



EU consumers are legally bound by the Battery Ordinance to return used batteries to community collection points or wherever batteries / accumulators are sold. Disposal in household trash or refuse is prohibited.

**Disposal:** Follow the valid legal stipulations in respect of the disposal of the device at the end of its lifecycle.

## Mounting

The RH30 can be wall mounted using the rear wall mount access hole or it can be placed on a desktop or other surface using the supplied stand base.

## Selecting °C/°F units of measure

Use the rear (center) °C/°F switch to select the desired temperature unit of measure.

## MAX-MIN and HOLD Function

The RH30 stores the highest (MAX) and lowest (MIN) readings since the meter was last reset. To view the maximum (MAX) reading, press the MIN-MAX button (right side, lower). All readings displayed will now represent the highest readings encountered since last reset. The MAX indicator will also appear on the left and middle displays for confirmation. Press the MIN-MAX button again to view the lowest readings (MIN) since the last reset. All readings displayed will now represent the lowest readings encountered along with the MIN indicators. To reset (clear) the MAX-MIN memories, press RESET (right side, upper button) while MAX or MIN is displayed.

## Relative Humidity (RH) Alert

The RH Alarm triggers an audible tone and two visual alerts (frowning face symbol illuminates and up arrow appears next to the humidity readout) when the RH exceeds the value set by the user. The limit switch on the rear (right) of the meter can be set to 55%, 60%, or 65% RH.

When the RH returns to the desired range the audible alarm will stop sounding and the frowning face symbol light will switch off. The arrow will remain however to show that the humidity was higher than the set value at least once in the past. Toggle the rear humidity % limit switch to turn off the arrow.

# ***Practical Considerations***

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## The Basics

The RH30 thermo-hygrometer monitors ambient room conditions and alerts the user when the relative humidity exceeds the user programmed limit (use the rear humidity 55/60/65% switch to set the limit).

Excessively humid room air can affect health, promoting the formation of moisture and mold. At the other extreme, excessively dry room air can also affect health by drying skin, mucous membranes, and airways. Pets, houseplants, wood flooring, antique furniture, fine art, musical instruments, etc. are all affected by extremes in ambient conditions. Effective heating and ventilation can help achieve a comfortable and healthy living environment and can also cut costs.

## The Benefits of Ventilation

For rooms that are too humid, ventilation at first may seem a bad idea in winter when outdoor air is also cold, damp, and just as humid. Cold air however can absorb little or no moisture. When cold air enters a living area it becomes warmer and can therefore absorb much more water vapor; in only a few minutes the humidity decreases.

## Dew Point Temperature

Dew Point is a window into the relationship between Temperature and Humidity. For example, if air is cooled at a constant (absolute) humidity, the relative humidity will steadily increase to a maximum of 100%. If the air is cooled further, the excess water vapor will separate in the form of water droplets. If the RH30 indicates an air temperature of 20°C (60°F) and a relative humidity of 65%, the dew-point temperature will be 13.2°C (56°F). This means that if walls or ceilings in a living area are cooler than 13.2°C (56°F), the air will condense and form droplets on the walls and ceiling surfaces. Mold and damp patches can result. In this same example, when the relative humidity of the air is 40%, the dew point temperature is only 6°C (43°F). Surfaces would have to be significantly colder for the air to reach its dew point to form water droplets.

### Tips on Achieving Optimum Ambient Conditions

- Check that the dew point temperature of walls is at least 15°C (59°F).
- Do not switch off home heating completely when leaving the house.
- Ventilate for short periods only in all weather conditions, even during rain.
- Air rooms by opening windows for a short time only. Partially opened windows for prolonged periods do not yield the desired results, waste energy, and can further promote the growth of mold.
- If room air is too dry (as it tends to be in winter), humidifier units are highly recommended since airing at low outdoor temperatures will tend to decrease humidity further.

## Specifications

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Display	Multi-function LCD
Sensor	Precision humidity sensor for quick and accurate readings
Measurement range	Relative Humidity: 1.0 to 99.0% RH
Air Temperature and Dew Point Temperature:	-10 to 50°C (14 to 122°F)
Resolution	0.1 °C (°F) and %
Humidity Accuracy	±4% from 35% to 75% otherwise ±5%
Temp. Accuracy	±1.0°C (1.8°F)
Power supply	2 x 1.5V AA batteries
Dimensions	95 x 25 x 95 mm (3.7 x 1.0 x 3.7")
Weight	90 g (3.2 oz.) instrument only, batteries not included in weight spec.

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