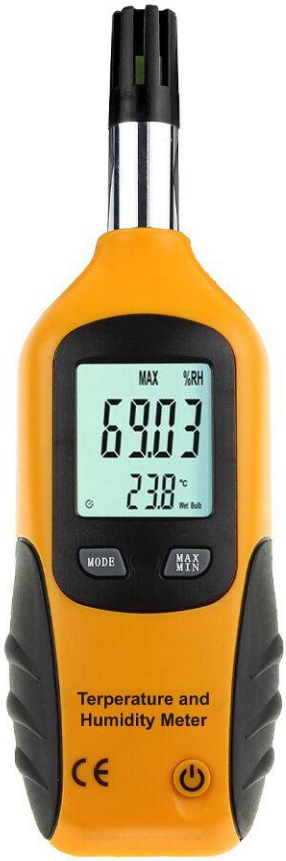
Tzone Digital Technology Co., Ltd.

TZ-TH602

---User Manual



1.Product Introduction

TZ-TH602 is a professional instrument of our company for measuring ambient temperature, humidity, dew point temperature and wet bulb temperature. It is a high-precision, low-power digital temperature and humidity sensor, applicable to environments such as production workshops, factory warehouses, libraries, offices, laboratories, and family rooms.

2.Matters needing attention

☆ Do not put sensor in the liquid or make the sensor exposed to sunlight;

☆ Do not put the instrument under extreme conditions or the heavily polluted environment such as chemical vapors, hazardous substances and so on, so as not to affect the accuracy of the meter, and even cause damage or reduce the life of the instrument;

☆ Do not use solvents and detergents to clean the product, and do not disassemble the body arbitrarily for research or repair;

☆ Remove the battery if do not use for a long time, so as to avoid battery leakage and corrosion of the instrument;

☆ When the battery is low (LCD displays the symbol of), please replace the battery, so as not to affect test accuracy.

3.Product Feature

◇ Low power consumption

◇ Low battery reminder

◇ Temperature and humidity measurement

◇ Automatic shutdown function

◇ Maximum and minimum measurement

◇ ℃/℉ temperature unit switching function

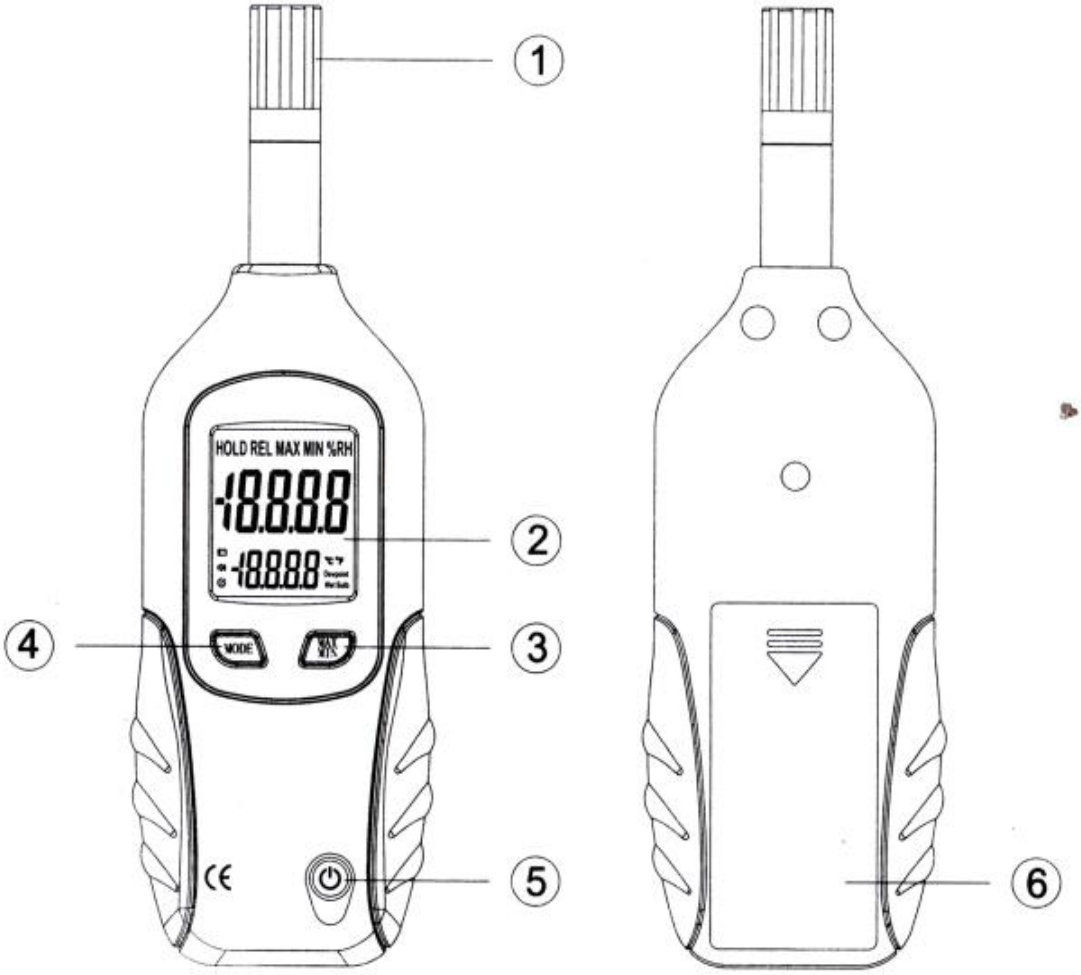
◇ Measurement of dew point temperature and wet bulb temperature

4.Product Specifications

Sensor measures temperature range	Temperature：-20~60℃ Humidity：0-100%RH
Precision	Temperature: ±0. 5℃(10~55℃); ±1. 5℃(Other ranges) Humidity: ±3%RH (25℃, 10～90%RH); ±4.5%RH (other ranges)
Resolution	Temperature：0.1℃/0.1℉

	Humidity：0.1%RH
Response time	10 S
Sampling time	2.5 times/sec
Power consumption	3mA
Automatic shutdown	About 15 minutes (no key operation)
Energy supply	6F22 9V battery
Energy life	About 50 hours (alkaline battery)
Working temperature	0～60℃
Storage environment	-20～60℃；<80%RH(non-condensing)
Size	175mm×58mm×35mm
Weight	143g

5.Structure introduction



① **Humidity / Air Temperature Probe:** (Humidity Sensor and Semiconductor Sensor inside)

② **LCD display:** 4 1/2 dual digits LCD display with units of ℃, ℉, %RH dewpoint wet bulb and low battery "BAT" MIN /MAX HOLD, DATA HOLD indication.

③ **MAX/ MIN Button:**

MAX/MIN: Press MAX/MIN to enter MAX, MIN Recording mode (manual range only). Select the proper range before selecting MAX MIN to ensure that the MAX/MIN reading will not exceed the testing range. Press once to select MIN. Press again to select MAX. **Press and hold the Button for over 2 second to turn off MAX, MIN Recording.**

④ **℉,℃, dewpoint , wbt select Button:**

Press℉,℃,dewpoint, wbt select Button to enter select℉,℃,dewpoint, wbt Measurement

⑤ **Power ON/OFF Button :**

Turn the meter power ON/OFF

⑥ **Battery Compartment**

7. operating instructions

1) Open the battery cover, install a 9V battery, and turn on the power.

2) Check whether the battery is sufficient. If the symbol is displayed on the screen, it indicates that the battery is insufficient and the battery should be replaced.

3) Place the meter where you need to measure, or fix it on a tripod.

4) Press the "MAX/MIN" key to cycle through the three modes of maximum measurement, minimum measurement and normal measurement. When the maximum value measurement mode is selected, the screen always displays the maximum reading measured. When the minimum value measurement mode is selected, the screen always displays the measured readings

5) Press the "℃/℉/dewpoint/wbt" key to cycle through the following modes：

8. Appendix

Dew point temperature:

The dew point temperature refers to the temperature at which the air is cooled to saturation when the water vapor content and pressure do not change. To put it vividly, the temperature at which the water vapor in the air turns into dew is called the dew point temperature. This is because when the water vapor in the air has reached saturation, the air temperature is the same as the dew point temperature; when the water vapor is not saturated, the air temperature must be higher than the dew point temperature. Therefore, the difference between the dew point and the temperature

can indicate the degree to which the water vapor in the air is saturated.

Wet bulb temperature:

The wet bulb temperature refers to the air temperature when the water vapor in the air reaches saturation under the same enthalpy value. On the air enthalpy chart, the air state point drops along the isenthalpy line to the 100% relative humidity line, corresponding to the point Dry bulb temperature.

Wet bulb temperature is a means to calibrate the relative humidity of the air, and its meaning is that the air in a certain state, in contact with the humidity bulb of the wet bulb thermometer, undergoes adiabatic heat and moisture exchange, so that it reaches the temperature when it reaches the saturation state. The temperature is a thermometer wrapped with wet gauze on a thermos bulb. The surface temperature of the gauze measured in air with a flow velocity greater than 2.5m/s and not subject to direct radiation is used as a measure of the degree of air close to saturation. . The greater the saturation difference of the surrounding air, the stronger the evaporation that occurs on the wet bulb thermometer, and the lower its humidity. According to the difference between the dry and wet bulb temperature, the relative humidity of the air can be determined.