

**ENVIRONMENTAL MOISTURE METER KC-321C**

**Introduction:**

The KC-321C Environmental Moisture Meter is equipped with an advanced technology sensor to measure the environmental parameters of the facilities. It measures ambient temperature and humidity, wet bulb temperature and dew point and can change measurement units.

The device adopts low-power design, with LCD display and data retention. This handy device is portable, easy and safe to use and with quick response. The external temperature probe is used to measure the surface of the object or the internal temperature. These readings can be used to calculate the dew point of the surface.

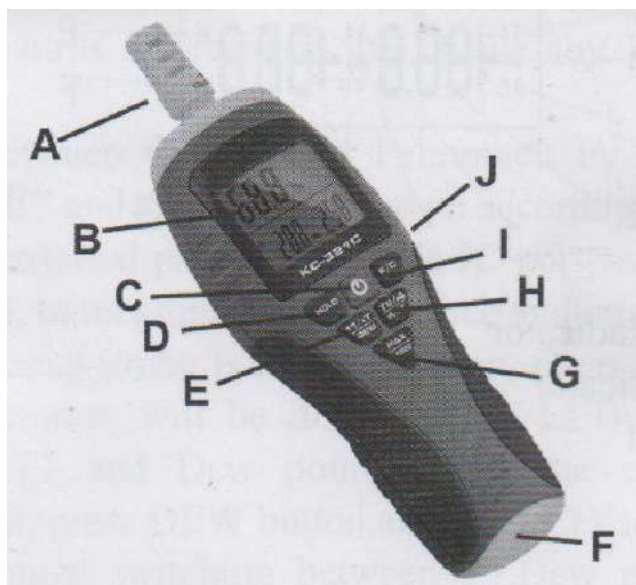
This device has a wide range of applications: food preservation and transportation, antique conservation, file management, construction material, agriculture, livestock, building inspection, pipe repair, heating, ventilation and cooling, etc.



**Battery Safety Instructions**

- Please remove the batteries when cleaning this product.
- Remove the batteries before storing the device for a long period of time.
- Please insert the batteries correctly as the negative and positive pole instructions indicate.
- Please dispose of the batteries correctly. High temperatures can cause explosions.
- Place insulating tape around the battery to avoid contact with other objects.

**Product Details**




- A- Temperature and humidity sensor.
- B- LCD screen
- C- Power button.
- D- Data hold button.
- E- Room temperature / Dew point change button.
- F- Battery compartment
- G- MAX / MIN button
- H- Wet bulb temperature and temperature probe
- I- Change of temperature unit
- J- External temperatura probe

### Display Screen Illustration

- A- Low battery indicator
- B- Data retention indicator
- C- MAX symbol
- D- MIN symbol
- E- Celsius
- F- Fahrenheit
- G- Probe temperature T2 / Wet bulb temperature
- H- Wet bulb indicator
- I- Condensation temperature difference
- J- Probe temperature
- K- Ambient temperature T1 / Dew Point (PR)
- L- Dew point indicator
- M- External / internal temperature difference =  $T1 - T2$
- N- Ambient temperature indicator T2
- O- Relative humidity Reading

### Operating Instructions

1. Unscrew and open the battery cover, insert a 9V battery and replace the battery cover.
2. Turn the probe protection cap as indicated by the arrow, and make sure the sensor is fully exposed. To ensure a stable reading, place the device in the environment to be tested for at least one minute. The relative humidity will be displayed at the top of the LCD screen, while the temperature is displayed at the bottom. The display will turn off after 10 seconds of inactivity. Press any button to turn it back on.
3. Change the units to Celsius or Fahrenheit by pressing the C/F button. "F" and "C" will appear on the display depending on the unit chosen.
4. Plug the external probe into the device port J (indicated in the product details) to measure the surface of the object and the internal temperature.
5. If the external probe is not connected, press the DEW button and the temperature will appear on the LCD display changing between temperature T1 and dew point only. If the external probe is connected, press the DEW button and the LCD will show the difference between temperature T1, dew point, ambient temperature and  $\Delta T = T1 - T2$ .
6. If the external probe is not connected, press the WBT button and it will only display the wet bulb temperature reading. If the external probe is connected, press the WBT button and the LCD display will show the difference between the condensing temperature and the wet bulb temperature. If the external probe is removed, it will only show the wet bulb temperature reading.
7. Press the MAX/MIN button to get the maximum and minimum temperature and humidity readings. Press continuously until the "MIN" and "MAX" symbols are not displayed to exit the MAX/MIN mode.
8. Press the HOLD button to set the current temperature and humidity values. Press again to get the dynamic readings of these values.
9.  It will appear on the LCD screen if the battery is low.
10. Press and hold the power button for 3 seconds to turn off the device. When the auto power off mode is active, the device will turn itself off in 20 minutes. Replace the protective cap when the device is turned off.
11. The auto power off mode can be turned off. Press the HOLD button first and then press the ON/OFF button to turn on the device. The auto power off mode is then deactivated.

### Instructions for use

- 1. Do not use this product if the manual has not been read previously.
- 2. To ensure accuracy, remove the protective cap and make sure the sensor is fully exposed before taking any readings.
- 3. Remove the battery before storing the device for a long period of time.
- 4. To ensure accuracy after calibration, do not expose the sensor to a saturated environment for a long period of time.
- 5. To avoid damage, do not use the device near the following locations:
  - - Dirty or Steamy Places
  - - Electromagnetic fields
  - - Static environments
  - - Sudden temperature changes

- After long hours of work, the sensor can become contaminated and the electronic parameters can deviate. If the reading value is out of range, you must follow these steps to calibrate it.

1. Purchase standard salt bottles of 33% and 75% humidity.
2. Please deactivate the auto power off mode and switch on the device as indicated in point 11 of the previous section.
3. Remove the protective cap and press the HOLD and ON/OFF buttons simultaneously. "---" will appear on the LCD screen and "1" will appear on the right side of the screen. Place the device in the standard 33% humidity bottle for 40 minutes. After 40 minutes, the unit will automatically adjust to the 33% value. Calibration work will end when performed with two values. After calibration with 33%, perform the same procedure with 75%. If calibration is only performed with the 33% bottle, turn the unit off manually and then on again to repeat the process once the error message "Er2" disappears. After the two calibrations, the device will function correctly.

### Troubleshooting

Problem	Possible reason	Possible Solution
Display off	No battery.	Check and replace the battery.
Shown on the screen	Low Battery	Replacing the battery

### PRECAUTIONS

- Do not drop the product or use it by force.
- Do not disassemble the product to avoid breakdowns.
  - Replace the protective cap when not in use.
  - Do not place the product with corrosive gas.
    - Keep the device clean.
    - Avoid dust and water.
- Do not immerse the product in water as it will be damaged.
- Please remove the battery if you are not going to use it for a while

### Technical Specifications

Product name	Ambient Moisture Meter
Model	KC-321C
Measuring range Ambient temperature T1	-10°C~50°C
Temperature range of the external probe T2	-10°C~70°C
Humidity range	0~99%
Accuracy ambient temperature T1	±1°C
Accuracy of the external probe T2	±1.5°C
Humidity accuracy	5%~95%±3°C (25°C)
Temperature Sensitivity	0.1°C
Moisture Sensitivity	0.1%
Default temperature unit	°C
Response time	<80s
LCD Auto Power Off	10s
Auto power off	20 minutes (with auto power off)
Accessories	External temperature probe
Power supply	a batterye 9V (6F22/6LR61)
Intensity of work	<25mA
Operating temperature	0°C~40°C
Operating Humidity	5%~95% HR (without condensation)
Storage conditions	-30°C~60°C, <85% HR (without battery)
Size of	192mm x 61mm x 31mm
Weight	107g

**Warranty**

**The product is warranted to be free from defects in material, workmanship for a period of one year from the date of purchase.**

**Note: The warranty does not apply under the following conditions:**

**- Unauthorized disassembly may invalidate the warranty.**

**- We are not responsible for any damage resulting from abrasion, water, falls or disassembly.**

**Tips: Many parts of the product can be recycled, please refer to your local regulator for recycling instead of throwing it in the trash..**