

**HUMIDITY AND AMBIENT PRESSURE METER WITH HUMIDITY PROBE KC-326B**

**Introduction:**

The KC-326B Humidity and Environmental Pressure Meter incorporates several energy saving sensors in a compact design. It measures in real time the ambient temperature, humidity, atmospheric pressure, moisture content of a piece of wood and can quickly calculate the dew temperature, absolute humidity (g/kg and grains/pounds), wet bulb temperature, and steam pressure with the dew-surface temperature calculation mode, 20 data retention groups in memory and 8000 groups of automatic data recording. The device has a large screen with two LCDs with intelligent management. It is an ideal instrument for monitoring food, medical supplies, warehouse and home decoration..



**Safety instructions**

Failure to follow the instructions below may result in electric shock or personal injury.

- - Please read this manual carefully before using this product.
- - Do not remove any labels from this product.
- - Do not use the product in the presence of explosive or flammable gases.
- - Please take care with the probe and do not damage it. When you have finished using it, put on the protective cap.
- - The probe is sharp. Be careful when using it.
- - Keep the product out of the reach of children..




**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**







## KC-326B HUMIDITY AND ENVIRONMENTAL PRESSURE METER



- A- Sensor Protective Cap
- B- Buckle
- C- Thermocouple interface (optional accessory, not included in the product)
- D- LCD screen
- E- LOG/SET button. Starts and stops data recording.
- F- MAX/MIN button. Change measurement mode to MAX/MIN. Alarm setting with UNIT button.
- G- ZERO/WBT button. Non-contact humidity measurement. Exchanges the Dry/Wet bulb temperature in HR mode, Clear the memory function with the UNIT button.
- H- UNIT  button/ Change units, recovery data, set alarm with MAX/MIN button, clear memory with ZERO/WBT button.
- I- <DN button. Scroll left. Use the UP button to review the saved data.
- J- DN> button. Scroll to the right. Use the UP> button to review the saved data.
- K- STORE/ENTER/  button Press and hold for 2s to memorize the current conditions and data. Press to exit memory or alarm mode.
- L- /HOLD button. Press once to turn on the device. Press again to set the data. Press and hold this button for 2s to turn it off.
- M- Moisture probe interface in wood.
- N- Mini USB interface.

### Display Screen Illustration





1.  Indicator arrow
2. RH - Relative humidity mode
3. AH - Absolute Moisture Mode
4. DEW - Dew point mode
5. COND - Condensation surface temperature-dew point mode
6. MR - Mixing ratio mode
7. BP - Ambient pressure mode
8. VP - Steam pressure mode
9. MI - Humidity mode without external probe
10. ME - Moisture mode with outdoor probe
11. TM - Time indicator
12. INT - Time Interval Recording Indicator
13. TML - Time duration recording indicator
14. JOB - Work Group Registration Indicator
15. CLR - Recording Settings Removal Indicator
16. DEF - Default Settings Indicator
17. HIGH LOW - Alarm limit indicator
18. ZERO - Zero Indicator
19.  External humidity level indicator
20. MAX, MIN - Maximum-minimum indicator
21. LOG - Log Indicator
22. HOLD - Data Set Indicator
23. RECL - Records Revision Status Indicator
24.  Data Memory, Serial Number Recording.
25. MEM, JOB - Data logging group indicator.
26.  Condensation indicator

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- 27.  USB connection indicator
- 28.  Low battery symbol
- 29. PROBE - Thermocouple indicator
- 30. DEW - Dew point temperature
- 31. WBT - Wet Bulb Temperature Indicator
- 32. DATA, TIME - Time and date indicator
- 33. APO - Auto Power Off Indicator
- 34. g/KG, GPP - Mixing ratio units
- 35. mg/L, g/m3 - Absolute Moisture Units
- 36. RH % - Relative humidity
- 37. °C °F - Units of temperature
- 38. kPa, mBAR - Units of pressure
- 39. S M M H D - Second, minute, hour and day indicator

**Operating Instructions**




• **Battery and turn on**

- Unscrew and open the battery cover, insert a 9V battery and replace the battery cover.
- Press  the power button and the device will turn on. Hold the power button for 2s or wait 30s for it to auto power off.
- **- RH Mode (Relative Humidity)**
  - The default mode after power-up is RH, or press the <DN or UP>  button to move the RH indicator date to another mode.



- Press the ZERO/WBT button under this mode and it will change from dry bulb mode to wet bulb mode.



- Press the UNIT/ button to change °C/°F
- Press and hold the STORE/ENTER/ button for two seconds to record the data displayed on the screen. The memory serial number increases by 1.
- **AH mode (absolute humidity)**
  - Turn on the device, press the <DN or UP> buttons to move the indicating arrow  from left to right to AH mode.

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- ◦ Press the UNIT/▲ button to change °C/°F, simultaneously switch between g/m3 and mg/L in AH mode.
- ◦ Press the STORE/ENTER/▼ button for 2 seconds to record the data displayed on the screen. The memory serial number will automatically increase by 1.

• **Mode DEW**

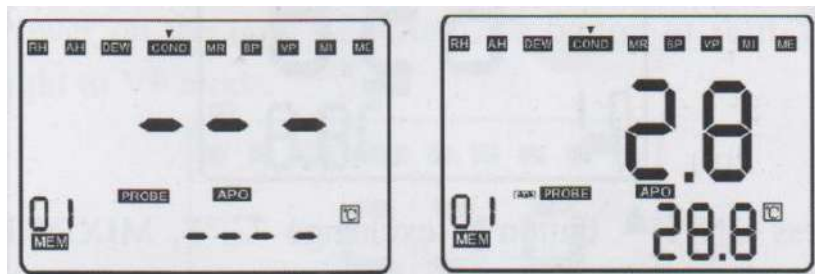
- Turn on the unit, press the <DN or UP> button to move the indicating arrow ▼ from left to right to DEW mode.



- ◦ Press the UNIT/▲ button to toggle between °C/°F
- ◦ Press the STORE/ENTER/▼ button for 2 seconds to record the data displayed on the screen. The memory serial number will automatically increase by 1.

• **Mode COND (condensation)**

- Turn the unit on, press the <DN or UP> button to move the indicating arrow ▼ from left to right to COND mode. If the thermocouple probe is not connected, "----" will be displayed. If the probe is connected, the first row shows the temperature difference at the dew point, and the second row shows the temperature value recorded by the thermocouple. (can be considered as the surface temperature)



- ◦ Press the UNIT/▲ button to toggle between °C/ °F
- ◦ When the superior result is higher than 14°C, ☹☹ it will not be shown. This indicates that it is difficult for condensation to occur in these temperature differences. When the measured value is in the range of 3~14°C ☹ it will be displayed. This indicates that condensation is possible at this temperature difference. When the result is below 3°C, ☹☹ it will appear on the display. This indicates that condensation is very easy to happen.

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- ◦ Press the STORE/ENTER/ ▼ button for 2 seconds to record the data displayed on the screen. The memory serial number will automatically increase by 1.

- **- MR Mode (Mixing Ratio)**

- ◦ Turn on the unit, press the <DN or UP> button to move the indicating arrow ▼ from left to right to MR mode.



- Press the UNIT/▲ button to toggle between °C/°F. The mix ratio will automatically change between g/kg and GPP (grains/pound).
- ◦ Press the STORE/ENTER/ button for 2 seconds to record the data displayed on the screen. The memory serial number will automatically increase by 1.

- **Mode BP ( ambient pressure)**

- ◦ Turn on the unit, press the <DN or UP> button to move the indicating arrow ▼ from left to right to BP mode.



- ◦ Press the UNIT/▲ button to switch between KPa and mBAR.
- ◦ Press the STORE/ENTER/ ▼ button for 2 seconds to record the data displayed on the screen. The memory serial number will automatically increase by 1.

- **- VP mode (steam pressure)**

- Turn on the unit, press the <DN or UP> button to move the indicating arrow ▼ from left to right to VP mode.



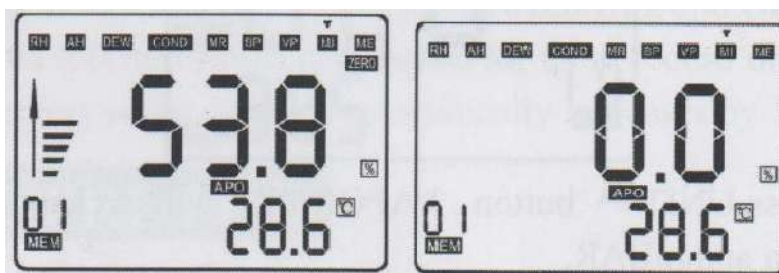
- ◦ Press the UNIT/▲ button to switch between KPa and mBAR.
- ◦ Press the STORE/ENTER/ ▼ button for 2 seconds to record the data displayed on the screen. The memory serial number will automatically increase by 1.

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- - **MI mode (humidity without external probe)**
- ◦ Under this mode, if nothing is touched and any value other than "0" is displayed, it needs to be calibrated. Hold the ZERO button and the ZERO symbol will appear. In a few seconds the ZERO symbol will disappear automatically and "0" will be shown on the display. When you switch to another mode, the calibration function will auto deactivate.
- Turn on the unit, press the <DN or UP> button to move the indicating arrow ▼ from left to right to MI mode. Place the device on the object to be measured.



- ◦ Press the ZERO button and the ZERO symbol will appear. Seconds later, the ZERO symbol disappears..



- ◦ Press the UNIT/▲ button to exchange °C/°F.
- ◦ Press the STORE/ENTER/▼ button for 2 seconds to record the data displayed on the screen. The memory serial number will automatically increase by 1.

- **Mode Me (humidity with external probe)**

- Turn on the unit, press the <DN or UP> button to move the indicating arrow ▼ from left to right to ME mode. Place the moisture probe on the appropriate connector and remove the protective cap to place the moisture detection pins on the material to be measured.

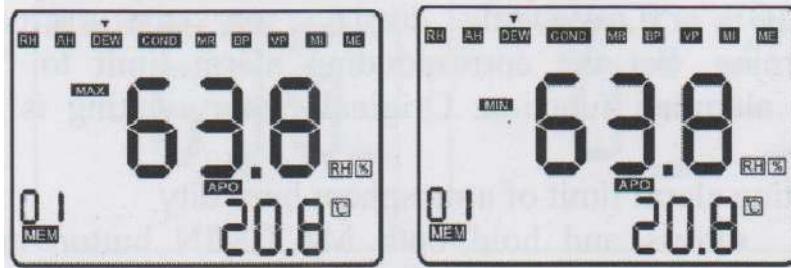


- ◦ Press the UNIT/▲ button to exchange °C/°F.
- ◦ Press the STORE/ENTER/▼ button for 2 seconds to record the data displayed on the screen. The memory serial number will automatically increase by 1.


- **Mode MAX/MIN**

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◦ Press the MAX/MIN button to measure the maximum and minimum values of the readings. (This function is disabled under the MI and ME modes. Under CON mode, the first row shows the actual value and the second row shows the maximum and minimum value of the thermocouple.)



• **Fix the data**

◦ Push the button /HOLD under normal mode and the HOLD symbol will appear on the screen to set the current data.



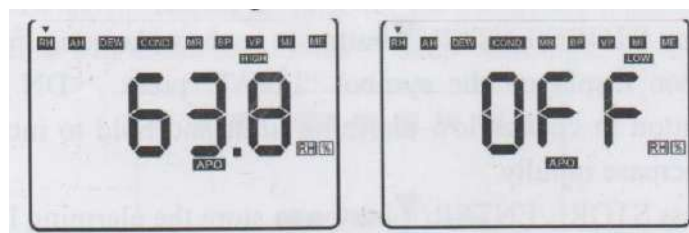
◦ Push the button /HOLD another time for erase the fix mode.



- **Setting alarm limits**

The user can set a limit of atmospheric humidity and humidity of the objects. When the measured humidity value is higher than the maximum alarm limit value or lower than the minimum alarm limit, the symbol "HIGH" or "LOW" will be displayed on the screen with an alarm sound. Set the alarm limit to "OFF" to deactivate the alarm. The factory defaults are 25% and 85%.

1. Setting the Humidity Alarm Limits

- Press and hold the MAX/MIN and UNIT buttons simultaneously under RH mode, the "HIGH" symbol will be displayed on the screen. Set the alarm limit to "OFF" to disable the alarm function.



- - Press the <DN or UP> button to change the upper alarm limit and hold it down to quickly increase or decrease the value.
- - Press the STORE/ENTER/  button to set the lower alarm limit.
- - When the "LOW" symbol is displayed press the <DN or UP> buttons to change the lower limit value and keep it pressed to quickly increase or decrease the value.
- - Press the STORE/ENTER/  button to save the alarm limit, auto exit and return to normal mode.

1. Set moisture alarm limits

- Press and hold the MAX/MIN and UNIT buttons simultaneously under MI and ME mode and the "HIGH" symbol will appear on the display. Set the alarm limit to "OFF" to disable the alarm function.
- ◦ Press the button <DN or UP> to change the upper alarm limit and hold it down to quickly increase or decrease the value.



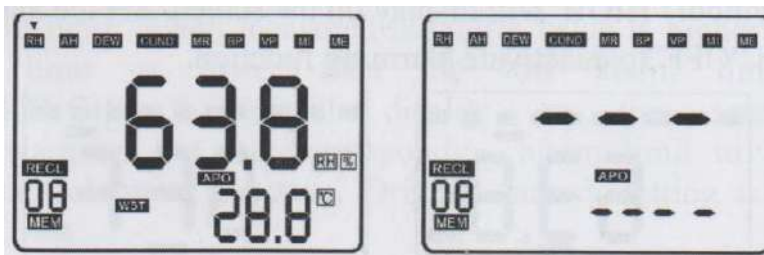
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- ◦ Press the STORE/ENTER/▼ button to save the alarm limit and auto exit and return to normal mode.

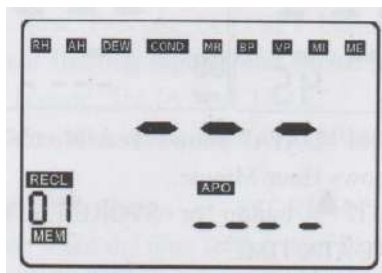
Note: The upper alarm value must be larger than the lower alarm value. If not, a beep will sound in the device warning you to reset the alarm limits.

◦ **Manually saving and deleting data**

- ◦ Press the <DN or UP> buttons simultaneously under any mode and the "RECALL" symbol and the current corresponding memory serial number will appear on the display.
- ◦ Press the <DN or UP> buttons to change the memory serial number, the corresponding data will be displayed..

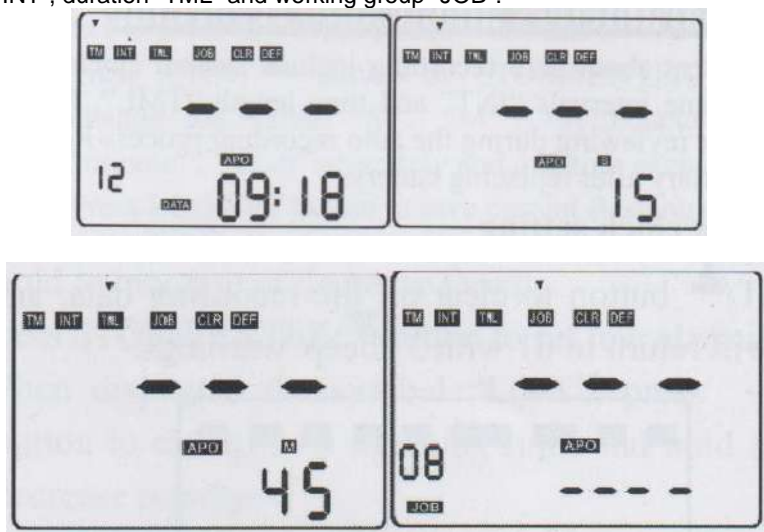


- To exit this mode, press the STORE/ENTER/▼ button to return to the previous mode.
- ◦ To delete all data in memory, press and hold the ZERO/WBT button and UNIT/▲ button to delete all stored data and the serial number will return to 01 with 3 beeps.



◦ **- Review of parameters related to automatic recording**

- Press the LOG/SET button to enter the parameter review mode and ▼ it will be displayed in the "TM" position or press the <DN or UP> button to move the arrow ▼ from left to right to "TM".
- Press the button <DN or UP> to move the arrow ▼ from left to right to see the system clock "TM", automatic recording time intervals "INT", duration "TML" and working group "JOB".

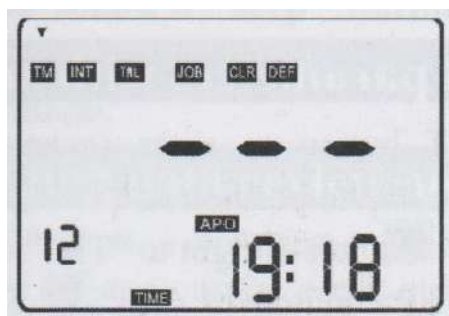




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- The "DATA" symbol shows year/month/day and the "TIME" symbol shows hour/minute. Press the UNIT/▲ or STORE/ENTER/▼ button to change "DATA"/"TIME".




- Push the button /HOLD for go out of this mode.


### • - Parameter settings for automatic recording.

Los parámetros sobre la grabación automática incluye el reloj del sistema "TM", intervalos de tiempo de grabación "INT" y duración "TML".

#### 1. System Clock Settings


- Press the <DN or UP> button to move the arrow ▼ from left to right to "TM".
- Press the LOG/SET button to enter the setting mode. If the "DATA" symbol is displayed, two digits of the year will flash first. Pressing the LOG/SET button each time will save the current flashing values and switch to the month, day, hour and minute digits. "DATA" and "TIME" can change automatically and start from 0 after the seconds have been set.
- Press the UNIT/▲ or STORE/ENTER/▼ button to change the flashing time.
- Press the <DN or UP> button to exit these settings and enter new ones. The data will not be saved.
- Press the /HOLD button to exit this mode and return to normal mode. The data will not be saved.

#### 2. Autoconfiguration adjustment of time intervals

- Enter revision mode to move the arrow ▼ to "INT".
- Press LOG/SET to confirm and enter the settings and the last two digits under the display will flash.
- Press the UNIT/▲ or STORE/ENTER/▼ button to change the value, "S", "M", "H" indicates second, minute and hour respectively.
- Press the LOG/SET button to save the current flashing digits.
- Press the <DN or UP> button to exit this setting without saving and enter other environments.
- Press the /HOLD button to exit this setting without saving and enter normal mode.

#### 3. Setting the duration

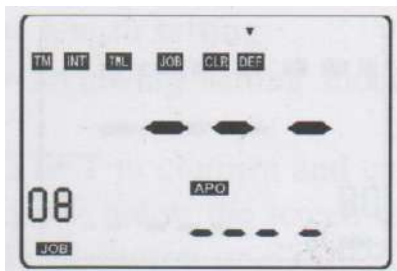
4.

- Enter the time duration recording mode, move the ▼ arrow to "TML".
- Press the LOG/SET button to confirm and enter settings and the last two lower digits will flash.
- Press UNIT/▲ or STORE/ENTER/▼ button to change "S", "M", "H" (second, minute and hour respectively).
- Press the LOG/SET button to save the current flashing values.
- Press the <DN or UP> button to exit this setting without saving any data.
- Press the /HOLD button to exit this setting without saving and enter normal mode.

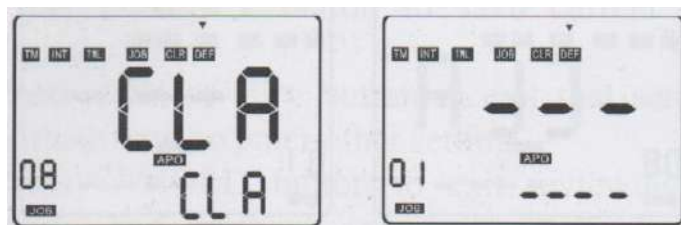
Note: The time duration recording mode "TML" must be greater than the recording of the time intervals "INT". If not, a "beep" will sound on the device and the data cannot be saved. The factory setting of "INT" is 15 seconds (minimum is 15 seconds and maximum is 24 hours). The factory value "TML" is 15 minutes (the minimum is 1 minute and the maximum is 30 days). When setting long duration periods, connect the USB to ensure the duration of the device.


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- - **Auto Erase Recording Data**
- ◦ Enter revision and adjustment mode by moving the arrow pointing ▼ to "CLR".




- Press the ZERO/WBT button for 2 seconds, and "CLR" will appear on the screen. All recording data will be erased and the serial number will return to 01.



- ◦ Press the <DN or UP> button to exit this setting.
- Pulse el botón /HOLD to exit the review and adjustment mode and return to normal mode.

◦ **Original factory settings**

- ◦ Enter review and adjustment mode by moving the indicator arrow ▼ to "DEF".
- ◦ Press the ZERO/WBT button for 2 seconds, and "CLR" will appear on the screen. All recording data will be erased and the serial number will return to 01. All configurable parameters will return to factory settings.
- Press the <DN or UP> button to exit this setting.
- Press the /HOLD button to exit review and adjust mode and return to normal mode.

◦ - **Automatic data recording**

◦

- Under normal measurement conditions, press the LOG/SET button for 2 seconds, and the "LOG" and "JOB" symbols and data will be displayed on the screen. The device will record according to the parameters. The auto power off function will be deactivated and the "APO" symbol will disappear.





- In recording mode, press LOG/SET for 2 seconds and the "LOG" and "JOB" symbols will disappear and the device will stop recording.
- Each time you start or stop recording, the serial number will automatically increase by 1, and the maximum number saved is 98. If the value is greater than 98, the "JOB" symbol will appear at this time, the recording is disabled and no data will be saved. Delete the existing data and record again.

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- If you use only the battery, the recorded data will be saved before the low battery symbol appears. After the low battery symbol appears, the recording will stop and save the previous data. If the device has the low battery symbol activated, you cannot save any data.
- Connect the 5V power supply instead of downloading data via USB, the PC connection symbol will not appear. At this time, only external power is supplied. By connecting the 5V power supply you can ensure that the unit will work for a long period of time and will not shut down. When connecting the power or external USB to the PC, the device will cancel the auto power off function. The "APO" symbol will disappear. The recording function will not be changed.

- **Adjustment of PC and data transmission**

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- ◦ When connecting the device, if the unit is in the auto-recording state, you need to exit to the manual state (the "LOG" symbol will disappear from the display) to continue communication with the PC.
- ◦ Connect the PC via USB,  and the symbol will appear on the screen. This will indicate that the connection has been made correctly. At this time, we can use the PC to perform the configuration and download data (please refer to the user manual). The unit will cancel the auto power off function and the "APO" symbol will disappear. After the communication, close the program, the PC symbol will not disappear and the data recording will stop. Disconnect the USB cable from the PC and the PC connection symbol  disappears and a new recording can be made.
- After successful connection and data transfer, do not work with the device. When disconnecting the device from the PC, turn the unit off and on again to continue working.

- **Device lighting control**

- The device light will turn off if there is no action after 30 seconds.

- **Auto Power Off Settings**

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- ◦ Press the power button and the "APO" symbol will be displayed on the screen. The device will turn itself off in 30 minutes with 3 beeps.
- ◦ Press the ZERO/WBT button to turn on the device again and the "APO" symbol will disappear. The Auto Power Off Function.

Note: When the auto recording mode is on or the external power supply is connected, the auto power off function stops automatically and the "APO" symbol will disappear..

### 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..

**KC-326B HUMIDITY AND ENVIRONMENTAL PRESSURE METER**

**Technical Specifications**

Product name	Humidity and environmental pressure meter with humidity probe for walls and wood.
Model	KC-326B
Humidity range of the probe	0~99.9%
Humidity range of the sensor	0~99.9%
Ambient temperature range	-29°C~75°C ± 2°C
Wet bulb temperature range	-20°C~60°C
Relative humidity accuracy (0%~10%)	±3%
Relative humidity accuracy (11%~90%)	±2.5%
Relative humidity accuracy (91%~100%)	±3%
Absolute humidity range	0.5~240 g/m <sup>3</sup> (mg/l)
Spray temperature range	-60°C~60°C
GPP Range (grains per pound)	0~999GPP
Ambient pressure range	30~120kPa
Vapour pressure range	0~20kPa
Thermocouple temperature range	-100°C~1000°C
Data Recording	Manual: 20, Auto: 8000
Automatic screen shutdown	30 seconds no activity
Automatic device shutdown	30 minutes no activity
PC Interface	USB 2.0
Accessories	Humidity sonde , wire USB y CD
Optional accessories	Termocouple K type (not included)
Power supply	A battery 9V (6F22/6LR61)
Intensity of work	<25mA
Working temperature	0°C~43°C
Working Humidity	5%~95% HR without condensation
Storage	-30°C~60°C, <90% HR (without battery)
Dimensions	185mm x 72mm x 36mm
Weight	180g

**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.**