

WILLHI WH1436H Digital Humidity Controller Manual (NEW VERSION)



UPDATE:

- ✧ The outlet has been updated from a universal outlet to a standard U.S. outlet.
- ✧ The operation has been simplified for ease of use.
- ✧ An expanded humidity control range has been implemented.

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1. Main functions:

- Turn your device on and off at desired humidity
- Settings are stored even when powered off.
- Humidity calibration correction
- High and low humidity alarm

2. Specifications:

- **Max Load: 10A (1100W @110V or 2200W @220V)**
- Humidity Accuracy: 1%
- Probe measurement range: 1%~100% RH
- Working temperature for the controller: -40°F~176°F / -40°C ~ 80°C
- Working humidity for the controller panel: less than 85%
- Working mode: Humidification mode OR Dehumidification mode
- Power supply: AC 110V ~ 240V, 50/60Hz
- Power consumption: less than 3W

3. Indicator Instruction:

SET indicator is on	In setting process
SET indicator is off	In control process
WORKING indicator is on	Supplying output power
WORKING indicator is off	No output power

4. Key Operation Instruction

SET: Press SET for 3 seconds to enter settings menu. In the settings menu, press SET once to enter a parameter setting. After specifying a value for a parameter, press SET once to go back to the menu.

POWER: In setting process (SET indicator is ON), press POWER once to save and quit setting. When it's not in working process (SET indicator is off), press POWER for 3 seconds to turn off the controller. Then press POWER once again to turn it on.

UP/DOWN: In setting process (SET indicator is on), press UP/DOWN to select parameter or adjust value of a parameter. **Holding the button allows for rapid number adjustments.**

Use UP/DOWN to check the Hb and Lb value. When it's not in setting process (SET indicator is off), hold UP to check Hb (Higher bound of your desired humidity range), hold DOWN to check Lb (Lower bound of your desired humidity range).

Restore default setting: When the controller is powered on, pressing POWER for 3 seconds to shut off the controller. Then press POWER once to turn on the controller. When the screen displays 888s, press SET and UP buttons at the same time until the display is back to normal reading. Then all settings will be restored to default.

Alarm Switch: The alarm function is disabled by default. It will be enabled if you specify a value for AL or AH. After alarm sounds, press any of the buttons to disable the alarm. **Please note that in order to enable the alarm function again, you need to cut off the power and turn on controller again.**

5. Quick start and step by step examples:

To use your controller, you only need to set 3 parameters: **[HC]**, **[Lb]**, **[Hb]**. Others are optional.

Tips: Holding the button allows for rapid number adjustments

HC=H Humidification	The load will be turned on once detected humidity is below [Lb] . The load will be turned off once detected humidity reaches [Hb] .
HC=C Dehumidification	The load will be turned on once detected humidity is over [Hb] . The load will be turned off once detected humidity reaches [Lb] .

Example #1

Control a humidifier: Keep humidity between 70% and 85%.

Parameter value: **[HC = H]** **[Lb = 70]** **[Hb = 85]**

- 1, Power on the controller
- 2, Press SET for 3 seconds, release button when you see HC. Press SET once to enter **HC** parameter.
- 3, Press UP/DOWN to select H. Press SET once and go back to menu.
- 4, Press UP to select **Lb**. Then press SET once to enter **Lb** parameter
- 5, Press UP/DOWN to specify **70** for **Lb**. Press SET once and go back to menu.
- 6, Press UP to select **Hb**. Then press SET once to enter **Hb** parameter
- 8, Press UP/DOWN to specify **85** for **Hb**.
- 9, Press POWER. DONE.

How it works:

- Once the detected humidity is below 70%, the controller turns on the humidifier.
- Once the detected humidity reaches 85%, the controller turns off the humidifier.

NOTE: The WH1436H can accurately controls turn-on and turn-off points. However, there might be overshooting. It's not the WH1436H's fault. You can consider changing the power of your humidifier to compensate for the overshooting effect.

Example #2 Control a dehumidifier: Keep humidity between 35% and 38%. Alarm sounds when the temperature exceeds 40%.

Parameter: **[HC = C]** **[Lb = 35]** **[Hb = 38]** **[AH = 40]**

- 1, Power on the controller
- 2, Press SET for 3 seconds, release button when you see HC. Press SET once to enter **HC** parameter.
- 3, Press UP/DOWN to select **C**. Press SET once and go back to menu.
- 4, Press UP to select **Lb**. Then press SET once to enter **Lb** parameter
- 5, Press UP/DOWN to specify **35** for **Lb**. Press SET once and go back to menu.
- 6, Press UP to select **Hb**. Then press SET once to enter **Hb** parameter
- 7, Press UP/DOWN to specify **38** for **Hb**. Press SET once and go back to menu.
- 8, Press UP to select **AH**. Then press SET once to enter **AH** parameter
- 9, Press UP/DOWN to specify **40** for **AH**.
- 10, Press POWER. DONE.

How it works:

- Once the detected humidity exceeds 38%, the controller turns on the dehumidifier.
 - Once the detected humidity reaches 35%, the controller turns off the dehumidifier.
- If the dehumidifier is defective and the humidity exceeds 40%, it beeps and displays H and the detected humidity on the screen.

6. Menu Instruction

Code	Default	Range	Definition	Explanation
HC	C	C or H	Working mode	H for humidification, C for dehumidification
Lb**	80	0~100	Lower bound of your desired humidity range	In humidification mode, Lb is turn-on degree. In dehumidification mode, Lb is turn-off degree.
Hb**	85	0~100	Higher bound of your desired humidity range	In humidification mode, Hb is turn-off degree. In dehumidification mode, Hb is turn-on degree.
CA	0	-12~12	Calibrate the reading	<i>Optional.</i> If measured humidity is 3% higher than the real humidity, set CA=-3.
PT***	0	0~30	Compressor Time Delay (unit: minute)	<i>Optional.</i> It defines the time interval of 2 compressor cycles(On-Off)
AH	100	0~100	High humidity alarm	<i>Optional.</i> It will beep once humidity exceeds AH . Press any key to stop alarm.
AL	0	0~100	Low humidity alarm	<i>Optional.</i> It will beep once humidity is below AL . Press any key to stop alarm.

** Lb must be less than Hb.

If while setting either Lb or Hb you inadvertently make Lb greater than Hb, the other setting will automatically adjust to make Lb less than Hb. This can be corrected by carefully setting the humidity range and never allowing Lb to be greater than Hb or allowing Hb to be less than Lb. To ensure Hb and Lb are specified correct value, check it again after you quit setting. Hold UP button to check Hb value and hold DOWN button to check Lb value on screen.

***Further explanation about Compressor Time Delay (PT):

The time delay is a way of over-riding the humidity sensor so that regardless of detected humidity the output device will not turn on unless the specified time duration has elapsed. Under dehumidification mode, after the power is on, if the measured humidity is higher than **Hb**, the device won't start output device immediately, but waiting for a delay time. **Delay time is calculated right after the moment that the output device stops.**

When the time interval of two on-off cycles is larger than the preset delay time, the controller will turn on the output device immediately. (For example, PT=2. It's been 3 minutes when the humidity reaches the turn-on temperature again. The output device starts immediately.)

When the time interval between two on-off cycles is less than preset delay, the controller won't turn on the output device until preset delay is satisfied. (For example, PT=5. Your output device stopped 3 minutes ago. Although it's now turn-on-degree, you have to wait 2 more minutes before your output device starts again.)

7. Trouble Shooting:

A. Output device does not turn on when specified humidity is reached.

Firstly please understand that the controller **turns off** the load when the target humidity is **reached**. It **turns on** the load only when the specified temperature is then **exceeded**. For example, if you set HC=C, Lb=40, Hb=45, then the load will be turned off once the humidity reaches 40. The load will be turned on only when the humidity is **OVER** 45.

Then, check if a PT value is specified. If you've specified a PT value, during the delay, the WORKING indicator on screen will flash. Your device will be turned on after the specified time delay.

B. The controller displays EEE while beeping.

Please check if the 3.5mm plug of the sensor probe is inserted completely into the jack on side of the controller. If plugged in correctly, the probe is most likely defective. Please email us at bill.1226@163.com for a free probe replacement.

C. The controller will not turn on or shut off automatically.

Make sure the input power cord is inserted securely into the power outlet.

D. The screen displays LLL.

This means the humidity is below the minimum value that this controller can measure.

E. The screen displays HHH.

This means the humidity is over the maximum value that this controller can measure.

F. It keeps beeping when the temperature reaches a certain level.

This is usually because the alarm has been set. You can set AH=100 and AL=-0 to disable the alarm function.

G, Lower Bound (Lb) or Higher Bound (Hb) automatically change after setting.

Lb must be less than Hb. If while setting either Lb or Hb you inadvertently make Lb greater than Hb, the other setting will automatically adjust to make Lb less than Hb. This can be corrected by carefully setting the temperature range and never allowing Lb to be greater than Hb or allowing Hb to be less than Lb.

To ensure Hb and Lb are specified correct value, check it again after you quit setting. Hold UP button to check Hb value and hold DOWN button to check Lb value on screen.



WARNING

- ✘ **Rated Current of this controller is 10A (1100W @110V, or 2200W @220V). Check amps and watts of your output device in order to reduce the risk of fire caused by overloading.**
- ✘ **Make sure the input power cord is inserted completely in the socket as incomplete contact between the pins and plug can result in fire.**