

ZL-7830 Intelligent Humidity Controller

Instruction Manual A1.0

Feature

ZL-7830 series are humidity controller with big output relay (30A), compact design with IP65 level front panel, convenient operation and easy installation, applied for humidify and dehumidify control.

Model

Model	Function
ZL-7830A	Humidify/Dehumidify
ZL-7830B	Humidify/Dehumidify, Alarm output






Technical Specification

- ◇ Power supply: AC100~240V 50/60HZ
- ◇ Input signal: one humidity sensor (L=2000mm)
- ◇ Output load: R1 load 30A/250Vac, R2/R3 load 3A/250Vac (Resistive load)
- ◇ Set range: humidity 0-100RH with 0.1% resolution
- ◇ Absolute measurement accuracy: humidity 5%
- ◇ Working environment: -20~45℃, 10-90%RH without dewing
- ◇ Machine dimension: 78*34.5*71(mm, W*H*D)
- ◇ Drilling template: 71*29(mm, W*H)
- ◇ Case materials: PC+ABS (fireproof)
- ◇ Protection level: IP65 (front panel)

Display Indication

Display sign

- ◇ Eco mode: The LED display brightness will reduce to save power, when there is no key operation for 10 seconds.

Icon	Function	On	Blinking
	Humidity load	Load is energized	Load protecting delay
	Humidify mode	Humidify mode	----
	Dehumidify mode	Dehumidify mode	----
	Warning	----	Warning
	Humidity display	Display humidity	Humidity setting. Warning
E1	Malfunction	----	Sensor failure
E2	Malfunction	----	Over the up humidity limit
E3	Malfunction	----	Bellow the down humidity limit
UnL	Info	Restoring to the default parameters	----

Key Operation

Set humidity

Keep [S] pressed for 3 seconds to enter into the set mode, digital shows the humidity set value.

Press [▲] or [▼] to adjust the set value (Keeping pressing [▲] or [▼] could fast set)

Press [S] to quit setting mode, and save the set data.

The device will leave the set mode without saving the set data, when there is no key operation for 30 seconds.

Set other parameters

Keep [S] pressed for 3 seconds to enter into the mode, digital shows [---0]. Press [▼] to select the digit of the password, press [▲] to select the value of the current digit (0-9). Press [S] to confirm. (If the password is "0000", it means no password. This step will be skipped. The factory setting is without password.)

Now the display shows the parameter code. Press [▲] or [▼] to select the code.

Press [S] to show its value. Press [▲] or [▼] to set the value. Press [S] to return parameter code display status.

Keep [P] depressed for 3 seconds, the set parameters will be saved, and exit.

Note: The mode will exit without saving the settings, when there is no key operation for 30 seconds.

Parameter codes:

No.	Parameter code	Function	Setting Range	Instruction	Factory Setting
01	U10	Humidify/Dehumidify	H/P	H: Humidify. P: Dehumidify	P
02	U11	Humidity hysteresis	0.1 ~ 20 %		5
03	U12	Load delay protection	0 ~ 30 min		0
04	U13	Humidity calibration	-9.9 ~ +9.9 %		0
05	U14	Humidity alarm up limit	0 ~ 100 %		100
06	U15	Humidity alarm down limit	0 ~ 100 %		0
07	U16	Alarm delay time	0 ~ 600 sec		30
08	U99	Password	0000 ~ 9999	If 0000, means password	0000

Control Function Instruction

Dehumidify control

- ◇ When humidity \geq 【set humidity】, and load has stopped for U12 minutes, the humidity load will be energized.
- ◇ When humidity \leq 【set humidity】 - U11, humidity load will stop.

Humidify control

- ◇ When humidity \leq 【set humidity】, and load has stopped for U12 minutes, the humidity load will be energized.
- ◇ When humidity \geq 【set humidity】 + U11, humidity load will stop.

Load delay protection

- ◇ Just after the controller power is supplied, the humidity load output could be energized after U12 minutes.
- ◇ Just after the humidity load stops, it could be energized again after U12 minutes.

Warning

- ◇ When sensor fails, digital shows blinking "E1", buzzer will be beeping, humidity load stop.
- ◇ When humidity \geq U14 for U16 seconds, digital will show blinking "E2", buzzer beep, alarm relay be de-energized, humidity load keep its status.
- ◇ When humidity \leq U15 for U16 seconds, digital will show blinking "E3", buzzer beep, alarm relay be de-energized, humidity load keep its status.

Note: when beeping, press [P] to stop beeping.

Alarm output (for model ZL-7830B): When power supplied, and there are no failure, the relay for Alarm is energized.

Signal Name	Instruction
NO(R3)	Open when warning, closed when no failure
NC(R2)	Close when warning, open when no failure
COM	Common port

Sensor calibration

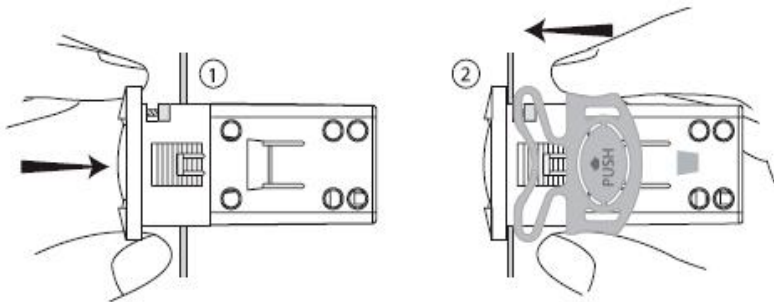
- ◇ When there is tolerance for humidity sensing, it could be calibrated by setting U13, the range is $\pm 9.9\%$;
- ◇ Do not plug on/off the sensor with the power is supplied.

Restore to the factory default parameter settings

Press [P] and [▲] simultaneously for 3 seconds, digital shows [UnL], then press [▼] twice, controller will restore all parameter settings to the factory default values.

Installation Procedure

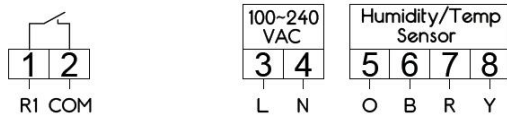
1. Insert the controller into hole (step one)
2. Slide the bracket to fix the device (step two)



Wiring Diagram

ZL-7830A

R1: Humi. Load 30A/250V~



ZL-7830B

R1: Humi. Load 30A/250V~

R2/R3: Alarm Load 3A/250V~

