ZL-7816A Humidity and Temperature Controller

Version 1.2

Specification

Power supply: 12Vac, or 12Vdc

Input: One humidity and temperature sensor, cable length is 1.5 meters. It can be extended. The limit is 50 meters.

Sensor precision: Humidity ±3% RH@25℃; Temperature ±1%@25℃

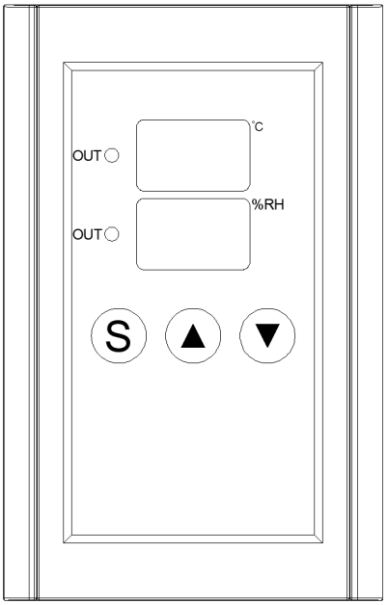
Setting range: Humidity 0.0 ~ 99.9% RH; Temperature 0.0 ~ 80.0℃

Output: Every output ≤ 7A (250Vac, pure resistance)

Working environment: -10 ~ 45℃; ≤ 90% RH without dew

Power consumption: 2W

Sensor option: ZL-SHR04 or ZL-SHR05



Setting Operation

Keep〖S〗depressed for 2 seconds to enter into set status:

The up window displays the parameter code.

The bottom window displays the value of the code.

Press〖S〗to select the code

Press〖▲〗or〖▼〗 to set the value (keep depressed make fast set).

Keep〖S〗depressed for 2 seconds to exit, and the settings are saved.

Note: The status will exit if no key operation for 30 seconds, and the settings will be saved.

Code	Function	Set Range	Remark	Factory Set
tC	Temperature control mode	CO/HE	CO: Cooling. HE: Heating	HE
tSP	Temperature Setting	0.0 ~ 99.9℃		37.5
td	Temperature hysteresis	0.0 ~ 30.0℃		0.1
tCA	Temperature calibration	-5.0 ~ 5.0℃		0.0
tHA	High temperature alarm hysteresis	0.0 ~ 30.0℃	0: Disable	0.5
tLA	Low temperature alarm hysteresis	0.0 ~ 30.0℃	0: Disable	1.5
HC	Humidity control mode	H/P	H: Humidify. P: Dehumidify	H
HSP	Humidity Setting	0.0 ~ 99.9% RH		52.0
Hd	Humidity hysteresis	0.0 ~ 30.0% RH		0.2
HCA	Humidity calibration	-5.0 ~ 5.0% RH		0.0
HHA	High humidity alarm hysteresis	0.0 ~ 30.0% RH	0: Disable	10.0
HLA	Low humidity alarm hysteresis	0.0 ~ 30.0% RH	0: Disable	5.0
SHr	Select Sensor	4 ~ 5	4: ZL-SHR04. 5: ZL-SHR05	5
BA	Buzzing alarm	0/1	0: disable. 1: enable	1

Control Function

Temperature control

Cool mode (tC = CO)

When【room_temp.】≥ tSP+Td, temp. load will be on.

When【room_temp.】≤ tSP, temp. load will be off.

Heat mode (tC = HE)

When【room_temp.】≤ tSP - Td, temp. load will be on.

When【room_temp.】≥ tSP, temp. load will be off.

Humidity control

Humidify mode (HC = H)

When【room_humidity】≤HSP - Hd, humidity load will be on.

When【room_ humidity.】≥ HSP, humidity. load will be off.

Dehumidify mode (HC = P)

When【room_humidity】≥HSP + Hd, humidity load will be on.

When【room_ humidity.】≤ HSP, humidity. load will be off.

Over temperature/Over humidity Warning

Over temperature warning

When【room_temp.】≥ tSP + tHA, there will be over high temperature warning, LED display “tHi”.

When【room_temp.】≤ tSP - tLA, there will be over low temperature warning, LED display “tLo”.

Over humidity warning

When【room_humidity.】≥ HSP + HHA, there will be over high humidity warning, LED display “HHi”.

When【room_humidity.】≤ HSP - HLA, there will be over low humidity warning, LED display “HLo”.

Sensor calibration

The tolerance of measured room temperature can be calibrated by tCA.

The tolerance of measured room humidity can be calibrated by HCA.

Display

When the sensor is not connected well, or fails, display “--.-“.

When the temperature output is energized, the up LED “out” is on;

When the humidity output is energized, the bottom LED “out” is on.

Restore To Factory Default Settings

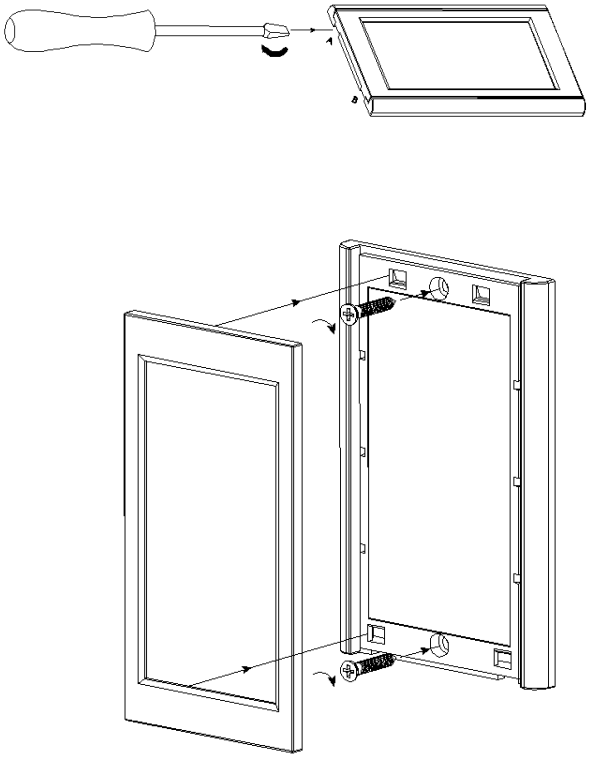
Keep〖▲〗and〖▼〗depressed simultaneously for 2 sec, the device displays “UnL” +“0”, press 【▼】three times, the controller will reset all parameters to factory default settings.

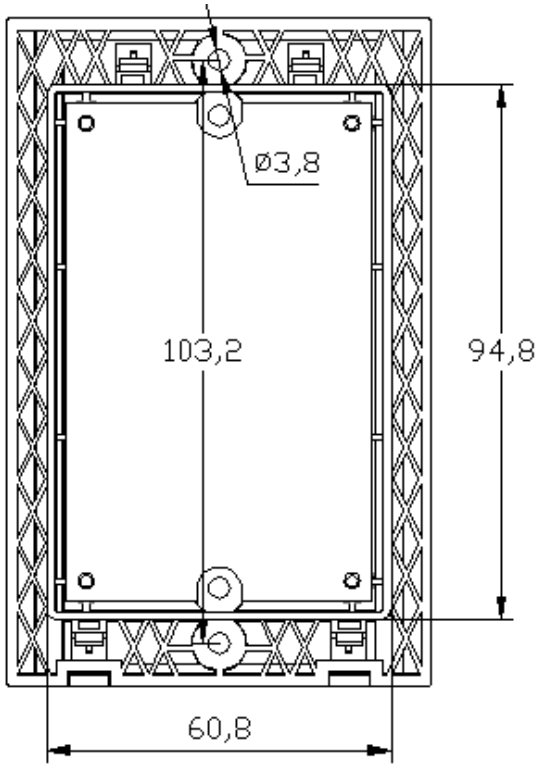
Warning

1. Do not connect wiring when power is supplied.
2. Electrical wiring must be manipulated by certified electrician.

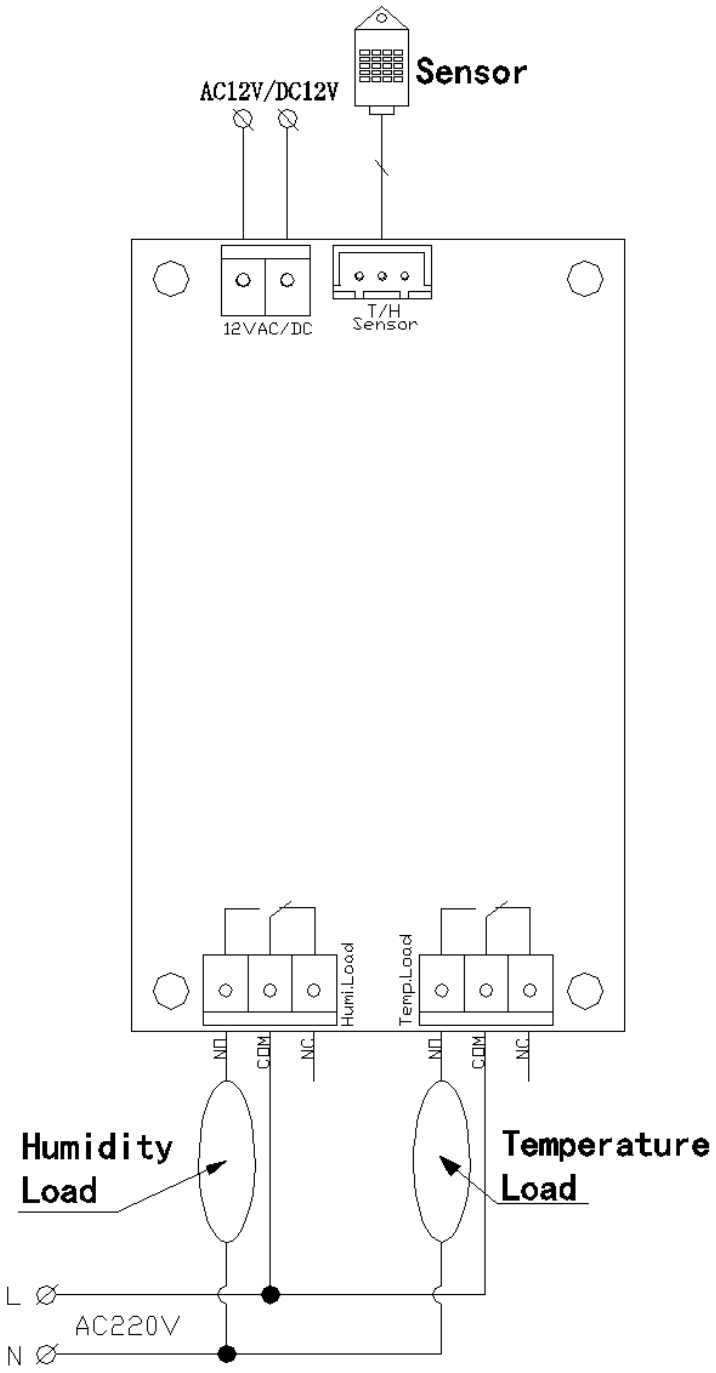
3. Read this manual carefully. Connect according to electrical wiring diagram. Wrong connection will damage the device.
4. Do not layout the sensor bundle together with power supply bundle.
5. Avoid working in erosive, wet and strong electrical-magnetic field environment, which could affect the device works correctly.
6. This device has been checked fully before shipment. The warranty time is one year, damaged by wrong usage, such as wrong connection, is not warranted.

Installation





Wiring


Sensor
AC12V/DC12V
12VAC/DC
T/H
Sensor
Humi.Load
Temp.Load
NO
COM
NC
NO
COM
NC
Humidity
Load
Temperature
Load
L
AC220V
N