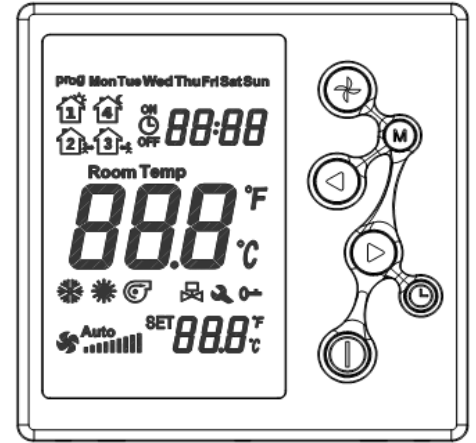


ZL-HV80 Series Fan Coil Controller

1. Introduction

- ZL-HV80 make use of super robust MCU, and excellent components, with simple and easy interactivity. With 86*86mm dimension which is same size as standard electrical switch box, it is convenient in application.
- The thermostat has seven days a week, four hours programming function.
- The thermostat has a timer switch machine.
- Set the parameters, the controller suits for two-wire electric valve, three-wire electric valve, and heating/cooling two valves system.
- The controller suits for zones temperature control of central air conditioning.



2. Specification

- Sensor: NTC
- Control accuracy: $\pm 1^{\circ}\text{C}$
- Fahrenheit temperature set range: 41~95°F
- Fahrenheit temperature display range: 16~122°F
- Working environments: 0~45°C, 5~95% RH(without dew)
- Power supply: AC 85~260V, 50/60HZ
- Load limitation: 2A with resistant load; 1A with inductive load
- Terminals: 2 lines X 1.5 mm², or 1 line x 2.5mm²
- Celsius temperature display range: -9~50°C
- Celsius temperature set range: 5~35°C
- Power consumption: < 2W
- Shell: fire-proof ABS
- Protection: IP30
- Dimension: 86x86x12 mm
- Installation: 60mm standard

3. Hardware Introduction

- 3.1 The system has six buttons, ON/OFF ①、Clock Set⌚、ModeM、Fan speed🌀、Temp+➡、Temp-⬅。
- 3.2 The system has five ways of relay output, two ways control electric valves, three ways control fan.
- 3.3 Electric valves can choose three output control method
 - 3.3.1 Set the parameter F1, electric valves output be set to will control in following methods
 - 3.3.2 F1=1, two wires electric valve
 - 3.3.3 F1=2, three wires electric valve
 - 3.3.4 F1=3, heating/cooling two valves
 - 3.3.5 When electric valve opening, the LCD will show “☒” flag
 - 3.3.6 Factory default F1=1
- 3.4 Fan work mode
 - 3.4.1 Fan speed: High, Medium and Low, control by three ways of relay output

3.4.2 There are two fan working mode, set F2 to select the mode

3.4.3 F2=1, valve off, fan stops

3.4.4 F2=2, valve off, fan keeps working

3.4.5 Factory default F2=1

4. Set parameter

4.1 The parameters of the controller are divided into user parameters and system parameters. In the parameter set status, if room temperature display area shows "t1", then we could enter into user menu, shows "t2", then we could enter into system menu. In any status, we are able to set parameters.

4.2 Hold "▷" and "◁" key for three seconds, the system will enter into parameter set status, and room temperature display area will shows "t1". Pressing "▷" or "◁" key switches selection menu "t1" or "t2"

4.3 Set user parameters

4.3.1 When the room temperature display area shows "t1", press "M" key, enter into user parameter set status. At this time room temperature display area shows user parameter sign "U1". Set temperature display area shows corresponding parameter data.

4.3.2 Press "M" key to switch selection user parameter, At this time the set temperature display area will show its corresponding parameter data.

4.3.3 Press "▷" or "◁" key to modify the corresponding parameter data.

4.3.4 When set completes, keep depressing "M" key for three seconds to exit parameter set status,

The set data are saved. The controller will working according to new set parameter data 3 seconds later.

4.3.5 In the set parameter status, do not press any key for 30 seconds, the mode exits, and the set parameter are not saved.

4.3.6 User Parameter Table:

Parameter Code	Function	Range	Explain	Factory Setting
U1	Low Temperature Protection	0~1	0: Off 1: On	0
U2	Restart	0~1	0: Off 1: On	0
U3	Keypad Lock	0~1	0: Off 1: On	0
U4	Time Period Programming	0~1	0: Off 1: On	0

4.4 Set system parameter

4.4.1 The controller must use the password to enter the system parameter setting status

4.4.2 When the room temperature display area shows "t2", press "M" key, enter into set system parameter status, At this time room temperature display area

show password sign "--", "--" represent two digital password. use "▶" or "◀" key enter password, again press "M" key confirm. If correct, shows system parameter sign, at this time set temperature display area shows corresponding parameter content, else exits.

4.4.3 Press "M" key to switch system parameter. At this time, the set temperature display area will show its corresponding parameter data.

4.4.4 Press "▶" or "◀" key to modify the corresponding parameter data.

4.4.5 When set completes, keep depressing "M" key for three seconds to exit parameter set status,

The set data are saved. The controller will working according to new set parameter data 3 seconds later.

4.4.6 In the set parameter status, do not press any key for 30 seconds, the mode exits, and the set parameter are not saved.

4.4.7 System Parameter Table:

Parameter Code	Function	Range	Explain	Factory Setting
F1	Electric Valve Type	1~3	1: Two Line Valve 2: Three Line Valve 3: Cool/Heat valve	1
F2	Fan Mode	1~2	1: Temperature reaches set data, fan stop 2: Temperature reaches set data, fan work	1
F3	Temperature Sensor Calibration	-10~+20℃		0
F4	Temperature Unit	1~2	1: ℃ 2: °F	1
--	Password	00-99		11

5. Set system clock

5.1 In the non- set state keep depressing "⌚" key for 2 seconds, and enter the time setting system. The corresponding "Week" sign flashing, use "◀" and "▶" Key to the set of "Week".

5.2 Press "⌚" button when "Week" has been set up, then "Week" sign stops blinking, flashing signs of the "Hour", use "◀" and "▶" Key to the set of "Hour".

5.3 Press "⌚" button when "Hour" has been set up, then "Hour" sign stops blinking, flashing signs of the "Minute", use "◀" and "▶" Key to the set of "Minute".

5.4 Press "⌚" button when "Minute" has been set up, it will exit the clock setting mode. "Hour" sign stops blinking, the controller clock will operate with the new setting clock.

Second unit will be zero, second from scratch timing.

5.5 If clock setting state for 30 seconds without key operation, and then automatically exit the clock setting state. But the clock is set invalid; control is running according to the original clock.