

ZL-7918A Humidity and Temperature Controller Manual V1.0a

Feature

ZL-7918A is an intelligent temperature and humidity controller, safe and stable, convenient to operate, applicable for control of incubator, climate chamber, warehouse, and so on.

Specification

- ◇ Power supply: AC100~240V 50/60Hz
- ◇ One temperature sensor (L = 1.5 meter), one humidity sensor (L = 1.5 meter)
- ◇ Setting range: Humidity 10 ~ 80% RH. Temperature 1 ~ 65°C
- ◇ Display range: Humidity 0 ~ 99%RH. Temperature -20 ~ 80°C
- ◇ Measuring accuracy: Humidity $\pm 3\%$ @25°C. Temperature $\pm 1\%$
- ◇ Output control: 7 outputs (heater, aux-heater, fan, egg left-turning, egg right-turning, humidity, illumination)
- ◇ Output load: heaters $\leq 1500W$. Illumination lamp $\leq 100W$. Humidity, fan and egg turnings $\leq 1A/250Vac$
- ◇ Hatched day record: the maximum value is 99 days
- ◇ Egg turn control: Turn period: 1 ~ 999 minutes. Turn driving time: 0 ~ 999 seconds. Turn times counter: 0 ~ 999 times
- ◇ Air exhaustion control: Period: 1 ~ 999 minutes. Exhausting time: 0 ~ 999 seconds
- ◇ Illumination control: Period: 1 ~ 999 minutes. Illuminating time: 0 ~ 999 seconds
- ◇ Operation environment: -10 ~ 45°C, less than 90% RH without dew
- ◇ Device dimension: 160 * 80 * 95 mm
- ◇ Installation drilling size: 151.5 * 76.5 mm

Setting

Set temperature and humidity set-point

When *temperature or humidity set-point* has been set, the *temperature and humidity control parameters* will be generated automatically and accordingly.

Press **【Set】** to enter into *temperature and humidity set-point* setting status.

Press **【Enter】** to switch between temperature and humidity settings.

SV window displays "***" + "tt": setting temperature.

SV window displays "***" + "HH": setting humidity.

Press **【▲】** or **【▼】** to set the set-point "***" (Keeping the key depressed can fast set).

Keeping **【Enter】** depressed for 2 seconds will exit setting status, the settings will be saved, and *temperature and humidity control parameters* will be generated automatically and accordingly.

The setting status will exit without saving if there is no key operation for 25 seconds.

Temperature setting range: 1 ~ 65°C (factory default is 38°C)

Humidity setting range: 10 ~ 80% RH (factory default is 60%)

Set temperature and humidity control parameter

Note: Setting these parameters will change the automatically generated values!

Press **【Set】** and **【▲】** simultaneously to enter into *temperature and humidity control parameter* setting status.

Press **【Enter】** to select parameter.

SV window displays the selection from "***" + "P0" to "***" + "PP".

Ref. the *temperature and humidity control parameter* code table below.

Press **【▲】** or **【▼】** to set the value "***" (Keeping the key depressed can fast set).

Keeping **【Enter】** depressed for 2 seconds will exit setting status, the settings will be saved.

The setting status will exit without saving if there is no key operation for 25 seconds.

Temperature and humidity control parameter code table:

No.	Code	Function	Range	Note	Default
001	P0	High temperature warning point	0 ~ 75°C		38.7
002	P1	Ventilation temperature up limit	0 ~ 75°C		38.2
003	P2	Ventilation temperature low limit	0 ~ 75°C		38
004	P3	Main temperature up limit	0 ~ 75°C		38
005	P4	Main temperature low limit	0 ~ 75°C		37.9
006	P5	Aux temperature up limit	0 ~ 75°C		37.7
007	P6	Aux temperature low limit	0 ~ 75°C		37.5
008	P7	Low temperature warning point	0 ~ 75°C		37.2
009	P8	High humidity warning point	0 ~ 99%		70
010	P9	Humidity up limit	0 ~ 99%		60
011	Pb	Humidity low limit	0 ~ 99%		55
012	PP	Low humidity warning point	0 ~ 99%		50

Set function control parameter

Press **【Set】** and **【▼】** simultaneously to enter into *function control parameter* setting status.

Press **【Enter】** to select parameter.

SV window displays the selection from “***” + “F1” to “***” + “FF”.

Ref. the *function control parameter* code table below.

Press **【▲】** or **【▼】** to set the value “***” (Keeping the key depressed can fast set).

Keeping **【Enter】** depressed for 2 seconds will exit setting status, the settings will be saved.

The setting status will exit without saving, if there is no key operation for 25 seconds.

Function control parameter code table:

No.	Code	Function	Range	Note	Default
001	F1	Egg turn period	1 ~ 999 min		90
002	F2	Egg turn time	0 ~ 999 sec	0: no egg turnings	180
003	F3	Egg turn times	0 ~ 999 times	0: turn for ever	0
004	F4	Air exhausting period	1 ~ 999 min		120
005	F5	Air exhausting time	0 ~ 999 sec	0: no air exhausting	30
006	F6	Temperature calibration	-9.9 ~ 9.9°C		0
007	F7	Humidity calibration	-20 ~ 20%		0
008	F8	Illumination period	1 ~ 999 min		90
009	F9	Illumination time	0 ~ 999 min	0: no illuminating	0
010	FF	Incubated days	0 ~ 99 day	Only clear operation	0

Check Incubated Days and Egg Turned Times

Press **【Enter】** and **【▲】** simultaneously, SV window displays *incubated days* “days” + “t1” for 3 seconds.

Press **【Enter】** and **【▼】** simultaneously, SV window displays *egg turned times* “times” + “t2” for 3 seconds.

Control

On/off operation

Keep **【Lamp - I/O】** depressed for 3 seconds, controller turns on or off.

Illumination operation

Manual on/off: Press **【Lamp - I/O】** , lamp turns on or off.

Timer on/off: Every \llbracket Illumination period, F8 \rrbracket , lamp will be on for \llbracket Illumination time, F9 \rrbracket .

Temperature control

Main heater: When *room temperature* \leq \llbracket Main temperature low limit, P4 \rrbracket , the heater will be on.

When *room temperature* \geq \llbracket Main temperature up limit, P3 \rrbracket , the heater will be off.

Aux. heater: When *room temperature* \leq \llbracket Aux temperature low limit, P6 \rrbracket , the heater will be on.

When *room temperature* \geq \llbracket Aux temperature up limit, P5 \rrbracket , the heater will be off.

Fan: When *room temperature* \geq \llbracket Ventilation temperature up limit, P1 \rrbracket , the fan will be on.

When *room temperature* \leq \llbracket Ventilation temperature low limit, P2 \rrbracket , the fan will be off.

Humidity control

When room humidity \leq \llbracket Humidity low limit, Pb \rrbracket , humidity output will be on.

When room humidity \geq \llbracket Humidity up limit, P9 \rrbracket , humidity output will be off.

Egg Turn control

Every \llbracket Egg turn period, F1 \rrbracket , egg turn output will be on for \llbracket Egg turn time, F2 \rrbracket .

Egg turn left output and right output will be on alternatively.

Times counter for egg turn: 1 left turn + 1 right turn = 1 egg turn.

When egg turn counters to \llbracket Egg turn times, F3 \rrbracket , there will be no egg turn.

Keeping **【▲】** depressed for 2 seconds can force left turning.

Keeping **【▼】** depressed for 2 seconds can force right turning.

Timer exhaustion control

Every \llbracket Air exhausting period, F4 \rrbracket , the fan will be on for \llbracket Air exhausting time, F5 \rrbracket .

Alarm control

When *room temperature* \geq \llbracket High temperature warning point, P0 \rrbracket , buzzer alarms, room temperature display blinks.

When *room temperature* \leq \llbracket Low temperature warning point, P7 \rrbracket , buzzer alarms, room temperature display blinks.

When *room humidity* \geq \llbracket High humidity warning point, P8 \rrbracket , buzzer alarms, room humidity display blinks.

When *room humidity* \leq \llbracket Low humidity warning point, PP \rrbracket , buzzer alarms, room humidity display blinks.

The buzzing alarm can be cancelled and restored by pressing **【Enter】** key.

Temperature and humidity calibration

Room temperature can be calibrated by setting \llbracket Temperature calibration, F6 \rrbracket .

Room humidity can be calibrated by setting \llbracket Humidity calibration, F7 \rrbracket .

Incubated days

\llbracket Incubated days, FF \rrbracket records the incubated days.

To make use of the data, it is necessary to clear the record before starting every incubating.

Restore to factory setting

Keep **【▲】** and **【▼】** depressed simultaneously for 3 seconds, SV window displays "000" + "00", buzzer beeps, then release the keys' pressing, the controller will restore to factory default settings.

LED indication

LED	On	Blinking	Off
FAN	Fan on during [Air exhausting time, F5]	Fan on, because room temperature reaches [Ventilation temperature up limit, P1]	Fan off
HEAT1	Main heater on		Main heater off
HEAT2	Aux heater on		Aux heater off
UP	Egg left turning now		No left turning
DOWN	Egg right turning now		No right turning
WET	Humidifying output on		Humidifying output off
ALARM		Room temperature or humidity is over warning points, or sensor fails	

Warning code

Code	Indication
E1	Temperature sensor failure
E2	Humidity sensor failure
E3	Room temperature is higher than [High temperature warning point, P0]
E4	Room temperature is lower than [Low temperature warning point, P7]
E5	Room humidity is higher than [High humidity warning point, P8]
E6	Room humidity is lower than [Low humidity warning point, PP]

Wiring Diagram

Attention

- The device is shipped with factory default setting. It suits for normal hatching requirements. So it is even able to use directly without any setting. About factory default setting, see the tables above.
- If need to set new temperature and humidity, please operate according to paragraph "Setting – Temperature and humidity set". The other parameters for working control will be generated automatically and accordingly. If you try to set the "working control parameters", please set them based on understanding to avoid hatching failure.
- Humidity sensor will not work correctly when covered with water or dew. Please keep its clean and dry, to get accurate result.
- Manufacturer is responsible for the device itself, is not responsible to losses resulted by the failure of this device.

