ZL-6200A Temperature Controller
Instruction Manual A1.0e

Introduction

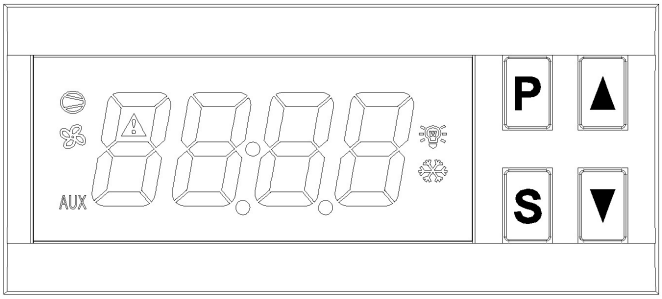
ZL-6200A is for cooling, heating or warning control. Front panel water proof level IP65, control resolution 0.1℃, keypad password protection. It is suitable to control or audit cold storage, aquarium, water heater, and so on.

Main Function

Cooling, heating or auditing
Over temperature warning
Sensor failure warning
Temperature control
Temp. output energized/de-energized periodically when sensor fails

Specification

Power supply: 185 ~ 245Vac, 50/60Hz
Sensor: NTC, 2 meters long
Display range: -50 ~ 120℃
Setting range: -50 ~ 120℃
Warning: Buzzing
(When in warning mode, temp. output as warning output)
Working: -10 ~ 45℃, 5 ~ 90%RH without dew
Dimension: W78 x H34.5 x D71 (mm)
Installation drilling: W71 x H29 (mm)
Case materials: PC + ABS fire proof
Protection level: IP65 (Front side only)
Resolution: 0.1℃
Absolute accuracy: 1% at 25℃
Accuracy after calibration: 0.1℃
Temp. output, R1: 10A, 250Vac (**resistive**)



Keypad and Display

Display	Function	On	Blinking
	Heating mode	Heating mode	Setting set-point
	Cooling mode	Cooling mode	Setting set-point
AUX	Warning mode	Warning mode	Setting set-point
	Temp. output, R1	R1 energized	Delay protecting
	Warning	----	Warning
E1	Warning	----	Sensor open
E2	Warning	----	Sensor short
HH	Warning	----	Over high temperature limit
LL	Warning	----	Bellow low temperature limit

Operation

On/off: Keep〖P〗depressed for 3 seconds to switch on/off.
Check settings: Press〖▲〗 to check the set-point; Press〖▼〗 to check the hysteresis.
Set Set-Point
When online, keep〖S〗depressed for 3 seconds to enter into the set status. The current set-point value displays.
Press〖▲〗or〖▼〗 to set the value (keeping depressed can fast set).
Keep〖S〗depressed for 3 seconds to exit, and save the settings.
The status will exit, and the setting will be saved, if no key operation within 30 seconds.
Set System Parameters
Keep〖S〗+〖▲〗depressed simultaneously for 3 seconds:
If the password is not “0000”, digits show “---0”:
Press〖▼〗to select the digit of the password, press〖▲〗to set the value of the digit.
Press〖S〗 to confirm: If the password is correct, enter into the parameter setting status, else exit.
If the password is “0000”, it equals no password, enter into the parameter setting status directly.
Set in parameter setting status:
Press〖▲〗or〖▼〗to select the parameter code (see parameter code table below).

Press〖S〗 to display the value of the code.

Press〖▲〗or〖▼〗to set the value. Press〖S〗to return to parameter code selection.

Keep〖S〗depressed for 3 seconds to exit, and save the settings.

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

Parameter Code Table

Code	Function	Range	Remark	Factory set
F0	Hysteresis	0.1 ~ 15.0℃		3.0
F1	Minimum time for R1 to keep de-energized	0 ~ 9 minute		3
F2	Low limit for set-point	-50.0℃~ 120.0℃		-20.0℃
F3	Up limit for set-point	-50.0℃~ 120.0℃		20.0℃
F4	Working mode	1 ~ 3	1: cooling; 2: heating; 3: warning	1
F5	Sensor calibration	-5.0 ~ +5.0℃		0.0℃
F6	Password	0000 ~ 9999	0000: disable password	0000

Control

Cooling Control (F4 = 1)

If **Troom** ≥ Set-point + F0, and R1 has been de-energized for F1, then R1 energized;

If **Troom** ≤ Set-point, then R1 de-energized.

Protecting Run When Sensor Fails: R1 will be energized for 15 minutes, and de-energized for 15 minutes, periodically.

Heating Control (F4 = 2)

If **Troom** ≤ Set-point, and R1 has been de-energized for F1, then R1 energized;

If **Troom** ≥ Set-point + F0, then R1 de-energized.

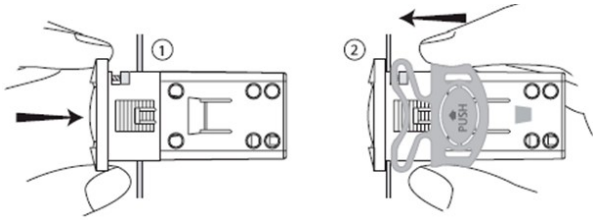
Warning Control (F4 = 3)

If **Troom** ≥ Set-point + F0, or **Troom** ≤ Set-point, and R1 has been de-energized for F1, then R1 energized;

Temp. Output Load Delay Protection

After power supplied, R1 could be energized after F1 time;

After R1 de-energized, it could be energized again after F1.



Installation

1st: Insert into drilling hole; 2nd: Clamp

Restore to Factory Default Settings

Keep〖P〗and〖▲〗depressed simultaneously for 5 sec, there will be a beep, and “UnL” displays.

Press〖▼〗twice, there will be a beep, all settings will be restored to factory default settings.

Attention

- Wiring work should be manipulated by certified technicians.
- Wrong connection could damage the controller, and the loads. Power supply to terminal 7 and 8 to check the controller. If there is a multimeter, check the outputs, as well as input, by the help of settings.
- Sensor and input signal wires should not be laid together with power supply wire, and even in same pipe.
- Sensor wire is better as short as possible. Not wind the redundant length wire to electrical noise equipment.
- The loads should be within the specification of the controller output driving ability. If using ac/dc module as load, or tungsten lamp, or motor, following the below requirements to avoid surging current damaging or shorten the life time of the controller outputs:

For ac/dc module as load, the rated current should be no more 1/10th of output specification **under pure resistance**.

For tungsten lamp as load, the rated current should be no more 1/15th of output specification **under pure resistance**.

For motor, the rate current should be no more 1/5th of output specification **under pure resistance**.

For example: if drive a 1500W tungsten lamp with 7A (**pure resistance** spec.) relay, the **relay contactor will be burnt immediately**.

- Don’t touch inside components;
- Avoid installing controller in the following environment:

More wet than 90%RH, or easily dew; Vibrating, or will be shocked; Possible sprayed; Under erosive air; Under explosive air.

Electrical Wiring