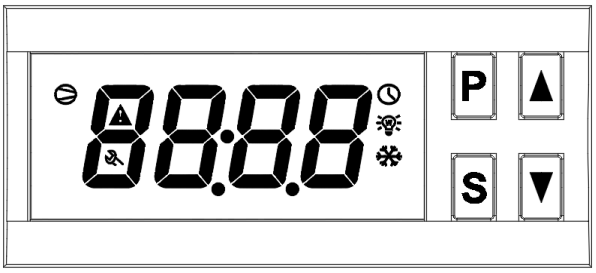
ZL-6203T+
Manual, A1.0

Introduction
ZL-6203T+, temperature controller, 30A output, timer on, timer off, IP65 sealing protection at front side, heating , or cooling control.

Specification
Power supply: 185 ~ 245Vac, 50/60Hz
Setting range: -20 ~ 120℃
Display range: -40 ~ 130℃
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 fireproof
Protection level: IP65 (Front side only)
Temperature resolution: 0.1℃
Sensor: NTC, 5K@25℃, B=3470K, 2 meter cable
Sensor accuracy: 3%
Temperature calibration: has.
Output: 30A, 250Vac, **resistive**

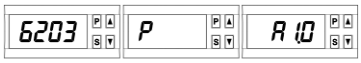


Display

Icon	Function	On	Blinking
	Heating	Heating	Setting setpoint
	Cooling	Cooling	Setting setpoint
	R1 status	R1 is on	During delay protection
	Timer	During timer on	During timer off

Display	Remark
EC	Sensor short
EO	Sensor open
UnL	Restore to factory settings

Display after power supplied
Display consecutively:



Switch On/Offline
Keep〖P〗depressed for 2 seconds, switch between online and offline. The controller display "OFF" when in offline.

Set Set-point
Press〖S〗, the current set-point value displays (Factory setting is 60℃), or blinks.
Press〖▲〗or〖▼〗to set the value (keeping depressed can fast set).
Keep〖S〗depressed for 2 seconds to exit, and **save** the setting.
The setting status will exit, and the setting **will not be saved** if there is no key operation within 10 seconds.

Set Parameters
Keep〖S〗depressed for 2 seconds, controller will show "F01", the code of the 1st parameter.
Press〖▲〗or〖▼〗to select the parameter, from "F01" to "F06", see parameter code table below.
Press〖S〗to display the value of the parameter. Press〖▲〗or〖▼〗to set the value of the parameter.
Press〖S〗to return to parameter selection.
Keep〖S〗depressed for 2 seconds to exit, and **save the settings**.
The setting status will exit, and the settings **will not be saved** if there is no key operation for 30 seconds.

Parameter Code Table

Code	Function	Range	Remark	Factory set
F01	Control mode	H/C	H: Heat, C: Cool	H
F02	Hysteresis	0.1 ~ 30.0℃		1.0
F03	Calibration	-10.0 ~ +10.0℃		0.0
F04	Delay protection	0 ~ 300 seconds		3
F05	Buzzing alarming	ON/OFF	OFF: Disable, ON: Enable	ON
F06	Auto restart	ON/OFF	OFF: Disable, ON: Enable	OFF

Set Timers
Press〖P〗, display "toFF". Press〖▲〗or〖▼〗to select between timer on "toN" and timer off "toFF".
Press〖S〗to display the value of the timer on, or timer off. Press〖▲〗or〖▼〗to set its value. Press〖S〗to return.
Keep〖S〗depressed for 2 seconds to exit, and **save the settings**.
The setting status will exit, and the settings **will not be saved** if there is no key operation for 10 seconds.
The Timers could only be set in offline status.

Timer Code Table

Code	Function	Range	Remark	Factory set
toFF	Delay time to keep R1 de-energized	0 ~ 900 min		0
toN	Time for temperature control	1 ~ 900 min, ON	ON: Temperature control never stops	ON

Inquire the Rest Time

Press 〖▼〗 to show the rest time of the timer period. The display keeps 5 seconds or returns immediately after press the key again.

Control

Cooling control (F01 = C)

If **Troom** ≥ Set-point + F02, and R1 has been de-energized for F04, R1 will be energized.

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

Heating control (F01 = H)

If **Troom** ≤ Set-point – F02, and R1 has been de-energized for F04, R1 will be energized.

If **Troom** ≥ Set-point, R1 will be de-energized.

Timer control

After controller switched to online, ⏲ blinks, and keep R1 de-energized for toFF time.

After toFF time has been past:

If toN = ON, ⏲ is off, temperature control will never stop.

Else, ⏲ is on, temperature control will keep for toN time. After the time, ⏲ is off, the controller will turn to offline automatically.

Auto restart

If F06 = ON, when power supplied, the controller will be in the same on/offline status as that before the power supply loses.

If F06 = OFF, when power supplied, the controller will be in the offline status.

Output delay protection

After power supplied, R1 could be energized after F04 time has passed.

After R1 is de-energized, it could be energized again after F04.

Sensor failure

If sensor is short circuit, blinking show "EC", buzzing, R1 will be de-energized.

If sensor is open circuit, blinking show "EO", buzzing, R1 will be de-energized.

Press 〖▲〗 could stop buzzing alarming sound.

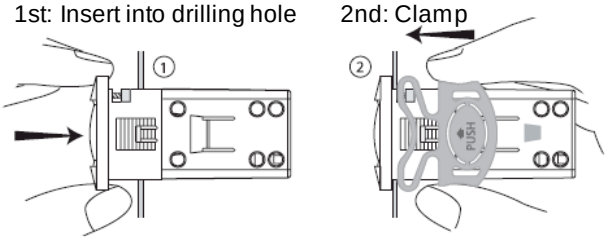
Restore to factory setting

Keep 〖P〗 and 〖▲〗 depressed simultaneously for 3 sec, there will be a beep, and "UnL" displays.

Press 〖▼〗 twice, all settings will be restored to factory settings (see Factory set of the code tables).

Installation

1st: Insert into drilling hole 2nd: Clamp



Attention

- Wiring work should be manipulated by certified technicians.
- Wrong connection could damage the controller, and the loads. Power supply to pin 3 and 4 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 lifetime of the controller output:

  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.

Wiring