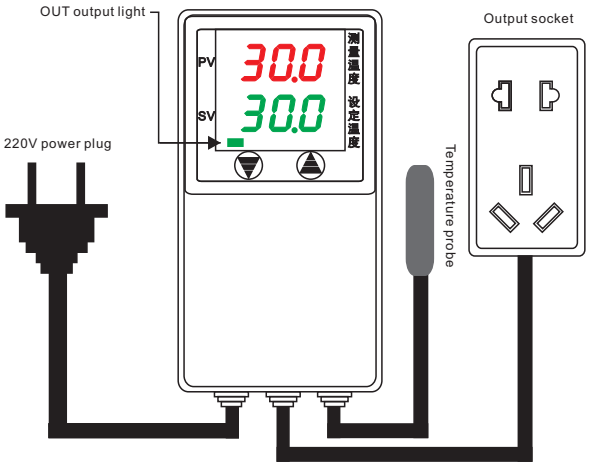
CL-609 Aquaculture and hatchery (turtle, fish, snake) intelligent temperature controller manual

First of all, thank you for using our high quality products.
Please read this manual carefully before use so that you can fully understand and use this instrument.

1.Shape and panel description:



PV Red digital display value: measure temperature
SV Green digital display value: set temperature
Appearance size: 115mm (height) * 59mm (width) * 30mm (thickness)

2.Features:

1、Small integrated intelligent temperature controller, used in aquaculture (turtle,fish, snakes)industry temperature control.

2、The inside of the controller adopts the integrated digital module LED display and touch-type keys, which is easy to operate.

3、Controller function heating / cooling mode free switching, temperature probe self-diagnosis, there are a variety of alarm mode selection.

4、Plug-type power supply, socket type output temperature control system, convenient for users in different situations.Use, eliminate complicated wiring and maintenance-free.

5、 Power supply line all use BVR1.5 more than pure copper wire, supporting air-conditioning special high-power socket, keep the heating system operates safelyfor a long period of time.

3. Technical Parameters

1,Working power: 220VAC 50/60HZ.

2, Temperature sensor: 50K NTC.

3, Temperature display range: -40.0 °C ~ +120 °C, resolution: 0.1 °C (-9.9-99.9 °C).

4,Temperature control range: -20.0 °C ~ +110 °C, resolution: ± 1 °C.

5, Working environment: -10 °C ~ +60 °C, relative humidity: 20% ~ 85% (no condensation).

6, The main control relay contact capacity: normally open contact 5A
(recommended load: cooling 0.5 horses, heating 800W).

4.Control parameter description:

Symbol	Parameter name	Predetermined area	Initial value	Description
Short press "▲" or "▼" key to enter the control temperature setting state (LCK=1).				
SV	Setting value	CL--CH	30.0℃	Set the required temperature control target value
Press the "▲" and "▼" keys at the same time for about 10 seconds to enter the engineering parameter view and set (LCK=12)				
LCK	Parameter lock	0-20	1	LCK=0, all parameters cannot be modified LCK=1, only the SV reference value can be modified. LCK=12, all parameters can be modified
AL	Alarm value	-40~+120℃	35.0℃	Set alarm value
Fd	control method	F/D	F	F: heating control, D: cooling control.
bd	Master control difference	0.0~10.0℃	0.5℃	Set master control relay operation backlash
SC	Sensor correction	-10.0~+10.0℃	0.0℃	Set the measurement error due to the sensor
AP	Alarm method	H/L/b/A/E/n	H	H: Upper limit alarm, L: Lower limit alarm. b: Upper deviation alarm, A: Lower deviation alarm. E: Out of range alarm. n: No alarm function.
CL	SV minimum setting	-40~+120℃	18℃	Limit the minimum set temperature of SV
CH	SV maximum setting	-40~+120℃	35℃	Limit the maximum set temperature of SV

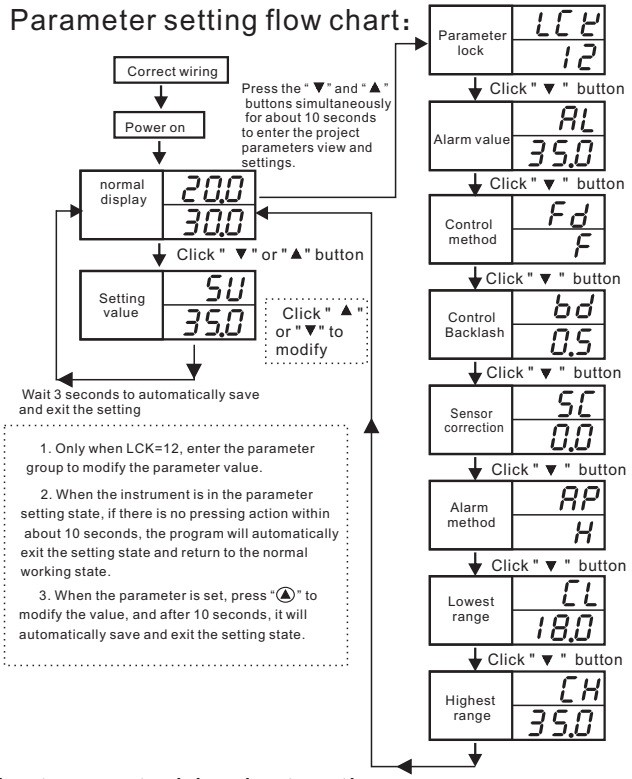
5.Instrument temperature control function description (heating mode example)

1. Heating operation description: After power on, when PV<SV, the OUT indicator lights up and the controller warms up. When the temperature rises to SV-PV ≤ 3°C, the OUT lamp starts flashing. When PV=SV, the controller turns off the output and the system stops heating. When the temperature drops to PV≤SV-bd, the OUT light flashes and the controller resumes heating operation. With this cycle work, achieve a constant temperature.

2. Temperature probe self-test: When the PV window shows "LLL" or "HHH", it means the temperature probe is faulty. At this time, you need to replace the same type of temperature probe.

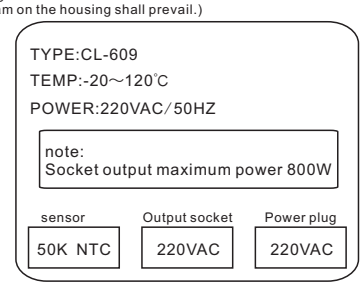
3, over-temperature alarm function: When the control temperature exceeds the AL value, the PV window displays "EH", at the same time the buzzer sounds, the controller automatically shuts down the heating operation. At this point, the user should check the cause of the alarm and troubleshoot it.

6. Parameter setting flow chart:



7.Instrument wiring instructions:

(If the wiring diagram on the instruction sheet is inconsistent with the wiring diagram on the meter housing, the wiring diagram on the housing shall prevail.)



8.installation and use precautions Description:

1, in order to prevent high-frequency interference, the probe line can not be with the power line or output power line together amount away from the power or power line, there is space to separate wiring.

2. The instrument drives high power load (more than 800W), it is best to connect the relay or AC toucher. To extend the life of the instrument's internal relays.

3, if you want to extend the probe line due to installation reasons, the longest can not exceed 100 meters.

4, in order to ensure the normal use of the instrument, please avoid in a corrosive, flammable, explosive, damp used in harsh environments.

5. After the instrument software/hardware function is upgraded, please refer to the latest version specification. .

6, Factory equipped with accessories: integrated temperature controller, a manual. Instrument use such as abnormal, please first check the instructions or call the factory after-sales technical support phone for technical support 0086-15107613940/E-MAIL: sale@aposunmeter.com