

## WTZK-50-C Pressure Type Temperature Controller Instruction Manual

The WTZK-50-C features a cast aluminum casing, is waterproof, and meets marine conditions. The controller uses a capillary tube temperature sensor. It can be used for gaseous or liquid media that are non-corrosive to copper and copper alloys, as well as steam. The controller's set value is adjustable, with a regulation range of 10-200°C.

### ● Basic Performance

No.	Setting Range (°C)	Adjustable Differential Range (°C)	Setting Value Error (°C)	Repeatability Error (°C)	Max Allowable Temperature (°C)	Capillary Length (m)	Weight (Kg)
		Min Differential ≤	Max Differential ≥				
1	10~40				55		
2	40~80	2	2		95		
3	60~100				115	1, 3, 5,	1.25~
4	80~120	3	5		135	8, 10, 12	1.85
5	110~150			3	3	165	
6	130~170				185		
7	160~200				215		

*Note: The setting value refers to the lower switching value.*

### ● Electrical Performance

AC Resistive Load	DC Resistive Load
Voltage V	Current A

AC Resistive Load	DC Resistive Load
380	3

**Wiring Diagram**

[Image of wiring diagram showing terminals 1, 2, 3 and a switch symbol T]

Single-pole double-throw microswitch operation status: When temperature T rises to the upper switching value, terminals 1-2 are connected; when T drops to the lower switching value, terminals 1-3 are connected.

● **Enclosure Protection Rating** WTZK-50-C IP44

● **Vibration Resistance** WTZK-50-C 225Hz 1.6mm; 25100Hz 40m/s<sup>2</sup>

Sales Hotline: 021-56983311 56325599 Fax: 021-69927273

● **Debugging:**

**Example:** Control the oil temperature inside a casing to be within 66~70°C using this controller.

1. Select controller number 2. Perform debugging after proper installation.
2. Maintain the temperature at 66°C, remove the lock nut, and rotate the adjustment rod to set the value. When the microswitch switches by rotating counter-clockwise, the pointer indicates the set value.
3. If high precision for the set value is not required, you can debug using the controller's scale or a thermometer in the system. If high precision is required, use a high-precision thermometer's reading as a reference value for debugging.

Since a differential of 4°C is required, the differential knob should be adjusted. Raise the temperature to 70°C and keep it constant, then rotate the differential knob until the microswitch triggers. When the switch triggers by rotating counter-clockwise, the position of the knob is the required differential. Seal it with paint. Install the lock nut.

● **Dimensions** [Image of the controller's dimensions with measurements]

● **Installation**

- Open the controller cover and use the four M4 screws inside to vertically mount the controller onto a dedicated panel.

- Thread the cable through the washer and seal, then wire according to the wiring diagram. Tighten the nut and close the controller cover.
  - Screw the M27x2 nut on the temperature bulb into the system's threaded hole. Depending on the required length, tighten the other nut. The temperature bulb should be fully immersed in the controlled medium, and the surrounding medium should maintain uniform flow. The bending radius of the capillary tube should be no less than 50mm, and it should be secured every 400mm with clips, ensuring no collision at any time.
- 

#### ● Precautions

- When opening the controller cover, do not rotate the internal screws or poke internal parts.
- The pointer's indicated value is the lower switching value; the setting range is the adjustment range for the lower switching value.
- The numbers on the differential knob only indicate the degree of the differential size, not the actual value. If precise values are needed, please refer to the standard table.
- During debugging, do not exceed the maximum allowable temperature listed in the table.
- The ambient environment should be free of corrosive gases.
- Please specify the capillary tube length when ordering.
- The controller is guaranteed for eighteen months from the date of factory delivery. The factory is responsible for timely repair or replacement for any product quality issues