HWP-T804-01-23-HL-P Pressure Controller User Manual

1. Product Overview

The HWP-T804-01-23-HL-P Pressure Controller is an intelligent liquid level light column controller designed for precise measurement and control in various applications. It features advanced digital filtering technology for strong anti-interference capabilities and a porous heat dissipation design for stable operation.

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Key Features:

- **Advanced Digital Filtering:** Utilizes digital filtering technology to identify and suppress low-frequency disturbances and irregular interference sources, ensuring stable and accurate measurement signals.
- **High Measurement Accuracy:** Capable of measuring pressure values with high precision, providing stable and reliable readings.
- **Efficient Heat Dissipation:** Features a porous design for effective heat dissipation, contributing to prolonged stable operation.
- **Easy Installation:** Designed with common installation dimensions for both domestic and international instruments, simplifying setup, maintenance, and replacement.
- **Wide Application Range:** Suitable for use in water treatment plants, sewage treatment plants, urban water supply, high-level swimming pools, water wells, mines, industrial water, water tanks, oil pools, hydrogeology, reservoirs, rivers, oceans, and similar environments.



This image emphasizes the controller's advanced digital filtering technology, which allows it to effectively identify and suppress low-frequency disturbances and irregular interference, ensuring stable and accurate measurements.

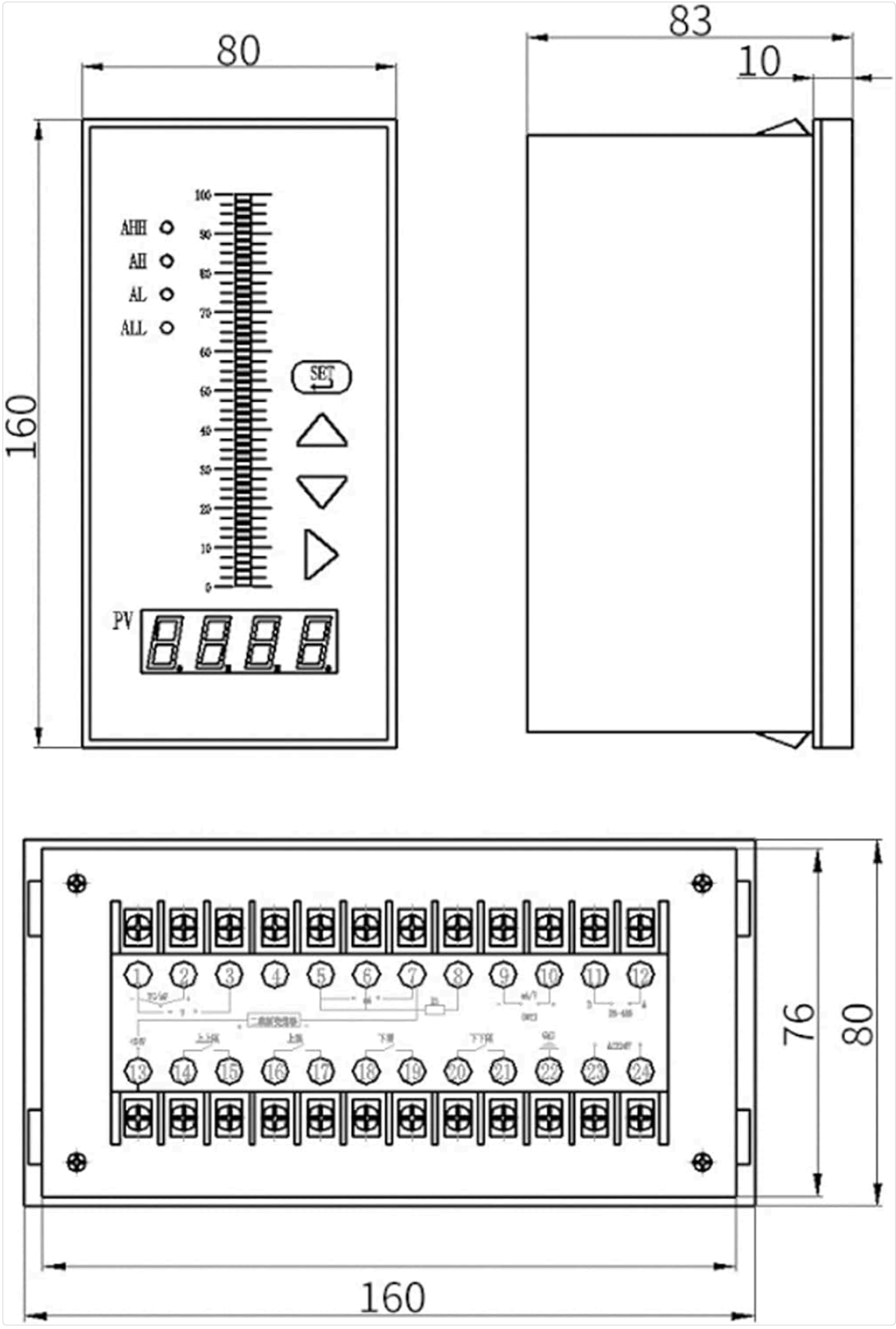


This visual highlights two key features: the porous design for efficient heat dissipation, which contributes to stable operation, and the high measurement accuracy that ensures precise and reliable pressure readings.

2. Specifications

Parameter	Value
Item Type	Pressure Controller
Model	HWP-T804-01-23-HL-P
Material	ABS
Manufacturer	LIUTT
Power Supply Voltage	AC 220V 50HZ
Measurement Accuracy	0.5% FS
Power Consumption	≤5 W
Measurement Range	-1999~1999 words
Resolution	0.001, 0.01, 0.1, 1
Sampling Cycle	3 times/second
Output	Four-way relay alarm control output

Parameter	Value
Thermal Resistance Signal Input	Pt100, Cu50
Thermocouple	B, S, E, K, J, T, R, N
Standard Current Input	0-10/0-20/4-20 mA
Standard Voltage Input	0-5/1-5 V
Resistance Input	0-400 Ω
Non-standard Voltage Input	0-100 mV
Frequency	0-3 KHz, amplitude> 4 V (square wave or sine wave)
Standard Output Voltage	0-5 V, 1-5 V (Load RL > 250 kΩ)
Standard Analog Current Output	0-10 mA (Load RL<750Ω)
Power Output	24 V DC
Load Capacity	≤30 mA
Control Output Contact Capacity	22 V AC/5 A (resistive load)
Included Components	1 x Light Column Controller



This technical drawing provides precise dimensions of the pressure controller in millimeters, including front panel size (160x80mm), depth (83mm), and rear terminal layout. Useful for planning installation space.

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3. Setup

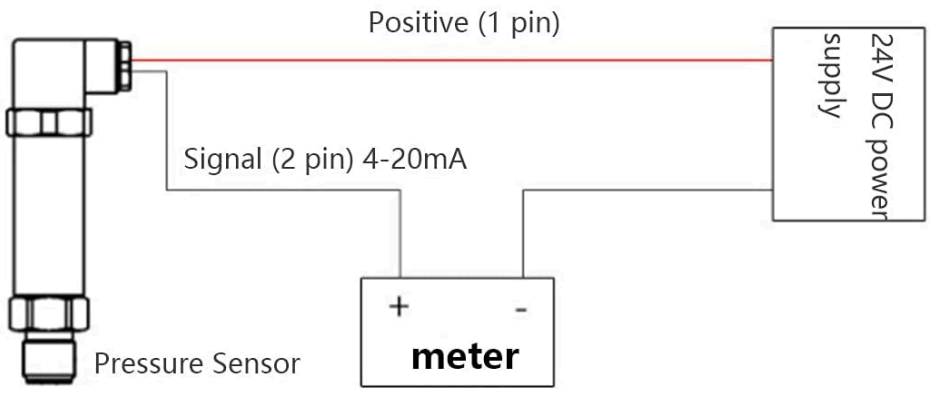
Proper installation and wiring are crucial for the safe and effective operation of the pressure controller. Refer to the wiring diagrams below for correct connections.

Wiring Instructions:

1. **Power Supply:** Connect the AC 220V 50HZ power supply to the designated terminals.
2. **Sensor Connection:** Connect your pressure sensor according to the type of output it provides (current or voltage).
3. **Output Connections:** Connect the control output to your alarm or control system as required.

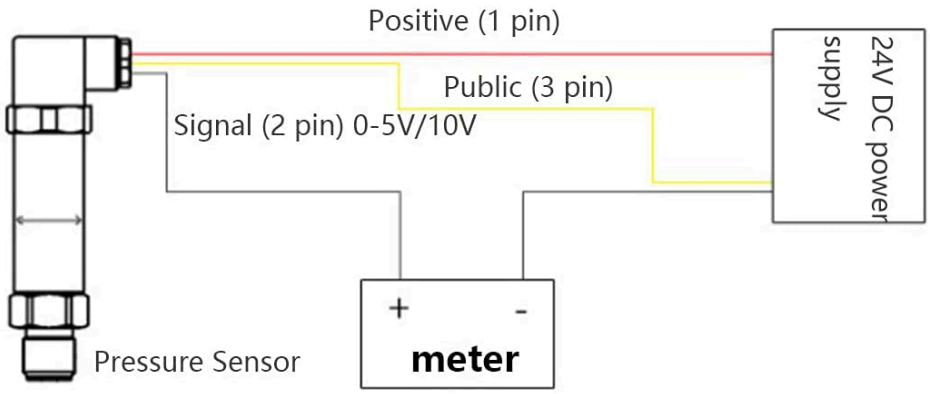
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Wiring diagram



Red wire: 24V DC Black wire: current output

Two-wire current output wiring diagram



Red wire: 24V DC Yellow wire: power supply- Black wire: voltage output+

Three-wire voltage output wiring diagram

This diagram illustrates the electrical connections for the pressure controller. It includes schematics for both two-wire current output (24V DC power, signal 4-20mA) and three-wire voltage output (24V DC power, signal 0-5V/10V, public pin). Essential for proper installation.

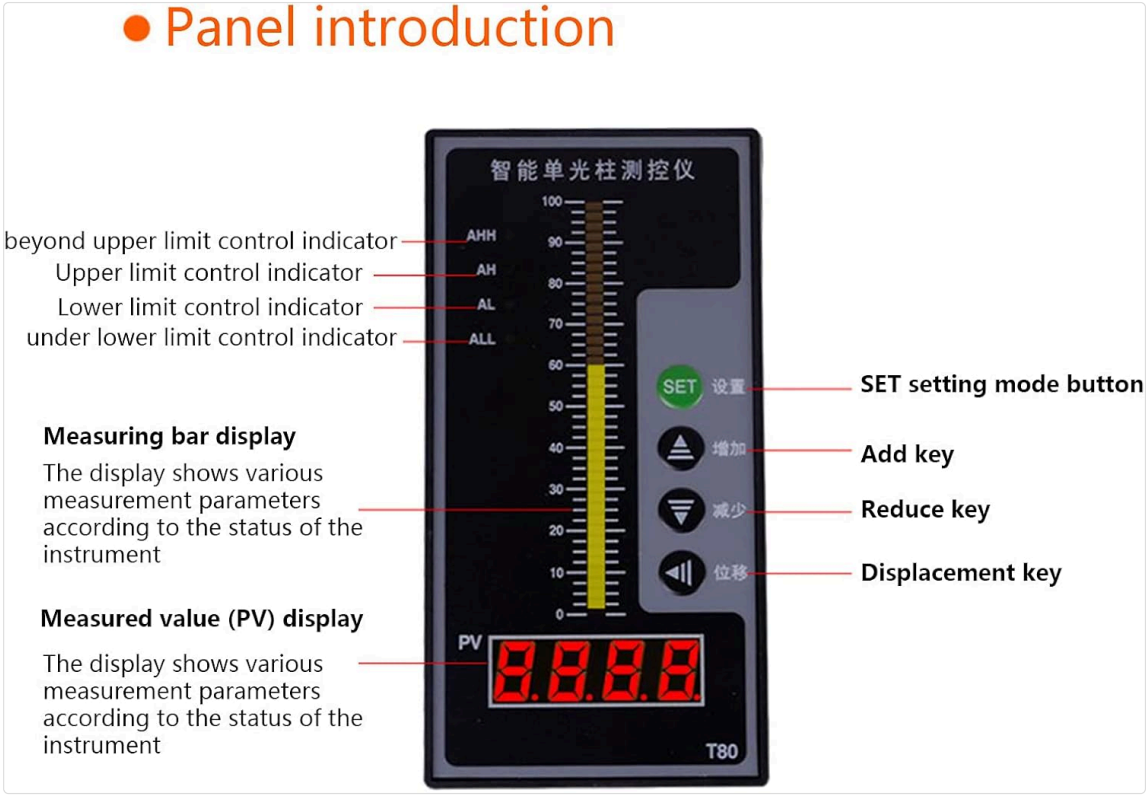
Ensure all connections are secure and comply with local electrical codes. Incorrect wiring can damage the device or lead to unsafe conditions.

4. Operating Instructions

The front panel of the HWP-T804-01-23-HL-P Pressure Controller provides all necessary indicators and controls for operation. Familiarize yourself with the panel layout and button functions.

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Panel introduction



An annotated diagram detailing the various indicators and buttons on the controller's front panel. It identifies the upper and lower limit control indicators (AHH, AH, AL, ALL), the measuring bar display, the measured value (PV) display, and the functions of the SET, Add, Reduce, and Displacement keys.

Panel Elements:

- **Measured Value (PV) Display:** Shows the current measured pressure value digitally.
- **Measuring Bar Display:** A vertical bar graph indicating various measurement parameters based on the instrument's status.
- **Limit Control Indicators (AHH, AH, AL, ALL):** These LEDs illuminate to indicate if the measured value is beyond the upper limit (AHH), at the upper limit (AH), at the lower limit (AL), or below the lower limit (ALL).
- **SET Button:** Used to enter and confirm settings modes.
- **Add Key (▲):** Used to increase values or navigate through menu options.
- **Reduce Key (▼):** Used to decrease values or navigate through menu options.
- **Displacement Key (◀):** Used for digit shifting during value input or for specific function navigation.

Basic Operation:

1. **Power On:** Ensure the device is correctly wired and then apply power. The display will light up.
2. **Monitoring:** The PV display will show the real-time pressure reading. The measuring bar and limit indicators provide visual feedback on the current status relative to set points.
3. **Setting Parameters:** Press the SET button to enter the parameter setting mode. Use the Add (▲) and Reduce (▼) keys to adjust values, and the Displacement (◀) key to move between digits or options. Press SET again to confirm and save changes.

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100
90
80
70
60
50
40
30
20
10
0
AHH
AH
AL
ALL
SET
设置
增加
减少
位移
PV
T80

A detailed view of the controller's front panel, featuring the digital PV display, the vertical bar graph for measurement, and control buttons (SET, Add, Reduce, Displacement).

5. Maintenance

Regular maintenance ensures the longevity and optimal performance of your pressure controller.

General Maintenance Tips:

- **Cleaning:** Periodically clean the exterior of the unit with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure the display and buttons are free from dust and debris.
- **Inspection:** Regularly inspect all wiring connections for tightness and signs of wear or corrosion.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and

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inspection to prevent electrical shock.

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6. Troubleshooting

This section provides solutions to common issues you might encounter with the pressure controller. If the problem persists, contact customer support.

Common Issues and Solutions:

- **No Power/Display Off:**
  - Check the power supply connection (AC 220V 50HZ).
  - Verify the power outlet is functional.
  - Inspect the power cable for damage.

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- **Inaccurate Readings:**

- Ensure the sensor is correctly connected and functioning.
- Check for any external interference sources near the unit or sensor wiring.
- Verify that the correct input type (current/voltage) is selected in the settings, if applicable.

- **Buttons Unresponsive:**
  - Ensure the unit is not in a locked mode (refer to advanced settings if available).
  - Power cycle the device (turn off and on again).
- **Alarm Not Triggering/Incorrectly Triggering:**
  - Verify the alarm set points are configured correctly.
  - Check the alarm output wiring.
  - Ensure the load connected to the alarm output is within the specified capacity (22 V AC/5 A).

For issues not listed here or if troubleshooting steps do not resolve the problem, please contact customer support.

7. Warranty and Support

This product is manufactured by LIUTT. For specific warranty information, please refer to the documentation provided with your purchase or contact the seller directly. LIUTT is committed to providing reliable products and customer satisfaction.

Customer Support:

If you require technical assistance, have questions about product functionality, or need to report a defect, please contact your point of purchase or the manufacturer's official support channels. When contacting support, please have your product model number (HWP-T804-01-23-HL-P) and purchase details ready.

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