LDHJBNAC YLD-3001 PT100

LDHJBNAC YLD-3001 PT100 Temperature Controller Instrument User Manual

Model: YLD-3001 PT100

1. Introduction

This manual provides comprehensive instructions for the installation, operation, and maintenance of the LDHJBNAC YLD-3001 PT100 Temperature Controller Instrument. This device is designed for precise temperature regulation in various industrial and commercial applications, including ovens, furnaces, plastic extruders, and other heating processes. Please read this manual thoroughly before using the instrument to ensure safe and efficient operation.

2. Safety Information

Always observe the following safety precautions to prevent personal injury or damage to the instrument.

- **Electrical Safety:** Ensure the power supply matches the instrument's specifications (AC220V 50Hz). Disconnect power before any wiring or maintenance. Only qualified personnel should perform electrical connections.
- **Installation:** Install the instrument in a dry, well-ventilated area, away from excessive heat, humidity, corrosive gases, or strong vibrations. Ensure proper grounding.
- **Operation:** Do not operate the instrument if it appears damaged. Avoid touching internal components when power is connected.
- **Maintenance:** Refer all servicing to qualified service personnel. Do not attempt to repair the unit yourself.

3. Product Overview

The LDHJBNAC YLD-3001 PT100 is a highly accurate temperature controller featuring a simplified operation process and flush mounting for easy integration. It is suitable for a wide range of applications requiring precise temperature management.

3.1 Key Features

- Highly accurate display and control.
- Simplified operation for quick setup.
- Flush mounting design with screw terminals for secure installation.

- Wide application suitability for various heating processes.

3.2 Component Identification

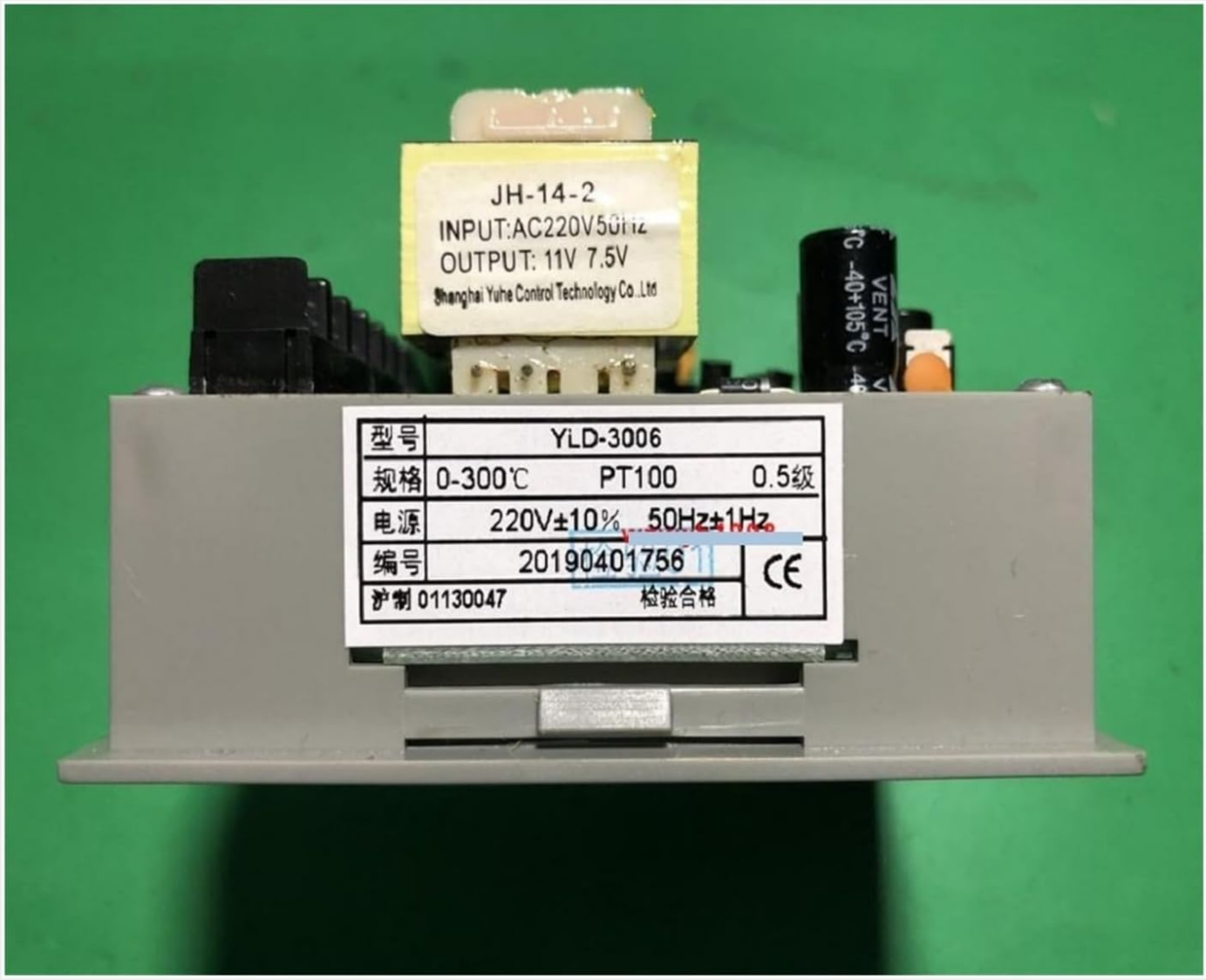

Figure 1: Front view of the LDHJBNAC YLD-3001 PT100 Temperature Controller. This image shows the display panel and control buttons, which are used for monitoring and adjusting temperature settings.

Figure 2: Internal circuit board of the LDHJBNAC YLD-3001 PT100 Temperature Controller. This view highlights the electronic components, including the transformer, relays, and terminal blocks for wiring connections.

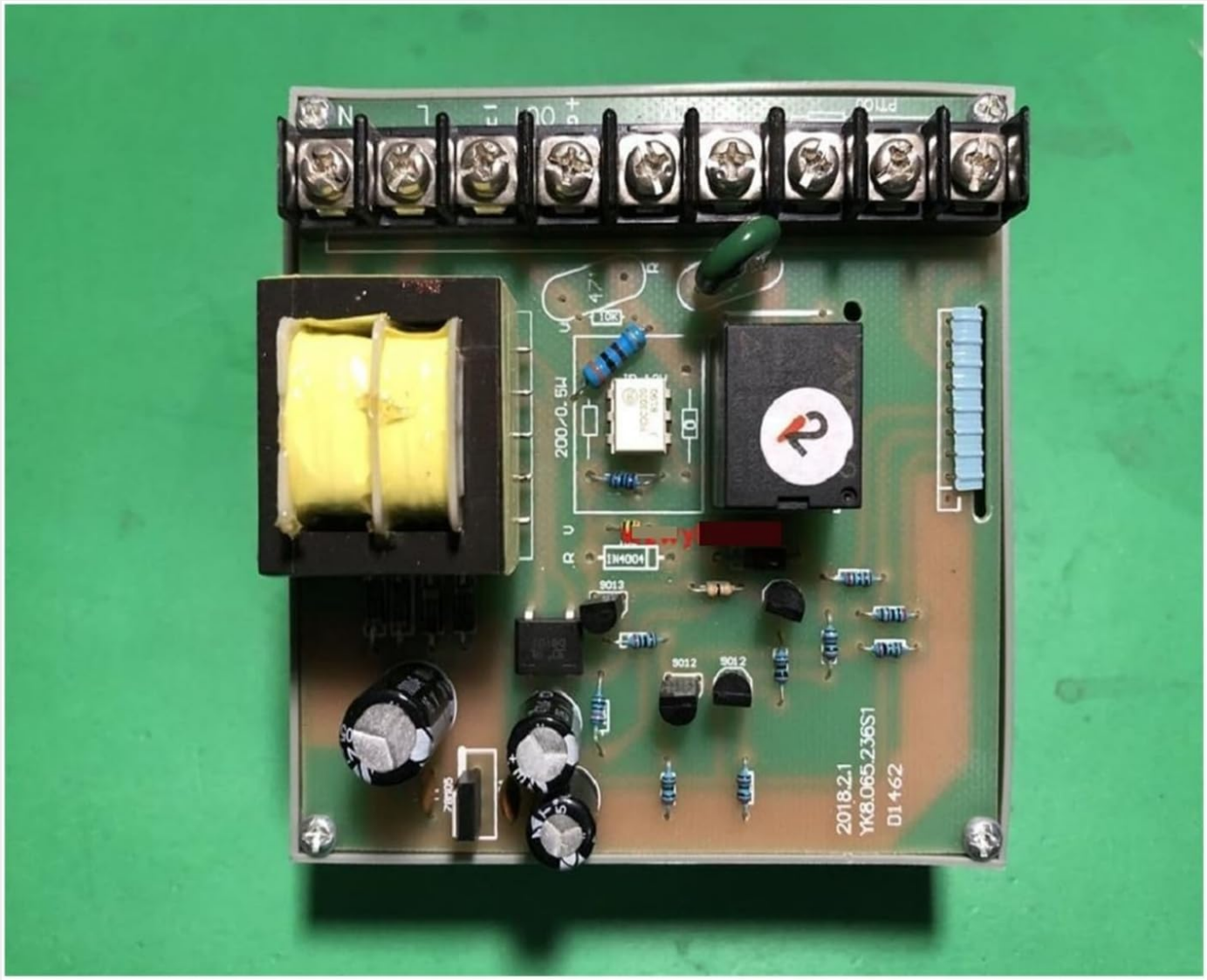

Figure 3: Packaging box of the LDHJBNAC YLD-3001 PT100 Temperature Controller. The label on the box indicates the model number YLD-3006 (note: this is a general series label, the specific model is YLD-3001 PT100), temperature range 0-300°C, sensor type PT100, and power specifications 220V±10% 50Hz±1Hz.

4. Setup and Installation

Follow these steps for proper installation of your temperature controller.

4.1 Mounting

- The YLD-3001 PT100 is designed for flush mounting. Cut an appropriate opening in the control panel according to the instrument's dimensions.
- Insert the controller into the opening and secure it using the provided mounting brackets or screws.

4.2 Wiring Connections

All wiring should be performed by a qualified electrician. Ensure power is disconnected before making any connections.

1. **Power Supply:** Connect the AC220V 50Hz power supply to the designated power terminals. Refer to the wiring diagram on the instrument's casing or in the detailed product documentation for exact terminal locations.
2. **Sensor Input:** Connect the PT100 temperature sensor to the sensor input terminals. Ensure correct polarity if applicable for the specific PT100 type (2-wire, 3-wire, or 4-wire).
3. **Output Control:** Connect the heating element or other controlled device to the output terminals. The controller provides a relay output to switch the load.

4. **Grounding:** Ensure the instrument is properly grounded to prevent electrical hazards.

5. Operating Instructions

The YLD-3001 PT100 features a simplified operation process.

5.1 Power On/Off

- To power on, ensure all connections are secure and apply AC220V power. The display will illuminate.
- To power off, disconnect the main power supply.

5.2 Setting the Target Temperature

The instrument is designed for straightforward temperature setting.

1. Press the **SET** button (or equivalent, refer to specific model's front panel). The display will show the current set point.
2. Use the **UP** and **DOWN** arrow buttons to adjust the target temperature to your desired value.
3. Press **SET** again to confirm the new set point. The instrument will then begin controlling the temperature to this value.

5.3 Display Interpretation

- The main display typically shows the current process temperature (PV - Process Value).
- Indicators (LEDs) may show the status of the output relay (e.g., heating ON/OFF) or alarm conditions.

6. Maintenance

Regular maintenance ensures optimal performance and longevity of your temperature controller.

- **Cleaning:** Wipe the display and casing with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure no liquids enter the instrument.
- **Inspection:** Periodically check all wiring connections for tightness and signs of wear or damage. Ensure the mounting is secure.
- **Environment:** Maintain the operating environment within specified temperature and humidity ranges to prevent component degradation.

7. Troubleshooting

If you encounter issues, refer to the following common problems and solutions.

Problem	Possible Cause	Solution
No display/No power	No power supply; Loose wiring; Blown fuse	Check power source; Verify wiring connections; Replace fuse if necessary (by qualified personnel).
Incorrect temperature reading	Sensor wiring error; Damaged sensor; Sensor type mismatch	Check sensor connections; Replace sensor; Ensure PT100 sensor is used.
Controller not heating/cooling	Output wiring error; Heating element failure; Set point too low/high	Verify output wiring; Check heating element; Adjust set point correctly.

Problem	Possible Cause	Solution
Unstable temperature control	Improper PID parameters (if adjustable); Sensor placement issue	Consult advanced settings for PID tuning (if applicable); Relocate sensor for better measurement.

If the problem persists after attempting these solutions, please contact customer support.

8. Specifications

Key technical specifications for the LDHJBNAC YLD-3001 PT100 Temperature Controller.

- **Model:** YLD-3001 PT100
- **Input Power:** AC220V ±10%, 50Hz ±1Hz
- **Power Consumption:** 2W
- **Temperature Range:** 0-300°C
- **Sensor Type:** PT100
- **Control Accuracy:** 0.5% (as indicated on product label for YLD-3006, assumed similar for YLD-3001)
- **Mounting:** Flush mounting
- **Output:** Relay output (specific current/voltage capacity not provided, refer to product label or detailed datasheet)

9. Warranty and Support

This LDHJBNAC product is covered by a standard manufacturer's warranty against defects in materials and workmanship. The warranty period typically begins from the date of purchase.

- **Warranty Claims:** For warranty service, please retain your proof of purchase. Contact the seller or authorized service center for instructions.
- **Technical Support:** If you require technical assistance or have questions not covered in this manual, please contact your point of purchase or the LDHJBNAC customer support channels.

For the most up-to-date support information, please visit the official LDHJBNAC website or refer to the contact details provided with your purchase.