

Aoleaby XW60L-5N1C1-N

Aoleaby XW60L-5N1C1-N Electronic Temperature Controller User Manual

Model: XW60L-5N1C1-N | Brand: Aoleaby

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, maintenance, and troubleshooting of the Aoleaby XW60L-5N1C1-N Electronic Temperature Controller. This device is a dedicated thermostat designed for precise temperature management in high-speed rail applications, offering high stability, fast response, and data recording capabilities.

2. SAFETY INFORMATION

- Always disconnect power before installation, wiring, or maintenance to prevent electric shock.
- Installation and wiring should be performed by qualified personnel in accordance with local electrical codes and regulations.
- Ensure the power supply voltage matches the specifications of the controller.
- Do not operate the device in environments exceeding its specified temperature and humidity ranges.
- Avoid exposing the controller to water or excessive moisture.

3. PRODUCT OVERVIEW

The Aoleaby XW60L-5N1C1-N is a compact and robust electronic temperature controller. It features a digital display for temperature readings and status, along with intuitive buttons for parameter adjustment. The rear panel provides clearly labeled terminals for various connections.



Figure 3.1: Front view of the Aoleaby XW60L-5N1C1-N Electronic Temperature Controller, showing the main unit with its integrated wiring diagram and specifications label. This image highlights the model number, power requirements, temperature and humidity ranges, probe type, and various connection points.



Figure 3.2: Close-up of the controller's front panel, featuring the digital display and control buttons. The buttons include 'Up', 'Down', 'SET', 'Power', 'Defrost/Snowflake', and 'Light/Fan', providing direct interaction for setting parameters and controlling functions.



Figure 3.3: Side view of the Aoleaby XW60L-5N1C1-N controller, illustrating the terminal blocks for electrical connections. This view provides a clear perspective on the physical interface for wiring the device into a system.

4. SETUP & INSTALLATION

4.1 Mounting

The controller is designed for panel mounting. Ensure adequate space for ventilation and access to wiring terminals. Secure the unit firmly into the panel cutout using the provided mounting clips or screws.

4.2 Wiring

Refer to the wiring diagram printed on the device label (Figure 3.1) and the detailed terminal view (Figure 3.3) for correct connections. All wiring must comply with local electrical standards.

- **Power Supply:** Connect the main power supply (Line and Neutral) to the designated terminals (e.g., 10, 11, 12 for 230V~).
- **Load Connections:** Connect the Light, Fan, Defrost, and Compressor loads to their respective relay output terminals. Note the maximum current ratings for each output.
- **Temperature Probe:** Connect the NTC temperature probe to the designated probe terminals. Ensure the probe is placed in the area where temperature measurement is required.
- **Remote Display/Hot Key:** If applicable, connect a remote display or hot key device to the TTL communication ports.

Caution: Incorrect wiring can damage the device or cause safety hazards. Consult a professional electrician if unsure.

5. OPERATING INSTRUCTIONS

5.1 Power On/Off

Press the **Power** button (usually marked with a circle and vertical line) to turn the controller on or off.

5.2 Display

The digital display shows the current measured temperature. It may also show error codes or parameter values during setup.

5.3 Button Functions

- **SET Button:** Used to enter parameter setting mode and confirm selections.
- **Up (▲) / Down (▼) Buttons:** Used to navigate through parameters and adjust values.
- **Defrost/Snowflake Button:** Manually initiates a defrost cycle (if configured).
- **Light/Fan Button:** Controls the light or fan output (if configured).

5.4 Setting Temperature Setpoint

1. Press the **SET** button once. The display will show the current setpoint value.
2. Use the **Up** or **Down** buttons to adjust the setpoint to the desired temperature.
3. Press the **SET** button again to confirm and save the new setpoint.

5.5 Advanced Parameter Settings

To access advanced parameters (e.g., differential, defrost cycles, sensor calibration), typically a longer press of the **SET** button or a combination of buttons is required. Refer to the specific parameter list provided with the product for detailed instructions on each setting. The controller supports data recording and analysis, which can be accessed via its communication interface.

6. MAINTENANCE

- **Cleaning:** Gently wipe the controller's surface with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Connection Check:** Periodically inspect all electrical connections to ensure they are secure and free from corrosion.
- **Sensor Inspection:** Ensure the temperature probe is clean and properly positioned. Replace if damaged.
- **Ventilation:** Ensure that the controller's ventilation openings are not obstructed to prevent overheating.

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
Controller does not power on	No power supply; Incorrect wiring; Blown fuse	Check power source; Verify wiring connections; Inspect and replace fuse if necessary.
Incorrect temperature reading	Faulty sensor; Sensor not properly connected; Sensor placed incorrectly	Check sensor wiring; Reposition sensor; Replace sensor if damaged.

Problem	Possible Cause	Solution
Outputs (e.g., compressor) not activating	Setpoint not met; Parameter settings incorrect; Faulty relay	Adjust setpoint; Review and correct parameter settings; Contact support if relay is suspected faulty.
Display shows error code	Specific system fault	Refer to the product's specific error code list for diagnosis and resolution.

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

8. SPECIFICATIONS

Feature	Specification
Model	XW60L-5N1C1-N
Brand	Aoleaby
Power Supply	230V~
Power Consumption	5VA Max
Temperature Range	T0~60°C
Humidity Range	r.H. 20-85%
Probe Type	NTC
Compressor Relay Output	16(4)A 250V~ (Max 16A/Max 20A)
Light/Fan/Defrost Relay Output	8(3)A 250V~
Package Dimensions	1.18 x 0.79 x 0.39 inches
Item Weight	4.41 pounds (approx. 2000 Grams)
Manufacturer	Aoleaby

9. WARRANTY INFORMATION

Specific warranty details for the Aoleaby XW60L-5N1C1-N Electronic Temperature Controller are typically provided at the point of purchase or within the product packaging. Please retain your proof of purchase for warranty claims. For detailed warranty terms and conditions, contact the seller or manufacturer directly.

10. SUPPORT

For further assistance, technical support, or inquiries regarding the Aoleaby XW60L-5N1C1-N Electronic Temperature Controller, please contact your retailer or the manufacturer, Aoleaby. Have your model number and purchase information ready when contacting support.

