XM-18D

Generic XM-18D Full Automatic Egg Incubator Controller User Manual

Model: XM-18D

1. Introduction

This manual provides detailed instructions for the installation, operation, and maintenance of the Generic XM-18D Full Automatic Egg Incubator Controller. This device is designed to precisely manage temperature and humidity within an egg incubator, ensuring optimal conditions for successful incubation. Please read this manual thoroughly before use to ensure correct operation and to prevent damage to the unit or injury.

2. Safety Information

- Ensure the operating voltage (AC 180V~240V, 50HZ) matches your power supply.
- Do not expose the controller to direct water or excessive humidity (relative humidity should be less than 85%).
- Avoid operating the device in ambient temperatures outside the -20°C to 70°C range.
- All wiring should be performed by a qualified individual to prevent electrical hazards.
- Keep out of reach of children.
- Disconnect power before performing any maintenance or cleaning.

3. Package Contents

Verify that all items are present in the package:

- 1 x XM-18D Incubator Controller Thermostat Hygrometer
- 1 x Temperature Sensor
- 1 x Humidity Sensor

4. Product Overview

The XM-18D controller features a digital display for real-time monitoring and control of incubation parameters. It includes multiple output lines for various incubator functions.

Figure 4.1: Front view of the XM-18D Incubator Controller. This image displays the main unit with its digital readouts and control buttons.

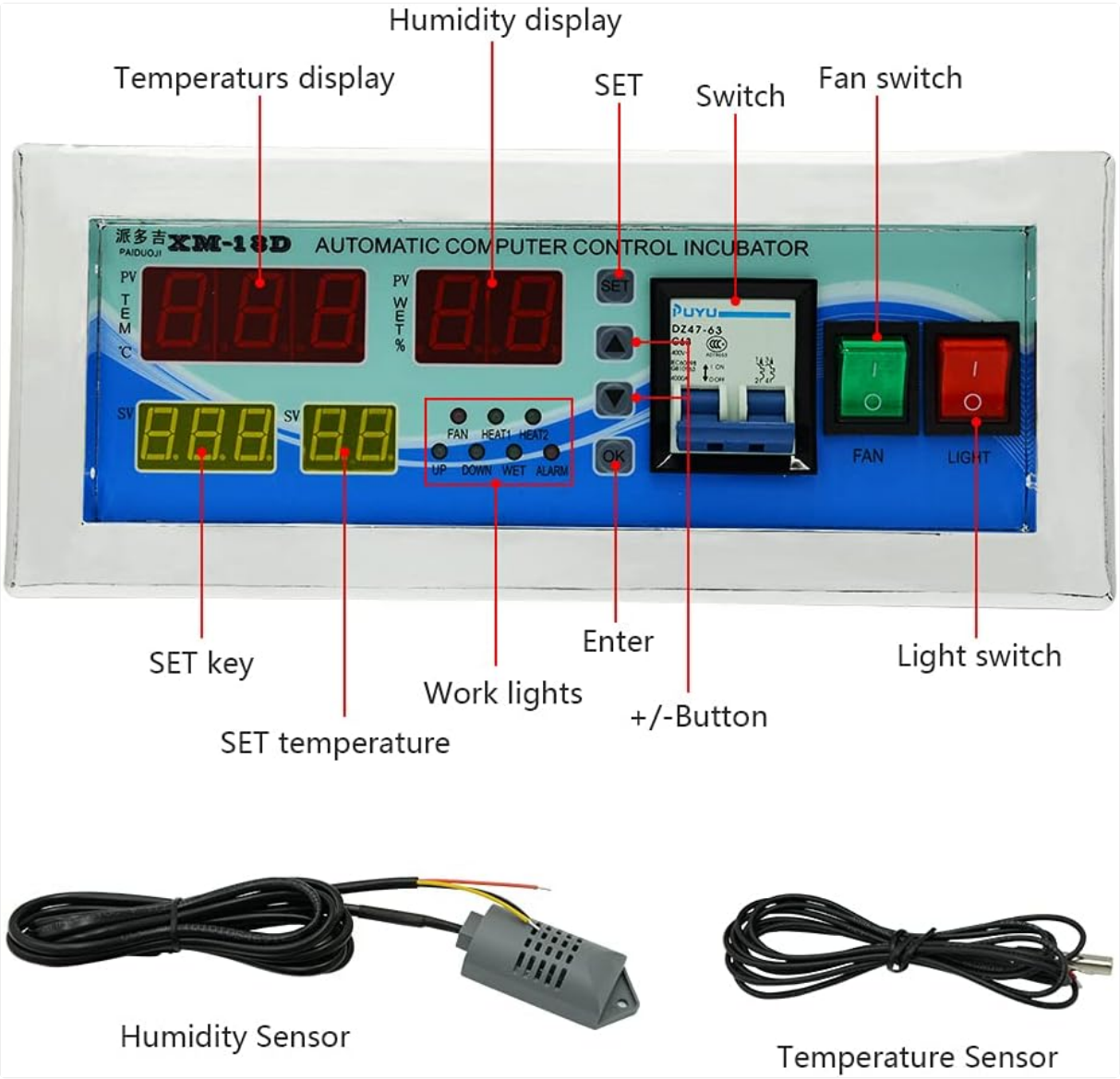


Figure 4.2: Labeled front panel of the XM-18D controller. Key components include the humidity display, temperature display, SET switch, fan switch, light switch, SET key, Enter button, work lights, and +/- buttons.

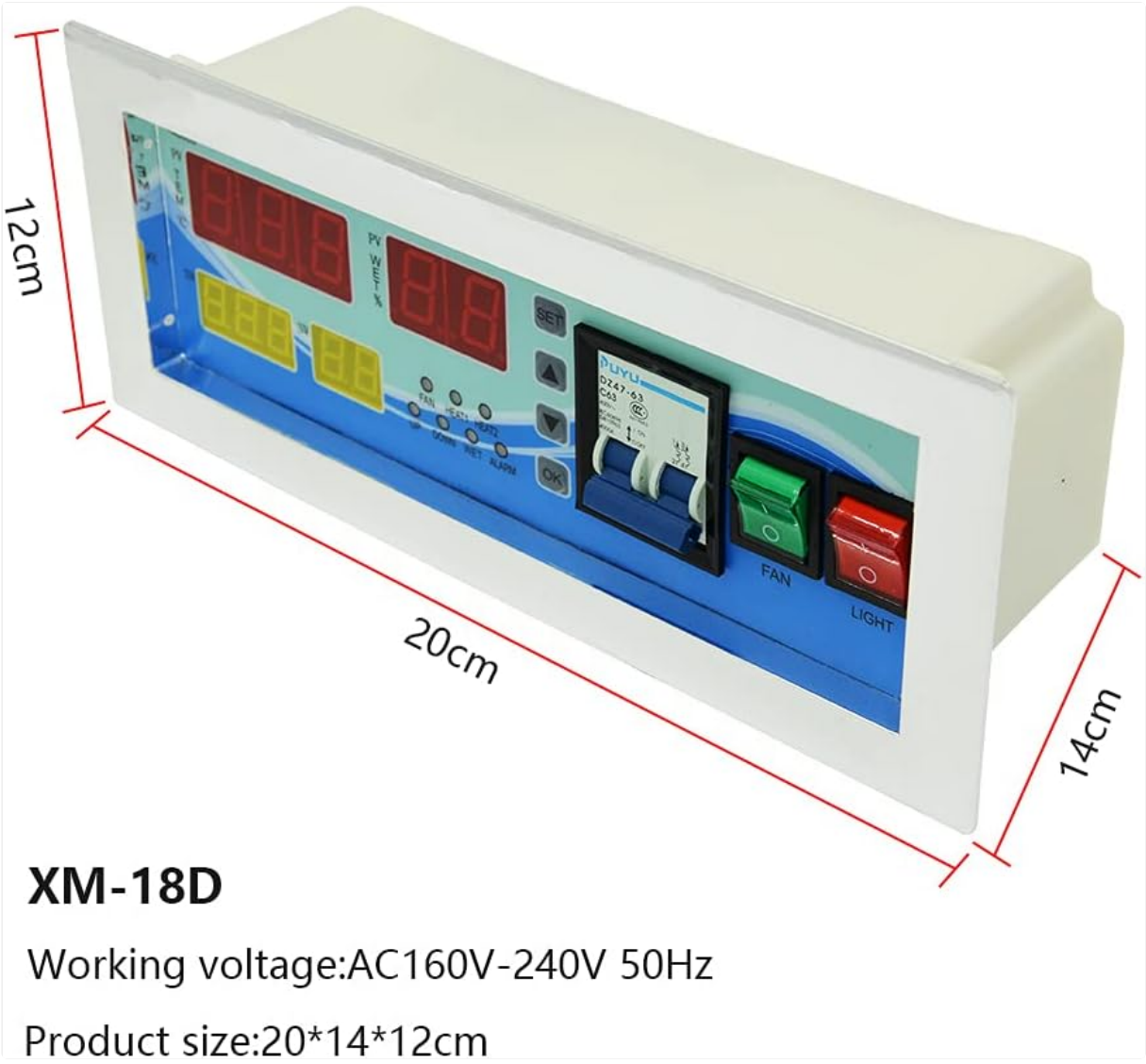


Figure 4.3: Dimensions of the XM-18D controller. The unit measures approximately 20cm in length, 14cm in width, and 12cm in height.

Product details

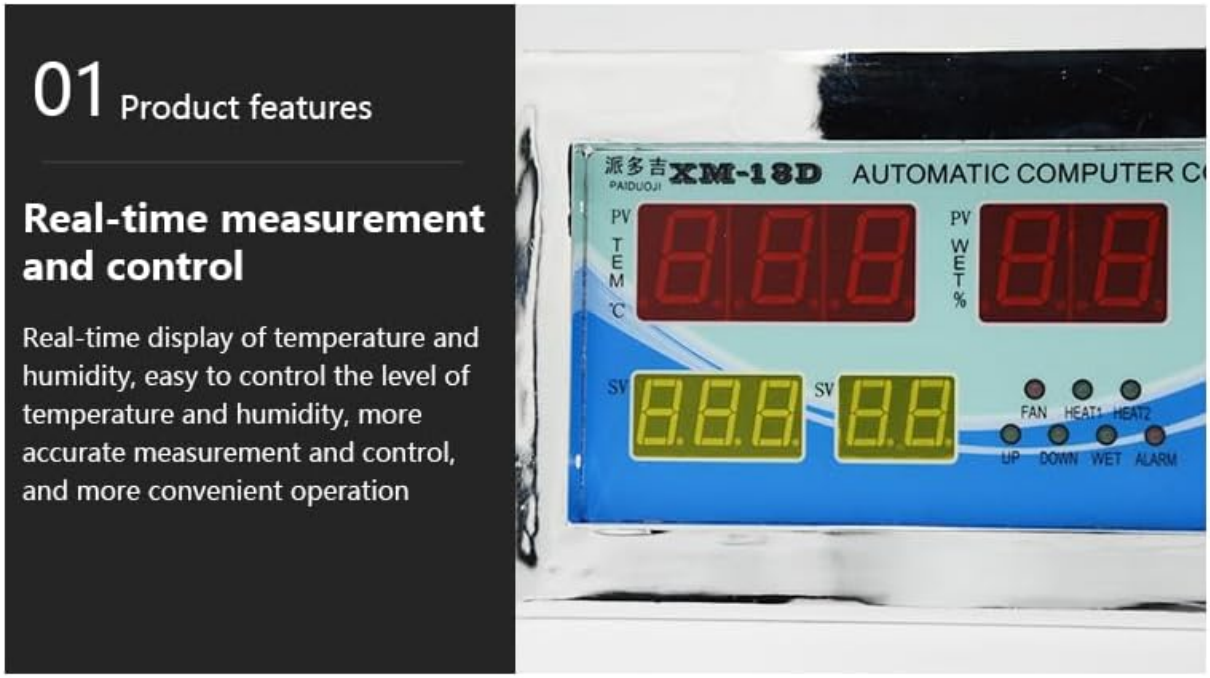


Figure 4.4: Key features of the XM-18D controller. It offers real-time measurement and control of temperature and humidity, along with button touch operation for simple and convenient use.

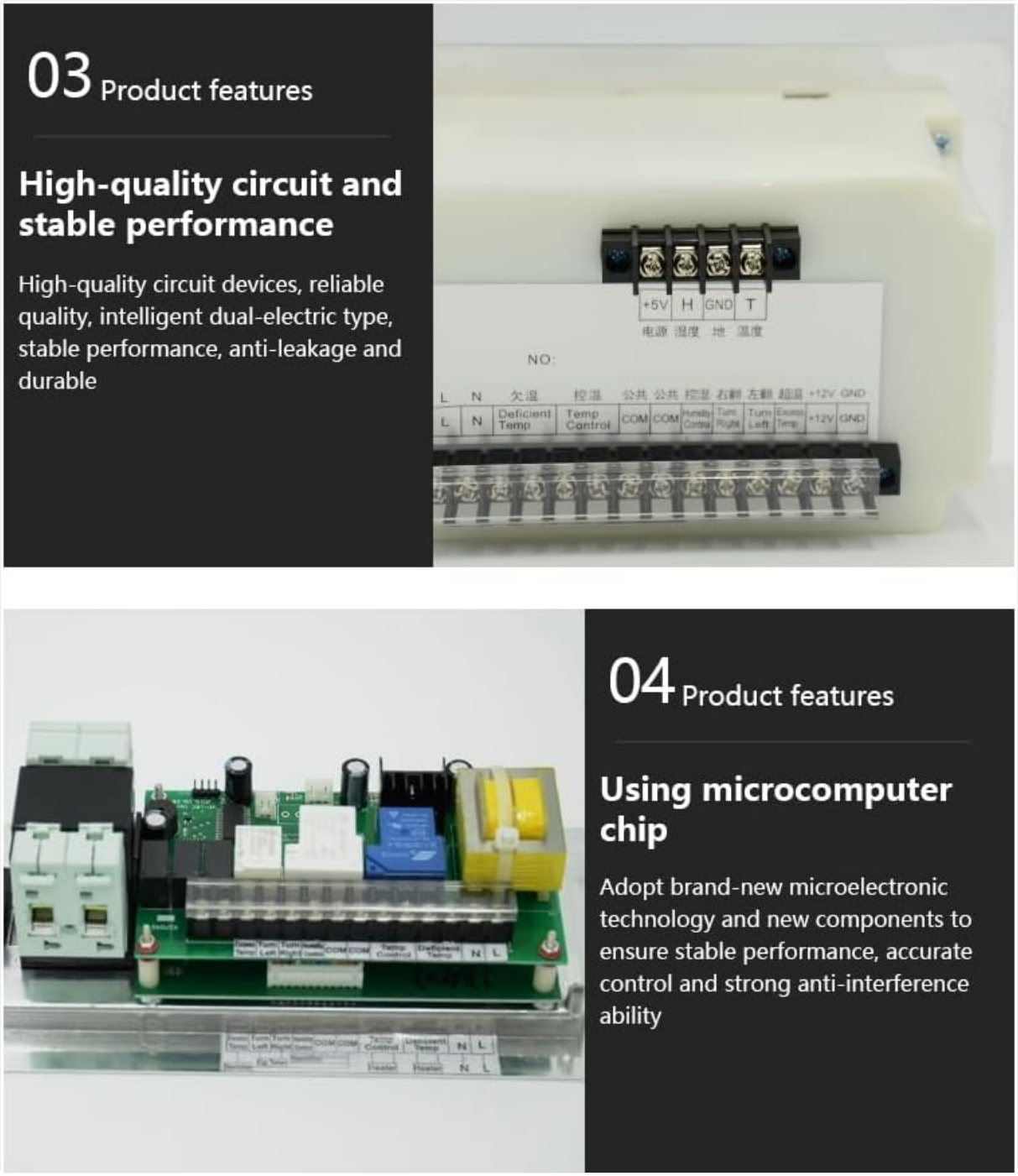


Figure 4.5: Internal components highlighting the high-quality circuit and microcomputer chip. These ensure stable performance, accurate control, and strong anti-interference capabilities.

5. Setup

Before operating the XM-18D controller, ensure all necessary connections are made correctly. Refer to the wiring diagram and the video for visual guidance.

5.1 Sensor Connection

Connect the humidity sensor and temperature sensor to their designated terminals on the controller's back panel.

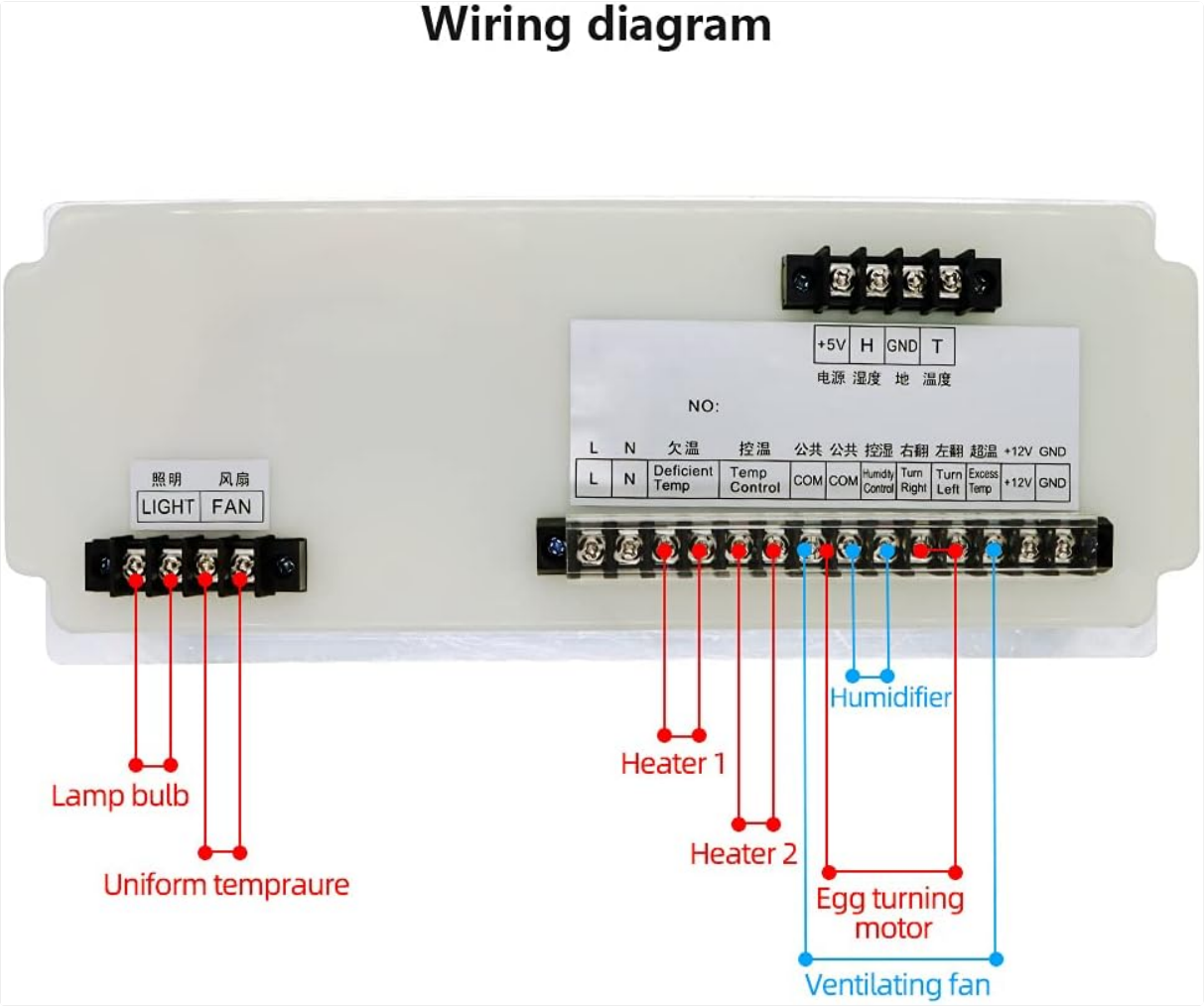


Figure 5.1: Detailed wiring diagram for the XM-18D controller. This diagram illustrates connections for the lamp bulb, uniform temperature, heaters, humidifier, egg turning motor, and ventilating fan, along with the power line, humidity sensor, and temperature sensor connections.

Your browser does not support the video tag.

Video 5.1: This video demonstrates the correct connection of the power cable, humidity sensor, and temperature sensor to the XM-18D controller. It also shows the initial power-on sequence and basic display functions.

1. Locate the terminals for the Humidity Sensor and Temperature Sensor on the back of the controller.
2. Carefully connect the wires from the Humidity Sensor to the corresponding terminals.
3. Connect the wires from the Temperature Sensor to its designated terminals.

5.2 Power Connection

Connect the power cable to the controller and then to a suitable power outlet.

1. Connect the power cable to the main power input terminals (L and N) on the controller.
2. Plug the power cable into an AC 180V~240V, 50HZ power source.

5.3 Output Connections

Connect the various incubator components (heaters, fan, humidifier, egg turning motor, light) to their respective output terminals as indicated in the wiring diagram (Figure 5.1).

1. Connect primary and auxiliary heaters to the HEATI and HEAT2 terminals.
2. Connect the exhaust fan to the appropriate fan terminal.
3. Connect the egg turning motor to the LEFT and RIGHT terminals.
4. Connect the humidifier to the WET terminal.

5. Connect the incubator light to the LIGHT terminal.

6. Operating Instructions

The XM-18D controller is designed for user-friendly operation. Follow these steps to configure and monitor your incubator.

6.1 Power On and Initial Display

1. After all connections are secure, turn on the main power switch on the controller.
2. The digital displays will illuminate, showing current temperature (PV TEM) and humidity (PV WET%). The set temperature (SV TEM) and set humidity (SV WET%) will also be displayed.
3. If an alarm sounds, manually dismiss it by pressing the "Cancel Alarm" button.

6.2 Setting Temperature and Humidity

To adjust the desired temperature and humidity settings:

1. Press the **SET** button to enter the setting mode. The temperature setting value will flash.
2. Use the **UP** and **DOWN** arrow buttons to adjust the desired temperature.
3. Press **SET** again to move to the humidity setting. The humidity setting value will flash.
4. Use the **UP** and **DOWN** arrow buttons to adjust the desired humidity.
5. Press **OK** or **SET** to confirm and save the settings.

6.3 Egg Turning Settings

The controller supports automatic egg turning. Refer to the manual's detailed parameters for specific timing adjustments.

1. Press the **Egg Turning** button to manually initiate an egg turn or to access egg turning settings (if applicable).
2. The egg rotation cycle and period can be adjusted in the advanced settings (refer to the full technical specifications for parameter codes).

6.4 Fan and Light Control

The controller provides dedicated switches for the fan and internal light.

1. Use the **FAN** switch to turn the incubator's internal fan on or off.
2. Use the **LIGHT** switch to control the internal light of the incubator.

7. Specifications

XM-18D Technical Specifications

Feature	Value
Model No.	XM-18D
Dimensions	30 x 12 x 7.5 cm (11.81 x 4.72 x 2.95 inches)
Weight	0.95 kg (2.64 pounds)
Temperature Display Range	0~40.5°C

Feature	Value
Temperature Measurement Accuracy	±0.1°C
Humidity Display Range	0~99%RH
Humidity Control Accuracy	±3%RH
Output Lines	6 lines (primary heating, auxiliary heating, exhaust, turn left, turn right, moisten)
Output Current	Primary and auxiliary heating 30A, other outputs 10A
Egg Rotation Time (Max)	999 times
Egg Rotation Cycle (Default)	0~999 minutes (90 minutes)
Egg Rotation Period (Default)	0~999 seconds (180 seconds)
Air Exchange Cycle (Default)	0~999 minutes (120 minutes)
Air Exchange Period (Default)	0~999 seconds (15 seconds)
Measuring Line Length	Approx. 1.5 meters
Operating Voltage	AC 180V~240V, 50HZ
Relative Humidity (Operating)	Less than 85%
Ambient Temperature (Operating)	-20°C~70°C

8. Maintenance

Proper maintenance ensures the longevity and accurate performance of your XM-18D controller.

- **Cleaning:** Regularly wipe the controller's surface with a soft, dry cloth. Do not use abrasive cleaners or solvents. Ensure no liquids enter the device.
- **Sensor Care:** Keep the temperature and humidity sensors clean and free from dust or debris. Avoid bending or damaging the sensor cables.
- **Ventilation:** Ensure the controller's ventilation openings are not obstructed to prevent overheating.
- **Storage:** When not in use for extended periods, store the controller in a cool, dry place away from direct sunlight and extreme temperatures.

9. Troubleshooting

If you encounter issues with your XM-18D controller, refer to the following common problems and solutions:

Common Troubleshooting Guide

Problem	Possible Cause & Solution

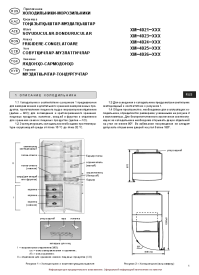
Problem	Possible Cause & Solution
Controller does not power on.	◦ Check if the power cable is securely connected. ◦ Verify the power outlet is functional. ◦ Ensure the main power switch on the controller is in the ON position.
Temperature/Humidity readings are inaccurate.	◦ Ensure sensors are correctly connected to the terminals. ◦ Check if sensors are clean and free from obstructions. ◦ Verify sensors are placed correctly within the incubator for accurate readings.
Heater/Humidifier/Fan not activating.	◦ Check if the output devices are correctly wired to the controller. ◦ Ensure the set temperature/humidity is outside the current reading, triggering the output. ◦ Verify the output devices themselves are functional.
Egg turning not working.	◦ Check the connection of the egg turning motor. ◦ Verify the egg turning cycle and period settings are configured correctly. ◦ Ensure the motor is not jammed or obstructed.
Alarm continuously sounds.	◦ Check if temperature or humidity is outside the set alarm limits. ◦ Press the "Cancel Alarm" button to temporarily silence. Address the underlying issue causing the alarm.

10. Warranty and Support

This product is manufactured to high-quality standards. For warranty information or technical support, please contact your retailer or the manufacturer directly. Keep your purchase receipt as proof of purchase.

Related Documents - XM-18D

智能新一代孵化控制器 18K-1 New Generation Intelligent Incubator Controller 说 明 书 Instruction	New Generation Intelligent Incubator Controller (XM-18K-1, XM-18K-2) - Instruction Manual Comprehensive instruction manual for the New Generation Intelligent Incubator Controller (models XM-18K-1 and XM-18K-2). This guide details the controller's features, technical specifications, automatic and user-defined incubation settings for various egg types, operational procedures, and maintenance functions.

	[XM-361/362 Temperature Module User Guide] User guide for Rockwell Automation's XM-361 and XM-362 Universal and Isolated Temperature Modules, detailing installation, configuration, specifications, and DeviceNet communication.
	[Payne Engineering 18D-SW/E-SW SCR Power Controls Datasheet] Detailed technical specifications, features, and ordering information for Payne Engineering's 18D-SW and 18E-SW series of Phase-Angle SCR Power Controls, designed for inductive loads and variable voltage control.
	[Руководство пользователя холодильников-морозильников XM-XXXX-XXX] Подробное руководство пользователя для холодильников-морозильников серии XM-XXXX-XXX, включающее описание, инструкции по эксплуатации, технические характеристики и комплектацию.
	[Danfoss AK-PC 781A Capacity Controller: User Guide for Refrigeration Systems] Comprehensive user guide for the Danfoss AK-PC 781A capacity controller, detailing its features for refrigeration systems, including compressor and condenser control, heat recovery, and CO2 gas pressure management.
	[ATLANT XM-402X Серия Холодильник Руководство Пользователя и Технические Характеристики] Полное руководство пользователя и технические характеристики для холодильников ATLANT серии XM-402X, включая описание, эксплуатацию, размораживание, очистку и технические данные.