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› [Elitech](#) /

› [Elitech ECB-LS230-BL Bluetooth Split Electrical Control Box Temperature Control Panel User Manual](#)

## Elitech ECB-LS230-BL

# Elitech ECB-LS230-BL Bluetooth Split Electrical Control Box Temperature Control Panel User Manual

Model: ECB-LS230-BL

## 1. PRODUCT OVERVIEW

The Elitech ECB-LS230-BL is a Bluetooth-enabled split electrical control box designed for precise temperature management. It features a large LED display for clear readings and remote monitoring capabilities. This control panel supports cooling, defrosting, and fan operations, offering a four-way output. Its split design separates the main controller from the display board, allowing for remote installation and enhanced safety.



Figure 1.1: Elitech ECB-LS230-BL Main Control Unit. This image shows the primary orange control box with blue mounting flanges, indicating its robust industrial design.

## Key Features:

- **Split Design:** Main controller separated from the display board for remote control up to 200 meters and safer installation.
- **Large LED Touch Screen:** Provides clear display and intuitive operation.
- **Enhanced Safety:** Strong and weak electricity are separated due to the split design.
- **Bluetooth Connectivity:** Allows parameter settings via a mobile application.
- **Multi-functional Output:** Supports refrigeration, defrosting, fan, and light control.
- **Monitoring:** Includes alarm, clock, and two storage temperature sensors.

## 2. SAFETY INFORMATION

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Please read this manual carefully before installation and operation to ensure proper use and prevent damage or injury. Keep this manual for future reference.

- Ensure all wiring is performed by a qualified electrician in accordance with local and national electrical codes.
- Disconnect power before performing any installation, maintenance, or troubleshooting.
- Do not operate the device if it is damaged or malfunctioning.
- Avoid exposing the device to excessive moisture, dust, or extreme temperatures outside its operating range.
- The split design separates strong and weak current circuits for safety; do not attempt to bypass or alter this design.

## 3. INSTALLATION AND SETUP

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The ECB-LS230-BL features a split design, allowing the main control unit and the display panel to be installed separately. This provides flexibility and enhances safety by keeping high-voltage components away from user interaction points.

### 3.1 Main Control Unit Installation

Mount the main control unit in a secure, well-ventilated location, away from direct heat sources or excessive moisture. Use appropriate fasteners for the mounting brackets. Ensure sufficient space for wiring connections and heat dissipation.



Figure 3.1: Elitech ECB-LS230-BL Main Control Unit Side View. This image highlights the cooling fins and robust construction of the main unit.

### 3.2 Display Panel Installation

Install the large LED touch screen display panel in a convenient location for monitoring and operation. The display panel connects to the main control unit via a communication cable, allowing for remote placement up to 200 meters.

### 3.3 Electrical Connections

Refer to the wiring diagram provided with your product packaging for detailed electrical connections. Ensure all power inputs (3-phase, 380V) and outputs (refrigeration, defrost, fan, light) are correctly wired. Connect the temperature sensors to the designated terminals. The RS485 port is used for communication with the mainboard.



## 4. OPERATING INSTRUCTIONS

The ECB-LS230-BL features a user-friendly LED touch screen and can also be controlled via a mobile application.

### 4.1 Display Panel Controls

The display panel provides real-time temperature readings and access to various functions:

- **Temperature Display:** Shows the current temperature in Celsius or Fahrenheit.
- **Indicator Lamps:** Separate indicators for defrosting, refrigeration, fan, unlock, communication, alarm, and light status.
- **Force Defrosting Button:** Initiates a manual defrost cycle.
- **Setting/Unlock Button:** Used to enter settings mode or unlock the panel.
- **Upper/Light Button:** Adjusts values upwards in settings or controls the light output.
- **Lower Button:** Adjusts values downwards in settings.
- **Pause/Exit Button:** Pauses current operation or exits a menu.

### 4.2 Bluetooth APP Control

The ECB-LS230-BL can be configured and monitored using a mobile application via Bluetooth. This allows for convenient parameter adjustments and remote data viewing without direct interaction with the display panel.

1. Download the Elitech iCold application from your mobile device's app store.
2. Ensure Bluetooth is enabled on your mobile device.
3. Open the Elitech iCold app and follow the on-screen instructions to connect to your ECB-LS230-BL device.

- Once connected, you can view real-time data, adjust parameters, and access historical graphs.



Figure 4.1: Bluetooth APP Monitoring. This image shows the display panel alongside a mobile phone demonstrating the Elitech iCold application's data logging and monitoring capabilities.

## 5. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your ECB-LS230-BL control box.

- Cleaning:** Periodically clean the display panel with a soft, dry cloth. Do not use abrasive cleaners or solvents.
- Inspection:** Regularly inspect all wiring connections for tightness and signs of wear or damage.
- Ventilation:** Ensure the main control unit's ventilation openings are clear of obstructions to prevent overheating.
- Software Updates:** Check for firmware updates for the device and application updates for the Elitech iCold app to ensure you have the latest features and bug fixes.

## 6. TROUBLESHOOTING

If you encounter issues with your ECB-LS230-BL, refer to the following common troubleshooting steps:

- **No Power:** Check the main power supply and all circuit breakers. Ensure all power connections to the control box are secure.
- **Incorrect Temperature Reading:** Verify that the temperature sensors are correctly connected and positioned. Check for any physical damage to the sensor cables.
- **Display Not Responding:** Ensure the communication cable between the main unit and the display panel is securely connected. Try restarting the unit by cycling the power.
- **Bluetooth Connection Issues:** Ensure Bluetooth is enabled on your mobile device and the control box. Try restarting both devices. Make sure the app is up to date.
- **Output Not Activating:** Check the set parameters for refrigeration, defrost, fan, or light. Verify wiring to the respective loads.
- **Alarm Triggered:** Check the alarm code displayed (if any) and consult the full product manual for specific alarm definitions and remedies.

For persistent issues, contact Elitech customer support.

## 7. SPECIFICATIONS

Specification	Value
Brand	Elitech
Model Number	ECB-LS230-BL
Voltage	380 Volts
Power Rating	10Hp (Horsepower)
Phase	3 Phase
Connectivity	Bluetooth
Display	Large LED Touch Screen
Remote Control Distance	Up to 200 meters (display to main unit)
Functions	Refrigeration, Defrosting, Fan, Light (four-way output)
Sensors	Two storage temperature sensors
UPC	781454242351

## 8. WARRANTY AND SUPPORT

Elitech products are designed for reliability and performance. For warranty information, please refer to the warranty card included with your product or visit the official Elitech website. For technical support, troubleshooting assistance, or service inquiries, please contact Elitech customer service through their official channels.

**Elitech Customer Support:** Please visit the Elitech website for contact details and support resources.

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