Walfront WALFRONT07gmwp1vzr

Walfront IP32 LCD Screen Solar Controller Instruction Manual

Models: MC2420N10, MC2430N10, MC2440N10, MC2450N10, LC100

1. INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Walfront IP32 LCD Screen Solar Controller. This display unit is designed to provide real-time monitoring and control for compatible solar charge controllers, ensuring efficient management of your solar power system. Please read this manual thoroughly before use to ensure proper functionality and longevity of the product.

2. PRODUCT OVERVIEW

The Walfront IP32 LCD Screen is an industrial-grade display unit crafted from durable ABS material, designed for robust performance in various environments. It features a simple two-button interface for easy navigation and data viewing. When connected to a compatible solar controller, it draws power directly, eliminating the need for an additional power source.

Image 2.1: Angled view of the Walfront IP32 LCD Screen Solar Controller with its connection cable.

Key Features:

- **Industrial Grade Design:** Suitable for diverse outdoor and indoor applications.

- **Durable ABS Material:** Ensures extended product lifespan.

- **Simple Two-Button Operation:** Intuitive 'SELECT' and 'ENTER' buttons for user-friendly control.

- **Direct Power Supply:** No external power required when connected to a compatible controller.

- **Real-time Data Display:** Provides clear, real-time monitoring of your solar system's operational data.

Applications:

This LCD display is versatile and can be used in various solar power system setups, including:

- Home Solar Systems

- Industrial Solar Installations

- Solar Charging Stations

- Solar-Powered Street Lighting

- Agricultural Solar Applications

- Research and Development Solar Projects
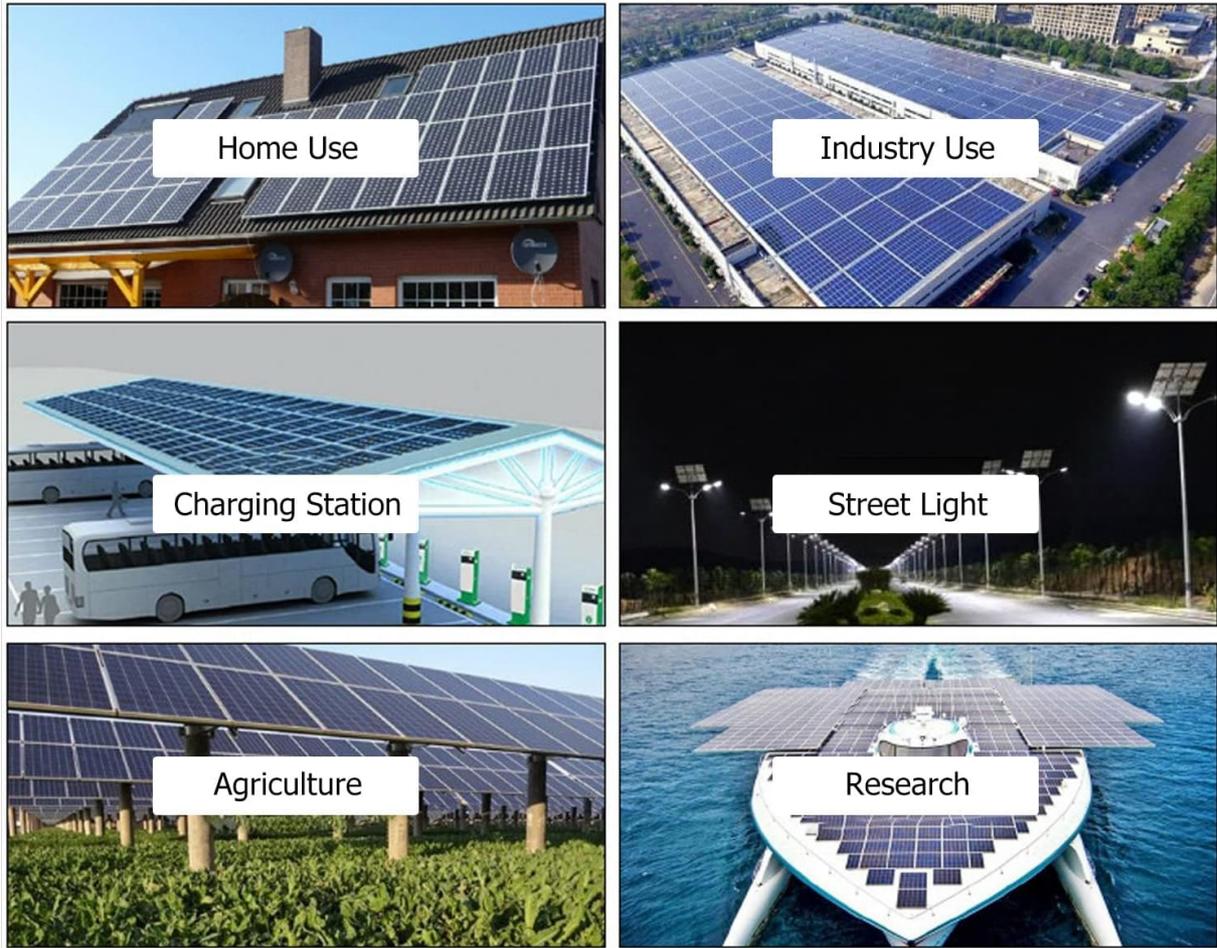
Industrial grade design
Safe and stable

Image 2.2: Examples of environments where the solar controller display can be utilized.

3. SPECIFICATIONS

Parameter	Value
Item Type	Solar Controller LCD Display
Material	ABS
Input Voltage	5V-12V
Standby Power Consumption	<0.03W
Running Power Consumption	<0.04W
Fixed Baud Rate	9600bps
Communication Mode	TTL
Interface Type	PH2.0
Operating Temperature	-35°C to 65°C
Protection Level	IP32

Parameter	Value
Altitude	≤3000m
Adaptation Models	MC2420N10, MC2430N10, MC2440N10, MC2450N10, LC100
Dimensions	5.51 x 5.12 x 1.57 inches (Package)
Item Weight	4.7 ounces / 134 Grams

4. SETUP INSTRUCTIONS

Follow these steps to properly connect your LCD display to a compatible solar charge controller:

1. **Prepare the Controller:** Ensure your solar charge controller is powered off or disconnected from all power sources (solar panels and battery) before connecting the display unit. This prevents potential damage during installation.

2. **Locate the Interface Port:** Identify the PH2.0 communication interface port on your compatible solar charge controller. Refer to your controller's manual if unsure.

3. **Connect the Display Cable:** Carefully insert the PH2.0 connector of the LCD display cable into the corresponding port on the solar controller. Ensure a firm and secure connection.

4. **Mount the Display (Optional):** The display unit can be mounted using the integrated mounting holes. Secure it in a location that allows for easy viewing and access to the buttons.

5. **Power On:** Reconnect the battery and then the solar panels to your solar charge controller. The LCD display will power on automatically, as it draws power directly from the controller.

Image 4.1: Front view of the display unit, showing the connection cable.

Note: The display unit does not require a separate power supply. It receives power directly from the connected solar charge controller.

5. OPERATING INSTRUCTIONS

The Walfront IP32 LCD Screen features a simple two-button interface for navigation and selection:

- **SELECT Button:** Used to cycle through different display screens or menu options.
- **ENTER Button:** Used to confirm a selection or enter a specific menu.

Image 5.1: Close-up of the 'SELECT' and 'ENTER' buttons for operation.

Viewing System Data:

Once connected and powered on, the display will show real-time operational data from your solar charge controller. Use the **SELECT** button to navigate through various data screens, which may include:

- Battery Voltage

- Charging Current

- Discharging Current

- Solar Panel Voltage

- Temperature

- Accumulated Charge/Discharge Energy

Connect to the LCD HD display for a clear, realtime view of the solar system's complete operation
Simple two button design
Convenient and easy to operate

Image 5.2: The LCD display provides a clear, real-time view of the solar system's operational data.

Adjusting Settings (if applicable):

Some compatible solar controllers allow for parameter adjustments directly through the connected display. If this functionality is supported by your controller, use the **SELECT** button to navigate to the settings menu and the **ENTER** button to confirm changes. Refer to your specific solar controller's manual for detailed instructions on adjustable parameters.

6. MAINTENANCE

The Walfront IP32 LCD Screen is designed for low maintenance. Adhering to the following guidelines will help ensure its continued performance:

- **Cleaning:** Gently wipe the screen and casing with a soft, dry, or slightly damp cloth. Avoid using abrasive cleaners, solvents, or harsh chemicals, as these can damage the display or casing.
- **Environmental Conditions:** While the display has an IP32 protection level, it is recommended to protect it from direct heavy rain or prolonged exposure to extreme moisture. Ensure operation within the specified temperature range of -35°C to 65°C and altitude of ≤3000m.
- **Connection Integrity:** Periodically check the PH2.0 connection cable to ensure it is securely attached to both the display and the solar controller. Loose connections can lead to intermittent data display or

quality issues.

- **Avoid Physical Impact:** Protect the display from strong impacts or drops, which could damage the screen or internal components.

7. TROUBLESHOOTING

If you encounter issues with your Walfront IP32 LCD Screen, refer to the following common troubleshooting steps:

- **Display Not Turning On:**
  - Ensure the solar charge controller is properly powered on and functioning.
  - Check the PH2.0 connection cable for secure attachment at both ends.
  - Verify that the display is compatible with your specific solar controller model.

- **No Data or Incorrect Data Displayed:**
  - Confirm the cable connection is secure and undamaged.
  - Ensure the solar controller is operating correctly and receiving input from solar panels and battery.
  - The communication baud rate (9600bps) is fixed; ensure your controller is configured to communicate at this rate if adjustable.

- **Buttons Not Responding:**
  - Gently press the buttons to ensure they are not stuck.
  - If the display is unresponsive, try disconnecting and reconnecting the display cable to reset it.

If these steps do not resolve the issue, please contact Walfront customer support or your retailer for further assistance.

8. WARRANTY AND SUPPORT

For information regarding product warranty, returns, or technical support, please refer to the documentation provided with your purchase or contact your retailer directly. You may also visit the official Walfront store for additional resources and contact information:

Visit the Walfront Store

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