

User Manual

RM-6 LCD Display Unit

1. Product Features

- ◆ LCD graphical main menu, for real-time monitoring of real-time data and operating status of the controller.
- ◆ Two-button design for menu viewing and parameters setting, easy to operate.
- ◆ No external power supply is required, and the LCD unit can be powered by connecting it to the controller via a communication cable.
- ◆ Embedded installation.
- ◆ Industrial grade design, allowing for use in a variety of harsh environments.

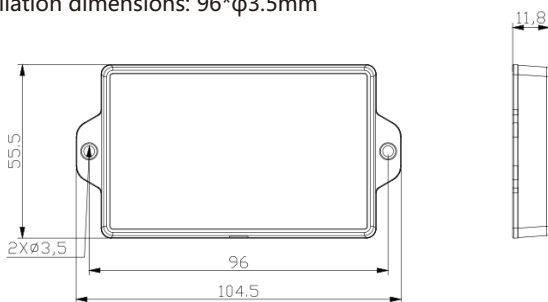
2. Appearance



3. Installation Dimensions

Product dimensions: 104.5*55.5*11.8mm

Installation dimensions: 96*φ3.5mm



4. Button Operations

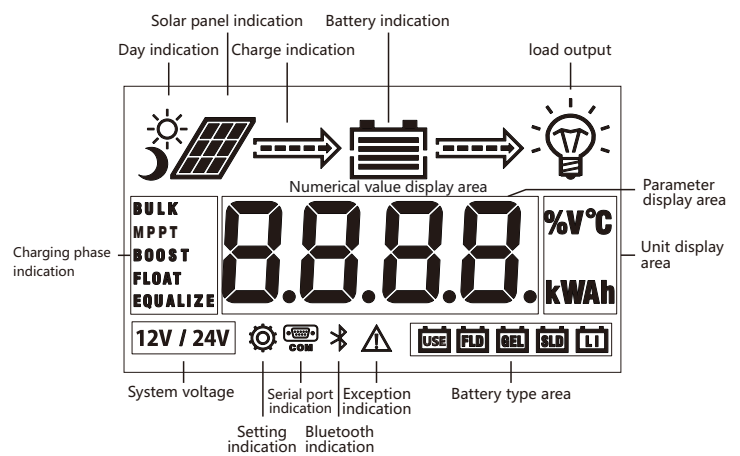
Buttons	Functions
SELECT	Menu/parameter switching
ENTER	Parameters setting/adjusting

5. Technical Parameters

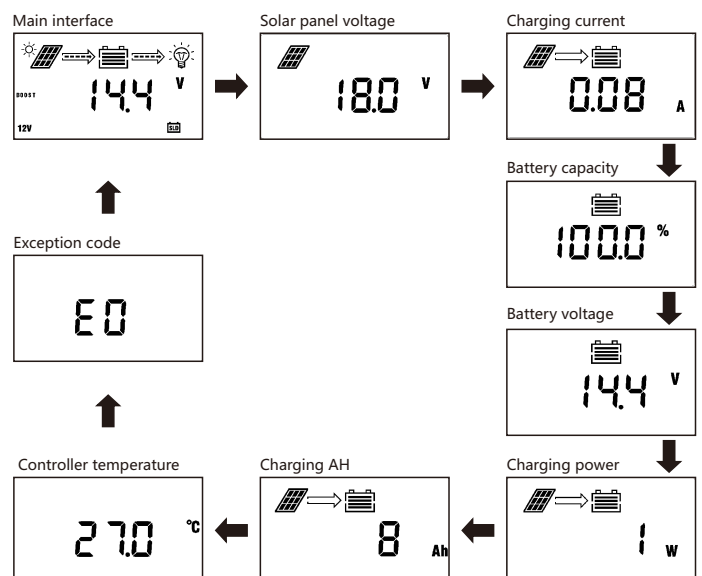
Items	Parameter values
Model	RM-6
Applicable models of controller	MC2420N10/MC2430N10 MC2440N10/MC2450N10
Input voltage	5V-12V
Standby power consumption	< 0.03W
Operating power consumption	< 0.04W
Fixed baud rate	9600bps
Communication mode	TTL
Interface type	PH2.0
Connection cable length	1.5M
Operating temperature	-35°C ~ +65°C
IP rating	IP32
Weight	90g
Altitude	≤ 3000M
Dimensions	104.5*55.5*11.8mm

6. LCD Menu

1) Menu Diagram



2) Menu Viewing



7. System Parameter Settings

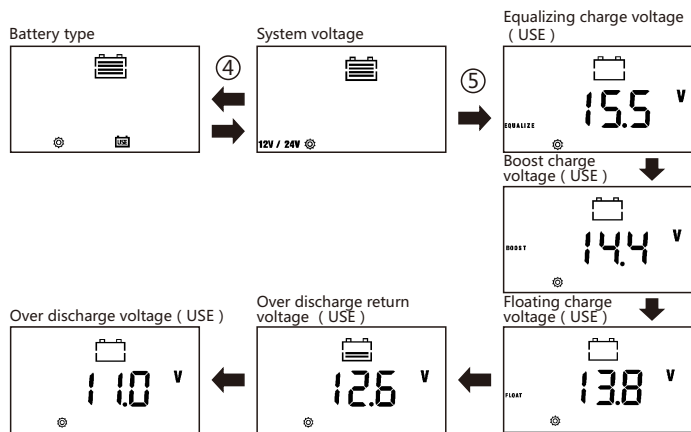
1) Methods

In any menu, press and hold "ENTER" to enter the "Parameter Settings" menu:

- ① Press the "ENTER" button to adjust parameter value;
- ② Press the "SELECT" button to switch between different setting items;
- ③ Press and hold the "ENTER" button for 2 seconds to save what has been set and exit setting mode;
- ④ Select the "FLD/GEL/SLD/LI" battery type and press the "SELECT" button to switch between "System voltage" and "Battery type";
- ⑤ After selecting "USE" to customize the battery type, press "SELECT" button to switch between "system voltage", "Equalizing charge voltage", "Boost charge voltage", "Floating charge voltage", "Over-discharge return voltage" and "Over-discharge voltage" to change some common parameters.

Care should be taken when the user defines parameters to their needs, and incorrect parameters may make the system fail to work properly.

(Note: After changing "System Voltage", it is required to power up again to take effect!!!)



2) Custom USE Menu

No.	LCD Display	Setting items	Parameter range	Notes
1	USE	Battery type		Custom battery type
2	12V/24V	System voltage	12V/24V	"12V/24V" light up at the same time, indicating automatic identification
3	EQUALIZE	Equalizing charge voltage (USE)	9.0 ~ 17.0V	
4	BOOST	Boost charge voltage (USE)	9.0 ~ 17.0V	
5	FLOAT	Floating charge voltage (USE)	9.0 ~ 17.0V	
6		Low voltage disconnection recovery voltage (USE)	9.0 ~ 17.0V	
7		Low voltage disconnection voltage (USE)	9.0 ~ 17.0V	

9. Exception Code Display

No.	Error codes displayed on LCD	Descriptions
1	E0	No exception
2	E1	Battery over discharge
3	E2	Battery over voltage
4	E3	Battery under-voltage warning
5	E6	Controller internal over temperature
6	E7	Battery over temperature
7	E8	Solar panel input overload
8	E10	Solar panel over voltage
9	E13	Solar panel reverse polarity

10. Common Problems and Handling Methods

Phenomena	Handling methods
LCD screen is not lit	Please check if the battery and solar panel are properly connected.
Solar panel has voltage, battery terminal has no voltage output, and the code E1 is displayed	If it is not lithium battery set in the system, when the battery is not connected, there is no voltage output at both ends of the battery, and this will return to normal as the battery is connected.
Battery of 12V or 24V normal voltage is connected, battery icon on the LCD flashes slowly, and the code E1 is displayed.	Check if it is set to the corresponding system voltage, or set to automatic identification and restart the controller
Battery icon indicator flashes quickly and the battery is not being charged. The code E2 is displayed.	System overvoltage, check if battery voltage is too high
E3 code is displayed	The battery voltage is lower than the under-voltage warning threshold. It is only a reminder. The system is normal.
E6 code is displayed	Internal temperature of the controller is too high. Charging and discharging are turned off. When the temperature drops below a certain value, it automatically recovers.
E7 code is displayed	Battery temperature is too high. Charging and discharging are turned off. When the temperature drops below a certain value, it automatically recovers.
E13 code is displayed	Solar panel reverse polarity, Check the wiring of solar panel
No data on the screen	Poor communication, check the communication line