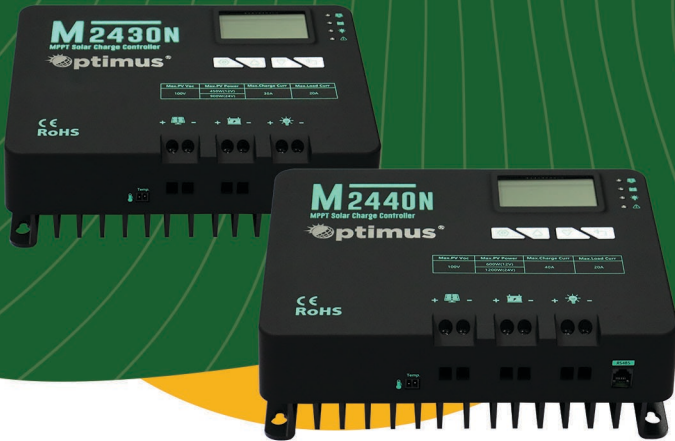


# M2430N, M2440N

## RELIABLE POWER FOR DIVERSE APPLICATIONS



## KEY FEATURES

- **High Efficiency:** Advanced MPPT technology ensures maximum energy extraction from solar panels.
- **Flexible Voltage Support:** Designed for 12V and 24V systems with auto-recognition.
- **Comprehensive Safety Features:** Reverse polarity, overcharge, and short-circuit protections ensure long-term reliability.
- **Multiple DC Load Modes:** Capable of connecting external relays for high-power DC loads, enhancing versatility.
- **Bluetooth-Enabled:** App support for remote monitoring and adjustments.
- **Durable Build:** IP43-rated protection and anti-condensation design for extended service life in variable environments.
- **Enhanced Safety Features:** Includes over-discharge and temperature protections, extending battery lifespan.



### Overcharge Protection

Real-time battery voltage detection to prevent battery overcharge damage. It can extend the service life of the battery and ensure the safety of use.



### Over Discharge Protection

Real-time monitoring of battery voltage prevents over-discharge, which can damage the battery and shorten its lifespan, thereby ensuring safety and extending the battery's service life.



### Short Circuit Protection

The output is automatically disconnected when the DC load is short-circuited to prevent device damage.



### Reverse Polarity Protection

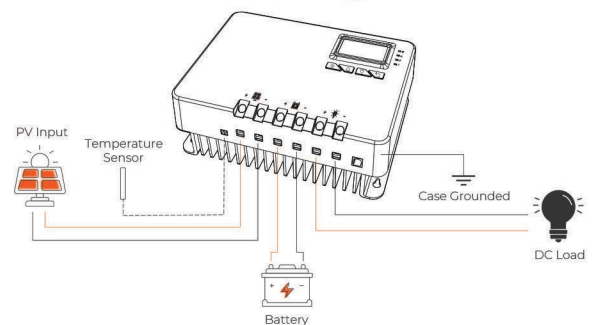
The reverse polarity protection for both solar panels and batteries ensures safety and facilitates easy operation.



### Over Temperature Protection

The controller of the device intelligently activates the over-temperature protection based on its own temperature, ensuring safe usage and extending the service life of the equipment.

## Wiring





## APPLICATIONS

- **Home Solar Systems:** Boosts efficiency for households with medium to high energy needs.
- **RV and Off-Grid Setups:** Dependable energy management for mid-size solar applications.
- **Solar-Powered Lighting Systems:** Ideal for standalone lighting installations in gardens and parks.
- **Off-Grid Solar Setups:** Reliable power management for rural areas or remote cabins.



Model No.	M2430N		M2440N		
System Voltage	12V/24V				
Battery Types	GEL/SEL/FLD(Auto) ; USE/Li(Manual)				
No-load Loss	12V/12mA ; 24V/10mA				
Operating Temperature	-35℃ ~ +45℃				
System Grounded	Negative				
Communication Port	RS485(RJ12) / Bluetooth(App)				
Net Weight	2kg		2kg		
Controller Dimension	245*180*82.5mm		245*180*82.5mm		
Max Charging Current	30A		40A		
PV					
Max Solar Input Voltage			<100Voc		
Max Solar Input Power	450W/12V 900W/24V		600W/12V 1200W/24V		
Load					
Max Load Output Current			20A		
Light Control Voltage			5V*n		
Battery Parameters					
Battery Types	GEL (Default)	SEL	FLD	USE	Li (LiFePO <sub>4</sub> )
Equalize Charge Voltage	--	14.6V*n	14.8V*n	Default	--
Boost Charge Voltage	14.2V*n	14.4V*n	14.6V*n	Default: GEL	Default: 14.2V*n
Float Charge Voltage	13.8V*n	13.8V*n	13.8V*n	Default: GEL	--
Boost Charge Recovery Voltage	13.2V*n	13.2V*n	13.2V*n	Default: GEL	--
Over-Discharge Recovery Voltage	12.6V*n	12.6V*n	12.6V*n	Default: GEL	--
Over-Discharge Voltage	11.1V*n	11.1V*n	11.1V*n	Default: GEL	Default: 11.1V*n
Temperature Compensation	(-3mV/2V/℃)	(-3mV/2V/℃)	(-3mV/2V/℃)	Default: GEL	--

### TEXAS OFFICE

☎ (346) 295 8900  
📍 3115 Fry Rd., Suite 505  
Houston, TX 77449

### OPTIMUS SOLAR

✉ sales@optimus.solar  
🌐 www.optimus.solar

### TENNESSE OFFICE

☎ (901) 590 4579  
📍 5066 Summer Ave,  
Memphis, TN 38122