SR-MT Maximum Power Point Tracking Series
Solar charge controller

SR-MT2410

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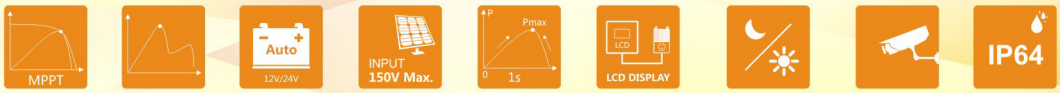
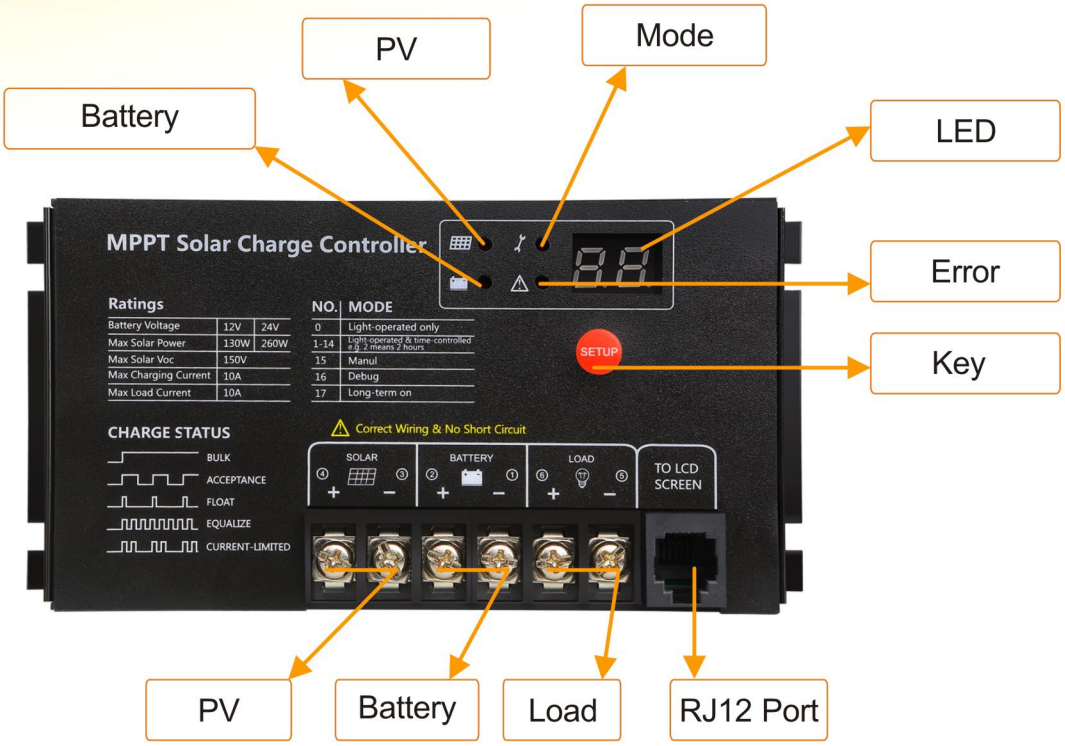


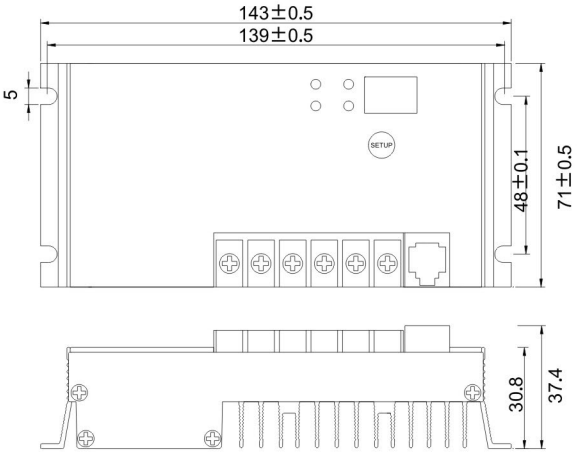
Features

1. Adopting double crest or multi crest tracing technique, used for the condition when a part of solar panel is under shadow or parts of solar panel is damage.
2. Built-in maximum power point tracking algorithm which could promote the energy utilization efficiency of pv system. The charging efficiency is 15%~20% higher than PWM mode.
3. It can find out the best working point of I-V curve within 1 minute. the MPPT efficiency could reach to 99.9%.
4. Adopting advanced digital power supply techniques which makes the energy conversion efficiency reach up to 97%.
5. Four charging stages: MPPT - equalizing charge- boosting charge- floating charge.
6. With current-limiting charging mode. When the power of solar panel is oversized, the controller will lower charging power automatically, which enable the system to work under the rated charging current.
7. Have the fault code indication, it helps user confirm the system fault.
8. Various load control methods. Could recognize day and night automatically.
9. Various system protection functions. Including over-charge, over-discharge, over-load, over-heat, battery-reverse connection and short-circuit protection etc.

Front View Schemat



Installation Dimension

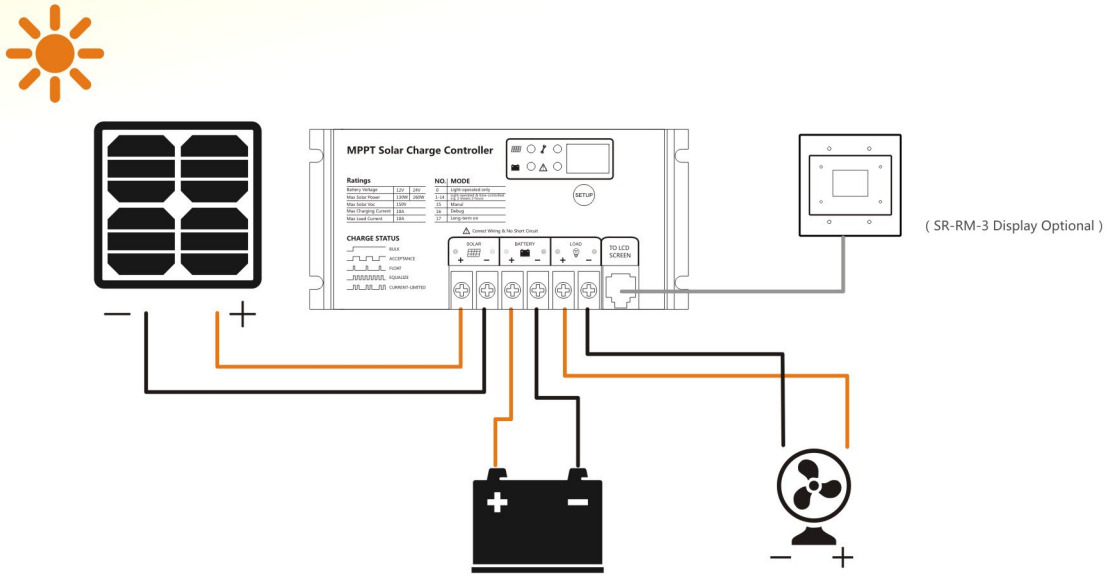


Overall Dimension : 143×71×36(mm)

Installation Dimension : 143×71×36(mm)

Product Detail

Wiring diagram is as below



Working State Indication

1.Charge indication: When the solar panel output voltage reaches a certain value, charge indicator start to work. Different flash status represents different charge mode. The specific meaning of charge mode is as the table A below.

2.Battery capacity indication: When the battery is normal, the indicator is on, when it is over discharge, the indicator will slow flash, when the battery is over voltage, the indicator will fast flash.(Table B)

3.Mode indication: When the mode indicator is on, it indicates that the value on the Nixie tube is controller mode. The value will disappear if no key operation within 5s.

4.Fault indication: when the fault indicator is on, it indicates that the value on the Nixie tube is controller fault code; The value will disappear if no key operation within 5s. If fault exists, the indicator will flash.

A. Charging Status Indication Specification:

Serial Number	Diagram	Indicating Status	State of charge
①	BULK	Normally on.	Charge at Max. Power.
②	ACCEPTANCE	Slow flash. (light for 1s, off for 1s, the cycle is 2s)	Boost charging.
③	FLOAT	Single flash. (light for 0.1s , off for 1.9s , the cycle is 2s)	Float charging.
④	EQUALIZE	Fast flash. (light for 0.1s , off for 0.1s , the cycle is 0.2s)	Equalizing charge.
⑤	CURRENT-LIMITED	Double flash. (light for 0.1s , off for 0.1s , reopen for 0.1s , reclose for 1.7s , the cycle is 2s)	Current limited charging.

B. Battery Indication Specification.

Serial Number	LED Status	Battery Status
①	Normally on.	The battery voltage is normal.
②	Slow flash. (light for 1s, off for 1s, the cycle is 2s)	The battery is over discharged.
③	Fast flash. (light for 0.1s, off for 0.1s, the cycle is 0.2s)	The battery is over voltage.

Parameters

Item	Value	
Model	SR-MT2410	
System voltage	12V	24V
Max. input power of solar panel	130W	260W
Transfer efficiency	≤96%	≤97%
Rated charge/ discharge current	10A	
No load loss	＜15mA	
Max. input voltage of solar panel	＜150V	
MPPT tracing efficiency	＞99%	
Over voltage protection	16.5V	33.0V
Limited charge voltage	15.5V	31.0V
Equalizing charge voltage	15.2V	30.4V
Equalizing charge interval	30 days	
Boosting charge voltage	14.4V	28.8V
Floating charge voltage	13.8V	27.6V
Over-discharge recover voltage	12.5V	25.0V
Over discharge voltage	11.0V	22.0V
Boosting charge time	2 hours	
Equalizing charge time	1 hour	
Over temperature protection	Yes	
Light-operated voltage (on)	5V	
Light-operated voltage (off)	6V	
Light-operated delay time	5min	
Working temperature	-35℃～+65℃；	
Weight	430g	
Altitude	≤3000m	
Dimension	143*71*37.4 (mm)	
Installation dimension	139*48(mm)	
Overload protection	Load current≥1.25 times rated current, cut off the load within 10 seconds; Load current≥1.5 times rated current, cut off the load within 5 seconds	
Protections	1.Reverse connection. 2.Inner over temperature. 3.The voltage of PV input terminal is over value. 4.Over load 5.Reverse charging protection at night. 6. TVS lightning protection 7. Waterproof: IP 64	