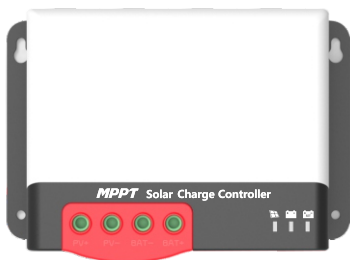


# MC Series MPPT Solar Charge Controller

MC2420N10/ MC2430N10/ MC2440N10/ MC2450N10

## User Manual



Model	MC2420N10	MC2430N10	MC2440N10	MC2450N10
Battery voltage	12V/24V			
Max. PV open circuit voltage	92V(25°C) ; 100V(Lowest ambient temperature)			
Charge current	20A	30A	40A	50A
Max. PV input power	260W/12V 520W/24V	400W/12V 800W/24V	520W/12V 1040W/24V	660W/12V 1320W/24V

## Electrical parameters

Items	Parameters			
	MC2420N10	MC2430N10	MC2440N10	MC2450N10
Model	MC2420N10	MC2430N10	MC2440N10	MC2450N10
System voltage	12V/24V			
Zero load loss	<10mA			
Battery voltage	9V~32V			
Maximum PV open circuit voltage	92V(25°C) ; 100V(Lowest ambient temperature)			
Maximum power point voltage range	( Battery voltage +2V ) ~ 72V			
Rated charging current	20A	30A	40A	50A
Maximum PV input power	260W/12V 520W/24V	400W/12V 800W/24V	550W/12V 1100W/24V	660W/12V 1320W/24V
Charging conversion efficiency	≤98%			
MPPT tracking efficiency	> 99%			
Temperature compensation coefficient	-3mv/°C/2V ( default ) ; Lithium battery features no temperature compensation			
Operating temperature	-35°C ~ +60°C			
IP rating	IP32			
Weight	650g	830g	1040g	1335g
Communication mode	TTL Serial communication			
Altitude	≤ 3000 meters			
Dimensions ( mm )	150*105.6*61.5	150*105.6*67.5	183*127*65.5	183*127*69.5

## Battery type default parameters

Comparison of parameters of various types of battery					
Set voltage Battery type	Sealed lead-acid battery	Gel lead-acid battery	Flooded lead -acid battery	Lithium battery	User defined
Overvoltage disconnection voltage	16.0V	16.0V	16.0V	—	9~17V
Equalizing charge voltage	14.6V	—	14.8V	—	9~17V
Boost charge voltage	14.4V	14.2V	14.6V	14.4V	9~17V
Floating charge voltage	13.8V	13.8V	13.8V	—	9~17V
Boost charge recovery voltage	13.2V	13.2V	13.2V	—	9~17V
Equalizing charge duration	120 min.	—	120 min.	—	0~600 min.
Equalizing charge interval	30 days	0 days	30 days	—	0~250D ( 0 indicates turning off equalizing charge function)
Boost charge duration	120 min.	120 min.	120 min.	—	10~600 min.

If a user-defined battery is used, the default voltage parameters of the system are the same as those of the sealed lead-acid battery. The following logic must be followed when you modify battery charge and discharge parameters:

Overvoltage disconnection voltage> charge limit voltage ≥ equalizing charge voltage ≥ boost charge voltage ≥ floating charge voltage> boost charge recovery voltage;

Overvoltage disconnection voltage> Overvoltage disconnection recovery voltage;



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