

MCR SERIES MPPT SOLAR CHARGE CONTROLLER

30A-100A

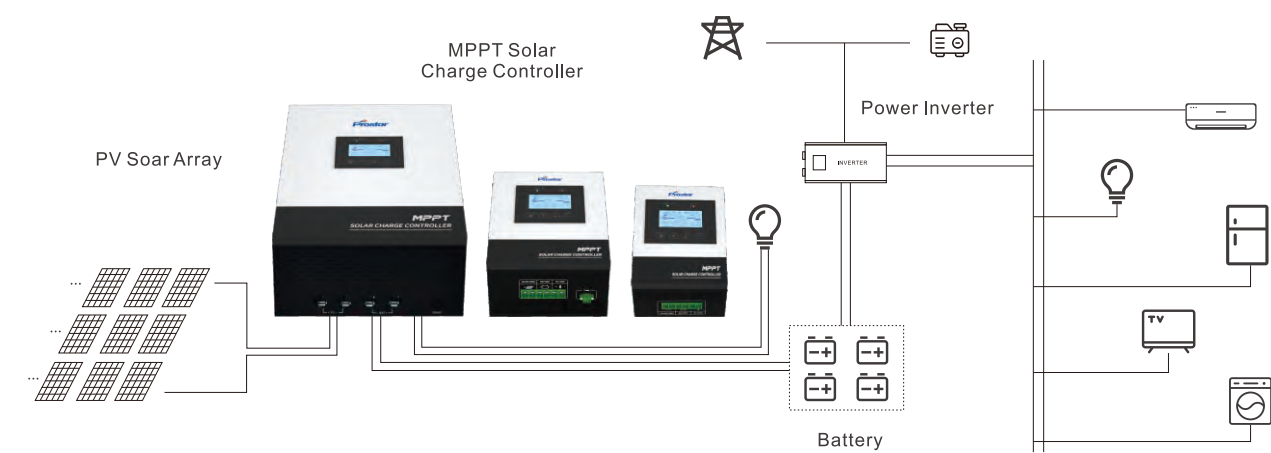
Performance Characteristics



- 1. Wide DC voltage input range, suitable for various common solar panel specifications
- 2. Compatible for PV systems in 12V, 24V, 48V or 96V
- 3. Select low power consumption chip to reduce static standby energy consumption and reduce energy loss
- 4. Three-stage charging optimizes battery performance
- 5. Maximum efficiency up to 98%
- 6. DSP control technology
- 7. Automatic battery voltage detection
- 8. Ability to output in parallel to power DC loads
- 9. Support wide range of batteries, like lead acid batteries Including wet, AGM, gel batteries and lithium-ion batteries
- 11. Real-time power statistics function

This MPPT solar charge controller adopts advanced DSP digital control technology, it is the intelligent, cost-effective choice for low-power applications that require maximum charging efficiency. There is advanced MPPT control algorithm to minimize the maximum power point loss rate and loss time, and can quickly track to the maximum power point of the photovoltaic array in any environment to obtain the maximum energy. In general, this MPPT solar charge controller is designed with three-stage battery charging algorithm for fast, efficient, and safe battery charging to extend battery lifespan significantly and improve system performance. With many comprehensive protections, like overcharging, over discharging, reverse connection for PV solar panel and battery, it can avoid damaging due to installation errors and system failures. This MPPT solar charge controller also features multifunctional LCD with communication ports for remote battery temperature and voltage measurement. It is widely used in many fields such as RVs, communication base stations, household systems and field monitoring.

Application Diagram



Technical Specifications

MODEL		MCR3024	MCR6048	MCR10048	MCR10096
MPPT Efficiency		≥99.5%			
System Voltage		12V/24V(Auto)	12V/24V/48V(Auto)	48V/96V(Auto)	
Dimension(mm)		162x150x78	200x168x94	359x240x114	
Net Weight(Kg)		1.3	1.8	7.2	
INPUT					
Max. PV Input Voltage		100VDC	170VDC	225VDC	
MPPT Operating Voltage Range	12V	18VDC-95VDC	18VDC-150VDC	-	
	24V	34VDC-95VDC	34VDC-150VDC	-	
	48V	-	65VDC-150VDC	65VDC-150VDC	
	96V	-	-	130VDC-180VDC	
Low Voltage Protection	12V	16VDC	16VDC	-	
	24V	30VDC	30VDC	-	
	48V	-	60VDC	60VDC	
	96V	-	-	120VDC	
High-voltage Protection		100VDC	170VDC	230VDC	
PV Rated Input Power	12V	428W	855W	-	-
	24V	856W	1710W	-	-
	48V	-	3420W	4560W	5700W
	96V	-	-	9120W	11400W
DC LOAD OUTPUT					
Load Voltage		Same as battery voltage, but 96VDC system without DC output load			
Load Current		30A	60A	100A	
CHARGE					
Battery Type		Sealed Lead Acid, Gel, Flooded, Lithium-ion, User-defined			
Charging Mode		Three-stage: CC (Constant current) - CV (Constant voltage) - CF (Float charge)			
Float Charging Voltage	12V	13.8VDC (Settable)	13.8VDC (Settable)	-	
	24V	27.6VDC (Settable)	27.6VDC (Settable)	-	
	48V	-	55.2VDC (Settable)	55.2VDC (Settable)	
	96V	-	-	110.4VDC (Settable)	
(Lead Acid Default)	12V	14.5VDC (Settable)	14.5VDC (Settable)	-	
	24V	29.0VDC (Settable)	29.0VDC (Settable)	-	
	48V	-	58.0VDC (Settable)	58.0VDC (Settable)	
	96V	-	-	116.0VDC (Settable)	
SYSTEM					
Protection Function		Input low/over voltage, input/output polarity reverse connection, short circuit, over temperature, battery shedding etc.			
Display		LED +LCD			
Communication		RS485 (Optional)			
ENVIRONMENT					
Relative Humidity		5% ~ 90% RH (Non-condensing)			
Altitude		< 3000m			
Operating Temp.		-20°C~+40°C			
Protection Grade		IP21			