

Solar Mate

- MPPT Solar Charge Controller -



Solar Mate is a solar charge controller with built-in Maximum Power Point Tracking (MPPT) technology, which enables it to increase its PV output by as much as 30% compared with non-MPPT designs.

Solar Mate can optimize the PV's output and eliminate the fluctuation due to shading or temperature variables. It is a multi-voltage MPPT with a built-in sophisticated battery charging algorithm for both lead acid battery and lithium-ion battery, suitable for various system designs. Meantime, it supports data management of 365-day history records, which can tell users the system's actual performance.

- High dynamic MPPT efficiency of more than 99.9%
- High efficiency up to 98%, and European weighted efficiency up to 97.3%
- Up to 7056W of charging power at 40°C
- Excellent performance at sunrise and low solar insulation levels
- Wide MPPT operating voltage range
- Parallel function, up to 6 units can be operated in parallel
- Built-in TBB premium II battery charging algorithm for lead acid battery
- Support 365days Data logging
- Communication: Auxiliary contact, RS485 supportT-bus

Model	SP150-60	SP150-80	SP150-120	SP250-70	SP250-100	
Electrical						
Nominal battery voltage (VDC)	24 or 48				48	
Maximum charging current (A)	60	80	120	70	100	
Maximum charging power (W)	12VDC	N/A				
	24VDC	1764	2352	3528	2058	N/A
	48VDC	3528	4704	7056	4116	5880
Maximum PV input power (W)	12VDC	N/A				
	24VDC	2250	3000	4500	2700	N/A
	48VDC	4500	6000	9000	5400	7500
PV open circuit voltage (Voc) (VDC)	150			250		
MPPT voltage range (VDC)	65~145			65~245		
Max. PV short circuit current (A)	40	80				
Max. efficiency	98%@48VDC system					
Max. MPPT efficiency	≥99.9%					
Self-consumption (mA)	37mA @ 48V					
Charge voltage 'absorption' (VDC)	28.8/57.6				57.6	
Charge voltage 'float' (VDC)	27/54				54	
Charging algorithm	TBB II multiple stages					
Temperature compensation	Default setting: -3mV/°C/cell					
Equalization charging	Programmable					
Other						
Display	LED+LCD					
Communication port	RS485					
Dry contact	30Vdc/2A					
Remote on/off	Yes (2 pole connector)					
Data logging	365 days of history record,daily, monthly and total production; Real time figure including solar array voltage, battery voltage,charging current,charging power; Record the daily PV start charging time, absorb to floating transfer time, PV power loss time and etc; Real time fault time and information.					
Storage temperature	-40°C~70°C					
Operating temperature	-25°C~ 60°C (power derated above 40°C)					
Humidity	5%~95%, non-condensing					
Altitude	3000m (full rated output up to 2000m)					
Max. wire sizes (mm ²)	35					
Protection category	IP21					
Dimension (L*W*H) - mm	325.2*293*116.2				352.2*293*116.2	
Weight (kg)	6.8	7.0	7.2	7.0	7.8	
Cooling	Natural cooling				Forced fan	
Standard	EN61000-6-1, EN61000-6-3, EN62109-1					