

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 support/T-bus

Model No.		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 (mm²)		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				