

SOLAR MATE

MPPT Solar Charge Controller



Regulador Solar SolarMate MPPT

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 temperatures variables. It is a multi-voltage MPPT with built-in sophisticated battery charging algorithm for both lead acid battery or 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.

Main Specifications

- High dynamic MPPT efficiency 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 insolation 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 CAN-bus

SPECIFICATIONS

		SP150-60	SP250-70	SP250-100
Electrical				
Nominal battery voltage		24 or 48 V		48 V
Maximum charging current		60 Amp	70 Amp	100 Amp
Maximum charging power	12 V	n.a	n.a	n.a
	24 V	1764 W	2058 W	n.a
	48 V	3528 W	4116 W	5880 W
Maximum PV input power	12 V	n.a	n.a	n.a
	24 V	2250 W	2700 W	n.a
	48 V	4500 W	5400 W	7500 W
PV Open circuit voltage		150 V		250 V
MPPT Voltage range		65 - 145 Vdc		65 - 245 Vdc
Max PV Shortcircuit current		40 A		80 A
Maximum efficiency			98 % @48Vdc	
Max MPPT efficiency			≥99.9%	
Self-consumption			37 mA @ 48V	
Absorption charge voltage		28,8 / 57,6 V		57,6 V
Float charge voltage		27 / 54 V		54 V
Charge algorithm			TBB II Multistage	
Equalization charging			Programmable	
Others				
Display			Led + LCD	
Communication port			RS485	
Dry contact			30V / 2A	
remote on / off			Yes, (2 pole connector)	
Data logging		365 day 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 to 70 °C	
Operative temperature			-25 to 60 °C	
Humidity			5 - 95 %, without condensation	
Altitude			3000 mts. Full rated output up to 2000 mts	
Max wire sizes			35 mm2	
Protection grade			IP21	
Dimmensions		353 x 293 x 117 mm	325,2 x 293 x 116,2 mm	353 x 293 x 117 mm
Weight		6,8 Kgr	7 Kgr	7,8 Kgr
Cooling		Natural		Forced fan
Standards		EN61000-6-1, EN61000-6-3; EN62109-1		

DOWNLOADS

REGULADORES MPPT TBB SOLARMATE

 [Solar_Mate_MPPT_Solar_Charger_Controller_V1.2.pdf](#)