SUNWAY POWER

Green and Creative

HEFEI SUNWAY POWER

PV SYSTEM

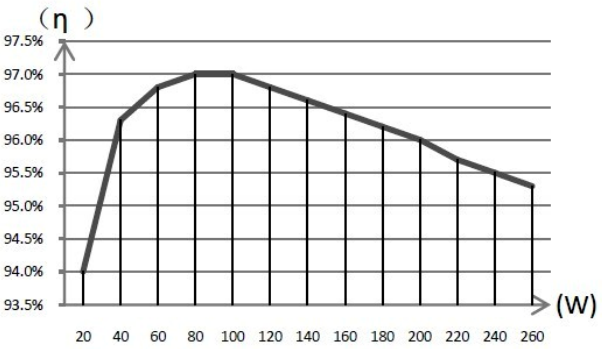
MPPT SOLAR CHARGE CONTROLLER

As a SME manufacture of solar controller, Sunway power using the most advanced **MPPT** technology to rise the efficiency of solar charging to the optimum level. This controller is for off-grid PV system to control the charging and discharging of the battery, especially suitable for street light system. The controller features a smart tracking algorithm inside that maximizes the energy from the solar PV module(s) and charge the battery. At the same time, the low voltage disconnect function (LVD) will prevent the battery from over discharging. Charging process has been optimized for long battery life and improved system performance.

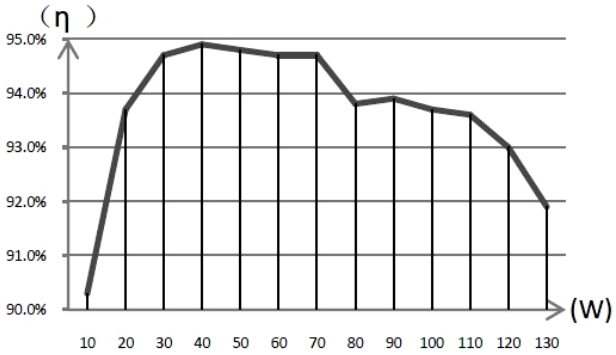
FEATURES

- 12V/24V system auto detection
- Peak conversion efficiency of 95%, high Tracking efficiency of 97%
- Very fast sweeping of the entire I-V curve，several seconds tracking speed
- Be suitable for Sealed, Gel and Li-Fe battery various kinds of batteries
- Adopting temperature compensation and correcting the charging and discharging parameters automatically, improving the battery lifetime
- With multi-functions of perfect protection.
- The metal housing case cooling
- Utility power hybrid function (Optional)

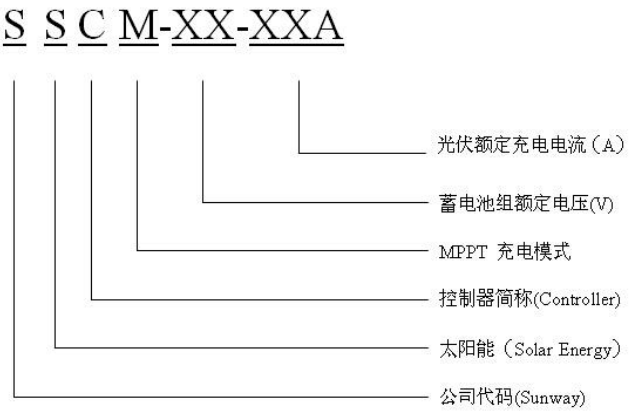
Voc of solar panel(36V) in 24V system

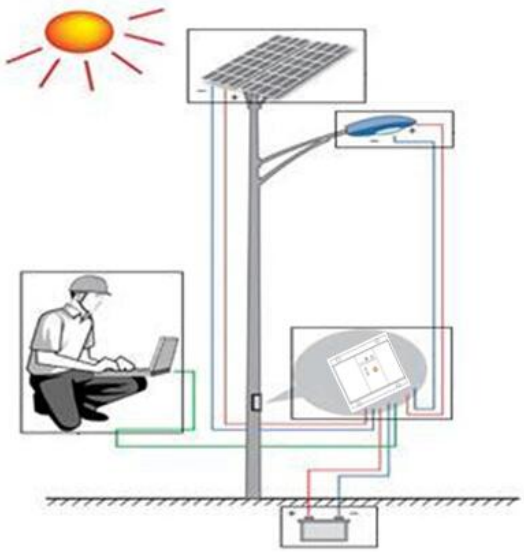


Voc of solar panel(17V)in 12V system



MODEL





TECH-DATA

system	Vmp	Vmp (suggestion)	Vmp
12V	15V	18V	25V
24V	30V	36V	45V

system	Over-discharge	Over-discharge recovery	floating	Over-charge	Over-charge recovery
12V	10.5 V	12.0 V	14.0 V	13.5 V	15.0 V
24V	20.0 V	24.0 V	28.0 V	27.0 V	30.0 V

output functions	
Each line rated current	5A
Each line rated power（12V/24V） MODE：lighting	60W / 100W Lighting on/off
MODE：lighting+ city-electric supply switch	Lighting on/off
MODE：home	Output constantly
MODE：home+ city-electric supply switch	Output constantly

performance	
Voc of solar Max. [V]	≤48
Battery condition	＞9V (12V system) ；＞18V (24V system)
Rated charging current [A]	☐5 ☐10 ☐15 ☐20
Self-consumption [mA]	≤20
Charging efficiency	≥95%
Temperature-compensation coefficient	-35mV/℃ (25℃ ref.)
cooling	Casing cooling
Ambient temp. range	-30℃ to +55℃
Humidity range	10% - 90% (NC）
Protection class	IP55
Altitude work [m]	≤2000
Net weight [kg]	0.6

MPPT
PLUS SERIES

SOLAR CHARGE CONTROLLER

As a SME manufacture of solar controller, Sunway power using the MPPT technology to rise the efficiency of solar charging to the optimum level. The controller features a smart tracking algorithm inside that maximizes the energy from the solar PV module(s) and charge the battery. At the same time, the low voltage disconnect function (LVD) will prevent the battery from over discharging. MPPT Maximum Power Point Tracking technology increases the efficiency of your PV system and charges your battery much faster than a regular controller.

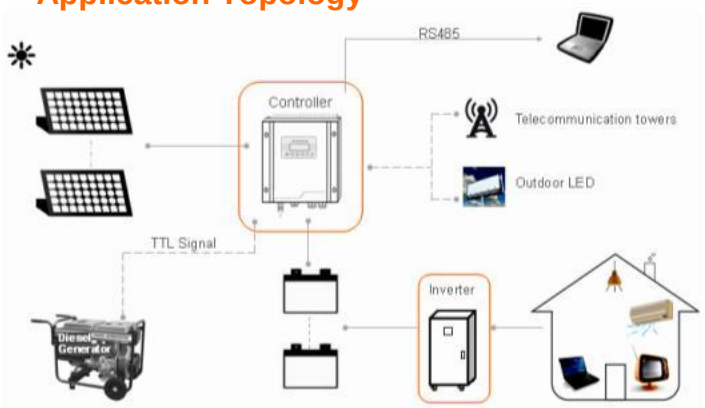
Product

30-40A

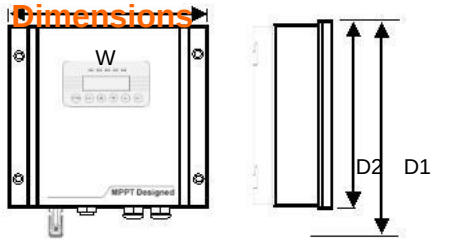
50A-120A

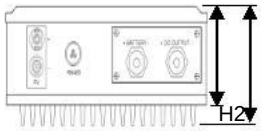
http://www.sunway-power.com please click for more details

Application Topology



Dimensions





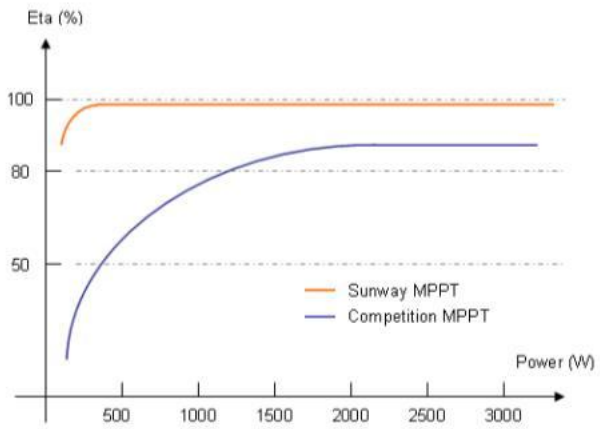
D1	D2	W	H1	H2
351	326	280	137	101

Features

- MPPT technology increases the efficiency of your PV system
- Modular Central Unit (MCU) control
- 12/24/36/48V selectable and auto recognition
- Be suitable for Lead-Acid, GEL,AGM and Li-Fe various kinds of batteries
- Users can to modify the system parameters by setting keys
- Standard RS485 data transfer function
- TTL Control Signal is offered, suitable for PV&Diesel generator hybrid system(optional)
- Temperature compensation function (optional)
- Utility power backup function (optional)

Protection Functions

- Battery over-charge/discharge protection
- Over-current disconnect function
- Over-loading disconnect function
- Over-temperature protection
- Short circuit disconnect function
- Reverse polarity protection
- anti-reverse charging on night



Data Transfer Accessories

Converter USB

http://www.sunway-power.com please click for more details

Technical Data

System Capability	
Model type	SSCM- 12V / 24V / 36V / 48V
Max. PV input power [W]	1440 / 2880 / 4320 / 5760 (12/24/36/48V system)
Rated charging current [A]	30 / 40 / 50 / 60 /80/100/120
Min. input voltage (Vmp) [V]	15 / 28 / 43 / 58 (12/24/36/48V system)
Max. input voltage (Vmp) [V]	18 / 36 / 54 / 72 (12/24/36/48V system)
Max. PV input voltage (Voc) [V]	150
Float charge (be adjustable) [V]	14 / 28 / 42 / 56 (12/24/36/48V system)
Boost charge [V]	10 / 20 / 30 / 40 (12/24/36/48V system)
Deep discharge protection (be adjustable) [V] Load disconnect	10.5 / 21 / 31.5 / 42 (12/24/36/48V system)
Reconnect level (be adjustable) [V] With 10s delay	12 / 24 / 36 / 48 (12/24/36/48V system)
Over-voltage protection (be adjustable) [V] Cut-off charging 10s delay (be adjustable)	15 / 30 / 45 / 60 (12/24/36/48V system)
Reconnect charging [V] With 10minutes delay (be adjustable)	13.5 / 27 / 40.5 / 54 (12/24/36/48V system)

Performance	
Consumption at standby [mA]	＜30
Conversion Efficiency	Up to 98%
Peak of conversion efficiency	99%
Topology	Inductor
Ambient Temperature	-40℃ to +50℃ (exceed 50℃ with derating)
Ambient Humidity	0%～98% Non-condensing
Cooling Method	Natural Convection
Temperature compensation	-4mV/K(2V cell)
Altitude [m]	＜2000 (without power derating)

General Data	
LCD Display	LCD (16X2characters，green backlight)
Display Language	English
Data communication (option)	RS485
Grounding	Negative
Ingress Protection Class	IP65
Dimensions (W*D*H) [mm]	280 *351 *137
Net weight [kg]	5.5

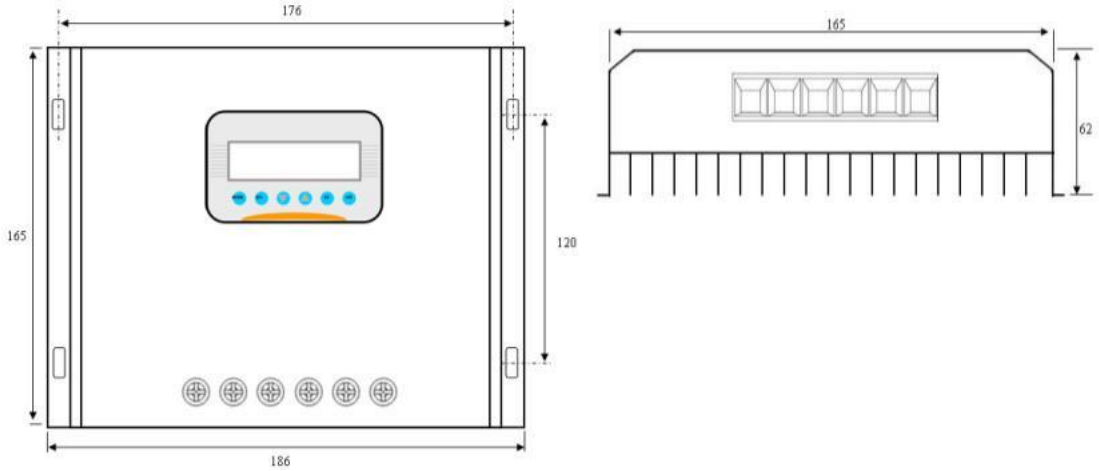
PWM HOME TYPE

As a SME manufacture of solar controller, Sunway power using the advanced technology to rise the efficiency of solar charging to the optimum level. The controller features a smart tracking algorithm inside that maximizes the energy from the solar PV module(s) and charge the battery. At the same time, the low voltage disconnect function (LVD) will prevent the battery from over discharging. Charging process has been optimized for long battery life and improved system performance. Meanwhile, the comprehensive self-diagnostics and electronic protection functions can prevent damage from installation or system faults.

FEATURES

- 12V/24V/36V/48V auto detect
- Be suitable for Sealed, Gel and Li-Fe battery various kinds of batteries
- With multi-functions of protection.
- Charging circuit and MCU Control circuit isolate completely
- Adopt wide range of new switching power chip, it also can optimize to maximize the use efficiency and reduce battery consumption
- The controller is equipped with an internal resettable fuse and varistor allows the controller to better cope with overvoltage caused by a variety of external environment and the flow through the emergency situations
- User can to modify the system parameters setting by keys
- Standard RS485 data communication function(optional)

DIMENSION



TECH-DATA

System Capability				
Model type	SSCP-12243648-XXA-HA			
Solar panels Vmp range [V] (suggest value)	15--18	30--36	45--54	60--72
Solar panels Voc Max. [V] (suggest value)	24V	48V	72V	100V
Input vol. of solar panels Max.	150V			
Rated charging current [A]	☐20 ☐30 ☐40 ☐50 ☐60			
Rated battery bank voltage [V]	12V/24V/36V/48V Auto detect			
Performance				
Consumption at standby [mA]	＜30			
Consumption at night [mA]	＜15			
Efficiency of charging	＞95%			
Peak of charging Efficiency	99%			
Topology	Transformerless			
Operating Temperature Range	-25℃ to +60℃ (45℃ to 60℃ with derating)			
Cooling Method	Natural Convection			
Ambient Humidity	0%～98% Non-condensing			
Altitude [m]	Up to 2000 (without power derating)			
General Data				
Terminal	Universal series			
LCD Display	LCD (16X2characters，green backlight)			
Display Language	English			
Data communication (option)	RS485			
Ingress Protection Class	IP20 (indoor)			
Mounting	Wall mounting type			
Dimensions (W*D*H) [mm]	186 *165 *62			
Net weight [kg]	1.5			

ADVANCE SERIES

HOME APPLICATION TYPE

PERFORMANCE FEATURES

- Accomodate 2 strings input of solar module arrays
- Digital and module structure designed
- LCD equipped to show parameters of system running status
- High efficiency with by PWM charge mode
- Multi protections as anti-reverse connection, no charging reversely on night. And over-charge, limited charging current &voltage protections for battery
- With system abnormal status alarm function
- Users can to modify the system parameters by setting keys
- Equipped with data communication function (optional)
- Be able to offer DC power supply (optional)
- Day and night double processing mode
- Intelligent cooling system inset

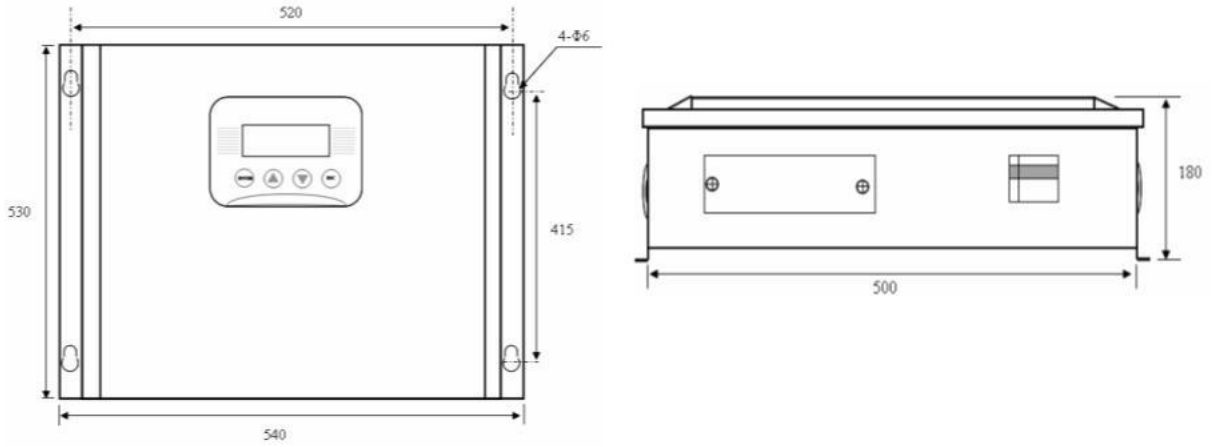
TECHNOLOGY PARAMETERS

System Capability					
Model	SSCP-48V	SSCP-96V	SSCP-120V	SSCP-216V	SSCP-240V
PV modules Vmp [V]	60-72	120-144	150-180	270-324	300-360
Module arrays input [array]	2 (standard) ; 3/4(optional)				
Rated charging current [A]	☐30 ☐50 ☐60 ☐75 ☐85				
Rated battery bank voltage [V]	☐48 ☐96 ☐120 ☐216 ☐240				
Performance					
Consumption at standby [mA]	＜50				
Consumption at night [mA]	＜15				
Topology	Transformerless				
Operating Temperature Range	-25℃ to +60℃ (45℃ to 60℃ with derating)				
Cooling Method	Convection with double cooling fans				
Ambient Humidity	0%～98% Non-condensing				
Altitude [m]	Up to 2000 (without power derating)				
General Data					
Terminal	Universal UK series				
LCD Display	LCD (16X2characters，green backlight)				
Display Language	English				
Data communication	RS232				
Ingress Protection Class	IP20 (indoor)				
Noise [dBA]	＜30				
Mounting	Wall mounting type				
Dimensions (W*D*H) [mm]	380 *355 *150				
Net weight [kg]	8.5				
Standard Warranty [year]	3 (standard) / 5(optional)				

EXCELLENT SERIES

PERFORMANCE FEATURES

- Accomodate 2 strings input of solar module arrays
- IGBT module structure designed
- LCD equipped to show parameters of system running status
- High efficiency with by PWM charge mode
- Multi protections as anti-reverse connection, no charging reversely on night. And over-charge, limited charging current &voltage protections for battery
- With system abnormal status alarm function
- Users can to modify the system parameters by setting keys
- Equipped with RS485 data communication function (optional)
- TTL Control Signal is offered, suitable for solar-genset hybrid system(optional)
- Be able to offer DC power supply (optional)
- Day and night double processing mode
- Wall mounting installation type



TECHNOLOGY PARAMETERS

System Capability						
Model	SSCP-48V	SSCP-96V	SSCP-120V	SSCP-240V	SSCP-360V	SSCP-380V
PV modules Vmp [V]	60-72	120-144	150-180	300-360	450-540	480-576
Module arrays input [array]	2 (standard) 3/4(optional)					
Rated charging current [A]	☐50 ☐60 ☐75 ☐85 ☐100					
Rated battery bank voltage [V]	☐240 ☐360 ☐380 ☐480 ☐540					
Performance						
Consumption at standby [mA]	＜35					
Consumption at night [mA]	＜15					
Topology	Transformerless					
Operating Temperature Range	-25℃ to +60℃ (45℃ to 60℃ with derating)					
Cooling Method	Convection with double cooling fans					
Ambient Humidity	0%～98% Non-condensing					
Altitude [m]	Up to 2000 (without power derating)					
General Data						
Terminal	Universal KE series					
LCD Display	LCD (16X2characters，green backlight)					
Display Language	English					
Data communication	RS485					
Ingress Protection Class	IP20 (indoor)					
Noise [dBA]	＜30					
Mounting	Wall mounting type					
Dimensions (W*D*H) [mm]	540 *530 *180					
Net weight [kg]	15					
Standard Warranty [year]	3 (standard) / 5(optional)					

CONTROL CABINET

PV STATION TYPE

PERFORMANCE FEATURES

- Accomodate 2 strings input of solar module arrays
- IGBT module structure designed
- LCD equipped to show parameters of system running status
- High efficiency with by PWM charge mode
- Multi protections as anti-reverse connection, no charging reversely on night. And over-charge, limited charging current &voltage protections for battery
- With system abnormal status alarm function
- Users can to modify the system parameters by setting keys
- Equipped with RS485 data communication function (optional)
- TTL Control Signal is offered, suitable for solar-genset hybrid system(optional)
- Be able to offer DC power supply (optional)
- Day and night double processing mode



TECHNOLOGY PARAMETERS

System Capability					
Model	SSCP-240V	SSCP-360V	SSCP-380V	SSCP-480V	SSCP-540V
PV modules Vmp [V]	300-360	450-540	480-576	600-720	675-810
Module arrays input [array]	2 (standard) 3/4(optional)				
Rated charging current [A]	☐100 ☐125 ☐150 ☐175				
Rated battery bank voltage [V]	☐240 ☐360 ☐380 ☐480 ☐540				
Performance					
Consumption at standby [mA]	＜40				
Consumption at night [mA]	＜20				
Topology	Transformerless				
Operating Temperature Range	-25℃ to +60℃ (45℃ to 60℃ with de-rating)				
Cooling Method	Convection with double cooling fans				
Ambient Humidity	0%～98% Non-condensing				
Altitude [m]	Up to 2000 (without power de-rating)				
General Data					
Terminal	Universal KE series				
LCD Display	LCD (16X2characters，green backlight)				
Display Language	English				
Data communication	RS485				
Ingress Protection Class	IP20 (indoor)				
Noise [dBA]	＜30				
Dimensions (W*D*H) [mm]	620 *480 *1200				
Net weight [kg]	70				
Standard Warranty [year]	3 (standard) / 5(optional)				