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

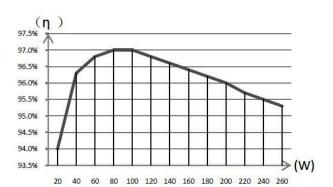With multi-functions of perfect protection.

The metal housing case cooling
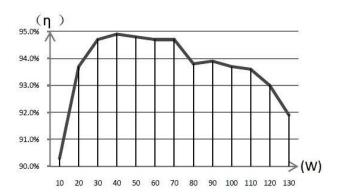
Utility power hybrid function (Optional)

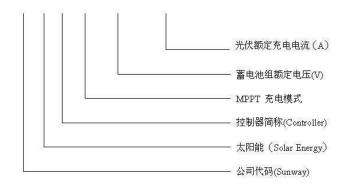more details

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

（η）

97.5%
97.0%
96.5%
96.0%
95.5%
95.0%
94.5%
94.0%
93.5%

20 40 60 80 100 120 140 160 180 200 220 240 260 (W)

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

（η）

95.0%
94.0%
93.0%
92.0%
91.0%
90.0%

10 20 30 40 50 60 70 80 90 100 110 120 130 (W)

MODEL

S S C M-XX-XXA

光伏额定充电电流（A）

蓄电池组额定电压(V)

MPPT 充电模式

控制器简称(Controller)

太阳能（Solar Energy）

公司代码(Sunway)

more details

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）	60W / 100W
MODE：lighting	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

more details

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.
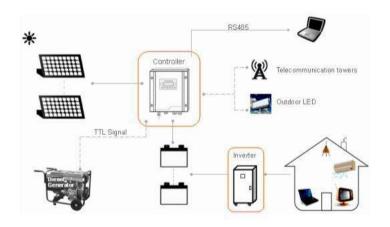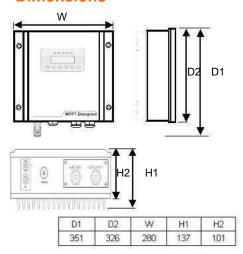
Product

30-40A

50A-120A

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

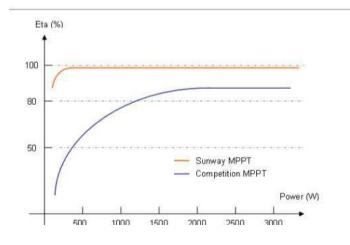Over-current disconnect function

Over-loading disconnect function

Over-temperature protection

Short circuit disconnect function

Reverse polarity protection

anti-reverse charging on night

Data Transfer Accessories

GPRS

RS485

Converter

USB

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

more details

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

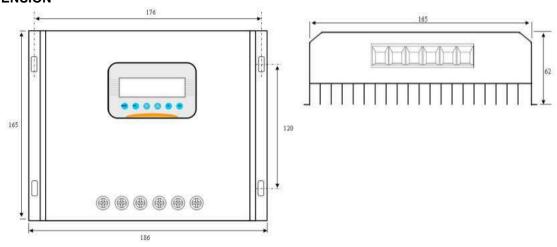Standard RS485 data communication function(optional)

1

more details

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) Wall			
Mounting	mounting type			
Dimensions (W*D*H) [mm]	186 *165 *62			
Net weight [kg]	1.5			

more details

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

more details

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)

more details

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)

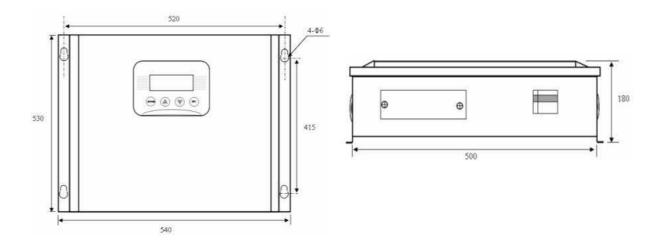Day and night double processing mode

Wall mounting installation type

more details

520 4-Φ6

530   415   180

500

540

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 Data	English					
communication Ingress	RS485					
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)					

more details

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

more details

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)

more details