

## **STS series MPPT Solar Charge Controller**



STS series adopts advanced MPPT technology. It can fast and accurately track the maximum power point (MPP) of photovoltaic array in any situation and obtain the maximum solar energy at any time, which remarkably improves energy efficiency.

With Modbus communication protocol interface, it is convenient for user to expand applications and meet monitoring requirements in various fields like telecommunication base station, household system, lighting system etc.



### **Models**

- STS1210A 10A,12/24Vautowork
- STS2210A 20A,12/24Vautowork
- STS3210A 30A,12/24Vautowork
- STS4210A 40A,12/24Vautowork

### **Features**

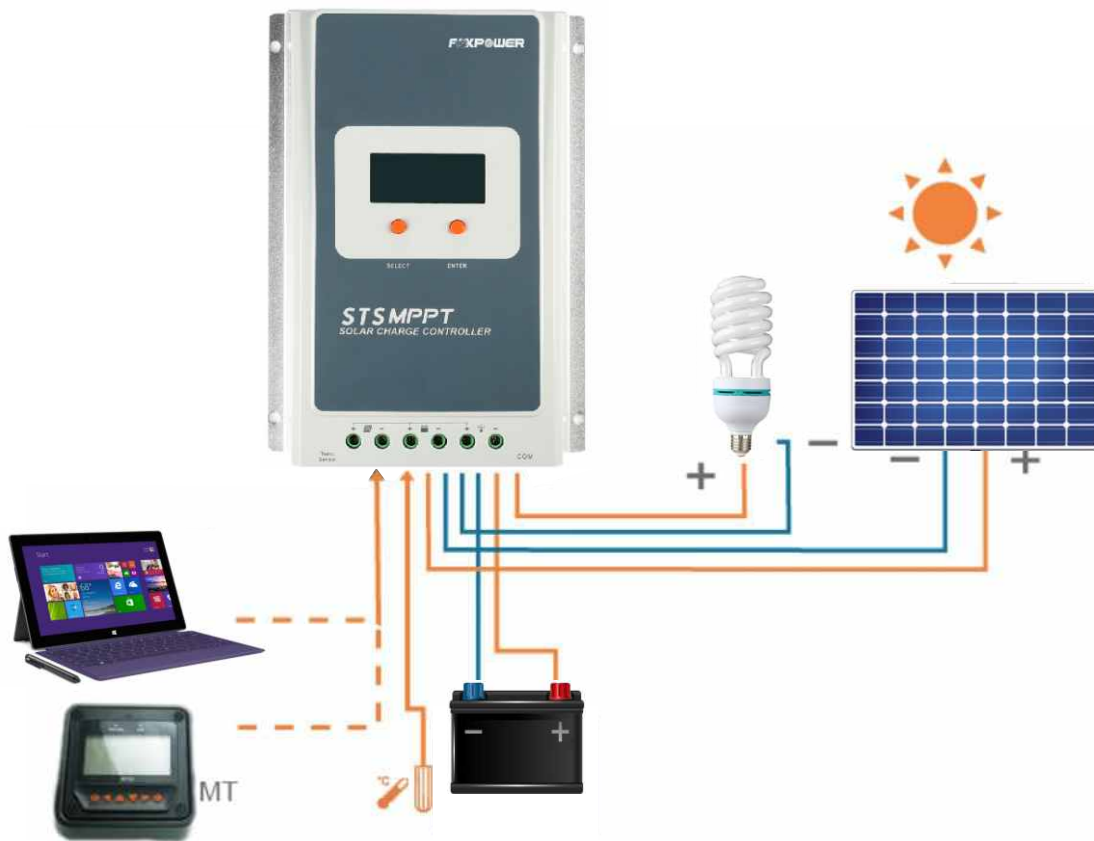
- Advanced MPPT technology
- High tracking efficiency no less than 99.5%
- Peak conversion efficiency of 98%
- Ultra-fast tracking speed
- Accurately recognizing and tracking MPP of multiple wave crest
- Automatic PV power limit function
- Multi-function LCD displays system information intuitively
- User programmable for battery types, load control etc.
- 3-Stage charge with PWM output
- Common positive grounding design
- RS485 port with industrial standard MODBUS open architecture
- Fully programmable function via remote meter, PC software and Mobile APP.

### Electronic protections:

- PV over current protection
- PV reverse polarity protection
- Battery over discharge protection
- Battery overheating protection
- Load short circuit protection
- PV short circuit protection
- Battery over voltage protection
- Battery reverse polarity protection
- Loadoverload protection
- Controller overheating protection

### Load working mode

- Manual (default) Time Control
- Light ON/OFF
- Test
- Light ON + Timer







## Operation:

Several methods for real-time monitoring and parameter setting

1. Remote control panel, MT50
2. PC monitoring setting software “Solar Station Monitor”
3. Mobile APP (Android system)

## Optional accessories

			
<p>MT50 Remote control panel with 2m communication cable</p>	<p>RTS300R47K3.81A Remote temperature sensor (3m)</p>	<p>CC-USB-RS485-150U PC communication cable (1.5m)</p>	<p>OTG-12CM OTG cable(12cm)</p>

## PC software



## Mobile APP



\*FreedownloadfromwebsiteforPCsoftwareandAPP.

## Technical Specifications

Model	STS1210A	STS2210A	STS3210A	STS4210A
Nominal system voltage	12/24VDC auto work			
Rated charge current	10A	20A	30A	40A
Rated discharge current	10A	20A	30A	40A
Battery input voltage range	8~32V			
Max. PV open circuit voltage	100V(at minimum operating environment temperature) 92V(at 25 environment temperature)			
MPP voltage range	$V_{BAT}+2V$ 72V			
Max. PV input power	130W(12V) 260W(24V)	260W(12V) 520W(24V)	390W(12V) 780W(24V)	520W(12V) 1040W(24V)
Equalize charging voltage*	Sealed: 14.6V, Flooded: 14.8V			
Boost charging voltage*	Gel: 14.2V, Sealed: 14.6V, Flooded: 14.8V			
Float charging voltage*	13.8V			
Low voltage reconnect voltage*	12.6V			
Low voltage disconnect voltage*	11.1V			
Self-consumption	$\leq 20mA(12V)$ ; $\leq 16mA(24V)$			
Temperature compensation coefficient	-3mV/ C/2V			
Communication	RS485(RJ45 interface)			
Grounding	Common positive			
Overall dimension	172x139x44mm	220x154x52mm	228x164x55mm	252x180x63mm
Power terminals	12AWG(4mm <sup>2</sup> )	6AWG(16mm <sup>2</sup> )	6AWG(16mm <sup>2</sup> )	6AWG(16mm <sup>2</sup> )
Net weight	0.6kg	1.1kg	1.2kg	1.9kg
Enclosure	IP30			
Working environment temperature	-25 C +45 C			
Humidity range	$\leq 95\%$ (N.C.)			

\* Technical data for 12V system at 25 , twice in 24V system.

\* Programmable voltage value by PC , MT50 and APP.