

SDTB Series Specification

(12V/24V/36V/48V SYS 80A, 100A)



Blue



Green



White

Self-cooling, High intelligent

Introduction:

This is a max. power point tracking function with high efficiency MPPT charge controller. It has many advantages such as self cooling, system voltage auto recognition, wide rang of PV input ,charge for all kinds of batteries, automatic discharge control, RS 232 / LAN communication function and so on. It is the most high-end product in solar market.

Feature:

- 1.MPPT charge mode,conversion efficiency up to 99%
- 2.12V/24V/48V battery system automatic recognition,convenient for customers to use.**
- 3.Maximum PV input voltage up to DC150V .
- 4. Controllers can be connected in Unlimited parallels**
- 5.Memory function, to save the setting, date, time, generating capacity and so on .**
- 6.Charge mode: three stages (fast charge ,constant charge ,floating charge). To extend the life span of the battery
- 7.Discharge mode: ON/OFF mode, double time control mode,PV voltage control mode ,PV voltage+time delay mode and so on .
- 8. Recommended battery types: sealed lead acid, vented, gel, NiCd battery. Other types of the batteries can also be defined, such as lithium battery etc.**
- 9.Most information could be provide by LCD and LED like: model no.,PV input voltage,battery type,battery voltage,charging current,charging power,working status and so on. **Also customer's information like company name,website and logo can be added to Solar Eagle software.**
- 10.RS232 and LAN communication port. IP and Gate address could be defined by the users and it can be used all around the world.And communication protocol can be provided to help customer manage all information .**
- 11.Provide professional upper computer software, it could show work status and set parameters of the discharge system.**
- 12.With intelligent design, customers can enjoy a lifelong upgrade online service
- 13.Adopting the well-known brand components,the devices can suffer the temperature not less than 105°C.The lifespan is designed to use for 10 years in theory.

14. Compliance with the 2002/95/EC environment protecting demand, doesn't include the cadmium, hydride and fluoride etc .

15. CE, ROHS, FCC certifications approved, other certifications can also be made based on different requirements.

16. 2 years warranty and 3~10 years extended technical service.

Parameter

MPPT controller Model:		SDTB-80A	SDTB-100A
Charge Mode	Maximum Power Point Tracking		
Method	3 stages: fast charge(MPPT), constant voltage, floating charge		
System Type	DC12V/24V/36V/48V SYS	Automatic recognition	
Soft Start Time	DC12V/24V/36V/48V SYS	≤10S	
Conversion Efficiency	DC12V/24V/36V/48V SYS	≥96.5%, ≤99%	
PV Modules Utilization Rate	DC12V/24V/36V/48V SYS	≥99%	
12V system recognize batteries Voltage Range		DC9V~15V	
24V system recognize batteries Voltage Range		DC18V~28V	
36V system recognize batteries Voltage Range		DC32V~40V	
48V system recognize batteries Voltage Range		DC42V~60V	
Error system		The battery voltage is not in above range when the controller is switched on	
PV Input Characteristics			
MPPT Working Voltage and Range	12V system	DC16V~DC150V	
	24V system	DC30V~DC150V	
	36V system	DC45V~DC150V	
	48V system	DC60V~DC150V	
Low Voltage Input Protection Point	12V system	DC22V	
	24V system	DC34V	
	36V system	DC50V	
	48V system	DC65V	
Input Overvoltage Protection Point	DC12V/24V/36V/48V SYS	DC150V	

Low Voltage Input Recovery Point	DC12V/24V/36V/48VSYS	DC145V	
Max. PV Power	12V system	1136W	1420W
	24V system	2272W	2840W
	36V system	3408W	4260W
	48V system	4544W	5680W
Discharge characteristic			
Selectable Battery Types (Default type is GEL battery)	DC12V/24V/36V/48VSYS	Sealed lead acid, vented Gel, NiCd battery (Other types of the batteries also can be defined)	
Charge mode	DC12V/24V/36V/48VSYS	constant current-constant voltage-floating charge	
Constant Voltage	DC12V/24V/36V/48VSYS	Please check the charge voltage according to the battery type form.	
Floating Charge Voltage	DC12V/24V/36V/48VSYS		
Rate charge current	DC12V/24V/36V/48VSYS	80A	100A
Current-limiting Protection	DC12V/24V/36V/48VSYS	85A	105A
Temperature Factor	DC12V/24V/36V/48VSYS	±0.02%/°C	
Temperature Compensation	DC12V/24V/36V/48VSYS	14.2V- (The highest temperature-25°C) *0.3	
Output Ripples(peak)	DC12V/24V/36V/48VSYS	200mV	
Charger voltage accuracy	DC12V/24V/36V/48VSYS	≤±1.5%	
Discharge characteristic			
Setting Control	Controller or PC software		
Max discharge current	DC12V/24V/36V/48VSYS	100A	
Discharge protection	DC12V/24V/36V/48VSYS	fuse	
Double-time control	DC12V/24V/36V/48VSYS	On in morning ,off in morning / On in night ,off in night	
ON / OFF mode	DC12V/24V/36V/48VSYS	ON / OFF	
PV voltage control	DC12V/24V/36V/48VSYS	PV voltage on, PV voltage off	
PV voltage / time	DC12V/24V/36V/48VSYS	PV voltage on, time delay off	

delay control		
Control ON/OFF mode		
Discharge voltage protection	DC12V/24V/36V/48VSYs	Set by user Output off when it under (exceed) setting voltage;
Communication Features		
RS232 communication	DC12V/24V/36V/48VSYs	Chose COM communication port
LAN communication	DC12V/24V/36V/48VSYs	Set IP and Gate address for controller and solar eagle ; Then chose TCP communication
Protection Function		
Input Low Voltage Protection		Check the input characteristics
Input Overvoltage Protection		Check the input characteristics
Temperature Protection		95℃
Temperature rise protection		Above 85℃ ,decrease the output power, decrease 3A per degree.
Other Parameters		
Thermal methods		Self-cooling
Components		World brand raw materials. Compliance with EU standards. All rated temperature of electrolytic capacitors not less than 105℃
Smell		No peculiar smell and toxic substances.
Environment Protection		Meet the 2002/95/EC, no cadmium hydride and fluoride
Physical		
Measurement DxWxH (mm)		
N.G(kg)		
G.N(kg)		
Color		Blue, Green, White (or OEM) (optional)
Safety		CE, PSE, FCC, EMC
EMC		EN61000
Type of Mechanical Protection		IP21
Environment		
Humidity		0~90%RH (no condense)
Altitude		0~3000m
Operating Temperature		-20℃ ~ +40℃

Storage Temperature	-40℃ ~ +75℃
Atmospheric Pressure	70~106kPa

Remark: Above is company's standard parameters;

Product Parts:

NO.	Quantity	Description
1	1PC	Solar controller (Blue,Green or White)
2	2 pc	hangers(To install the controller on the wall)
3	8 set	Screw (To keep the hangers into the controller)
4	1 pc	RJ45 turn to RS232 communication cable
5	1 pc	Temperature sensing wire
6	1 pc	CD
7	1 pc	User manual



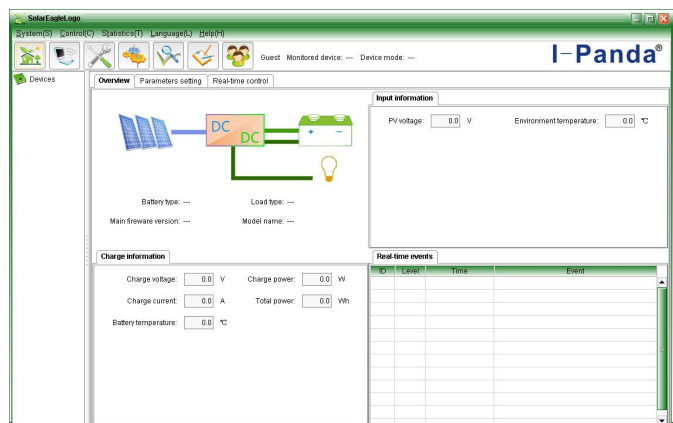
Blue appearance



Green appearance



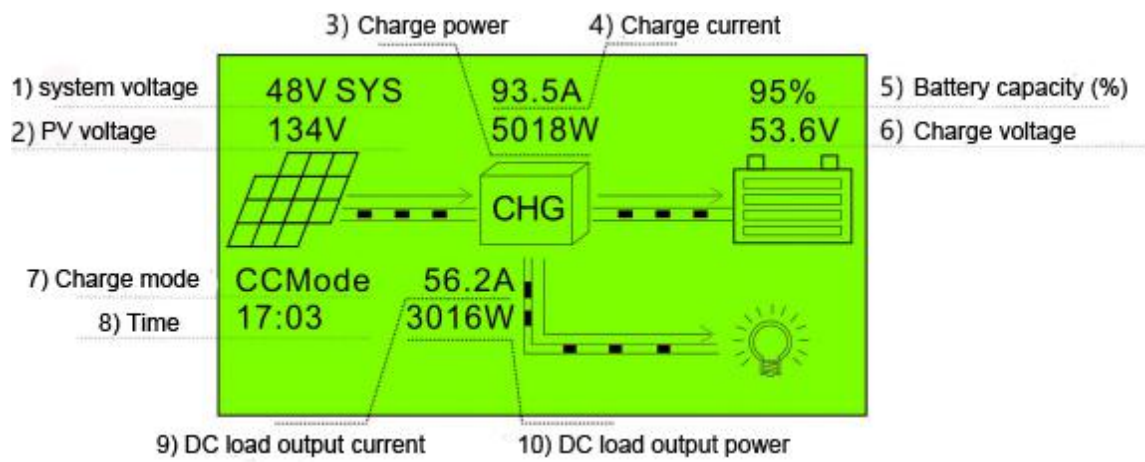
White appearance

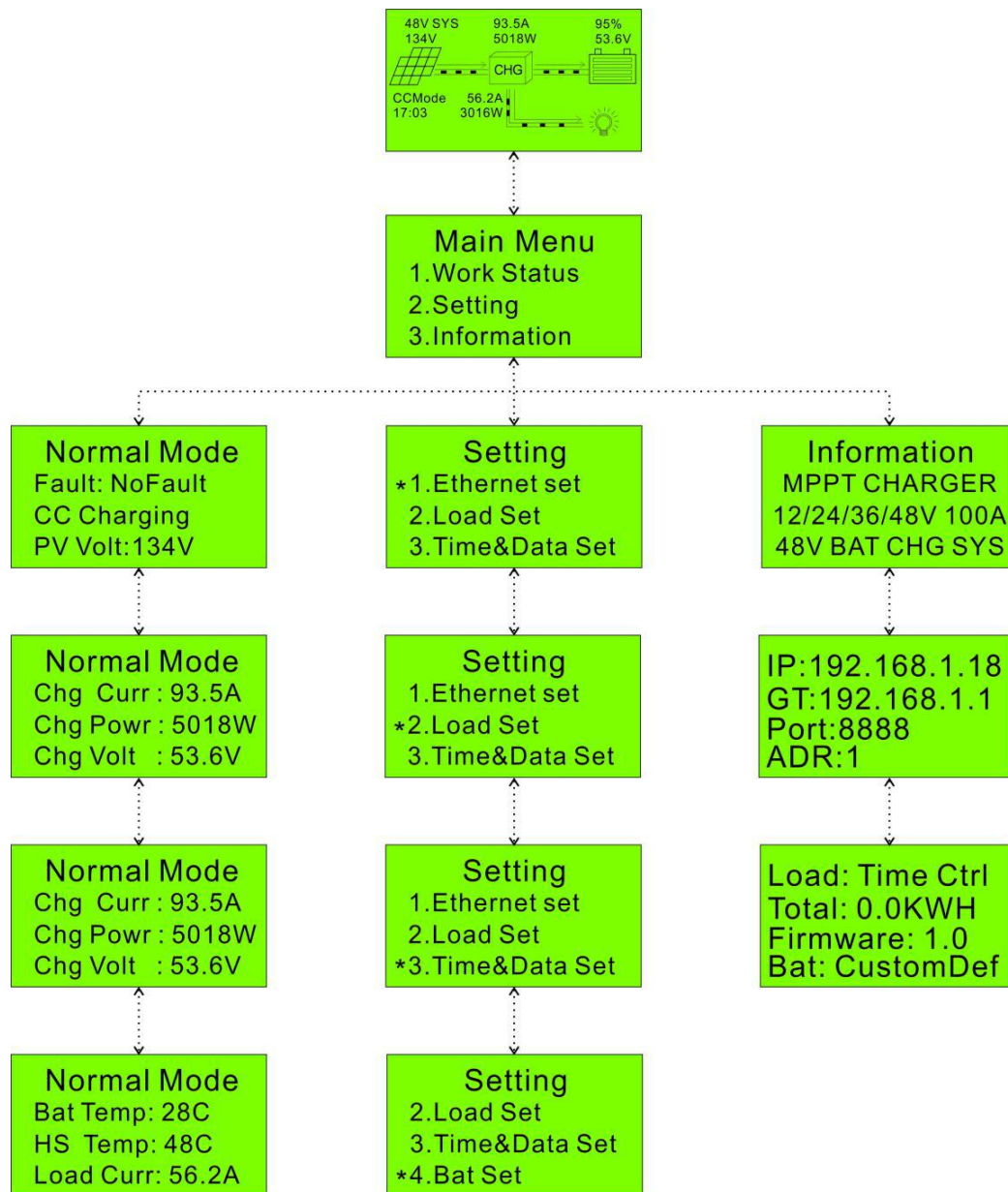


Parts

PC software

The Main Information of MPPT

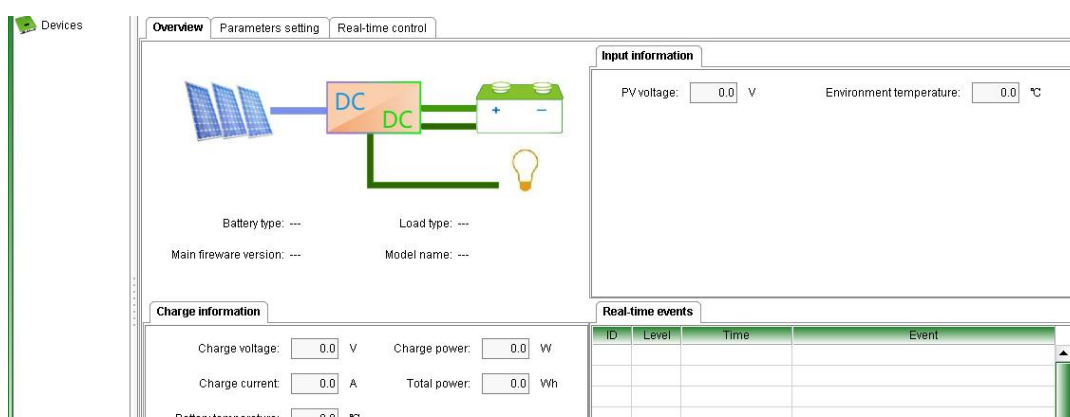




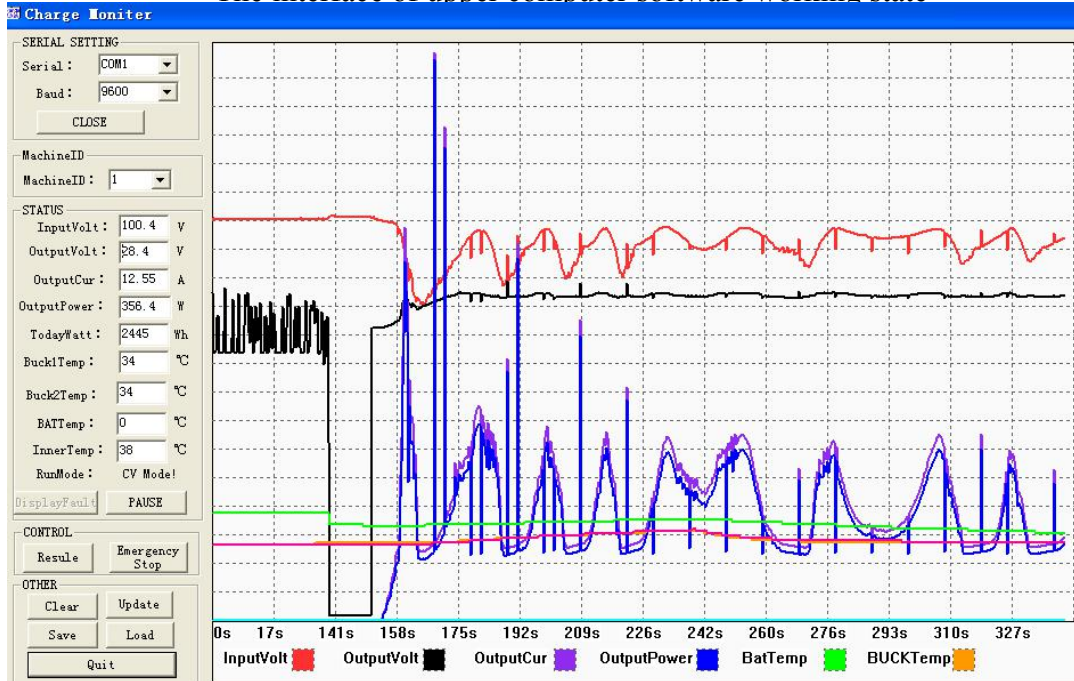
Setting page

Note: All above information is a sample which is the working state of SDTB in some time . In different working stage the parameters will change, like working mode , charge current ,charge mode ,charge power and so on ; In the fault mode it will show fault mode ;

Upper Computer Software and Test Software



The interface of upper computer software



The interface of test software working state

MPPT Connection

