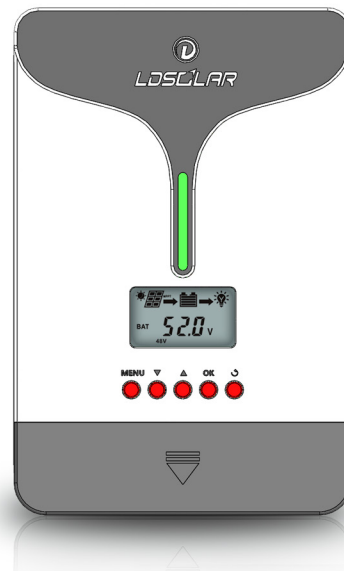


Overview

Tracer Dream F Series controller is based on Multi phase synchronous rectification technology and advanced MPPT control algorithm, adopt co-negative design, with LCD displaying running status. The MPPT control algorithm can minimize the maximum power point loss rate and loss time, quickly track the maximum power point of the PV array and obtain the maximum energy from solar modules under any conditions; and can increase the ratio of energy utilization in the solar system by 20%-30% compared with a PWM charging method.

Features

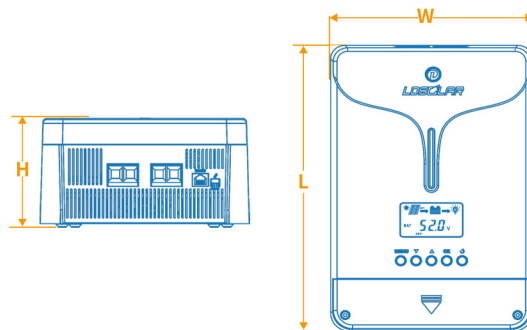
- Advanced MPPT technology, with efficiency no less than 99.5%
- Three phases synchronous rectification technology
- Maximum DC/DC conversion efficiency of 98%
- Common Negative Design
- Support the lead-acid, gel, flooded with the needed Temp
- Support lithium batteries start from solar panel
- Support parameters setting via the iConnect App
- Fan cooling solar controller are cooled by using fans
- Optional external WIFI or Bluetooth
- LCD display with back light
- RJ45 port



Mechanical size

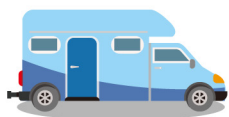
Model	60A	80A	100A	120A
Charge and load current	60A	80A	100A	100A
Rated discharge current	30A	/		
Size (L×W×H) mm	260×200×105		316×210×110	
Mounting hole size	Φ5mm			
Weight(kg)	2.4 kg	3.8 kg	3.9 kg	4.0 kg

➤ Please refer to the indicator diagram on the right



➤ Dimension reference drawing

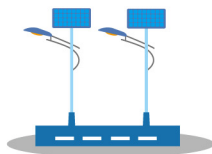
Application scenario



Solar RV



Household solar energy



Solar street lamp



Solar Power Generator



Solar boat

Safety Protection



Over Charging Protection



Over Discharging Protection



Thunder Protection



Solar Reverse Connected Protection



EMC Protection



Battery Reverse Connected Protection



Power Limited Protection



Battery Over-Voltage Protection



Temperature Compensation



Over Temperature Protection



Reverse Flow of Current Protection



Solar Short Circuit Protection



Overheating Power Reduction Protection



Solar Over-Voltage Protection

Technical specifications

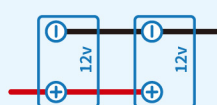
Item	TD4615F	TD4815F	TD41015F	TD4820F	TD41020F	TD41220F
System nominal voltage	12/24/48VDC Auto ①					
Rated charge current	60A	80A	100A	80A	100A	120A
Rated discharge current	30A	/	/	/	/	/
Battery voltage range	8~68V					
Max. PV open circuit voltage	② 150V ③ 138V			② 200V ③ 180V		
MPP voltage range	(Battery voltage +2V)~ 108V			(Battery voltage +2V)~ 144V		
Max. PV input power	800W/12V	1000W/12V	1300W/12V	1000W/12V	1300W/12V	1500W/12V
	1600W/24V	2100W/24V	2600W/24V	2100W/24V	2600W/24V	3000W/24V
	3200W/48V	4200W/48V	5200W/48V	4200W/48V	5200W/48V	6000W/48V
Self-consumption	≤50mA(12V)/37mA(24V)/27mA(48V)					
LVD	11.0V ADJ 9V...12V; ×2/24V; ×4/48V					
LVR	12.6V ADJ 11V...13.5V; ×2/24V; ×4/48V					
Float voltage	13.8V ADJ 13V...15V; ×2/24V; ; ×4/48V					
Boost voltage	14.4V ; ×2/24; ×4/48V Battery Voltage less than 12.6V Start Boost changing for 2hours(Li-battery not)					
MPPT tracking efficiency	≥99.5%					
Max. Conversion efficiency	98%					
Grounding	Common negative					
Battery Type	Sealed(Default)/Gel/Flooded/LiFePO4/ Li(NiCoMn)O2/ User					
Temperature compensate Coefficient ④	-4mv/°C/2V					
Communication method	RS485(5VDC/200mA)					
LCD backlight time	Default: 15S					
Working environment temperature◆	-20°C~+50°C(100% input and output)					
Storage temperature range	-20°C~+70°C					
Relative humidity	≤95%, N.C.					
Enclosure	IP32					

①When a lithium battery is used, the system voltage can't be identified automatically. ②At minimum operating environment temperature

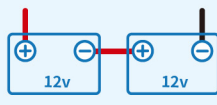
③At 25°C environment temperature ④When a lithium battery is used, the temperature compensate coefficient will be 0.

◆The controller can work under full load in the working environment temperature, When the internal temperature is more than 80°C, the reducing power charging mode is turned on.

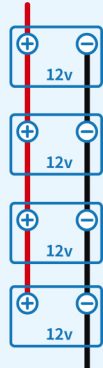
Connection



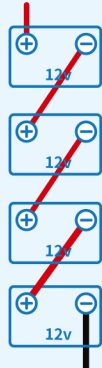
2x12v to 12v parallel



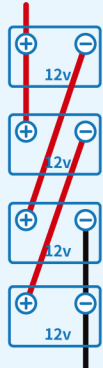
2x 12v to 24v series



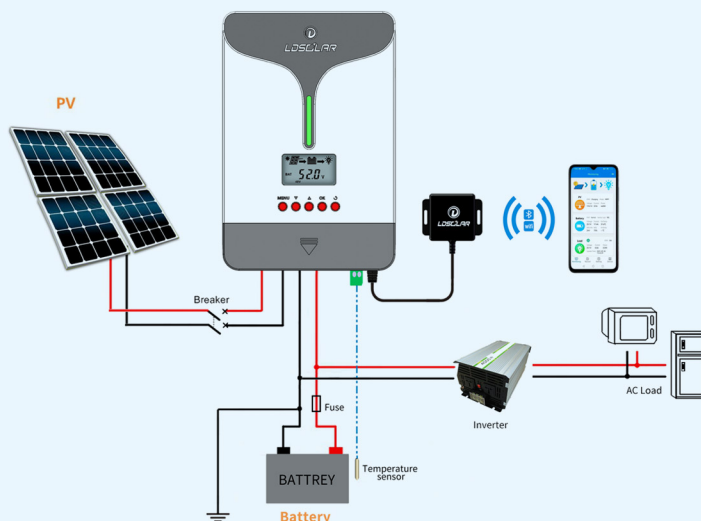
4x12v to 12v parallel



4x12v to 48v series



4x12v to 24v series/parallel



Connection diagram

Example Wiring Methods