

Overview

iTracer Dream Series adopts MPPT technology. Max. 150V solar input voltage, 12V/24V/48V auto work or Max. 120V solar input voltage, 12V/24V auto work. It's also ran by 32 bits CPU, so stability and speed can be guaranteed. Based on the synchronous rectifier technology, the transfer efficiency of circuit can be increased up to 98.5% and the Pmax tracking accuracy up to 99.5%. So our MPPT can trace the accurate Pmax in the shortest time (10-20s), even when the sunlight changes rapidly. It can perfectly handle extreme weather or weak sunlight. It adopted by common negative design and it can start from solar panel, widely used in solar station and big solar home system.

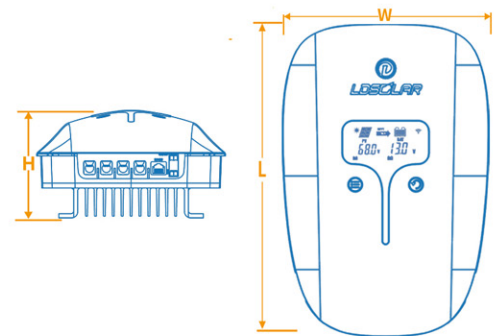
Features

- With the advanced dual-peak or multi-peak tracking technology, when the solar panel is shadowed or part of the panel fails resulting in multiple peaks on the I-V curve, the controller is still able to accurately track the maximum power point.
- Advanced MPPT technology, with efficiency no less than 99.5%
- Maximum DC/DC conversion efficiency of 98%
- Ultra-fast tracking speed and guaranteed tracking efficiency
- Advanced MPPT control algorithm to minimize the MPP loss rate and loss time
- Wide MPP operating voltage range
- Limit charging power & current over rated range. When the solar panel power exceeds a certain level and the charging current is larger than the rated current, the controller will automatically lower the charging power and bring the charging current to the rated level.
- Support the lead-acid, gel, flooded with the needed Temp. compensation and support lithium batteries starting from solar panel
- Real-time working record function
- Load dry contact to control the external load switch
- Auto-control of utility and generator dry contact design to compose a hybrid power system easily
- Power reduction automatically over temperature range
- TVS lighting protection.
- Support parameters setting via the iConnect App



Mechanical size

Item	iTD2412	iTD4315	iTD2612	iTD4415
Dimension(L*W*H)	258×180×88mm		288×190×108mm	
Mounting Dimension(A*B)	130×135mm		138×140mm	
Mounting hole size	Φ5mm		Φ6mm	
Weight	1.8KGS	1.7KGS	2.4KGS	2.2KGS



Please refer to the indicator diagram on the right

Dimension reference drawing

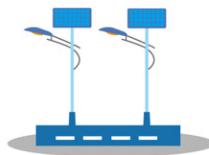
Application scenario



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	iTD2412	iTD2612	iTD4315	iTD4415
System nominal voltage①	12/24VDC Auto		12/24V/48V DC Auto	
Rated charge current	45A	60A	30A	40A
Battery voltage range	8~32V		8~68V	
Max. PV open circuit voltage	②110V③120V		②138V③150V	
MPP voltage range	(Battery voltage +2V)~ 85V		(Battery voltage +2V)~ 108V	
Rated chargepower	600W/12V 1200W/24V	800W/12V 1600W/24V	390W/12V 780W/24V 1560W/48V	600W/12V 1200W/24V 2400W/48V
Self-consumption	≤70mA(12V)/40mA(24V)/24mA(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 Boostchanging 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 compensateCoefficient④	-4mv/°C/2V			
Dry contact	Rated value: 1A/30VDC; Max. value: 0.5A/60VDC			
Communication method	RS485(5VDC/200mA)			

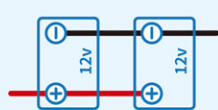
①When a lithium battery is used, the system voltage can't be identified automatically.

③At 25°C environment temperature

②At minimum operating environment temperature

④When a lithium battery is used, the temperature compensate coefficient will be 0.

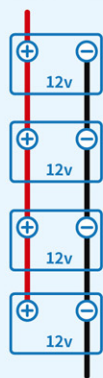
Connection



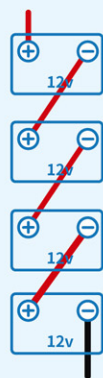
2x12v to 12v parallel



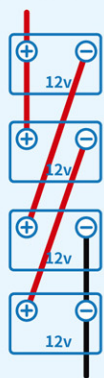
2x 12v to 24v series



4x12v to 12v parallel

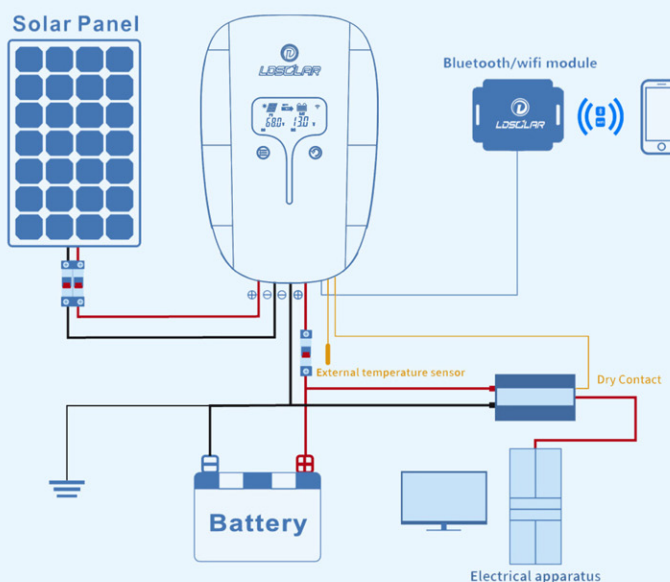


4x12v to 48v series



4x12v to 24v series/parallel

● Example Wiring Methods



● Connection diagram