

# MPPT Solar charge controller with load control

## iTracer series



iTracer is an industrial grade product with advanced Maximum Power Point Tracking (MPPT) algorithm. It can deliver the maximum available power for charging batteries and charge a lower nominal voltage battery from a higher nominal voltage array. And can be applied in the off-grid PV systems up to 3KW. The die-cast aluminum design ensures excellent heat dispersion.



### Models:

IT3415ND, IT4415ND, IT6415ND  
30A,45A,60A  
12V/24V/36V/48V

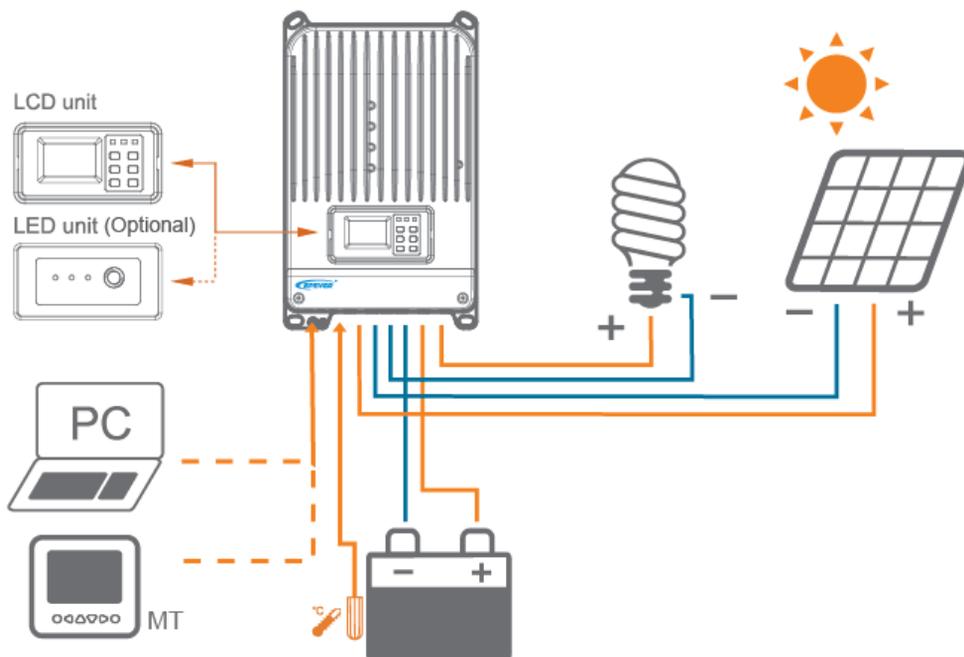
### Features:

- ◆ Advanced MPPT technology, with efficiency no less than 99.5%
- ◆ Maximum conversion efficiency of 98% and full load efficiency of 97%
- ◆ MSRT, realizing high conversion efficiency in the situation of low charge power
- ◆ Ultra-fast tracking speed and guaranteed tracking efficiency
- ◆ Accurately recognizing and tracking of multiple power points
- ◆ Reliable automatic limit function of maximum PV input power, ensuring no overload
- ◆ Wide MPP operating voltage range
- ◆ High-speed and high-powered dual-core processor architecture, improving system response speed, optimizing system performance

- ◆ Die-cast aluminum case for heat dissipating, ensuring excellent heat dissipation characteristic
- ◆ 12/24/36/48VDC automatically identifying system voltage or user-defined working voltage
- ◆ Concise human-computer interactive interface, convenient multiple combination keys, dynamically displaying system operating data and working condition.
- ◆ Multiple load control modes: manual control, light ON/OFF, light on+timer and time control.
- ◆ Support 4 charging options: Sealed, Gel, Flooded and User.
- ◆ Battery temperature compensation function.
- ◆ Real-time energy statistics function.
- ◆ With RS-485, RS-232 communication bus interface and Modbus communication protocol, it is available to meet various communication requirements in different situations.
- ◆ Available for PC monitoring and external display unit connecting like MT50 and so on, realizing real-time data checking and parameters setting.
- ◆ Support software upgrade.

### Electronic protections:

- |                                     |                                       |
|-------------------------------------|---------------------------------------|
| ◆ PV short circuit protection       | ◆ PV over current protection          |
| ◆ PV reverse polarity protection    | ◆ Battery over voltage protection     |
| ◆ Battery over discharge protection | ◆ Battery reverse polarity protection |
| ◆ Load overload protection          | ◆ Load short circuit protection       |
| ◆ Battery overheating protection    | ◆ Controller overheating protection   |





### Accessories :



Remote meter  
MT50



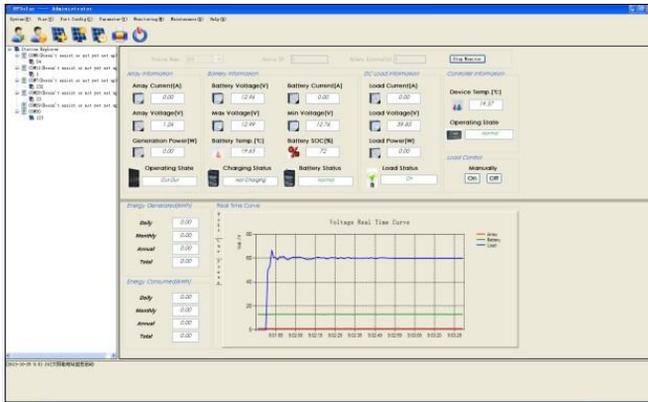
Remote temp. sensor  
RTS300R10K5.08A



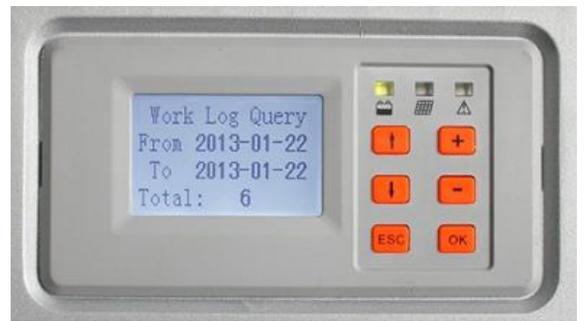
PC communication cable  
CC-USB-RS485-150U-3.81



## PC software:



## Display interface:



## Technical specifications

Model	IT3415ND	IT4415ND	IT6415ND
Nominal system voltage	12/24/36/48V auto work		
Rated battery current	30A	45A	60A
Rated load current	30A	45A	60A
Max. PV open circuit voltage	150V (at minimum operating environment temperature) 138V (at 25°C environment temperature)		
Battery Input Voltage Range	8~68V		
Max. PV input power	400W (12V)	600W (12V)	800W (12V)
	800W (24V)	1200W (24V)	1600W (24V)
	1200W (36V)	1800W (36V)	2400W (36V)
	1600W (48V)	2400W (48V)	3200W (48V)
Self-consumption	1.4~2.6W		
Equalize charging voltage	Sealed: 14.6V, Flooded: 14.8V, User-defined: 9~17V		
Boost charging voltage	Gel: 14.2V, Sealed: 14.4V, Flooded: 14.6V, User-defined: 9~17V		
Float charging voltage	Gel /Sealed /Flooded: 13.8V, User-defined: 9~17V		
Low voltage reconnect voltage	Gel /Sealed /Flooded: 12.6V, User-defined: 9~17V		
Low voltage disconnect voltage	Gel /Sealed /Flooded: 11.1V, User-defined: 9~17V		
Grounding	Common negative		

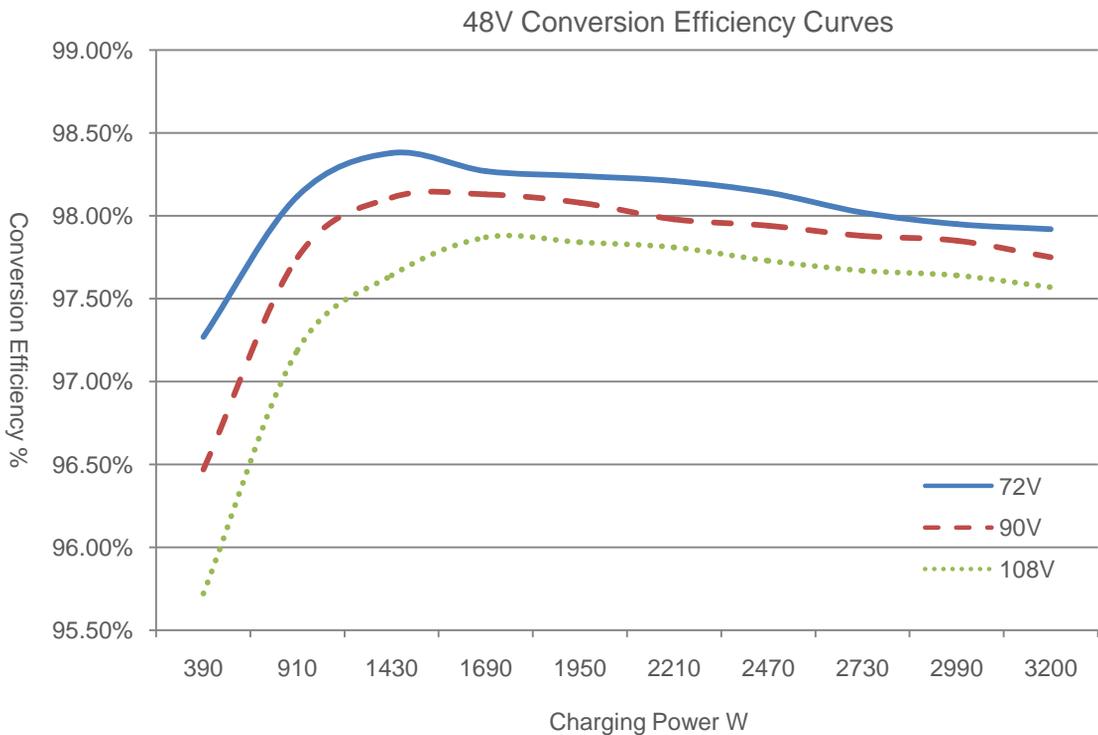
### \* Technical data for 12V system at 25°C

Mechanical	IT3415ND	IT4415ND	IT6415ND
Overall	358x219x102mm	382x231x107mm	440x231x110mm
Mounting	339x195mm	362x205mm	420x205mm
Terminal	25mm <sup>2</sup>	35mm <sup>2</sup>	35mm <sup>2</sup>
Net Weight	3.7kg	4.6kg	5.9kg

Environmental	
LCD temperature range	-20°C ~ +70°C
Ambient temperature range	-25°C ~ +50°C
Humidity range	95% N.C.
Enclosure	IP20

### Conversion Efficiency Curves:

Illumination Intensity: 1000W/m<sup>2</sup>    Temperature: 25°C  
 Test model: IT6415ND  
 Solar MPPT Voltage(72V, 90V, 108V) / System Voltage(48V)



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