

# MPPT Solar charge controller

## Tracer BN series



Tracer BN series is EPsolar's second generation of MPPT controller. Compared with CLASSIC Tracer series, it has extensive communication ability. And the die-cast aluminum design ensures excellent heat dispersion.

Compared to conventional PWM controller, MPPT technology increases the charge efficiency up to 30% and potentially decrease the power of solar array needed.



### Models:

Tracer1215BN, 10A, 12/24V auto work

Tracer2215BN, 20A, 12/24V auto work

Tracer3215BN, 30A, 12/24V auto work

Tracer4215BN, 40A, 12/24V auto work

### Features:

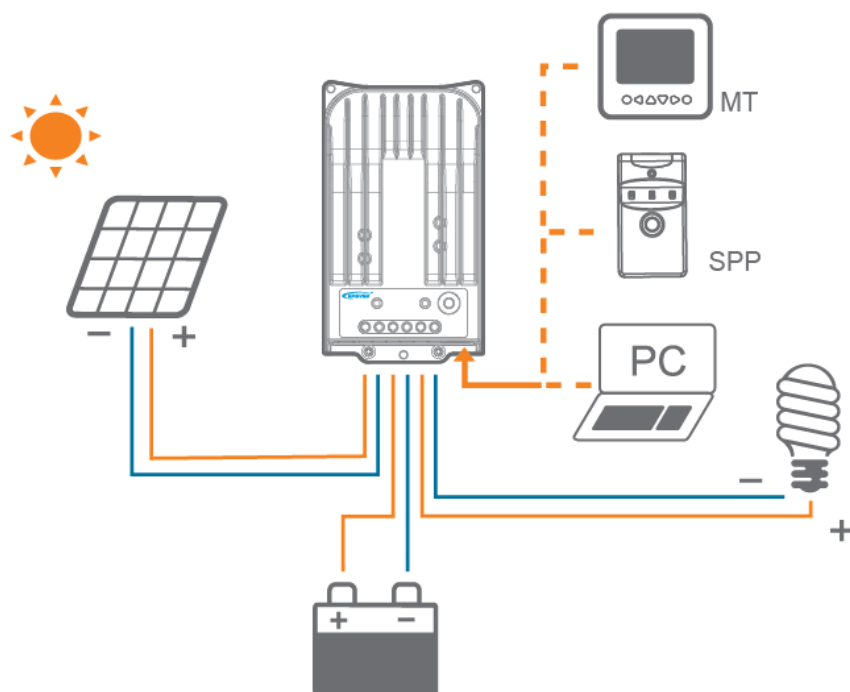
- ◆ Advanced MPPT technology, with efficiency no less than 99.5%
- ◆ Maximum conversion efficiency of 98%
- ◆ Ultra-fast tracking speed and guaranteed tracking efficiency
- ◆ Accurately recognizing and tracking of multiple power points
- ◆ Reliable automatic limit function of maximum PV input power, ensuring no overload under any circumstance
- ◆ Wide MPP operating voltage range
- ◆ Die-cast aluminum design, ensuring excellent heat dissipation characteristic

- ◆ 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 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.

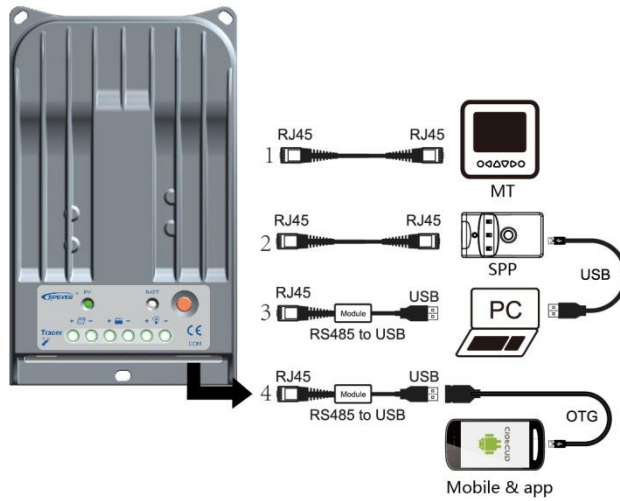


### Electronic protections:

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







Three methods to configure the controller:

1. Remote Meter, MT50
2. Super Parameter Programmer SPP-02, One-key easily configure and apply to batch setting.
3. PC monitoring setting software "Solar Station Monitor"
4. Mobile APP

## Optional accessories :



Remote meter  
MT50



Remote temperature  
sensor  
RTS300R47K3.81A

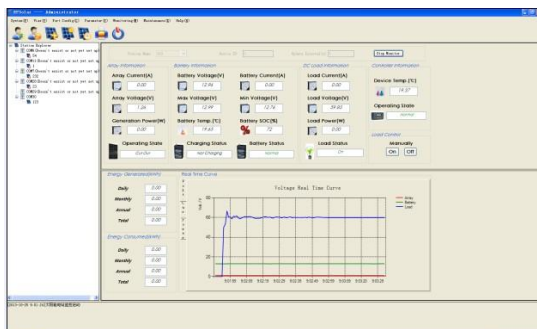


PC  
communication cable  
CC-USB-RS485-150U



Super parameter  
programmer  
SPP-01

## PC software:



## Technical specifications

Model	Tracer1215BN	Tracer2215BN	Tracer3215BN	Tracer4215BN
Nominal system voltage	12/24V auto work			
Rated battery current	10A	20A	30A	40A
Rated load current	10A	20A	20A	20A
Max. PV open circuit voltage	150V at minimum operating environment temperature 138V at 25°C environment temperature			
MPP Voltage range	Battery voltage+2V~108V			
Max. PV input power	130W (12V)	260W (12V)	390W (12V)	520W (12V)
	260W (24V)	520W (24V)	780W (24V)	1040W (24V)
Equalize charging voltage	Sealed: 14.6V, Flooded: 14.8V, USER: 9~17V			
Boost charging voltage	Gel: 14.2V, Sealed: 14.4V, Flooded: 14.6V, USER: 9~17V			
Float charging voltage	Gel /Sealed /Flooded: 13.8V, USER: 9~17V			
Low voltage reconnect voltage	Gel /Sealed /Flooded: 12.6V, USER: 9~17V			
Low voltage disconnect voltage	Gel /Sealed /Flooded: 11.1V, USER: 9~17V			
Self-consumption	≤60mA(12V) ≤30mA(24V)			
Grounding	Common negative			
Temp. compensation	-3mV/°C/2V			
Communication port	RS485 / RJ45 interface			

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

Mechanical	Tracer1215BN	Tracer2215BN	Tracer3215BN	Tracer4215BN
Overall dimension	196x118x36mm	217x143x56mm	281x160x60mm	303x183x64mm
Terminal	4mm <sup>2</sup>	10mm <sup>2</sup>	16mm <sup>2</sup>	25mm <sup>2</sup>
Net weight	0.9kg	1.5kg	2.3kg	2.9kg
Enclosure	IP30			

## Environmental

Working temperature	-35℃ ~ +55℃
Storage temperature	-35℃ ~ +80℃
Humidity	≤95% N.C.

## Conversion efficiency curves:

Illumination Intensity: 1000W/m<sup>2</sup>      Temperature: 25℃  
 Test model: Tracer3215B

