

# MPPT Solar charge controller

## New Tracer series



New Tracer 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:

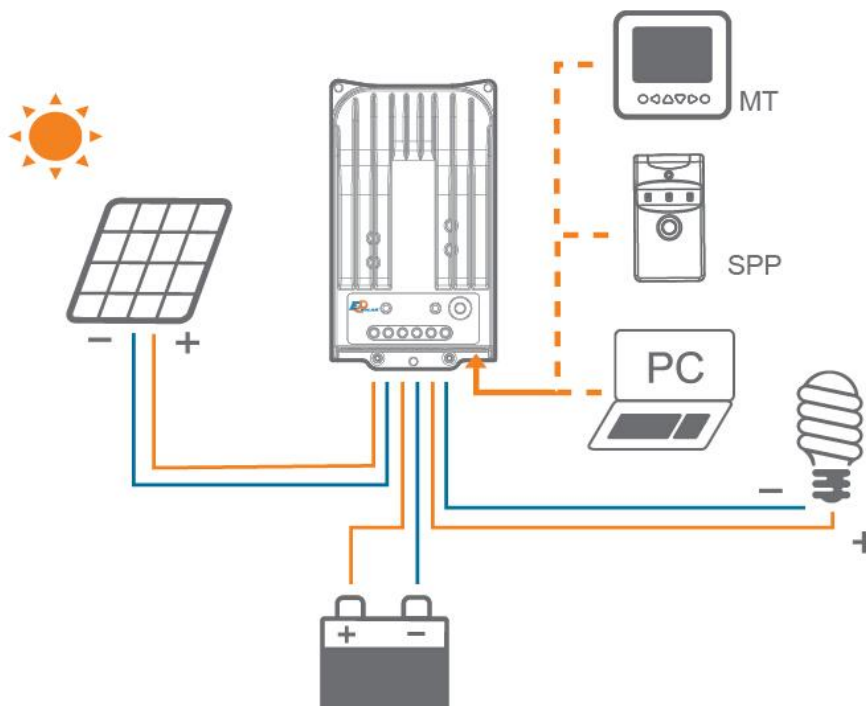
- ◆ Innovative MPPT technology
- ◆ Peak conversion efficiency of 98%
- ◆ High tracking efficiency up to 99%
- ◆ Several seconds tracking speed
- ◆ Die-cast aluminum design and nature cooling
- ◆ Temperature compensation

- ◆ Diversified load control to meet different requirements
- ◆ Four battery type options: Sealed, Gel, Flooded, and USER
- ◆ Intelligent lighting and timer control for solar lighting system
- ◆ Energy statistics function
- ◆ RS485 ports with MODBUS communication protocol
- ◆ Optional PC monitoring software and remote meter for real-time monitoring and battery management parameter setting
- ◆ Field upgradable firmware

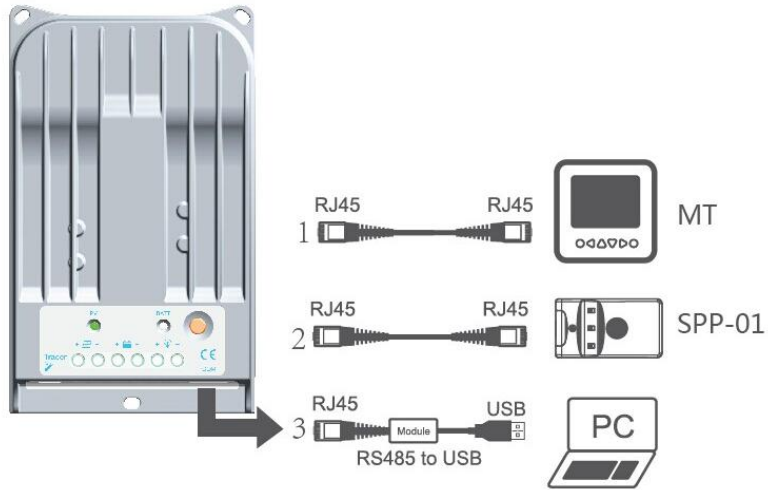


### Electronic protections:

- ◆ PV short circuit protection
- ◆ PV current limiting protection
- ◆ Battery overcharge protection
- ◆ Battery reverse polarity protection
- ◆ Load short circuit protection
- ◆ PV overvoltage alarm protection
- ◆ PV reverse polarity protection
- ◆ Battery over discharge protection
- ◆ Load overload protection
- ◆ Overheating protection







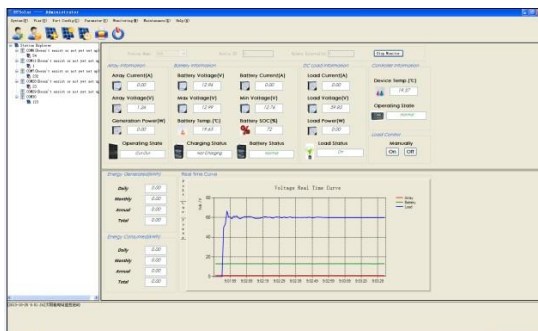
Three methods to configure the controller:

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

### Optional accessories :

|                              |                                                          |                                                         |                                                  |
|------------------------------|----------------------------------------------------------|---------------------------------------------------------|--------------------------------------------------|
|                              |                                                          |                                                         |                                                  |
| <p>Remote meter<br/>MT50</p> | <p>Remote temperature<br/>sensor<br/>RTS300R47K3.81A</p> | <p>PC<br/>communication cable<br/>CC-USB-RS485-150U</p> | <p>Super parameter<br/>programmer<br/>SPP-01</p> |

### 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                                                   |              |              |              |
| Max. battery voltage           | 32V                                                    |              |              |              |
| 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               | ≤50mA(12V) ≤27mA(24V)                                  |              |              |              |
| Grounding                      | Common negative                                        |              |              |              |
| Temp. compensation             | -3mV/°C/2V                                             |              |              |              |
| Communication port             | RS485 / RJ45 interface                                 |              |              |              |

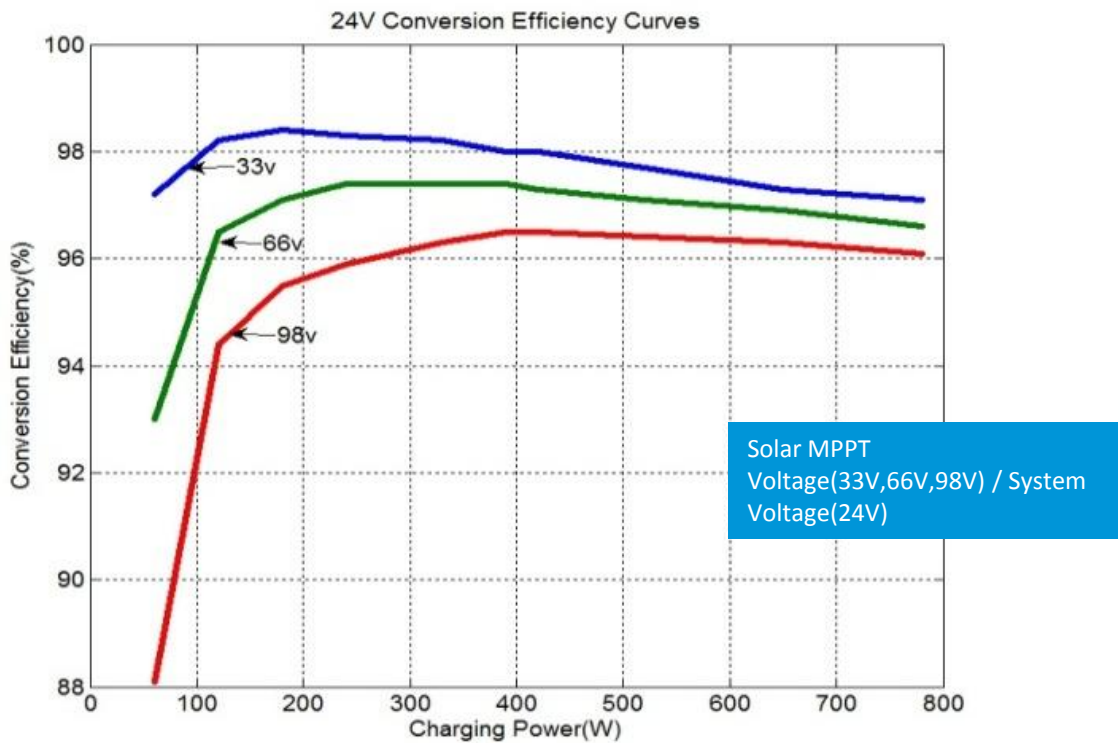
### \* Technical data for 12V system at 25°C

| 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



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