

### Overview

Tracer-BN series. Based on common negative design and advanced MPPT control algorithm, with die-cast aluminum design for heat dissipation, products in this series are artistic, economical and practical.

With MPPT control algorithm, in any situation, products of this series can fast and accurately track out the best maximum power point (MPP) of photovoltaic array, in order to obtain the maximum solar energy in time, which remarkably improves energy efficiency. With Modbus communication protocol interface, it is convenient for customers to expand applications and monitor in various fields like telecommunication base station, household system, caravan system, street lighting system, wilderness monitoring system, etc.

All-round electronic fault self-test function and enhanced electronic protection function could furthest avoid damages on system components resulting from installation errors or system failures.



### Features

- Advanced Maximum Power Point Tracking (MPPT) technology, with efficiency no less than 99.5%
- High quality components, perfecting system performance, with 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
- 12/24VDC automatically identifying system voltage or user-defined working voltage
- LED indicators showing system status, simple and clear
- 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



Solar Car



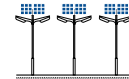
Solar Home



Solar Backpack



Solar Boat



Solar Street Light



Solar Power Generator

## Technical specifications

| Model                              | Tracer1215BN  | Tracer2215BN           | Tracer3215BN           | Tracer4215BN            |
|------------------------------------|---|------------------------|------------------------|-------------------------|
| Nominal system voltage             | 12/24VDC Auto   |                        |                        |                         |
| Rated charge current               | 10A   | 20A                    | 30A                    | 40A                     |
| Rated discharge current            | 10A   | 20A                    | 20A                    | 20A                     |
| Battery voltage range              | 8V ~ 32V  |                        |                        |                         |
| Max. PV open circuit voltage       | 150V (at minimum operating environment temperature)<br>138V (at 25°C environment temperature) |                        |                        |                         |
| MPP voltage range                  | Battery voltage+2V ~ 108V   |                        |                        |                         |
| Max. PV input power                | 130W(12V)<br>260W(24V)  | 260W(12V)<br>520W(24V) | 390W(12V)<br>780W(24V) | 520W(12V)<br>1040W(24V) |
| Self-consumption                   | ≤60mA(12V); ≤30mA(24V)  |                        |                        |                         |
| Discharge circuit voltage drop     | ≤0.15V  |                        |                        |                         |
| Temperature compensate coefficient | -3mV/°C/2V(Default)   |                        |                        |                         |
| Communication                      | RS485(RJ45 interface)   |                        |                        |                         |
| Grounding                          | Common negative   |                        |                        |                         |

### Environmental Parameters

| Model                      | Parameter     |
|----------------------------|---------------|
| Ambient temperature range* | -35°C ~ +55°C |
| Storage temperature range  | -35°C ~ +80°C |
| Humidity range             | ≤95% (N.C.)   |
| Enclosure                  | IP30          |

\* Please operate controller at permitted ambient temperature. If over permissible range, please derate capacity in service

### Mechanical Parameters

| Mechanical         | Tracer1215BN             | Tracer2215BN             | Tracer3215BN             | Tracer4215BN             |
|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| Dimension(mm)      | 196 x 117.8 x 36         | 216.6 x 142.6 x 56       | 280.7x 159.7 x 60        | 302.5 x 182.7 x 63.5     |
| Mounting dimension | 106mm x 185mm            | 130mm x 204mm            | 147mm x 268mm            | 170mm x 290mm            |
| Mounting hole size | Φ4.7                     | Φ4.7                     | Φ4.7                     | Φ4.7                     |
| Power cable        | 12AWG(4mm <sup>2</sup> ) | 8AWG(10mm <sup>2</sup> ) | 6AWG(16mm <sup>2</sup> ) | 4AWG(25mm <sup>2</sup> ) |
| Weight             | 0.8kg                    | 1.5kg                    | 2.2kg                    | 2.9kg                    |