

Tracer-AN Series

MPPT Solar Charge Controller



Product models

Tracer1206AN/Tracer2206AN

Tracer1210AN/Tracer2210AN

Tracer3210AN/Tracer4210AN



Product Features

- Advanced MPPT technology, with efficiency no less than 99.5%
- Ultra-fast tracking speed and guaranteed tracking efficiency
- Advanced MPPT control algorithm to minimize the maximum power point loss rate and loss time
- Wide MPP operating voltage range
- High quality components, perfecting system performance, with maximum conversion efficiency of 98%
- Accurate recognition and tracking of multiple-peaks maximum power point
- International famous brands of ST and IR's components of high quality and low failure rate are used, which can ensure the product's service life
- Charging power and current limitation function

- Compatible with lead-acid and lithium-ion batteries
- Battery temperature compensation function (only for Lead-acid battery)
- Real-time energy statistics function
- Overheating power reduction function
- Multiple load work modes
- The communication port adopts professional protection chip
- With RS-485 communication bus interface and Modbus communication protocol.
- Monitor and set the parameters via mobile phone APP or PC software
- Full-load operation without any drop in capacity within the range of working environment temperature
- Extensive electronic protection

The Tracer AN series. Based on common negative design and advanced MPPT control algorithm, with LCD displaying running status, this product is artistic, economical and practical. Improving the MPPT control algorithm further, Tracer AN series can minimize the maximum power point loss rate and loss time, quickly track the maximum power point of the PV array and obtain the maximum energy from solar modules under any conditions; and can increase the ratio of energy utilization in the solar system by 10%-30% compared with a PWM charging method. The limitation function of the charging power and current and reducing charging power function automatic improve the stability which works even connecting oversize PV modules and in high temperature, and increase the professional protection chip for the communication port, further improving the reliability and meeting the different application requirements.

With the adaptive three-stage charging mode based on a digital control circuit, Tracer AN series controllers can effectively prolong the life-cycle of batteries, significantly improve the system performance and support all-around electronic protection functions, including overcharging and over discharging protection to minimize damages to components of the system caused by incorrect installation or system failure at the utmost, and effectively ensure safer and more reliable operation of the solar power supply system for a longer service time. This modular solar controller can be widely used for different applications, e.g., Communication base stations, household systems, and field monitoring, etc.

Protection function

- | | | |
|-----------------------------------|----------------------------|---------------------------|
| • PV Over Current/power | • PV Short Circuit | • PV Reverse Polarity |
| • Night Reverse Charging | • Battery Reverse Polarity | • Battery Over Voltage |
| • Battery Over Discharge | • Battery Overheating | • Controller Overheating★ |
| • Lithium Battery Low Temperature | • Load Short Circuit , | • Load Overload |
| •TVS High Voltage Transients | | |

★When the internal temperature is 81℃, the reducing power charging mode which reduce the charging power of 5%,10%,20%,40% every increase 1℃is turned on. If the internal temperature is greater than 85℃, the controller will stop charging. But while the temperature decline to be below 75℃, the controller will resume.

Accessories



Remote Meter(MT50)

Set the controller parameter via the LCD display



Data logger (eLOG01)

Real-time parameter recording of the product through the RS485 communication mode



Bluetooth adapter (Box-BLE-01)

with 2m communication cable (for the controller with RS485 port)



WIFI adapter (eBox-WIFI-01)

with 2m communication cable (for the controller with RS485 port)



Remote temperature sensor RTS300R47K3.81A (3m)



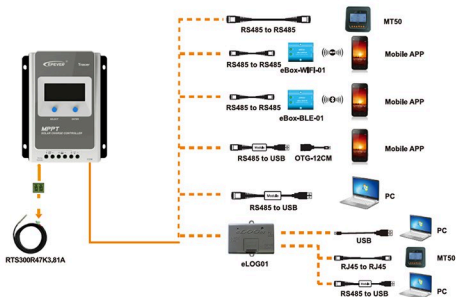
Communication cable CC-USB-RS485-150U

USB to RS485 PC communication cable (1.5m)



OTG cable (OTG-12CM)

Connect the controller to mobile APP



Electrical Parameters

Item	Tracer 1206AN	Tracer 2206AN	Tracer 1210AN	Tracer 2210AN	Tracer 3210AN	Tracer 4210AN
System nominal voltage	12/24VDC ^① Auto					
Rated charge current	10A	20A	10A	20A	30A	40A
Rated discharge current	10A	20A	10A	20A	30A	40A
Battery voltage range	8~32V					
Max. PV open circuit voltage	60V ^② 46V ^③		100V ^② 92V ^③			
MPP voltage range	(Battery voltage +2V)~36V		(Battery voltage +2V)~72V			
Max. PV input power	130W/12V 260W/24V	260W/12V 520W/24V	130W/12V 260W/24V	260W/12V 520W/24V	390W/12V 780W/24V	520W/12V 1040W/24V
Self-consumption	≤12mA					
Discharge circuit voltage drop	≤0.23V					
Temperature compensate coefficient ^④	-3mV/°C/2V (Default)					
Grounding	Common negative					
RS485 interface	5VDC/100mA					
LCD backlight time	60S (Default)					

Electrical Parameters

- ①When a lead-acid battery is used, the controller hasn't the low temperature protection.
- ②At minimum operating environment temperature
- ③At 25°C environment temperature
- ④When a lithium-ion battery is used, the system voltage can't be identified automatically.

Environmental Parameters

Working environment temperature [★]	-25℃～+50℃(100% input and output)
Storage temperature range	-20℃～+70℃
Relative humidity	≤95%, N.C.
Enclosure	IP30

Mechanical Parameters

Item	Tracer1206AN Tracer1210AN	Tracer2206AN Tracer2210AN	Tracer3210AN	Tracer4210AN
Dimension	172x139 x 44mm	220x154x 52mm	228x164x55mm	252x180x63mm
Mounting dimension	130x130mm	170x145mm	170x164mm	210x171mm
Mounting hole size	Φ5mm			
Terminal	12AWG(4mm ²)	6AWG(16mm ²)	6AWG(16mm ²)	6AWG(16mm ²)
Recommended cable	12AWG(4mm ²)	10AWG(6mm ²)	8AWG(10mm ²)	6AWG(16mm ²)
Weight	0.57kg	0.94kg	1.26kg	1.65kg
Certification	CE IEC62109			