

Tracer-AN series MPPT Solar Charge Controller (50A-100A)



Product models

Tracer5210AN/Tracer6210AN
Tracer5415AN/Tracer6415AN
Tracer8415AN/Tracer10415AN
Tracer5420AN/Tracer6420AN
Tracer8420AN/Tracer10420AN

Overview

Tracer AN series is Epever classical MPPT charge controller from over 10 years' field experience. Built for reliability and performance, up to 100A 48V model today, Tracer AN have been proven in global off grid solar systems to be first choice.

It can rapidly track the maximum power point (MPP) of PV array to obtain the maximum energy of the panel. Moreover, the limitation function of the charging power & current, and automatic power reduction function fully ensure the stability when oversize PV modules are installed. These two extra protection function can help controller operate under high temperature environment.

The load, utility or generator auto-control relays make it easy to compose the hybrid power system. All-around electronic protections, including overcharging, over discharging, and PV reverse polarity protection, effectively ensure more safer and reliable system operation longer.

The isolated RS485 interface with standard MODBUS communication protocol and 5V power supply makes it easy for customer to expand the application.

Product Features

- CE certification(LVD EN/IEC62109,EMC EN61000-6-1/3)
- ST and Infineon components are used, high quality & low failure rate
- Advanced MPPT technology, maximum ultra-fast tracking speed 99.5% guaranteed
- Maximum DC/DC transfer efficiency 98.7%
- Accurate recognition and tracking at the highest point of multiple-peaks MPP
- The wider range of MPP operating voltage up to 108V
- Auto control system to limit the charging power & current go over the rated value.
- Support 4 charging options: Sealed, Gel, Flooded and User.
- Battery temperature compensation function
- Real-time energy recording and statistical function
- Automatic over-temperature power reduction function
- 100% full load operation in working environment temperature range within charging & discharging

- Support up to 8 units in parallel to expand system
- Load relay control external load switch signal to realize diversified load work modes
- The first and the second disconnection of load control, contain two relay's contact.
- Auto-control of utility and generator relay design
- Utility or generator auto-control relays make it easy to compose the hybrid power system
- The remote temperature and the voltage sensor design will collect accurate data of battery temperature and voltage
- Isolated RS-485 with 5VDC/200mA to protect output for no power devices with MODBUS protocol
- Customer programmable parameter via mobile phone Apps or PC software.
- Digital LCD display

Electronic Protection

- PV Over Current/power
- PV Short Circuit
- PV Reverse Polarity
- Night Reverse Charging
- Battery Over Voltage
- Battery Over Discharge
- Battery Overheating
- Controller Overheating
- TVS High Voltage Transients

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)

Technical specifications

Item	Tracer5210AN	Tracer6210AN	Tracer5415A N	Tracer6415AN	Tracer8415AN
Nominal System Voltage	12/24VDCVDC or Auto		12/24/36/48VDCVDC or Auto		
Battery Input Voltage Range	8V~32V		8V~68V		
Battery Type	Sealed/Gel/Flooded/User				
Battery fuse	80A/58V				150A/58V
Rated charge current	50A	60A	50A	60A	80A
Rated charge Power	625W/12V 1250W/24V 1875W/36V 2500W/48V	750W/12V 1500W/24V 2250W/36V 3000W/48V	625W/12V 1250W/24V 1875W/36V 2500W/48V	750W/12V 1500W/24V 2250W/36V 3000W/48V	1000W/12V 2000W/24V 3000W/36V 4000W/48V
Max. PV open circuit voltage	100V ^① 92V ^②	150V ^① 138V ^②			
MPP Voltage Range	(Battery Voltage+2V) ~72V ^③	(Battery Voltage +2V) ~108V ^③			
Maximum Tracking efficiency	99.5%				
Maximum Conversion efficiency	98.7%				
Temperature compensate coefficient	-3mV/°C/2V(Default)				
Self-consumption	98mA/12V;60mA/24V;50mA/36V;46mA/48V				
Grounding	Common negative				
Relay	Rated Value:5A/30VDC; Max. Value:0.5A/60VDC				
RS485 interface	RS485(RJ45)				
LCD backlight time	60S(Default)				
Item	Tracer10415AN	Tracer5420AN	Tracer6420AN	Tracer8420AN	Tracer10420AN
Nominal System Voltage	12/24/36/48VDC or Auto				
Battery Input Voltage Range	8V~68V				
Battery Type	Sealed/Gel/Flooded/User				
Battery fuse	150A/58V	80A/58V		150A/58V	
Rated charge current	100A	50A	60A	80A	100A
Rated charge Power	1250W/12V 2500W/24V 3750W/36V 5000W/48V	625W/12V 1250W/24V 1875W/36V 2500W/48V	750W/12V 1500W/24V 2250W/36V 3000W/48V	1000W/12V 2000W/24V 3000W/36V 4000W/48V	1250W/12V 2500W/24V 3750W/36V 5000W/48V
Max. PV open circuit voltage	150V ^① 138V ^②	200V ^① 180V ^②			
MPP Voltage Range	(Battery Voltage +2V) ~108V ^③	(Battery Voltage+2V)~144V ^③			

Tracking efficiency	99.50%
Conversion efficiency	98.70%
Temperature compensate coefficient	-3mV/°C/2V(Default)
Self-consumption	98mA/12V;60mA/24V;50mA/36V;46mA/48V
Grounding	Common negative
Relay	Rated Value:5A/30VDC; Max. Value:0.5A/60VDC
RS485 interface	RS485(RJ45)
LCD backlight time	60S(Default)

- ①At minimum operating environment temperature;
 ②At 25°C environment temperature
 ③The maximum PV open circuit voltage must never exceed 138V or 180V at 25°C environment temperature.

Environmental Parameters

Ambient temperature range	-25°C ~ +45°C
LCD temperature range	-20°C ~ +70°C
Storage temperature range	-30°C ~ +85°C
Humidity	≤95%, N.C.
Enclosure	IP20

Mechanical Parameters

Item	Tracer5210/5415/5420AN	Tracer6210/6415/6420AN
Dimension	261x216x119mm	340x236x119mm
Mounting dimension	180x204mm	260x224mm
Mounting hole size	Φ7	
Terminal	6AWG(16mm ²)	2AWG(35mm ²)
Recommended cable	6AWG(16mm ²)	16mm ² (5AWG)
Weight	3.5kg	4.5kg

Item	Tracer8415/8420AN	Tracer10415/10420AN
Dimension	394x240x134mm	394x242x143mm
Mounting dimension	300x228mm	300x230mm
Mounting hole size	Φ7	
Terminal	2AWG(35mm ²)	
Recommended cable	25mm ² (4AWG)	35mm ² (2AWG)
Weight	6.1kg	7.4kg