Overview

Tracer-AN G3 series controllers, based on a new design concept, adopt the solar charge controller as the main component. With optional 4G or Wi-Fi modules, the end-users read and write parameters by phone APP conveniently.

Adopting the advanced MPPT control algorithm, the Tracer-AN solar controller can minimize the maximum power point loss rate and time. It makes this product tracks the PV array's maximum power point and obtains maximum energy under any situation. Compared with the PWM charging method, MPPT solar controllers can increase the energy utilization ratio by 10%-30%. Charging current limit, charging power limit, and high temperature charging automatic power reduction fully ensure system stability when access to excess PV modules and high temperature running. Add a professional protection chip for the RS485 port, which further improves the reliability and meets the different application requirements.

The Tracer-AN series controller owns a self-adaptive three-stage charging mode based on a digital control circuit. It can effectively prolong the battery lifespan and significantly improve the system's performance. They are equipped with comprehensive electronic protections to ensure the solar system is more reliable and durable. This controller can be widely used for RV, household systems, field monitoring, and many other applications.

Features

- High quality and low failure rate components of ST or IR to ensure the service life
- Advanced MPPT technology, with Max. tracking efficiency higher than 99.5%.
- Advanced MPPT control algorithm to minimize the lost rate and lost time
- Accurate recognizing and tracking technology of multi-peaks maximum power point
- Wider MPP(maximum power point) running voltage to optimize PV utilization
- Maximum DC/DC conversion efficiency of 98%
- Support multi battery types including lithium batteries
- Equipped with a stable self-activation function for the lithium battery
- Set the battery voltage parameters on the LCD
- Battery temperature compensation
- Limit the charging power & charging current to no higher than the rated value
- Real-time energy statistics function
- Charging power reduction automatically for over-temperature
- RS485 communication interface with optional 4G or Wi-Fi modules for remote monitoring
- Standard Modbus communication protocol based on the RS485 communication bus, extending the communication distance
- A power protection chip, which can provide 5VDC/200mA power and over-current, short-circuit protections, is adopted by the communication interface
- Setting parameters via the PC software, APP, or remote meter
- Constant voltage output function
- Comprehensive electronic protections
- Multiple load work modes
- Low self-consumption, lower than 10mA
- Operation at full load without charging power reduced in the working temperature range

Technical Specifications

Parameter	Tracer 1206AN G3	Tracer 2206AN G3	Tracer 1210AN G3	Tracer 2210AN G3	Tracer 3210AN G3	Tracer 4210AN G3
Electrical Parameters						
Battery Rated Voltage	12/24VDC Auto-recognition					
Rated Charging Current	10A	20A	10A	20A	30A	40A
Rated Discharge Current	10A	20A	10A	20A	30A	40A
Controller Work Voltage Range	8~31V					
PV Max. Open-circuit Voltage	60V 46V		100V 92V			
MPPT Voltage Range	(Battery voltage +2V)~36V		(Battery voltage +2V)~72V			
Rated Charging 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
Static Losses	≤8mA(12V) ≤5mA(24V)					
Discharge-circuit Voltage Drop	≤0.23V					
Temperature Compensation	-3mV/℃/2V (Default)					
Grounding Type	Common negative					
RS485 Port	5VDC/200mA(RJ45)					
LCD Backlight Time	Default:60S, Range:0~999S (0 seconds: the backlight is ON all the time)					
Environmental parameters						
Work Temperature Range	-25℃~+45℃(100% loads working)					
Storage Temperature Range	-20℃~+70℃					
Relative Humidity	< 95% (N.C.)					
Enclosure	IP30					
Dimension (L x W x H)	172x139x44 mm	220x154x52 mm	172x139x44 mm	220x154x52 mm	228x164x55 mm	252x180x63 mm
Mounting Size (L x W)	124x130mm	170x145mm	124x130mm	170x145mm	170x155mm	204x171mm
Mounting Hole Size	Φ5mm					
Terminal	12AWG (4mm²)	6AWG (16mm²)	12AWG (4mm²)	6AWG (16mm²)	6AWG (16mm²)	6AWG (16mm²)
Recommended Wire Size	12AWG (4mm²)	10AWG (6mm²)	12AWG (4mm²)	10AWG (6mm²)	8AWG (10mm²)	6AWG (16mm²)
Net Weight	0.57kg	0.94kg	0.57kg	0.94kg	1.26kg	1.65kg