

Overview

Tracer AN series controller, based on multiphase synchronous rectification technology (MSRT) and advanced MPPT control algorithm, with dual-core processor architecture and common negative design, has the features of high response speed, high reliability, and high industrial standard. MSRT can guarantee very high conversion efficiency in any charge power, which sharply improves the energy efficiency of solar system; Advanced MPPT control algorithm minimize the maximum power point loss rate and loss time, to ensure the tracking efficiency, corresponding speed as well as high conversion efficiency under high or low power, so that in any situation, Tracer AN products can rapidly track the maximum power point(MPP) of PV array to obtain the maximum energy of the panel. The limitation function of the charging power and current, and automatic power reduction function fully ensure the stability when works with oversize PV modules and operate under high temperature environment.

With the adaptive three-stage charging mode based on digital control circuit, Tracer AN series controllers can effectively prolong the life-cycle of battery and significantly improve the system performance. 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 the safer and more reliable operation of the solar system for a longer service time. The isolated RS485 interface with standard MODBUS communication protocol and 5V power supply makes it easy for customer to expand the application, it support up to 6 charging in parallel to expand system and meet with different monitoring requirements, so that can be widely used for various applications, e.g. solar RV, household system and field monitoring, etc.

Features

- CE certification(LVD EN/IEC62109,EMC EN61000-6-1/3)
- High quality & low failure rate components of ST and Infineon to ensure the product's life
- Advanced MPPT technology & ultra-fast tracking speed, with tracking efficiency no less than 99.5%
- Maximum DC/DC transfer efficiency is as high as 98.6%★, full load efficiency is up to 98%★
- Advanced MPPT control algorithm will minimize the MPP loss rate and loss time
- The accuracy of the recognition and tracking at the highest point of multiple-peaks MPP
- The wider range of MPP operating voltage.
- Auto control system to limit the charging power & current go over the rated value.
- Support 4 charging options: Sealed, Gel, Flooded and User.
- Support the lead-acid and lithium batteries
- Real-time energy recording and statistical function
- Automatic over-temperature power reduction function
- Hundred percent full load operation in working environment temperature range within charging & discharging
- Support up to 6 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 RS485 with 5VDC/200mA to protect output for no power devices with MODBUS protocol
- To monitor or set the parameters by using the phone Apps or PC software



Tracer10415AN@48V system



Solar Car



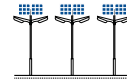
Solar Home



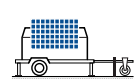
Solar Backpack



Solar Boat



Solar Street Light



Solar Power Generator

Technical specifications

Model	Tracer6210AN	Tracer5415AN	Tracer6415AN	Tracer8415AN	Tracer10415AN	Tracer5420AN	Tracer6420AN	Tracer8420AN	Tracer10420AN
Nominal system voltage	12/24VDC or Auto	12/24/36/48VDC or Auto							
Battery type	Lead-acid (Sealed(Default)/Gel/Flooded)/Lithium (LiFePO4/ Li(NiCoMn)O2)/User								
Battery input voltage range	8V ~ 32V	8V ~ 68V							
Rated charge current	60A	50A	60A	80A	100A	50A	60A	80A	100A
Rated charge power	750W/12V 1500W/24V	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	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. conversion efficiency	98.00%	98.30%	98.60%	98.50%	98.60%	98.30%	98.10%	98.50%	98.50%
Tracking efficiency	≥99.5%								
Max. PV open circuit voltage	100V ^① ;92V ^②	150V;138V				200V;180V			
MPP voltage range	(Battery Voltage+2V) ~ 72V ^②	(Battery Voltage +2V) ~ 108V ^②				(Battery Voltage+2V) ~ 144V ^②			
Equalization voltage	Sealed:14.6V,Flooded:14.8V,User-defined:9-17V								
Boost voltage	Gel:14.2V,Sealed:14.4V,Flooded:14.6V,User-defined:9-17V								
Float voltage	Gel/Sealed/Flooded:13.8V,User-defined:9-17V								
Low voltage reconnect voltage	Gel/Sealed/Flooded:12.6V,User-defined:9-17V								
Low voltage disconnect voltage	Gel/Sealed/Flooded:11.1V,User-defined:9-17V								
Self-consumption	98mA/12V;60mA/24V;50mA/36V;46mA/48V								
Temperature compensation	- 3mV/°C/2V(Default)								
Relative humidity	5% to 95% (N.C.)								
Enclosure	IP20								
RS485 interface	RS485(5VDC/200mA, Two RJ45 ports in parallel) ^③								
Grounding	Common negative grounding								
Operating temperature range	-25°C ~ +60°C(Derate above 45°C)								
Dimensions(LxWxH)(mm)	340×232×105.2	261×216×119	340×236×119	394×240×134	394×242×143	261×216×119	340×236×119	394×240×134	394×242×143
Weight	3.5kg	3.5kg	4.5kg	6.1kg	7.4kg	3.5kg	4.5kg	6.1kg	7.4kg

① At minimum operating environment temperature

② At 25°C environment temperature

③ The maximum PV open circuit voltage must never exceed 138V or 180V at 25°C environment temperature