EPEVER
EPSOLAR TECHNOLOGY

Tracer-BPL Series

Solar Charge Controller with built in LED Driver

Overview

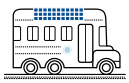
The Tracer BPL series lithium battery MPPT solar charge controller combines solar charge controller and LED constant current driver into one unit which is ideal for solar LED Lighting, especially when dimmer function is needed. The advanced Maximum Power Point Tracking charging methods enables the system charging and discharging management to obtain the most radical optimization. Increase the system flexibility, yet lower down the system cost.

Features

- Adopt high quality components of ST,IR and Infineon, make sure product using lifespan
- Wide working environment temperature(-40℃～60℃)
- Apply to lead-acid battery and lithium battery
- Lithium battery self-activating and low temperature protection function
- Maximum conversion efficiency of 98%
- Advanced Maximum Power Point Tracking (MPPT) technology, with tracking efficiency no less than 99.5%
- Ultra-fast tracking speed and guaranteed tracking efficiency
- Accurately recognizing and tracking of multiple power points
- Lithium battery low temperature protection function
- Lithium battery limit current in low temperature
- Digital precision constant current control and the control accuracy are less than ±2%
- Intelligent power mode with 365-day lighting control technology
- Load reduce power automatically
- Maximum output efficiency of 96%
- PV and Load power limitation function
- The output current can be adjusted among the rated power and current range
- Monitoring and setting parameter via Mobile APP, PC Monitor setting software with RS485 communication interface.
- Use of standard Modbus communication protocol for RS485 bus connections, communication protocol compatibility much better
- Connecting the IOT(Internet of Things) module and Cloud Server monitoring software to realize remote monitoring of the multi-machine system
- The RS485 connector can provide power supply
- Aluminum housing for better cooling
- Real-time energy statistics function
- IP67 waterproof degree
- Long lifespan design， five years warranty

Electronic protections

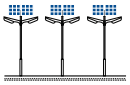
- PV Short Circuit
- PV Reverse Polarity
- Battery Reverse Polarity
- Battery Over Voltage
- Battery Over Discharge
- Battery Overheating
- Libattery low temperature
- Load Short Circuit
- Controller Overheating
- High Voltage Transients

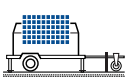

Solar Car


Solar Home


Solar Backpack


Solar Boat


Solar Street Light


Solar Power Generator

Technical Specifications

Model		Tracer2606BPL	Tracer3906BPL	Tracer5206BPL	Tracer2610BPL	Tracer3910BPL	Tracer5210BPL
Nominal system voltage		12/24VDC Auto(Lithium battery do not automatic identification system voltage)					
Battery input voltage range		8.5～32VDC					
Rated charge current★		10A	15A	20A	10A	15A	20A
Rated charge power		130W/12V 260W/24V	195W/12V 390W/24V	260W/12V 520W/24V	130W/12V 260W/24V	195W/12V 390W/24V	260W/12V 520W/24V
Max. PV open circuit voltage		58V(at minimum operating environment temperature) 46V(at 25℃ environment temperature)			95V(at minimum operating environment temperature) 92V(at 25℃ environment temperature)		
MPP Voltage range		(Battery voltage+2V)～36V			(Battery voltage+2V)～72V		
Max. output current		3.3A	4.5A	6.6A	3.3A	4.5A	6.6A
Max. output power		100W	130W	200W	100W	130W	200W
Output voltage range		(Max. battery voltage+2V)～58V			(Max. battery voltage+2V)～80V		
Load open circuit voltage		58V			80V		
Load over voltage protection		63V			100V		
Maximum output efficiency		96%					
Output current control accuracy		≤2%					
Battery Type		Lead-acid battery: Sealed(Default) / Gel / Flooded/User; Lithium battery:LiFePO4/ Li-NiCoMn/User					
Lead-acid	Equalize Charging Voltage	Sealed :14.6V/Gel：No / Flooded:14.8V/User:9-17V (×2/24V)					
	Boost Charging Voltage	Sealed :14.4V/Gel：14.2V/Flooded:14.6V/User:9-17V (×2/24V)					
	Float Charging Voltage	Sealed/Gel/Flooded:13.8V/User:9-17V (×2/24V)					
	Low Voltage Reconnect Voltage	Sealed/Gel/Flooded:12.6V/User:9-17V (×2/24V)					
	Low Voltage Disconnect Voltage	Sealed/Gel/Flooded:11.1V/User:9-17V (×2/24V)					
Lithium	Boost Charging Voltage	LiFePO4:14.5V/ Li-NiCoMn:12.5V / User:9-17V (×2/24V)					
	Low Voltage Reconnect Voltage	LiFePO4:12.8V / Li-NiCoMn:10.5V / User:9-17V (×2/24V)					
	Low Voltage Disconnect Voltage	LiFePO4:11.1V / Li-NiCoMn:9.3V / User:9-17V (×2/24V)					

Self-consumption	≤15mA/12V;≤22mA/24V					
Temperature compensation coefficient	-3mV/℃/2V(Lithium battery don't have temperature compensation coefficient)					
Communication	RS485（RJ45）					
Working environment temperature	-40℃～+60℃					
Enclosure	IP67					
Overall dimension mm	124×89×30	150×93.5×32.7	153×105×52.1	124×89×30	150×93.5×32.7	153×105×52.1
Mounting hole size	Φ3.5mm					
Mounting dimension	88×76mm	120×83mm	120×94mm	88×76mm	120×83mm	120×94mm
Power cable	PV/BAT:14AWG(2.5mm^2) LOAD:18AWG(1.0mm^2)				PV/BAT:12AWG(4mm^2) LOAD:16AWG(1.5mm^2)	
Net weight	0.54kg	0.73kg	1.18kg	0.54kg	0.73kg	1.18kg

★The controller has the limit charge current function, the current can be set via the APP software and RC10.

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