



TEP Series

Solar Charge Controller



►► Overview

The TEP series is a new generation of high-current MPPT solar charge controller. It features superior MPPT tracking accuracy and high conversion efficiency to ensure maximum utilization of solar energy. The controller offers robust system flexibility with support for parallel connection, no battery mode, and three-stage charging management. Its low-power consumption design prolongs standby performance. Comprehensive electronic protection and flexible communication options (WiFi, Bluetooth, 4G, etc.) further enhance system reliability and monitoring capabilities. It is widely used in RVs, boats, industrial monitoring, and small to medium-scale solar power systems.

►► Features

- Compatible with 12V/24V/48V systems; Charging current: 60A-100A
- Supports two PV inputs ⁽¹⁾: Max. MPPT tracking efficiency: 99.5%; Max. Conversion efficiency: 98.5%
- Compatible with AGM, Gel, Flooded, LiFePO4 batteries, etc.
- No battery mode: Enables direct load supply with sufficient PV energy
- Built-in CAN parallel communication port; Max. 6-unit parallel operation (with/without battery)
- Built-in independent BMS communication port; Reliable battery charge/discharge management ⁽²⁾
- Isolated RS485: Optional Bluetooth, WiFi, TCP or 4G modules
- Real-time data recording, event logging, and power statistics function
- Compartment design for superior dust resistance
- Compact and lightweight for versatile installation

⁽¹⁾TEPI0415 and TEPI0425 support two PV inputs

⁽²⁾Direct communication with EPEVER batteries; BMS-LINK module required for other brands

Technical Specifications

Model	TEP6415	TEP7415	TEP8415	TEP10415	TEP6425	TEP7425	TEP8425	TEP10425
PV Input (DC)								
Max. Open-circuit Voltage	150V(@ lowest temperature),135V(@ 25°C)				250V(@ lowest temperature),225V(@ 25°C)			
MPPT Voltage Rang	(Battery voltage plus 2V, and > 20V) to 108V (@ 25 °C)				(Battery voltage plus 2V, and > 20V) to 180V (@ 25 °C)			
Battery								
Battery Type	AGM(Default) / GEL / FLD/ User							
Lithium Battery Type	LFP / NCM / User							
Rated Voltage	12/24/48VDC or Auto							
Rated Charging Current	60A	75A	80A	100A	60A	75A	80A	100A
Rated Charging Power	780W/ 1560W/ 3120W	975W/ 1950W/ 3900W	1040W/ 2080W/ 4160W	1300W/ 2600W/ 5200W	780W/ 1560W/ 3120W	975W/ 1950W/ 3900W	1040W/ 2080W/ 4160W	1300W/ 2600W/ 5200W
Temperature Compensate Coefficient	- 3mV/°C/2V (Default)							
Controller								
Output Voltage Range	8V ~ 62V							
Static Loss (Enabled Communication)	98mA/12V, 60mA/24V, 46mA/48V							
Static Loss (Disabled Communication)	48mA/12V, 25mA/24V, 14mA/48V							
Grounding	Common negative grounding							
Communication Method	5VDC/200mA (RJ45)							
Efficiency								
Tracking Efficiency	≥99.5%							
Max. Conversion Efficiency	98.3%	98.2%	98.3%	98.4%	98.5%	98.4%	98.3%	98.4%
Environmental Parameters								
Operating Temperature	-25°C ~ +60°C							
Storage Temperature	-30°C ~ +70°C							
Relative Humidity	5% ~ 95%(N.C.)							
Altitude	< 5000m (> 2,000m Derating)							
Ingress Protection	IP20							
Mechanical Parameters								
Dimensions (L x W x H)(mm)	200 x 357 x 90			231 x 298 x 119	200 x 357 x 90			231 x 298 x 119
Mounting Dimensions (L x W)(mm)	Φ8							
Weight (kg)	4.47	4.58	4.51	5.2	4.47	4.58	4.51	5.3
Recommended Cable Size	6AWG/16mm ²				2AWG/35mm ²			
Others								
Certifications	EN/IEC61000-6-2; EN/IEC61000-6-4; EN/IEC62109-1; IEC62321							