



TES Series

Solar Charge Controller



Overview

The TES 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.

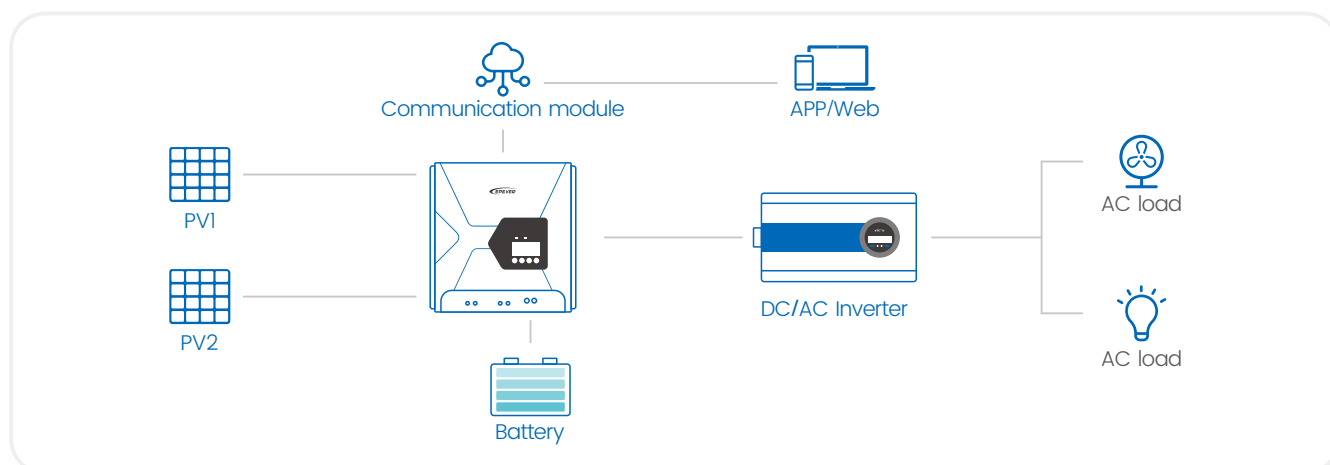
Features

- Compatible with 12V/24V/48V systems; Charging current: 60A-100A
- Durable plastic enclosure, IP32
- Supports two PV inputs ⁽¹⁾
- Max. MPPT tracking efficiency $\geq 99.5\%$; 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
- Certified to IEC62109 and EMC standards

(1) These models support dual PV inputs: TES10415, TES8425, and TES10425

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

System Diagram



Technical Specifications

Models	TES6415	TES8415	TES10415	TES6425	TES7425	TES8425	TES10425
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) to108V(@25°C)			(Battery voltage plus 2V,and>20V) to180V(@ 25 °C)			
Number of MPPTs	1		2		1		2
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	80A	100A	60A	75A	80A	100A
Rated Charging Power	780W/ 1560W/ 3120W	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	98.30%		98.40%	98.50%	98.40%	98.30%	98.40%
Environmental Parameters							
Operating Temperature	-25°C to +60°C						
Storage Temperature	-30°C to +70°C						
Relative Humidity	5% ~ 95% (N.C.)						
Altitude	< 5,000m (> 2,000m Derating)						
Ingress Protection	IP32						
Mechanical Parameters							
Dimensions (L x W x H)(mm)	270x305x91	270x305x105	308x308x119	270x305x105	270x305x122	308 x 308 x 119	
Mounting Dimensions (L x W)(mm)	Φ6.5						
Weight (Kg)	3.85	4.9	6.55	4.85	5.5	6.5	6.6
Recommended Cable Size	6AWG/16mm ²			2AWG/35mm ²			
Others							
Certifications	EN/IEC61000-6-2; EN/IEC61000-6-4; EN/IEC62109-1; IEC 62109-1; IEC 62321						