

Power Conversion

CFE-SC 60A / 80A / 120A



Cutting-Edge MPPT Technology

- up to 99.97% MPPT tracking efficiency Optimized for partial shading and complex environmental conditions.
- <100 ms response time Real-time tracking algorithms ensure maximum energy capture.
- Dynamic Current Control Intelligent power derating protects equipment when current exceeds thresholds.
- Up to 98% Conversion Efficiency Digital power architecture minimizes loss and boosts performance.



Robust Safety Protection

- Triple Circuit Protection TVS surge suppression, linear thermal derating, and battery undervoltage cutoff.
- Dual-Mode Alarm System Screen-coded and buzzer - based real-time fault alerts for quick diagnostics.



Enhanced User Interface

- HD Touchscreen Displays solar generation curves, fault logs, and system metrics Supports bilingual interface (EN / CN).
- Auto-Config for Battery Types Auto-detection for lead - acid; programmable settings for lithium.



Open System Architecture

- Universal Battery Compatibility Works with gel, sealed, flooded, and lithium batteries.
- Auto-Config for Battery Types Built-in Modbus with monitoring software. supports programmable expansion.



Industrial-Grade Reliability

- Anti - Miswiring Design Reduces installer error and component failure risk.
- Smart Sleep Mode Powers down automatically in no - light conditions, reducing self - consumption by 70%.

Model		CFE-SC 60A	CFE-SC 80A	CFE-SC 120A	
Product Category	MPPT Efficiency	≥99.97% (Max Power Point Tracking Precision)			
	Power Consumption	Charging Stop: 1.2 W – 3 W			
		Sleep Mode: 1 – 2 mW			
	System Voltage	Automatic Recognition / Manual Configuration			
	Battery Voltage Range	12 V system	DC 9 V – DC 15 V		
24 V system		DC 18 V – DC 30 V			
48 V system		DC 42 V – DC 60 V			
Input Characteristics	Wake-up Voltage	≥30V			
	PV Open Circuit Voltage (VOC)	12 V - 72 V Series: 180 V, 48 V - 120 V Series: 235 V			
	Startup Charging Voltage	5 V above battery voltage			
	Input Low Voltage Protection	2 V above battery voltage			
	Input Overvoltage Protection	12 V - 72 V Series: 180 V, 48 V - 120 V Series: 235 V			
	Startup Charging Voltage Threshold	5 V above battery voltage			
	Solar Panel Input Power	12 V System	780 W	1040 W	1560 W
		24 V System	1560 W	2080 W	3120 W
48 V System		3120 W	4160 W	6240 W	
Charging Characteristics	Bulk Charge Voltage and Float Charge Voltage	12 V System	Bulk Charge: 14.4 V Float Charge: 13.8 V (Configurable)		
		24 V System	Bulk Charge: 28.8 V Float Charge: 27.6 V (Configurable)		
		48 V System	Bulk Charge: 57.6 V Float Charge: 55.2 V (Configurable)		
	Rated Charging Current	60 A	80 A	120 A	
Load Characteristics	Rated Load Current	30 A	50 A	60 A	
	Load Voltage	Matches batter voltage			
	Load Control Mode	NO / NC Mode, Time Control, Light Control			
	Configuration Method	Controller Menu Interface			
Display & Communication	Display	High-resolution color LCD			
Other Features	Protection Functions	Input overvoltage, reverse polarity, temperature,			
		battery over-discharge, short circuit protection			
	Operating Temperature	-10 to 55 °C			
	IP Rating	IP20			
	Noise Level	≤ 40dB			
	Operating Altitude	0 - 3000 m			
	Dimensions (W × D × H)	220 × 108 × 306.5 mm	220 × 108 × 306.5 mm	247.5 × 98 × 337 mm	

CFE ESS Co., Ltd.

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