

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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