



**samlexamerica®**

# EVOLUTION™



## Inverter/ Charger

⚡ Pure Sine Wave

Models:  
EVO-4248SP

Programmable  
Remote Control  
Model: EVO-RC-PLUS  
(Sold Separately)



**3 YEAR LIMITED WARRANTY**

	MODEL NO.	EVO-4248SP	
	INPUT CONFIGURATION	120 VAC SINGLE PHASE	120/240 VAC SPLIT PHASE
INVERTER SPECIFICATIONS	OUTPUT WAVEFORM	Pure Sine Wave	
	INPUT BATTERY VOLTAGE RANGE	36 - 68 VDC	
	NOMINAL AC OUTPUT VOLTAGE	120 / 240 VAC ± 5% Split Phase	
	OUTPUT FREQUENCY	60 Hz ± 0.1 Hz	
	TOTAL HARMONIC DISTORTION (THD)	< 5% (See Note 4)	
	CONTINUOUS OUTPUT POWER AND POWER FACTOR (PF)	2100 Watt (PF 0.95)	4200 Watt (PF 0.95)
	CONTINUOUS AC OUTPUT CURRENT	17.5A	17.5A
	SURGE POWER FOR 1 MSEC	300%	300%
		6,300 VA	12,600 VA
	SURGE POWER FOR 100 MSEC	200%	200%
		4,200 VA	8,400 VA
	POWER BOOST FOR 30 SEC	150%	150%
		3,150 VA	6,300 VA
	POWER BOOST FOR 1 MIN	140%	140%
		2,940 VA	5,880 VA
	POWER BOOST FOR 10 MIN	120%	120%
		2,520 VA	5,040 VA
POWER BOOST FOR 30 MIN	110%	110%	
	2,310 VA	4,620 VA	
MAXIMUM CONTINUOUS DC INPUT CURRENT	137 ADC		
MAXIMUM OUTPUT FAULT AC CURRENT AND DURATION	147.8A peak, 64.63A rms, Duration: 8.9ms		
INVERTER EFFICIENCY (PEAK)	93%		
NO LOAD POWER CONSUMPTION IN POWER SAVING MODE	< 8 W		
NO LOAD POWER CONSUMPTION IN NORMAL MODE (120 VAC OUTPUT, TYPICAL)	< 30 watts		
NO LOAD POWER CONSUMPTION IN STANDBY MODE	< 5 W		
AC INPUT	AC INPUT VOLTAGE	60 - 140 VAC	180 - 280 VAC
	AC INPUT FREQUENCY	50/60Hz	
	PROGRAMMABLE AC INPUT CURRENT	5 - 30A (Default - 30A)	
	AC INPUT BREAKER SIZE	30A (Has to be installed externally by the installer / user)	
TRANSFER CHARACTERISTICS	TRANSFER RELAY TYPE AND CAPACITY	SPDT, 40A	
	TRANSFER TIME – INVERTER TO GRID / GENERATOR	< 1 ms (Synchronized transfer at zero crossing)	
	TRANSFER TIME – GRID / GENERATOR TO INVERTER	18ms (Synchronized transfer at zero crossing)	

Over ▶

## Inverter/ Charger

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Models:  
EVO-4248SP

MODEL NO.		EVO-4248SP	
INPUT CONFIGURATION		120 VAC SINGLE PHASE	120/240 VAC SPLIT PHASE
INTERNAL BATTERY CHARGER	MAX CONTINUOUS AC INPUT CURRENT AT MAXIMUM BULK CHARGING CURRENT	17.5A (At charging current = 30 ADC)	17.5A (At charging current = 60 ADC)
	AC INPUT POWER FACTOR (PF)	> 0.95	
	NOMINAL DC OUTPUT VOLTAGE	36 - 68VDC (57.6V Nom)	
	PROGRAMMABLE BULK CHARGING CURRENT	0 - 60 ± 5A, DC	
	PROGRAMMABLE CHARGING VOLTAGES: BULK / ABSORPTION STAGE	48.0 to 64.0V (Default 57.6V)	
	FLOAT STAGE	48.0 to 60.0V (Default 54.0V)	
	EQUALIZATION STAGE	56.0 to 66.0V (Default 57.6V)	
	CHARGER EFFICIENCY	86%	
	PROGRAMMABLE CHARGING PROFILES	<ul style="list-style-type: none"> <li>• 3 profiles under 3-Stage Charging: Bulk, Absorption, Float</li> <li>• 1 profile under 4-Stage Charging: Bulk, Absorption, Equalize, Float</li> <li>• 3 profiles under 2-Stage Charging: Bulk, Absorption</li> </ul>	
	BATTERY TEMPERATURE COMPENSATION	<ul style="list-style-type: none"> <li>• Battery Temperature Sensor EVO-BCTS included</li> <li>• Compensation Range from -20° C to 60° C</li> </ul>	
EXTERNAL BATTERY CHARGER SECTION (SOLAR CHARGE CONTROLLER)	CHARGING VOLTAGE RANGE	52 - 60 VDC	
	MAXIMUM CHARGING CURRENT	100A	
COOLING, PROTECTIONS AND ALARMS	COOLING	2 Fans – Temperature Controlled, Variable Speed	
	PROTECTIONS AND ALARMS	<ul style="list-style-type: none"> <li>• Battery Low Voltage Alarm and Low / Over Voltage Shut Down</li> <li>• Shut Down under Input Over Current, Output Over Current, Output Overload and Output Short</li> <li>• Transformer and Heat Sink Overheat Shut Down</li> <li>• Immunity Against Conducted Electrical Transients in Vehicles</li> </ul>	
INPUT AND OUTPUT CONNECTIONS	BATTERY CONNECTION	Stud and Nut: M8 (Pitch 1.25mm)	
	EXTERNAL CHARGE CONTROLLER CONNECTION	Stud and Thumb Nut: M8 (Pitch 1.25mm)	
	AC INPUT / OUTPUT CONNECTION	Hard-wired through screw down terminals <ul style="list-style-type: none"> <li>• Terminal hole size: Hole dia 6mm<sup>2</sup> / 16mm<sup>2</sup> for up to AWG#6</li> </ul>	
OPTIONAL REMOTE CONTROL	MODEL NO.	EVO-RC-PLUS	
	SPECIFICATIONS	<ul style="list-style-type: none"> <li>• For programming parameters and modes of operation</li> <li>• 4 Rows of 20 Character Alpha Numeric LCD Display for messaging</li> <li>• SD Card Slot for Data Logging (16 or 32 GB)</li> <li>• Comes with 10M / 33ft RJ-45 Data Cable</li> </ul>	
COMPLIANCE	SAFETY COMPLIANCE	CSA listed: Conforms to CAN / CSA STD. C22.2 No. 107.1 and UL Std No. 1741 2 <sup>nd</sup> Ed.	
	EMI / EMC COMPLIANCE	Certified to FCC Part 15(B), Class A	
ENVIRONMENTAL SPECIFICATIONS	OPERATING TEMPERATURE	-20° C to 60° C (-4° F to 140° F)	
	STORAGE TEMPERATURE	-40° C to 70° C (-40° F to 158° F)	
	OPERATING HUMIDITY	0 to 95% RH non condensing	
WEIGHTS AND DIMENSIONS	DIMENSIONS: W X D X H	324 x 415 x 212 mm ; 12.8 x 16.3 x 8.35 in	
	WEIGHTS	29 Kg / 64 lb	

### NOTES:

- (1) All AC power ratings in the Inverter Section are specified at Power Factor = 0.95
- (2) All specifications given above are at ambient temperature of 25°C / 77°F (50°C / 122°F at 85% load and 60°C / 140°F at 72% load) unless specified otherwise.
- (3) Specifications are subject to change without notice.
- (4) Above the low battery warning voltage, the harmonic distortion meets UL requirements.