

## EVOLUTION Series Inverter/Charger

⚡ Pure Sine Wave Inverter, Adaptive Battery Charger, Transfer Relay – All in ONE unit.

Using state of the art technology, the Samlex EVO inverter/charger operates at 165 million instructions per second with lightning fast load & response times, has 9 points of physical protection monitoring (being scanned up to 10,000 times per second) to detect fault conditions & prevent product damage and uses 5 different temperature sensors to activate 2 speed controlled cooling fans. It doesn't get much smarter than this. Samlex inverter/chargers are robust, reliable and affordable for everyone. Experience the Evolution.

### Two Separate AC Inputs for Grid & Generator

Connect Grid & Generator simultaneously, no need to reconfigure system as power availability changes. Priority is given to Grid. Both AC input ranges are fully programmable.

### Active Power Boost

In addition to 3X Surge on start up, loads can exceed the continuous power output by the Power Boost Allowances without triggering an overload fault. Get 140% for 30 seconds or 120% for five minutes! Use a smaller, lower cost inverter to handle heavy surge loads.

### Conformally Coated Circuit Board

Dampens vibration, protects from corrosion in high humidity environments or marine salt air.

### Adaptive Battery Charger

Algorithm monitoring in the Bulk Stage assesses the condition of the battery being charged. The remaining stages of charging are then based on the battery's condition rather than a pre-set charging time. Minimizes excessive charging time and extends life of battery.

### Input for Solar Charge Controller

Connect a solar charge controller directly to the EVO through the Battery Charger External DC Input (Solar Input). Seamlessly integrate your solar system with the EVO's inverter, battery charger and transfer relay.

### Bullet Proof Intelligence

9 physical points of protection monitoring are scanned up to 10,000 times per second to detect adverse internal and external conditions. When detected, the unit will initiate a healthy shutdown and turn itself off before any damage can be done. This bullet proof intelligence makes the EVO practically indestructible in the field.

### Optional Remote Control w/ Removable SD Card for Data Logging

The EVO-RC remote control (sold separately) can accept a 16GB SD card to capture data. Log historic power consumption, inverter functionality, battery charging activity, faults and the conditions leading up to them. Use the remote to program parameters and view performance details in real time.

### Safety Certified

ETL safety listed to stringent UL standards: 1741, 458, and to CSA C22.2 No. 107.1-01 EMI/EMC compliant with FCC Part 15(B), Class B and RoHS Compliant.

### Wide Operating Temperature Range

Will operate below zero!  
-20°C to 60°C, -4°F to 140°F

### 2 YEAR WARRANTY

### Online Mode

Prioritizes the inverter over the grid to drive the AC output to the load (programmable). The inverter is driven by the batteries which can be charged from the solar input (using the grid as back-up power only when the batteries necessitate charge).

### Temperature Controlled Cooling

2 internal fans are speed controlled based on 5 different temperature sensors. Reduces unnecessary fan noise and energy consumption by only cooling where and when needed.

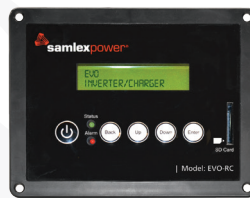
**FOR USE WITH:** Alternative Energy Systems, trucks, boats, RVs, cabins, remote locations, areas with unreliable utility power and for emergency power back-up.





samlexamerica®

# EVOLUTION



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

## Inverter Charger

⚡ Pure Sine Wave

Models:  
EVO-2212  
EVO-3012  
EVO-2224  
EVO-4024

2 YEAR WARRANTY



INVERTER	EVO-2212	EVO-3012	EVO-2224	EVO-4024
NOMINAL AC OUTPUT, FREQUENCY, THD	120 ± 5% VAC, 50/60 Hz ± 0.1 Selectable, < 5% THD			
INPUT BATTERY VOLTAGE RANGE	9 - 17 VDC	9 - 17 VDC	18 - 34 VDC	18 - 34 VDC
CONTINUOUS POWER OUTPUT AT 25° C	2200 VA	3000 VA	2200 VA	4000 VA
CONTINUOUS AC OUTPUT CURRENT (A)	18A	25A	18A	33A
SURGE POWER FOR 1 MS	300% (6600VA, 54A)	300% (9000VA, 75A)	300% (6600VA, 54A)	300% (12000VA, 99A)
SURGE POWER FOR 100 MS	200% (4400VA, 36A)	200% (6000VA, 50A)	200% (4400VA, 36A)	200% (8000VA, 66A)
POWER BOOST FOR 5 SECONDS	150% (3300W)	150% (3900W)	150% (3300W)	150% (6000W)
POWER BOOST FOR 30 SECONDS	140% (3080W)	140% (3800W)	140% (3080W)	140% (5600W)
POWER BOOST FOR 5 MINUTES	120% (2640W)	120% (3400W)	120% (2640W)	120% (4800W)
POWER BOOST FOR 30 MINUTES	110% (2420W)	110% (3200W)	110% (2420W)	110% (4400W)
MAXIMUM CONTINUOUS DC INPUT CURRENT	266A	373A	133A	266A
INVERTER EFFICIENCY (PEAK)	90%	90%	93%	94%
NO LOAD POWER CONSUMPTION	Normal Mode: 30W; Power Save Mode: <8W		Normal Mode: 25W; Power Save Mode: <8W	
<b>AC INPUT FROM GRID/GENERATOR</b>	120 VAC Nominal (60 - 140 VAC, 40 - 70 Hz Selectable)			
PROGRAMMABLE AC INPUT CURRENT	5-40A (Default 30A)	5-70A (Default 30A)	5-40A (Default 30A)	5-70A (Default 30A)
<b>TRANSFER RELAY</b>	TRANSFER RELAY TYPE AND CAPACITY			
	SPDT, 40A	DPDT, 70A (2X35A contacts)	SPDT, 40A	DPDT, 70A (2X35A contacts)
TRANSFER TIME: INVERTER TO GRID/GENERATOR	< 1 ms (Synchronized Transfer at Zero Crossing)			
TRANSFER TIME: GRID/GENERATOR TO INVERTER	Up to 16 ms (Synchronized Transfer)			
<b>INTERNAL BATTERY CHARGER</b>	AC INPUT VOLTAGE RANGE			
	120 VAC Nominal (60 - 140 VAC, 40 - 70 Hz Selectable)			
MAXIMUM AC INPUT CURRENT	15 Amps, AC	20 Amps, AC	19 Amps, AC	30 Amps, AC
MAXIMUM DC OUTPUT CURRENT	100 Amps, DC	130 Amps, DC	70 Amps, DC	110 Amps, DC
POWER FACTOR	> 0.95			
CHARGER EFFICIENCY	75%	75%	86%	85%
CHARGING STAGES	Adaptive Charging Control; Normal Mode: 3 Stages – Bulk, Absorption, Float; Equalization Mode: 4 Stages – Bulk, Absorption, Equalization, Float			
BATTERY TEMPERATURE COMPENSATION	Battery Temperature Sensor included. Compensation Range from -20°C to +60°C			
<b>BATTERY CHARGER EXTERNAL INPUT (SOLAR INPUT)</b>	CHARGING INPUT VOLTAGE RANGE			
	13 - 15VDC	13 - 15VDC	26 - 30VDC	26 - 30VDC
MAXIMUM CHARGING CURRENT	50A			
<b>COOLING</b>	2 Fans – Temperature Controlled, Variable Speed			
<b>PROTECTIONS/ALARM</b>	Input Over Current, Output Overload, Short Circuit, Over Temperature, Battery Low Voltage /Over Voltage Immunity Against Conducted Electrical Transients in Vehicles			
<b>COMPLIANCE</b>	SAFETY/EMI/EMC			
	Intertek-ETL listed: Conforms to ANSI / UL STD. 1741, 458; Certified to CAN / CSA STD. C22.2 No. 107.1-01; Certified to FCC Part 15(B), Class B			
<b>ENVIRONMENTAL</b>	TEMPERATURE			
	OPERATING: -20°C to +60°C (-4°F to 140°F); STORAGE: -40°C to +70°C (-40°F to 158°F)			
	OPERATING HUMIDITY			
	0 to 95% RH non condensing			
<b>WEIGHT AND DIMENSIONS</b>	W x D x H			
	325 x 426 x 207mm / 8.6 x 22 x 7.8 inches			
	WEIGHT			
	27 Kg / 59 lb.	29 kg / 64 lb.	26 Kg / 57 lb.	29 Kg / 64 lb

Note: (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 unless specified otherwise  
(3) Specifications are subject to change without notice

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