

# SI series (350 – 2000 W)

Pure Sine Wave Inverters



- Input/output fully isolated for more application flexibility
- Input and output protected against over and under voltage
- “Low power saving mode” < 1 W (350 W) increases system efficiency and reduces costs
- Advanced microprocessor optimizes operation processes while reducing energy consumption
- Status indicator for operation verification
- Usual home appliances (supplied from AC mains) can be integrated in a small solar home system (12-48V)
- Certified for mobile applications (RVs, cars and many more), certification class B

This new inverter series converts DC energy from solar modules into clean, stable AC power that is ideal for power demanding appliances. Phocos inverters are designed for high efficiency: Integrated advanced microprocessor technology combined with pure sine wave output makes them the perfect choice for use with high-end electronics and electrical equipment. Thanks to their low weight and

long lifespan, the SI series inverters are also ideal for mobile and outdoor applications (e.g. RVs, cars and many more). As a special, high performance benefit the THD (total harmonic distortion) of Phocos’ true sine wave inverters is below 3%, thus providing superior efficiency. Overload, short circuit, DC over/under voltage and overheating protection are standard on all models.

Type: SI 350	SI350-12110	SI350-12230	SI350-24110	SI350-24230
Rated power	350 W			
Surge power	700 W (350 - 400 W, 30 s) (400 - 700 W, 2 s)			
Input	12 Vdc		24 Vdc	
Operating voltage	10.5 to 16.0 Vdc		21.0 to 32.0 Vdc	
Shut down low battery	10.5 Vdc		21.0 Vdc	
Battery low voltage alarm	11.0 Vdc		22.0 Vdc	
Overvoltage shut down	16.0 Vdc		32.0 Vdc	
No load current draw	< 0.65 Adc	< 0.9 Adc	< 0.32 Adc	< 0.5 Adc
Save mode max. current draw	< 0.09 Adc		< 0.06 Adc	
Output	110 Vac <sup>1</sup>	230 Vac <sup>2</sup>	110 Vac <sup>1</sup>	230 Vac <sup>2</sup>
Output socket	Universal	Universal	Universal	Universal
Efficiency at rated Vdc, full load	90%	91%	91%	93%
Dimensions	210 x 160 x 73 mm			
Weight	1.6 kg			

**Note:** Due to the high current demanded by inverters, they should be directly connected to the battery terminals.

Selectable output:

<sup>1</sup> 100/110/115/120 Vac ± 5%

<sup>2</sup> 200/220/230/240 Vac ± 5%

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<b>Type: SI 700</b>	<b>SI700-12110</b>	<b>SI700-12230</b>	<b>SI700-24110</b>	<b>SI700-24230</b>	<b>SI700-48110</b>	<b>SI700-48230</b>	
Rated power	700 W						
Surge power	700 - 1400 W, 6 s						
Input	12 Vdc		24 Vdc		48 Vdc		
Operating voltage	10.3 to 15.8 Vdc		20.6 to 31.6 Vdc		41.2 to 61.2 Vdc		
Shut down low battery	10.3 Vdc		20.6 Vdc		41.2 Vdc		
Battery low voltage alarm	10.6 Vdc		21.2 Vdc		42.0 Vdc		
Overvoltage shut down	15.8 Vdc		31.6 Vdc		61.2 Vdc		
No load current draw	< 1.25 Adc	< 1.2 Adc	< 0.64 Adc	< 0.6 Adc	< 0.31 Adc	< 0.28 Adc	
Save mode max. current draw	< 0.25 Adc		< 0.15 Adc		< 0.08 Adc		
Output	110 Vac	230 Vac	110 Vac	230 Vac	110 Vac	230 Vac	
Output socket	Universal	Universal	Universal	Universal	Universal	Universal	
Efficiency at rated Vdc, full load	89%	91%	92%	91%	93%	94%	
Dimensions	310 x 192 x 75 mm						
Weight	2.7 kg						
<b>Type: SI 1500</b>	<b>SI1500-24110</b>		<b>SI1500-24230</b>		<b>SI1500-48110</b>		<b>SI1500-48230</b>
Rated power	1500 W						
Surge power	1650 - 1750 W, 180 s; 1750 - 3000 W, 6 s						
Input	24 Vdc				48 Vdc		
Operating voltage	20.6 to 31.6 Vdc				41.2 to 61.2 Vdc		
Shut down low battery	20.6 Vdc				41.2 Vdc		
Battery low voltage alarm	21.2 Vdc				42.0 Vdc		
Overvoltage shut down	31.6 Vdc				61.2 Vdc		
No load current draw	< 0.75 Adc		< 0.7 Adc		< 0.4 Adc		< 0.4 Adc
Save mode max. current draw	< 0.15 Adc				< 0.09 Adc		
Output	110 Vac		230 Vac		110 Vac		230 Vac
Output socket	Universal		Universal		Universal		Universal
Efficiency at rated Vdc, full load	92%		90%		93%		94%
Dimensions	420 x 205 x 90 mm						
Weight	4.8 kg						
<b>All inverters SI series: 700 / 1500</b>							
AC regulation	+/- 3%						
Frequency swith select.	50/60 Hz +/-0.1%						
Protections	Overload, short circuit, DC over/under voltage, over temperature						
Waveform	True sine wave						
Power factor cos Ø	-90° to + 90°						
Operating temperature	-20° C to + 40° C						
Storage temperature	-30° C to + 70° C						
Max. humidity	90%						
Safety standard	UL458						
Cooling	Load/temperature controlled fan						
Reverse polarity protection	No, will result in permanent damage						
Remote control unit	Si-RSW (not for model SI 350) for 12 V and 24 V						

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<b>Type: SI 1000</b>	<b>SI1000-112</b>		<b>SI1000-212</b>	
Rated power	1000 W			
Surge power	< 1750W, 1 Sec.			
Input	12 Vdc			
Operating voltage	10.5 to 16.5 V			
Shut down low battery	10.5 ± 0.3 Vdc			
Battery low voltage alarm	11.0 ± 0.3 Vdc			
Overvoltage shut down	16.5 ± 0.3 Vdc			
No load current draw	<1.5A@12 Vdc			
Save mode max. current draw	<0.1A@12 Vdc			
Output	100/110/115/120 Vac ±5% (Dip switch select)		200/220/230/240 Vac ±3% (Dip switch select)	
Output socket	North America (GFCI, NEMA 5-15R)		EU (Schuko), Australia/New Zealand, UK, Uni.	
Efficiency	88%			
Dimensions (W x H x D)	200.0 x 83.0 x 372.2 mm			
Weight	3.26 kg			
<b>Type: SI 2000</b>	<b>SI2000-124</b>	<b>SI2000-148</b>	<b>SI2000-224</b>	<b>SI2000-248</b>
Rated power	2000 W			
Surge power	< 3500 W, 1 Sec.			
Input	24 Vdc	48 Vdc	24 Vdc	48 Vdc
Operating voltage	21.0 to 33.0 V	42.0 to 66.0 V	21.0 to 33.0 V	42.0 to 66.0 V
Shut down low battery	21 ± 0.5 Vdc	42 ± 1.0 Vdc	21 ± 0.5 Vdc	42 ± 1.0 Vdc
Battery low voltage alarm	22 ± 0.5 Vdc	44 ± 1.0 Vdc	22 ± 0.5 Vdc	44 ± 1.0 Vdc
Overvoltage shut down	33 ± 0.5 Vdc	66 ± 1.0 Vdc	33 ± 0.5 Vdc	66 ± 1.0 Vdc
No load current draw	<0.9A@24Vdc	<0.5A@48Vdc	<0.9A@24Vdc	<0.5A@48Vdc
Save mode max. current draw	<0.05A@24Vdc	<0.05A@48Vdc	<0.05A@24Vdc	<0.05A@48Vdc
Output	100/110/115/120 Vac ±5% (Dip switch select)		200/220/230/240 Vac ±3% (Dip switch select)	
Output socket	North America (GFCI, NEMA 5-15R)		EU (Schuko), Australia/New Zealand, UK, Uni.	
Efficiency	89%	90%	89%	90%
Dimensions (W x H x D)	248.0 x 83.0 x 443.3 mm			
Weight	5.24 kg			
<b>All inverters SI series: 1000 / 2000</b>				
AC regulation	±3% (SI1000/SI2000-212, -224, -248), ±5% (SI1000/SI2000-112,-124,-148)			
Frequency swith select.	50/60 Hz +/-0.5% (Dip shwitch selectable)			
Protections	Input under-voltage protection / alarm / recovery, input over-voltage protection / recovery			
Waveform	Pure sine wave			
Power factor cos Ø	-90° to + 90°			
Operating temperature	-20° C to + 40° C			
Storage temperature	-30° C to + 70° C			
Max. humidity	10 to 95% RH			
Safety standard	UL458 (SI1000-112, SI1000-124, SI2000-112, SI2000-124)			
Cooling	Load/temperature controlled fan			
Reverse polarity protection	By fuse			
Remote control unit (optional)	CR-8 / CR-16			

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