



# PSW-G (1-10 kW)

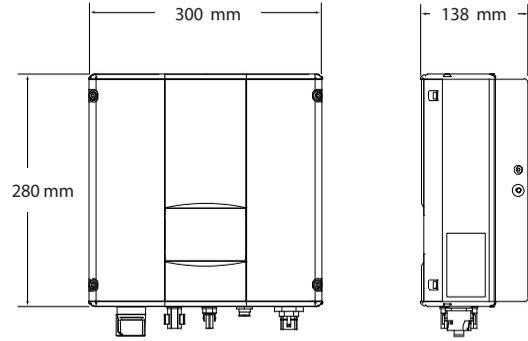
Any-Grid™ Single and Three Phase Pure Sine Wave Grid Inverters



**NEW**



### Technical Drawings

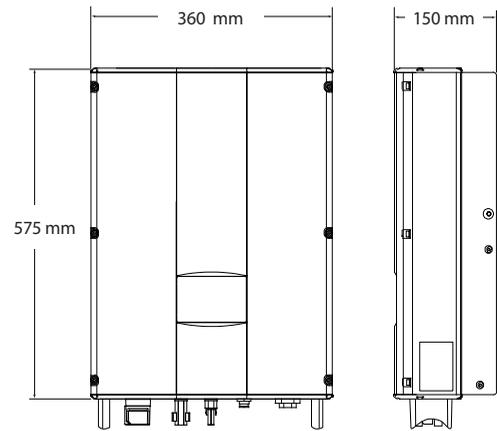


PSW-G 1-3 kW

### Product Introduction

The Phocos Any-Grid™ PSW-G Grid-Tied Inverter (Pure Sine Wave Grid Inverter) is part of Phocos' most versatile line of products. Flexibility and reliability are key characteristics of this product line, with a strong potential for cost saving opportunities in real world conditions. The PSW-G converts DC (Direct Current) into AC (Alternating Current), feeding that power into the public grid and to local loads.

This PSW-G series is a new generation of PV string inverters which were developed for residential and small commercial applications. This series inverters adopts the latest transformerless technologies and components for maximum efficiency. This series also has many outstanding advantages such as the compact size, low weight, easy installation and very low maintenance. Its IP65 rating ensures maximum protection against the elements. These inverters have an outstanding performance in terms of product stability, efficient power transformation, low harmonics, safe power grid access and compatibility with high ambient temperatures. They can be widely used on public building roofs, residential roofs, commercial rooftops and in ground-mounted solar systems to provide customers with stable and efficient renewable energy. The wide range of available power classes includes one maximum power point tracker (MPPT) for single-phase units and two independent MPPTs for 3-phase units. The series also allows flexible system configuration and monitoring solutions for household and commercial systems.



PSW-G 8-10 kW



# PSW-G (1-10 kW)

Any-Grid™ Single and Three Phase Pure Sine Wave Grid Inverters



## Product Features

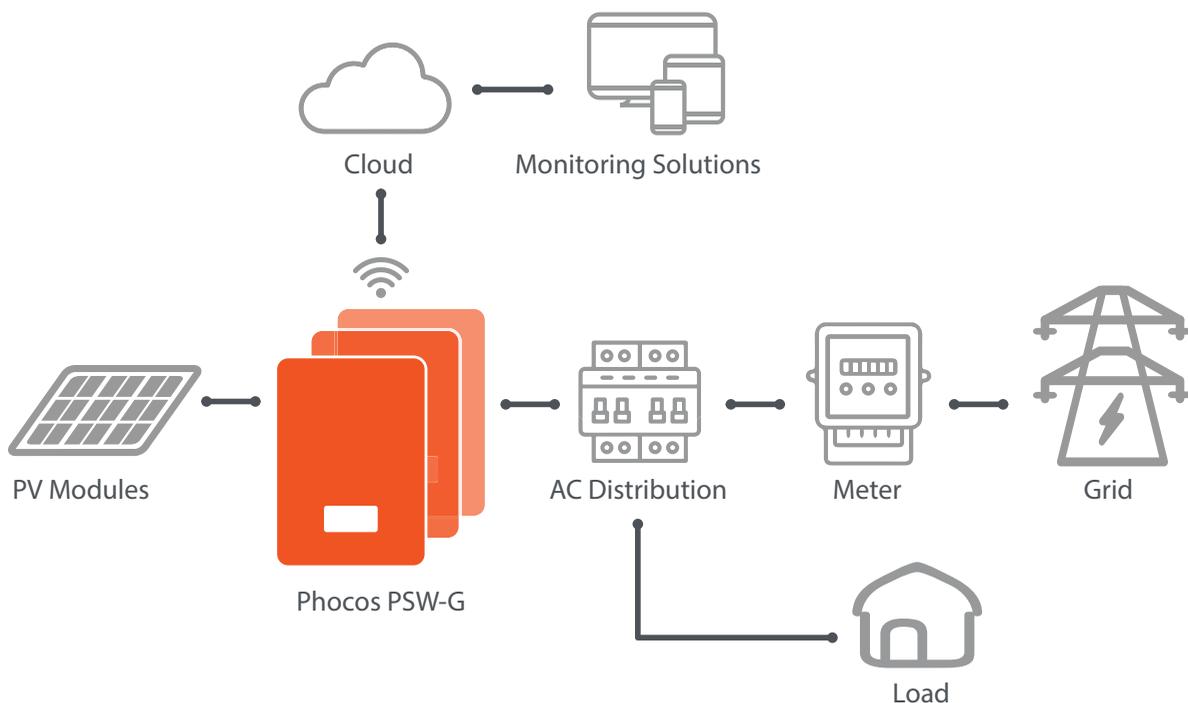
- Wide PV voltage range, low PV starting voltage, high conversion efficiency
- Integrated high efficiency maximum power point tracker (MPPT), two MPPTs for 3-phase models
- Smart grid adaptation to meet the requirements of various grid access
- Functions without an expensive battery, minimizing up-front investment
- Robust aluminum housing and natural convection cooling (added forced cooling for 8 and 10 kW units)
- Designed with latest thermal simulation technology for longer service life.
- LC-Display and easy to operate keyboard with multiple functions
- Plug and Play
- Ingress Protection IP65, suitable for outdoor operation



### What is Any-Grid?

Traditionally, the energy industry defines power systems relative to their access to the grid as Off-Grid or On-Grid. At Phocos, we believe energy access should be available under 'Any-Grid' conditions whether you have full or partial access to renewable energy and/or grid power, and if energy sources are unreliable. The Phocos Any-Grid product family provides flexible energy access solutions that optimize the use of locally available energy resources that can adapt as access to resources changes over time.

## Any-Grid On-Grid Capability



**Technical Data**

	PSW-G 1KW-1P	PSW-G 3KW-1P	PSW-G 4KW-1P	PSW-G 5KW-1P
<b>INPUT</b>				
Max. PV Array Power	1200 Wp	3300 Wp	4800 Wp	6000 Wp
Max. PV Panel Voltage	450 Vdc	500 Vdc	600 Vdc	
PV Starting Voltage / Min. Operation Voltage	80 / 60 Vdc		120 / 100 Vdc	
PV Panel MPP Voltage	60 ~ 400 Vdc	120 ~ 450 Vdc	120 ~ 550 Vdc	
Quantity of MPPTs / String connections per MPPT	1 / 1		1 / 2	
Max. PV Current per MPPT	9 Adc	15 Adc	16 Adc	20 Adc
<b>OUTPUT</b>				
Rated AC Output Power	1000 W	3000 W	3680 W	4600 W
Max. AC Output Current	4.5 Aac	13 Aac	16 Aac	20 Aac
Power Factor	≥ 0.99 (at rated power)			
Total Harmonic Distortion	< 3% THD (at rated power)			
Nominal Output Voltage	230 Vac, L + N + PE			
AC Frequency	50 / 60 Hz			
<b>EFFICIENCY</b>				
Max. Efficiency	96.90%	97.30%	97.70%	97.80%
European Efficiency	96.00%	96.50%	96.70%	96.80%
MPPT Tracking Efficiency	99.90%			
<b>PROTECTION</b>				
Protection	DC breaker, AC short-circuit protection, over-current protection, over-voltage protection, isolation protection, RCD, surge protection, anti-island protection, over-temperature protection, ground fault monitoring, etc.			
<b>GENERAL DATA</b>				
Display	2.0 inches LC-Display			
LCD Language	English, German, Chinese, Dutch			
Communication Interface	RS485, WiFi, Ethernet (optional)			
Cooling Method	Natural convection cooling			
Protection Degree	IP 65			
Night Self Consumption	< 1 W			
Topology	Transformerless			
Operating Temperature Range	-25 °C ~ + 60 °C (derating above 45 °C)			
Relative Humidity	4 ~ 100%, with condensation			
Dimensions (W x H x D)	300 x 280 x 138 mm / 11.8 x 11 x 5.4 in		360 x 405 x 150 mm / 14.2 x 16 x 6 in	
Weight	9.5 Kg / 21 lb		15 Kg / 33 lb	
Grid Certificates	DIN VDE 0126-1-1:2013, VDE-AR-N 4105:2011, DIN VDE V 0124-100:2012, EN 50438:2013, G83-2 :2012, IEC 61727(IEC62116), AS/NZS 4777.2:2015, NB/T32004-2013, IEC 60068-2-1:2007, IEC 60068-2-2:2007, IEC 60068-2-14:2009, IEC 60068-2-30:2005, IEC 61683:1999, C10/11, TF3.2.1		DIN VDE 0126-1-1:2013, VDE-AR-N 4105:2011, DIN VDE V 0124-100:2012, G83-2 :2012, G59/3-2:2015, IEC 61727(IEC62116), AS/NZS 4777.2:2015, NB/T32004-2013, IEC 60068-2-1:2007, IEC 60068-2-2:2007, IEC 60068-2-14:2009, IEC 60068-2-30:2005, IEC 61683:1999	
Other Certificates	IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011			
Warranty	5 years			



	PSW-G 4KW-3P	PSW-G 5KW-3P	PSW-G 6KW-3P	PSW-G 8KW-3P	PSW-G 10KW-3P
<b>INPUT</b>					
Max. PV Array Power	4800 Wp	5700 Wp	7200 Wp	9000 Wp	11000 Wp
Max. PV Panel Voltage	900 Vdc			1000 Vdc	
PV Starting Voltage / Min. Operation Voltage	220 / 180 Vdc			220 / 150 Vdc	
PV Panel MPP Voltage	200 ~ 800 Vdc				
Quantity of MPPTs / String connections per MPPT	2 / 1				
Max. PV Current per MPPT	10 Adc			12 Adc	
<b>OUTPUT</b>					
Rated AC Output Power	4000 W	5000 W	6000 W	8000 W	10000 W
Max. AC Output Current	6.4 Aac	8 Aac	9.6 Aac	12.6 Aac	14 Aac
Power Factor	≥ 0.99 (at rated power)				
Total Harmonic Distortion	< 3% THD (at rated power)				
Nominal Output Voltage	230 / 400, 220 / 380 Vac ; 3L + N + PE , 3L + PE				
AC Frequency	50 / 60				
<b>EFFICIENCY</b>					
Max. Efficiency	98.10%		98.20%	98.30%	
European Efficiency	97.50%	97.60%	97.70%	97.80%	
MPPT Tracking Efficiency	99.90%				
<b>PROTECTION</b>					
Protection	DC breaker, AC short-circuit protection, over-current protection, over-voltage protection, isolation protection, RCD, surge protection, anti-island protection, over-temperature protection, ground fault monitoring, etc.				
<b>GENERAL DATA</b>					
Display	2.0 inches LC-Display				
LCD Language	English, German, Chinese, Dutch				
Communication Interface	RS485, WiFi, Ethernet (optional)				
Cooling Method	Natural convection cooling			Natural cooling with controlled forced cooling	
Protection Degree	IP 65				
Night Self Consumption	< 1 W				
Topology	Transformerless				
Operating Temperature Range	-25 °C ~ + 60 °C (derating above 45 °C)				
Relative Humidity	4 ~ 100%, with condensation				
Dimensions (W x H x D)	360 x 530 x 150 mm / 14.2 x 21 x 6 in			360 x 575 x 150 mm / 14.2 x 22.6 x 6 in	
Weight	20 kg / 44 lb			23 kg / 50.7 lb	
Grid Certificates	IEC 61727(IEC 62116), IEC 60068-2-1:2007, IEC 60068-2-2:2007, IEC 60068-2-14:2009, IEC 60068-2-30:2005, IEC 61683:1999, VDE0126-1-1, VDE-AR-N4105, G59/3, C10/11, AS/NZS 4777.2:2015, NB/T 32004-2013, PEA, ZVR				
Other Certificates	IEC 62109-1:2010, IEC 62109-2:2011, EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011				
Warranty	5 years				