

# Growatt SPH3000~6000

- VPP interface ready for energy trading
- Multiple workmodes configurable
- Smart load management via dry contact
- Remote smart O&M
- IP65 & Natural cooling



P O W E R  
- I N G  
T O M O -  
R R O W



[www.ginverter.com](http://www.ginverter.com)

Datasheet	SPH 3000	SPH 3600	SPH 4000	SPH 4600	SPH 5000	SPH 6000
<b>DC input data</b>						
Max. recommended PV power	6600W	6600W	6600W	8000W	8000W	8000W
Start voltage				150V		
Max. PV voltage				550V		
PV voltage range				120V-550V		
MPPT voltage range/ nominal voltage				150V-550V /360V		
Max. input current of tracker A/B				12A/12A		
Number of MPP trackers / strings per MPP tracker				2/1		
<b>AC Output</b>						
Rated AC output power	3000W	3680W	4000W	4600W	4999W	6000W
Max. AC apparent power	3000VA	3680VA	4000VA	4600VA	5000VA	6000VA
Max. output current	16A	16A	22A	22A	22A	27A
Nominal AC output voltage				230V		
Nominal grid frequency				50/60Hz, ±5Hz		
Power factor at rated power				1		
Displacement power factor				0.8leading...0.8lagging		
THDI				<3%		
<b>AC output power(Backup)</b>						
Max. output power				3000W		
Rated AC output voltage				230Vac		
Rated AC output frequency				50/60Hz		
Automatic switchover time				<0.5S		
<b>Battery data</b>						
Battery voltage range				42~59V		
Max. charging voltage				58V		
Max charging and discharging current				66A		
Max charging and discharging power				3000W		
Battery type				Lithium /Lead-acid		
Capacity of battery				50-2000AH		
<b>Efficiency</b>						
Max. efficiency	97.5%	97.5%	97.5%	97.6%	97.6%	97.7%
Euro European efficiency	97.0%	97.0%	97.0%	97.1%	97.1%	97.1%
MPPT efficiency				99.9%		
<b>Protection devices</b>						
DC switch				Yes		
DC reverse polarity protection				Yes		
Battery reverse protection				Yes		
Output over current protection				Yes		
Output over voltage protection				Yes		
Ground fault monitoring				Yes		
Grid monitoring				Yes		
Integrated all-pole sensitive leakage				Yes		
<b>General Data</b>						
Dimensions (W / H / D)				450/560/180mm		
Weight				27kg		
Operating temperature range				-25°C ... +60°C		
Altitude				2000m		
Self-Consumption				< 3 W		
Topology(solar)				Transformerless		
Topology(battery)				HF transformer		
Cooling concept				Natural		
Environmental Protection Rating				IP65		
Relative humidity				100%		
DC connection				MC4/H4(Optional)		
AC connection				Connector		
Interfaces: RS232/RS485/CAN/USB				Yes		
Monitor : RF/WIFI/GPRS				Optional		
Display				LCD+LED		
Warranty: 5 years / 10 years				Yes /Optional		
CE, IEC62109, G98/G99, VDE0126-1-1, AS4777, AS/NZS 3100, CEI 0-21, VDE-AR-N4105, UTE C 15-712, EN50438, EN50549, IEC 61727, IEC 62116, C10/11						