

# Growatt SPH3000~6000

- 2 MPPTs
- IP65 & Natural cooling
- Workmodes programmable
- Supports export limitation
- Online Smart Service



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



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

Datasheet	SPH3000	SPH3600	SPH4000	SPH4600	SPH5000	SPH6000
<b>DC input data</b>						
Max. recommended PV power	6600W	6600W	6600W	8000W	8000W	8000W
Start voltage	150V	150V	150V	150V	150V	150V
Max. PV voltage	550V	550V	550V	550V	550V	550V
PV voltage range	120V-550V	120V-550V	120V-550V	120V-550V	120V-550V	120V-550V
MPP voltage range/nominal voltage	150V-550V /360V	150V-550V /360V	150V-550V /360V	150V-550V /360V	150V-550V /360V	150V-550V /360V
Max. input current of tracker A/B	12A/12A	12A/12A	12A/12A	12A/12A	12A/12A	12A/12A
Number of MPP trackers / strings per MPP tracker	2/1	2/1	2/1	2/1	2/1	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	230V	230V	230V	230V	230V
Nominal grid frequency	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz
Power factor at rated power	1	1	1	1	1	1
Displacement power factor	0.8leading... 0.8lagging	0.8leading... 0.8lagging	0.8leading... 0.8lagging	0.8leading... 0.8lagging	0.8leading... 0.8lagging	0.8leading... 0.8lagging
THDI	<3%	<3%	<3%	<3%	<3%	<3%
<b>AC output power(Backup)</b>						
Max. output power	3000W	3000W	3000W	3000W	3000W	3000W
Rated AC output voltage	230Vac	230Vac	230Vac	230Vac	230Vac	230Vac
Rated AC output frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Automatic switchover time	<0.5S	<0.5S	<0.5S	<0.5S	<0.5S	<0.5S
<b>Battery data</b>						
Battery voltage range	42~59V	42~59V	42~59V	42~59V	42~59V	42~59V
Max. charging voltage	58V	58V	58V	58V	58V	58V
Max charging and discharging current	66A	66A	66A	66A	66A	66A
Max charging and discharging power	3000W	3000W	3000W	3000W	3000W	3000W
Battery type	lithium /Lead-acid	lithium /Lead-acid	lithium /Lead-acid	lithium /Lead-acid	lithium /Lead-acid	Lithium /Lead-acid
Deep of discharging	80%DOD/50%DOD	80%DOD/50%DOD	80%DOD/50%DOD	80%DOD/50%DOD	80%DOD/50%DOD	80%DOD/50%DOD
Capacity of battery	3~12kWh	3~12kWh	3~12kWh	3~12kWh	3~12kWh	3~12kWh
<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	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%
<b>Protection devices</b>						
DC switch	yes	yes	yes	yes	yes	yes
DC reverse polarity protection	yes	yes	yes	yes	yes	yes
Battery reverse protection	yes	yes	yes	yes	yes	yes
Output over current protection	yes	yes	yes	yes	yes	yes
Output over voltage protection	yes	yes	yes	yes	yes	yes
Ground fault monitoring	yes	yes	yes	yes	yes	yes
Grid monitoring	yes	yes	yes	yes	yes	yes
Integrated all - pole sensitive leakage	yes	yes	yes	yes	yes	yes
<b>General Data</b>						
Dimensions (W / H / D) in mm	547/516/170	547/516/170	547/516/170	547/516/170	547/516/170	547/516/170
Weight	27KG	27KG	27KG	27KG	27KG	27KG
Operating temperature range	-25°C ... +60°C	-25°C ... +60°C	-25°C ... +60°C	-25°C ... +60°C	-25°C ... +60°C	-25°C ... +60°C
Noise emission (typical)	≤ 25 dB(A)	≤ 25 dB(A)	≤ 25 dB(A)	≤ 25 dB(A)	≤ 25 dB(A)	≤ 25 dB(A)
Altitude	2000m	2000m	2000m	2000m	2000m	2000m
Self-Consumption	< 3 W	< 3 W	< 3 W	< 3 W	< 3 W	< 3 W
Topology	transformerless	transformerless	transformerless	transformerless	transformerless	transformerless
Cooling concept	Natural	Natural	Natural	Natural	Natural	Natural
Environmental Protection Rating	IP65	IP65	IP65	IP65	IP65	IP65
Relative humidity	100%	100%	100%	100%	100%	100%
<b>Features</b>						
DC connection	MC4/H4(opt)	MC4/H4(opt)	MC4/H4(opt)	MC4/H4(opt)	MC4/H4(opt)	MC4/H4(opt)
Interface:RS232/USB/CAN/RF/WI-FI	yes/yes/yes/opt/opt	yes/yes/yes/opt/opt	yes/yes/yes/opt/opt	yes/yes/yes/opt/opt	yes/yes/yes/opt/opt	yes/yes/yes/opt/opt
Display	LCD	LCD	LCD	LCD	LCD	LCD
Warranty: 5 years / 10 years	yes /opt	yes /opt	yes /opt	yes /opt	yes /opt	yes /opt

CE, IEC62109, G83/G59, VDE0126-1-1, AS4777, AS/NZS 3100, CEI 0-21, VDE-AR-N4105, UTE C 15-712, EN50438, IEC 61727, IEC 62116



## PANEL FOTOVOLTAICO POLICRISTALINO DE 60 CELULAS

### EFICIENCIA



Elevada eficiencia del panel fotovoltaico, por la utilización de 5 bus bar por célula.

### GARANTIA



Nuestros paneles fotovoltaicos se garantizan por veinticinco años en cuanto a potencia con depreciación lineal y doce años de garantía contra defectos de fabricación.

### CERTIFICACIONES



Los paneles fotovoltaicos cumplen con las normativas siguientes:

Fuego: Clase C  
IEC 61215(ed.2)  
IEC 61730-1(ed.1); am1; am2  
IEC 61730-2(ed.1); am1  
EN 61215:2005  
EN 61730-1:2007/A2:2013  
EN 61730-2:2007/A1:2012

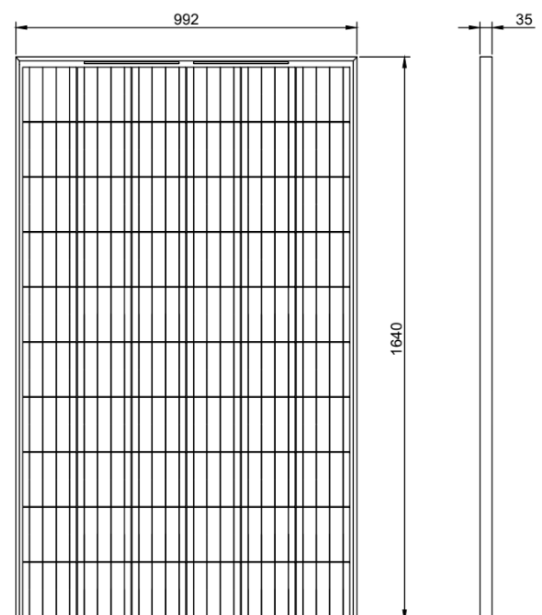


### TOLERANCIA

Un estricto control de calidad, garantiza una tolerancia de entre el 0% al 3%



### DIMENSIONES



NOTA: Dimensiones en mm.  
Ficha Técnica sujeta a cambios sin previo aviso

## PANEL FOTOVOLTAICO LS265P, LS270P, LS275P, LS280P.

DATOS ELECTRICOS 	LS265P	LS270P	LS275P	LS280P
<b>Potencia Máxima (Pmax)</b>	265Wp (0% a 3%)	270Wp (0% a 3%)	275Wp (0% a 3%)	280Wp (0% a 3%)
<b>Voltaje a Máxima Potencia (Vmp)</b>	30.6 Voltios	30.7 Voltios	30.8 Voltios	30.9 Voltios
<b>Corriente a Máxima Potencia (Imp)</b>	8.66 Amperios	8.8 Amperios	8.93 Amperios	9.07 Amperios
<b>Voltaje a Circuito Abierto (Voc)</b>	36.72 Voltios	36.84 Voltios	36.93 Voltios	37.08 Voltios
<b>Corriente de Corto Circuito (Isc)</b>	9.27 Amperios	9.41 Amperios	9.56 Amperios	9.71 Amperios
<b>Eficiencia del panel</b>	16.29%	16.6%	16.9%	17.21%

## DATOS TERMICOS, MECANICOS Y ELECTRICOS

<b>NOCT</b>	45°C ± 2°C
<b>Coefficiente de Temperatura Voc</b>	-0.34%/°C
<b>Coefficiente de Temperatura Isc</b>	0.037%/°C
<b>Coefficiente de Temperatura Pmax</b>	-0.48%/°C
<b>Voltaje máximo del sistema</b>	1,500VDC
<b>Temperatura de funcionamiento</b>	-40°C a 85°C
<b>Fusible</b>	15A
<b>Configuración de los pallets</b>	30pcs
<b>Configuración del contenedor 40'HQ</b>	28 pallet/840pcs

## DATOS DE LAS CELULAS

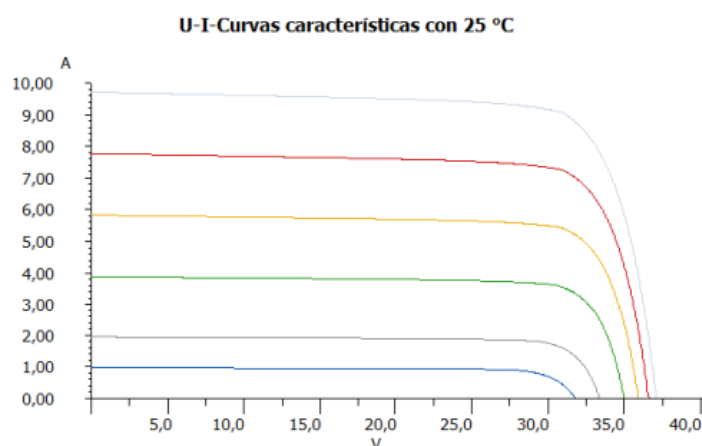
<b>Tecnología</b>	Silicio Policristalino
<b>Cantidad por Panel</b>	60 células
<b>Dimensión</b>	156 x 156 mm
<b>Orientación</b>	6 x 10

## CARACTERISTICAS

## MECANICAS

<b>Dimensiones</b>	992 x 1640 x 35 mm
<b>Peso</b>	18.3 kg
<b>Caja de Conexiones</b>	IP67, 3 diodos
<b>Cables y conectores</b>	4mm <sup>2</sup> 1M, MC4 compatible

## CURVAS DE TENSION Y CORRIENTE LS280P



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