

# GROWATT SMART PHOTOVOLTAIC INVERTER SERIES



Residential on-grid inverters



Commercial on-grid inverters



Large commercial and utility grade on-grid inverters



Residential storage inverters



Commercial storage inverters



Monitoring solutions

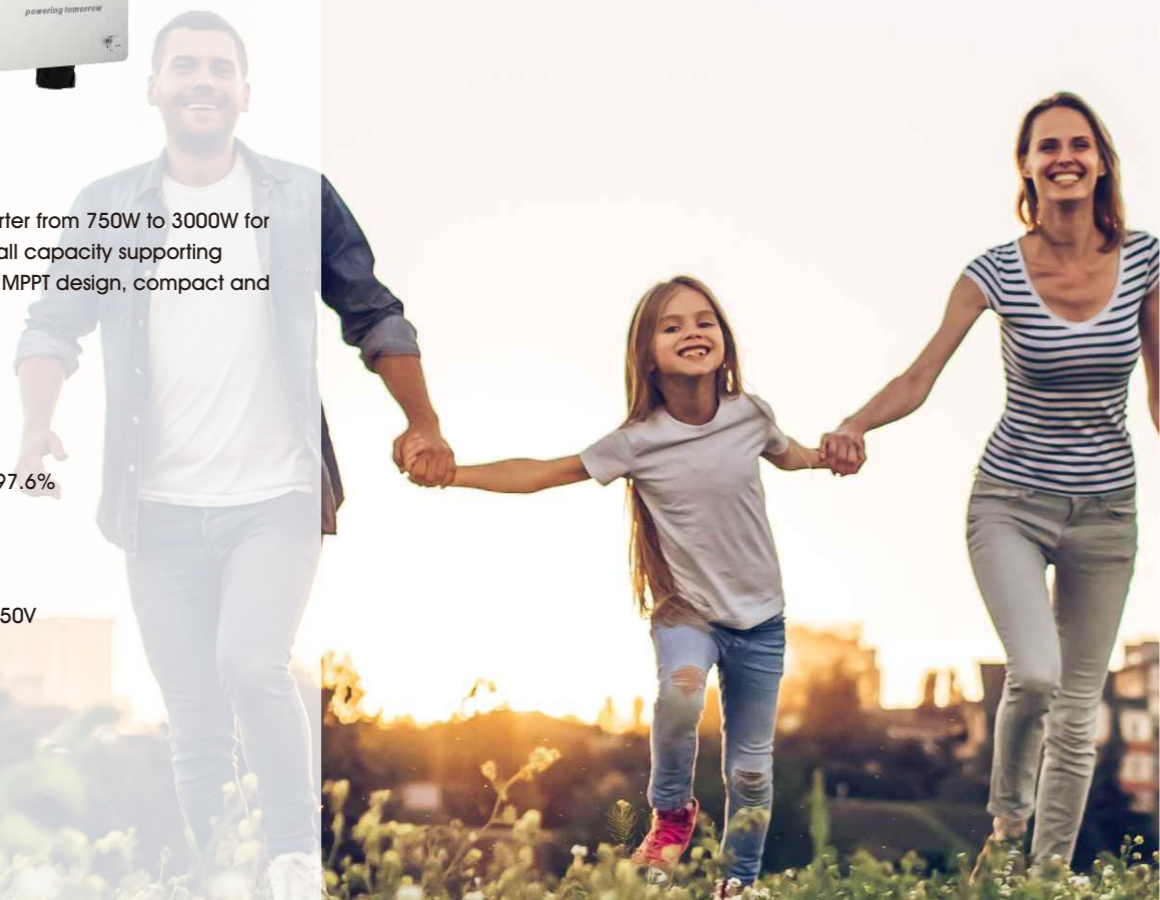
# Growatt

## 750~3000 -S



Single phase grid-tied inverter from 750W to 3000W for residential application, small capacity supporting small roof utilization. single MPPT design, compact and cost effective.

- Maximum efficiency of 97.6%
- Optional DC switch
- Max.DC voltage up to 550V
- Flexible Interfaces



### GROWATT · PRODUCT

Datasheet	750-S	1000-S	1500-S	2000-S	2500-S	3000-S
<b>Input Data</b>						
Max. recommended PV power (for module STC)	970W	1300W	1950W	2600W	3250W	3900W
Max. DC voltage	450V	450V	450V	450V	550V	550V
Start voltage	50V	80V	80V	80V	80V	80V
PV voltage range	50V-450V	70V-450V	70V-450V	70V-450V	70V-500V	70V-550V
MPP work voltage range/ nominal voltage	55V-450V/120V	70V-450V/180V	70V-450V/250V	70V-450V/360V	70V-500V/360V	70V-550V/360V
Full load dc voltage range	80V-400V	110V-400V	175V-400V	200V-400V	250V-450V	250V-500V
Max. input current	10A	10A	10A	11A	12A	13A
Max. input current per string	10A	10A	10A	11A	12A	13A
Number of independent MPP trackers/strings per MPP tracker	1/1	1/1	1/1	1/1	1/1	1/1
<b>Output (AC)</b>						
Rated AC output power	750W	1000W	1600W	2000W	2500W	3000W
Max. AC power	750W	1000W	1650W	2000W	2500W	3000W
Max. output current	3.3A	4.7A	7.8A	9.5A	11.9A	14.3A
AC nominal voltage	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V
AC grid frequency; range	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Adjustable 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%
AC connection	Single phase	Single phase	Single phase	Single phase	Single phase	Single phase
<b>Efficiency</b>						
Max. efficiency	97.2%	97.4%	97.4%	97.4%	97.6%	97.6%
Euro weighted efficiency	96%	96.5%	97%	97%	97.3%	97.3%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%
<b>Protection Devices</b>						
DC reverse polarity protection	yes	yes	yes	yes	yes	yes
DC switch	yes	yes	yes	yes	yes	yes
Output over current protection	yes	yes	yes	yes	yes	yes
Output AC overvoltage Protection - Varistor	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 current monitoring unit	yes	yes	yes	yes	yes	yes
<b>General Data</b>						
Dimensions (W / H / D) in mm	271/299/141	271/299/141	271/299/141	271/299/141	271/359/141	271/359/141
Weight	6.4KG	6.4KG	6.4KG	6.4KG	9.1KG	9.1KG
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)
Self-Consumption night	<0.5 W	<0.5 W	<0.5 W	<0.5 W	<0.5 W	<0.5 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
Altitude	2000m without derating	2000m without derating	2000m without derating	2000m without derating	2000m without derating	2000m without derating
Relative humidity	100%	100%	100%	100%	100%	100%
<b>Features</b>						
DC connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Connector	Connector	Connector	Connector	Connector	Connector
Display	LCD	LCD	LCD	LCD	LCD	LCD
Interfaces: RS232/RF/Wi-Fi/LAN/GPRS	yes/opt/opt/opt/opt	yes/opt/opt/opt/opt	yes/opt/opt/opt/opt	yes/opt/opt/opt/opt	yes/opt/opt/opt/opt	yes/opt/opt/opt/opt
Warranty:5 years/10 years	yes/opt	yes/opt	yes/opt	yes/opt	yes/opt	yes/opt

# Growatt 2500~5500 MTL-S



Single phase grid-tied inverter up to 5000W for residential application, suitable for bigger roofs. dual MPPT, more flexible for PV string design compact and cost effective.

- Maximum efficiency 97.9%
- Dual MPP trackers
- Max.DC voltage up to 550V
- Flexible Interfaces



## GROWATT · PRODUCT

Datasheet	2500MTL-S	3000MTL-S	3600MTL-S	4200MTL-S	5000MTL-S	5500MTL-S
<b>Input Data</b>						
Max. recommended PV power (for module STC)	3250W	3900W	4680W	5460W	5980W	6500W
Max. DC voltage	500V	500V	550V	550V	550V	550V
Start voltage	100V	100V	100V	100V	100V	100V
MPP work voltage range/nominal voltage	80V-500V /360V	80V-500V /360V	80V-550V /360V	80V-550V /360V	80V-550V /360V	80V-550V /360V
Full load dc voltage range	130V-450V	160V-450V	190V-500V	150V-500V	160V-500V	175V-500V
Max. input current of tracker A/tracker B	10A/10A	10A/10A	10A/10A	15A/15A	15A/15A	15A/15A
Max. input current per string of tracker A/tracker B	10A/10A	10A/10A	10A/10A	15A/15A	15A/15A	15A/15A
Number of independent MPP trackers / strings per MPP tracker	2/1	2/1	2/1	2/1	2/1	2/1
<b>Output (AC)</b>						
Rated AC output power	2500W	3000W	3600W	4200W	4600W	5000W
Max. AC apparent power	2500VA	3000VA	3600VA	4200VA	4600VA	5000VA
Max. output current	11.3A	13.6A	16.3A	19A	20.9A	22.7A
AC nominal voltage; range	220V/230V /240V; 180Vac-280Vac	220V/230V/240V; 180Vac - 280Vac	220V/230V/240V; 180Vac - 280Vac	220V,230V,240V; 180Vac - 280Vac	220V,230V,240V; 180Vac - 280Vac	220V,230V,240V; 180Vac - 280Vac
AC grid frequency; range	50Hz,60Hz / ±5Hz	50Hz,60Hz / ±5Hz	50Hz,60Hz / ±5Hz	50Hz,60Hz / ±5Hz	50Hz,60Hz / ±5Hz	50Hz,60Hz / ±5Hz
Displacement power factor, configurable	0.8leading... 0.95lagging	0.8leading... 0.95lagging	0.8leading... 0.95lagging	0.8leading... 0.95lagging	0.8leading... 0.95lagging	0.8leading... 0.95lagging
THDI	<3%	<3%	<3%	<3%	<3%	<3%
AC connection	Single phase	Single phase	Single phase	Single phase	Single phase	Single phase
<b>Efficiency</b>						
Max. efficiency	97.6%	97.6%	97.9%	97.9%	97.9%	97.9%
Euro weighted efficiency	97%	97%	97.4%	97.4%	97.4%	97.4%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%
<b>Protection Devices</b>						
DC reverse polarity protection	yes	yes	yes	yes	yes	yes
DC switch rating for each MPPT	yes	yes	yes	yes	yes	yes
Output over current protection	yes	yes	yes	yes	yes	yes
Output over voltage protection-varistor	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 current monitoring unit	yes	yes	yes	yes	yes	yes
<b>General Data</b>						
Dimensions (W / H / D) in mm	355/419/138	355/419/138	355/419/138	355/419/138	355/419/158	355/419/158
Weight	14KG	14KG	14KG	14KG	14.5KG	14.5KG
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 without derating	2000m without derating	2000m without derating	2000m without derating	2000m without derating	2000m without derating
Self-Consumption night	< 0.5 W	< 0.5 W	< 0.5 W	< 0.5 W	< 0.5 W	< 0.5 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	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Connector	Connector	Connector	Connector	Connector	Connector
Display	LCD	LCD	LCD	LCD	LCD	LCD
Interfaces: RS232 / RJ45 / RF / Wi-Fi / LAN / GPRS	yes / yes / opt / opt / opt / opt	yes / yes / opt / opt / opt / opt	yes / yes / opt / opt / opt / opt	yes / yes / opt / opt / opt / opt	yes / yes / opt / opt / opt / opt	yes / yes / opt / opt / opt / opt
Warranty: 5 years / 10 years	yes / opt	yes / opt	yes / opt	yes / opt	yes / opt	yes / opt

CE, IEC62109, G83, VDE0126-1-1, UTE C 15-712,G59, AS4777, AS/NZS 3100, CEIO-21, VDE-AR-N4105, EN50438, CQC, IEC 61683, IEC 60068, IEC 61727, IEC 62116, INMETRO

# Growatt 2500~6000 TL-X



Most up-to-date smart grid-tied inverter for single phase residential application. innovative aerial material cover, elegant looking and 45% lighter. the OLED screen and touch button design brings more convenient operation. leading high efficiency ensures high energy yields of a home system .

- Maximum efficiency 98.4%
- Dual MPP trackers
- Type II SPD on DC side
- Supports export control
- Touch key and OLED display

# NEW



## GROWATT · PRODUCT

Datasheet	2500TL-X	3000TL-X	3600TL-X	4200TL-X	5000TL-X	6000TL-X
<b>Input Data</b>						
Max. recommended PV power (for module STC)	3500W	4200W	5040W	5880W	7000W	8100W
Max. DC voltage	500V	500V	550V	550V	550V	550V
Start voltage	100V	100V	100V	100V	100V	100V
MPP work voltage range/ nominal voltage	80V-550V /360V	80V-550V /360V	80V-550V /360V	80V-550V /360V	80V-550V /360V	80V-550V /360V
Max. input current	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A
Max. short-circuit current	16A/16A	16A/16A	16A/16A	16A/16A	16A/16A	16A/16A
Number of independent MPP trackers / strings per MPP tracker	2/1	2/1	2/1	2/1	2/1	2/1
<b>Output (AC)</b>						
Rated AC output power	2500W	3000W	3600W	4200W	5000W <sup>*1</sup>	6000W
Max. AC apparent power	2500VA	3000VA	3600VA	4200VA	5000VA	6000VA
Max. output current	11.3A	13.6A	16A	19A	22.7A <sup>*2</sup>	27.2A
AC nominal voltage	230V(184V-274V)	230V(184V-274V)	230V(184V-274V)	230V(184V-274V)	230V(184V-274V)	230V(184V-274V)
AC grid frequency	50Hz/60Hz ±5Hz	50Hz/60Hz ±5Hz	50Hz/60Hz ±5Hz	50Hz/60Hz ±5Hz	50Hz/60Hz ±5Hz	50Hz/60Hz ±5Hz
Adjustable 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%
AC connection	Single phase	Single phase	Single phase	Single phase	Single phase	Single phase
<b>Efficiency</b>						
Max. efficiency	98.2%	98.2%	98.2%	98.4%	98.4%	98.4%
Euro weighted efficiency	97.1%	97.1%	97.2%	97.5%	97.5%	97.5%
MPPT efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
<b>Protection Devices</b>						
DC reverse polarity protection	yes	yes	yes	yes	yes	yes
DC switch	yes	yes	yes	yes	yes	yes
DC surge protection	Type II	Type II	Type II	Type II	Type II	Type II
Output over current protection	yes	yes	yes	yes	yes	yes
Output over voltage protection-varistor	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 current monitoring unit	yes	yes	yes	yes	yes	yes
<b>General Data</b>						
Dimensions (W / H / D) in mm	415/378/143	415/378/143	415/378/143	415/378/143	415/378/143	415/378/143
Weight	10.8KG	10.8KG	10.8KG	10.8KG	10.8KG	10.8KG
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	4000m	4000m	4000m	4000m	4000m	4000m
Self-Consumption night	< 0.5 W	< 0.5 W	< 0.5 W	< 0.5 W	< 0.5 W	< 0.5 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	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Connector	Connector	Connector	Connector	Connector	Connector
Display	OLED+LED	OLED+LED	OLED+LED	OLED+LED	OLED+LED	OLED+LED
Interfaces: RS485 / USB / Wi-Fi / 4G / RF	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Warranty: 5 years / 10 years	yes / opt	yes / opt	yes / opt	yes / opt	yes / opt	yes / opt

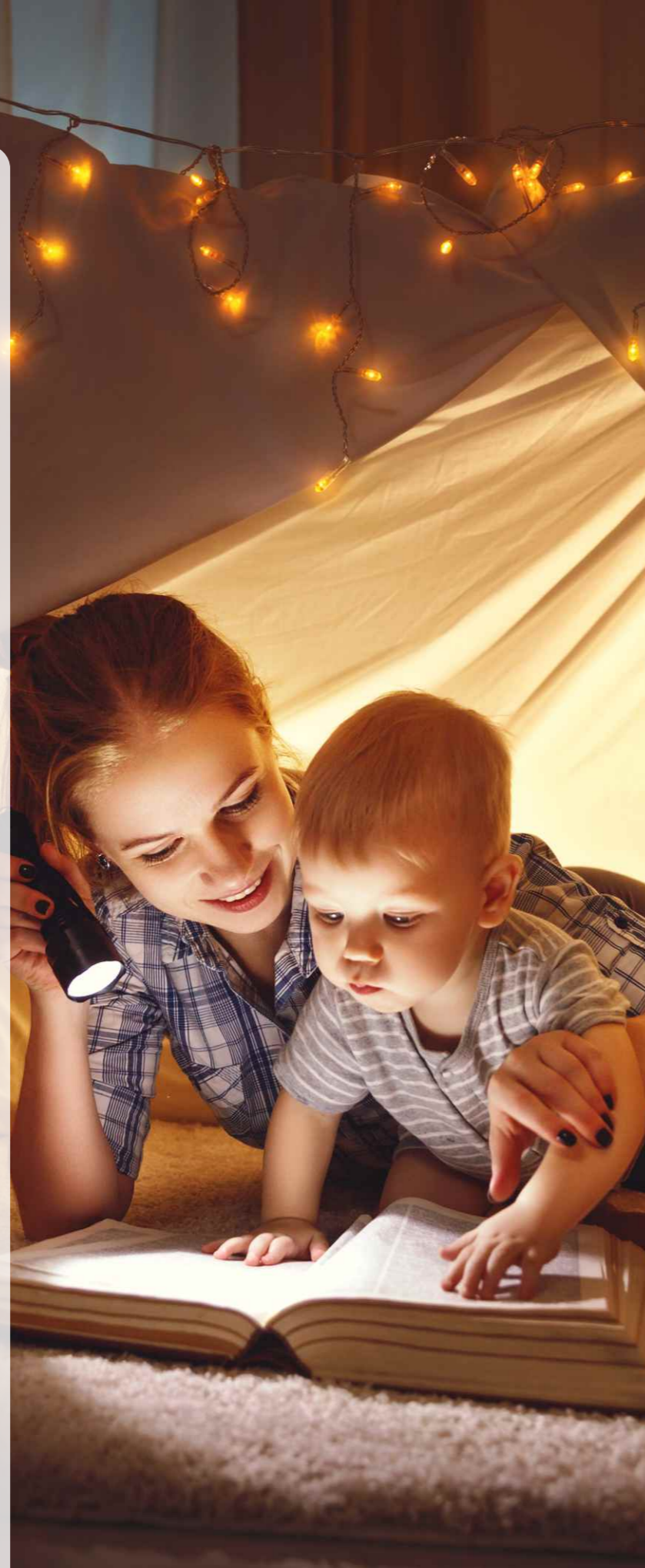
\*1 For VDE-AR-N4105 Max. output power is 4600W  
\*2 For AS4777, Iac max.:21.7A

# Growatt 3000~6000 TL3-S



3 phase grid-tied inverter for residential or small commercial rooftop application. fanless design, compact and easy for installation.

- Max. Efficiency 98%
- Dual MPP trackers
- Supports export limitation
- Integrated DC switch
- Max.DC voltage 1000VDC
- Natural cooling



## GROWATT · PRODUCT

Datasheet	3000TL3-S	4000TL3-S	5000TL3-S	6000TL3-S
<b>Input Data</b>				
Max. recommended PV power (for module STC)	3600W	4800W	6000W	7200W
Max. DC voltage	1000V	1000V	1000V	1000V
Start Voltage	140V	140V	140V	140V
PV voltage range	140V-1000V	140V-1000V	140V-1000V	140V-1000V
Nominal voltage	620V	620V	620V	620V
MPP voltage range at Full Power	160V-800V	200V-800V	250V-800V	290V-800V
Max. input current	11A/11A	11A/11A	11A/11A	11A/11A
Number of independent MPP trackers/strings per MPP tracker	2/1	2/1	2/1	2/1
<b>Output (AC)</b>				
Rated AC output power	3000W	4000W	5000W	6000W
Max. AC apparent power	3000VA	4000VA	5000VA	6000VA
Max. output current	5.1A	6.8A	8.5A	10.2A
AC nominal voltage	230V/400V; 320-478V	230V/400V; 320-478V	230V/400V; 320-478V	230V/400V; 320-478V
AC grid frequency	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz
Power factor	0.8leading - 0.8lagging	0.8leading - 0.8lagging	0.8leading - 0.8lagging	0.8leading - 0.8lagging
THDI	<3%	<3%	<3%	<3%
AC grid connection type	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE
<b>Efficiency</b>				
Max. efficiency	97.5%	97.8%	98.0%	98.0%
Euro - eta	96.5%	96.7%	96.9%	97.1%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%
<b>Protection Devices</b>				
DC reverse polarity protection	yes	yes	yes	yes
DC switch	yes	yes	yes	yes
Output over current protection	yes	yes	yes	yes
Output AC overvoltage Protection - Varistor	yes	yes	yes	yes
Ground fault monitoring	yes	yes	yes	yes
Grid monitoring	yes	yes	yes	yes
Integrated all-pole sensitive leakage current monitoring unit	yes	yes	yes	yes
<b>General Data</b>				
Dimensions (W / H / D) in mm	480/448/200	480/448/200	480/448/200	480/448/200
Weight	21.2kg	21.2kg	21.2kg	21.2kg
Operating temperature range	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Noise emission (typical)	≤35 dB(A)	≤35 dB(A)	≤35 dB(A)	≤35 dB(A)
Altitude	3000m	3000m	3000m	3000m
Self-consumption night	< 0.5W	< 0.5W	< 0.5W	< 0.5W
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Cooling concept	Natural	Natural	Natural	Natural
Environmental Protection Rating	IP65	IP65	IP65	IP65
Relative humidity	0~100%	0~100%	0~100%	0~100%
<b>Features</b>				
DC connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Connector	Connector	Connector	Connector
Display	LCD	LCD	LCD	LCD
Interfaces:RS232/RS485/RF/Ethernet/Wi-Fi	yes/yes/opt/opt/opt	yes/yes/opt/opt/opt	yes/yes/opt/opt/opt	yes/yes/opt/opt/opt
Warranty:5 years/10 years	yes/opt	yes/opt	yes/opt	yes/opt

# Growatt 7000~11000 TL3-S



3 phase grid-tied inverter for residential or small commercial rooftop application. fanless design, compact and easy for installation.

- Max. Efficiency 98.4%
- Dual MPP trackers
- Supports export limitation
- Integrated DC switch
- Max.DC voltage 1000VDC
- Natural cooling

## GROWATT · PRODUCT

Datasheet	7000TL3-S	8000TL3-S	9000TL3-S	10000TL3-S	11000TL3-S
<b>Input Data</b>					
Max. recommended PV power (for module STC)	8400W	9600W	10800W	12000W	13200W
Max. DC voltage	1000V	1000V	1000V	1000V	1000V
Start Voltage	160V	160V	160V	160V	160V
PV voltage range	160V-1000V	160V-1000V	160V-1000V	160V-1000V	160V-1000V
Nominal voltage	600V	600V	600V	600V	600V
MPP voltage range at Full Power	320V-850V	360V-850V	400V-850V	450V-850V	450V-850V
Max. input current	11.5A/11.5A	11.5A/11.5A	11.5A/11.5A	13A/13A	13A/13A
Number of independent MPP trackers/strings per MPP tracker	2/1	2/1	2/1	2/1	2/1
<b>Output (AC)</b>					
Rated AC output power	7kW	8kW	9kW	10kW	11kW
Max. AC apparent power	7.7kVA	8.8kVA	9.9kVA	11kVA	12.1kVA
Max. output current	11.7A	13.3A	15A	16.7A	18.3A
AC nominal voltage	230V/400V; 320-478V	230V/400V; 320-478V	230V/400V; 320-478V	230V/400V; 320-478V	230V/400V; 320-478V
AC grid frequency	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz	50Hz/60Hz, ±5Hz
Power factor	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%
AC grid connection type	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE
<b>Efficiency</b>					
Max. efficiency	98.3%	98.3%	98.4%	98.4%	98.4%
Euro - eta	97.5%	97.8%	98%	98%	98%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%	99.5%
<b>Protection Devices</b>					
DC reverse polarity protection	yes	yes	yes	yes	yes
DC switch	yes	yes	yes	yes	yes
Output over current protection	yes	yes	yes	yes	yes
Output AC overvoltage Protection - Varistor	yes	yes	yes	yes	yes
Ground fault monitoring	yes	yes	yes	yes	yes
Grid monitoring	yes	yes	yes	yes	yes
Integrated all-pole sensitive leakage current monitoring unit	yes	yes	yes	yes	yes
<b>General Data</b>					
Dimensions (W / H / D) in mm	480/448/200	480/448/200	480/448/200	480/448/200	480/448/200
Weight	21.6kg	21.6kg	21.6kg	21.6kg	21.6kg
Operating temperature range	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Noise emission (typical)	≤35 dB(A)	≤35 dB(A)	≤35 dB(A)	≤35 dB(A)	≤35 dB(A)
Altitude	3000m	3000m	3000m	3000m	3000m
Self-consumption night	< 0.5W	< 0.5W	< 0.5W	< 0.5W	< 0.5W
Topology	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless
Cooling concept	Natural	Natural	Natural	Natural	Natural
Environmental Protection Rating	IP65	IP65	IP65	IP65	IP65
Relative humidity	0~100%	0~100%	0~100%	0~100%	0~100%
<b>Features</b>					
DC connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Screw terminal	Screw terminal	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD	LCD	LCD
Interfaces:RS232/RS485/RF/WI-FI	yes/yes/opt/opt	yes/yes/opt/opt	yes/yes/opt/opt	yes/yes/opt/opt	yes/yes/opt/opt
Warranty:5 years/10 years	yes/opt	yes/opt	yes/opt	yes/opt	yes/opt

CE, IEC 62109-1/2, VDE 0126-1-1, Greece, VFR 2014, VDE-AR-N4105, G83, EN50438, CEI 0-21, AS4777, IEC 61727, IEC 62116, CQC

# Growatt 12000~15000 TL3-S



3 phase grid-tied inverter for commercial rooftop application. fanless design, compact and easy for installation.

- Max. Efficiency 98.4%
- Dual MPP trackers
- Supports export limitation
- Integrated DC switch
- Max.DC voltage 1000VDC
- Natural cooling



## GROWATT · PRODUCT

Datasheet	12000TL3-S	13000TL3-S	15000TL3-S
<b>Input Data</b>			
Max. recommended PV power (for module STC)	14400W	15600W	18000W
Max. DC voltage	1000V	1000V	1000V
Start Voltage	160V	160V	160V
PV voltage range	160V-1000V	160V-1000V	160V-1000V
Nominal voltage	600V	600V	600V
MPP voltage range at Full Power	480V-850V	480V-850V	520V-850V
Max. input current	20A/10A	20A/10A	20A/10A
Number of independent MPP trackers/strings per MPP tracker	2/2+1	2/2+1	2/2+1
<b>Output (AC)</b>			
Rated AC output power	12kW	13kW	15kW
Max. AC apparent power	13.2kVA	14.3kVA	16.5kVA
Max. output current	19A	20.6A	23.8A
AC nominal voltage	230V/400V 184~275V; 320~478v	230V/400V 184~275V; 320~478v	230V/400V 184~275V; 320~478v
AC grid frequency	50/60Hz, ±5Hz	50/60Hz, ±5Hz	50/60Hz, ±5Hz
Power factor	0.8leading - 0.8lagging	0.8leading - 0.8lagging	0.8leading - 0.8lagging
THDI	<3%	<3%	<3%
AC grid connection type	3W+N+PE	3W+N+PE	3W+N+PE
<b>Efficiency</b>			
Max. efficiency	98.4%	98.4%	98.4%
Euro - eta	97.8%	98%	98%
MPPT efficiency	99.5%	99.5%	99.5%
<b>Protection Devices</b>			
DC reverse polarity protection	yes	yes	yes
DC switch	yes	yes	yes
Output over current protection	yes	yes	yes
Output AC overvoltage Protection - Varistor	yes	yes	yes
Ground fault monitoring	yes	yes	yes
Grid monitoring	yes	yes	yes
Integrated all-pole sensitive leakage current monitoring unit	yes	yes	yes
<b>General Data</b>			
Dimensions (W / H / D) in mm	480/448/200	480/448/200	480/448/200
Weight	23.5kg	23.5kg	23.5kg
Operating temperature range	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Noise emission (typical)	≤35 dB(A)	≤35 dB(A)	≤35 dB(A)
Self-Consumption (night)	<0.5W	<0.5W	<0.5W
Topology	Transformerless	Transformerless	Transformerless
Cooling concept	Natural	Natural	Natural
Environmental Protection Rating	IP65	IP65	IP65
Altitude	3000m	3000m	3000m
Relative Humidity	0~100%	0~100%	0~100%
<b>Features</b>			
DC connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Screw terminal	Screw terminal	Screw terminal
Display	LCD	LCD	LCD
Interfaces:RS232/RS485/RF/Ethernet/Wi-Fi	yes/yes/opt/opt/opt	yes/yes/opt/opt/opt	yes/yes/opt/opt/opt
Warranty:5 years/10 years	yes/opt	yes/opt	yes/opt

# Growatt 17000~25000 TL3-S



3 phase grid-tied inverter for commercial rooftop or ground mounted application. Integrated wire box for comprehensive protections.

- Max. Efficiency 98.7%
- Dual MPP trackers
- Supports export limitation
- Integrated DC switch
- String fuse and string monitoring
- PID-recovery function
- Natural cooling
- Type II DC and AC SPDs

## GROWATT · PRODUCT

Datasheet	17000TL3-S	20000TL3-S	25000TL3-S
<b>Input Data</b>			
Max. recommended PV power (for module STC)	21250W	25000W	31250W
Max. DC voltage	1000V	1000V	1000V
Start Voltage	250V	250V	250V
PV voltage range	200V - 1000V	200V - 1000V	200V - 1000V
Nominal voltage	580V	580V	580V
Full load MPP voltage range	400V - 800V	400V - 800V	400V - 800V
Max. input current	37.5A/37.5A	37.5A/37.5A	37.5A/37.5A
Max. input current per string	12.5A	12.5A	12.5A
Number of independent MPP trackers/strings per MPP tracker	2/3	2/3	2/3
<b>Output (AC)</b>			
Rated AC output power	17000W	20000W	25000W
Max. AC apparent power	18800VA	22200VA	27700VA
Max. output current	27.5A	32.2A	40.3A
AC nominal voltage	230V/400V	230V/400V	230V/400V
AC grid frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Power factor	0.8 leading - 0.8 lagging	0.8 leading - 0.8 lagging	0.8 leading - 0.8 lagging
THDI	<3%	<3%	<3%
AC grid connection type	3W+N+PE	3W+N+PE	3W+N+PE
<b>Efficiency</b>			
Max. efficiency	98.7%	98.7%	98.7%
Euro - eta	98.4%	98.4%	98.4%
MPPT efficiency	99.5%	99.5%	99.5%
<b>Protection Devices</b>			
DC reverse polarity protection	yes	yes	yes
DC Switch	yes	yes	yes
DC Surge protection	TypeII	TypeII	TypeII
Ground fault monitoring	yes	yes	yes
Output short circuit protection	yes	yes	yes
AC Surge protection	TypeII	TypeII	TypeII
String Fuse protection	yes	yes	yes
String fault monitoring	yes	yes	yes
Anti-PID protection	yes	yes	yes
<b>General Data</b>			
Dimensions (W / H / D) in mm	470/754/270	470/754/270	470/754/270
Weight	48kg	48kg	48kg
Operating temperature range	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Noise emission (typical)	≤40 dB(A)	≤40 dB(A)	≤40 dB(A)
Self-Consumption (night)	<1W	<1W	<1W
Topology	Transformerless	Transformerless	Transformerless
Cooling concept	Smart cooling	Smart cooling	Smart cooling
Environmental Protection Rating	IP65	IP65	IP65
Altitude	4000m	4000m	4000m
Relative Humidity	0~100%	0~100%	0~100%
<b>Features</b>			
Display	LED+ LCD	LED+ LCD	LED+ LCD
Interfaces: RS232/R485/WIFI	yes / yes / opt	yes / yes / opt	yes / yes / opt
Warranty:5 years / 10 years	yes / opt	yes / opt	yes / opt

CE, VDE 0126-1-1, VDE-AR-N4105, G59, CEI 0-21, CEI 0-16, VFR 2014, EN50438, IEC 62116, IEC 61727, IEC 61683, IEC 60068



# Growatt 30000~50000 TL3-S



3 phase grid-tied inverter for commercial rooftop or ground mounted application. Integrated wire box for comprehensive protections.

- Max. Efficiency 99%
- Dual MPP trackers
- Supports export limitation
- Integrated DC switch
- String fuse and string monitoring
- PID-recovery function
- Natural cooling
- Type II DC and AC SPDs

## GROWATT · PRODUCT

Datasheet	30000TL3-S	33000TL3-S	40000TL3-NS	50000TL3-S
<b>Input Data</b>				
Max recommended PV Power (for module STC)	37500W	41250W	50000W	60000W
Max DC voltage	1000V	1000V	1000V	1000V
Start Voltage	250V	250V	250V	250V
PV voltage range	200V - 1000V	200V - 1000V	200V - 1000V	200V - 1000V
Nominal voltage	580V	580V	580V	695V
Full load MPP voltage range	450V - 800V	450V - 800V	540V - 800V	645V - 850V
Max. input current	34A/34A	38A / 38A	38A / 38A	38A / 38A
Max. input current per string	12A	12A	12A	12A
Number of MPP trackers / strings per MPP tracker	2/4	2/4	2/4	2/4
<b>Output (AC)</b>				
Rated AC output power	30kW	33kW	40kW	48kW
Max. AC apparent power	33.3kVA	36.6kVA	44.4kVA	53.3kVA
Max. output current	48.3A	53A	64.5A	64.5A
AC nominal voltage	230V/400V	230V/400V	230V/400V	277V/480V
AC grid frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Power factor	0.8 leading - 0.8 lagging	0.8 leading - 0.8 lagging	0.8 leading - 0.8 lagging	0.8 leading - 0.8 lagging
THDI	<3%	<3%	<3%	<3%
AC grid connection type	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE/3W+PE
<b>Efficiency</b>				
Max. efficiency	98.9%	98.9%	99%	99%
Euro - eta	98.4%	98.4%	98.5%	98.5%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%
<b>Protection Devices</b>				
DC reverse polarity protection	yes	yes	yes	yes
DC Switch	yes	yes	yes	yes
DC Surge protection	Type II	Type II	Type II	Type II
Ground fault monitoring	yes	yes	yes	yes
Output short circuit protection	yes	yes	yes	yes
AC Surge protection	Type II	Type II	Type II	Type II
String Fuse protection	yes	yes	yes	yes
String fault monitoring	yes	yes	yes	yes
Anti-PID protection	yes	yes	yes	yes
<b>General Data</b>				
Dimensions (W / H / D) in mm	470/754/270	470/754/270	470/754/270	470/754/270
Weight	48kg	48kg	48kg	48kg
Operating temperature range	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Noise emission (typical)	≤40 dB(A)	≤40 dB(A)	≤40 dB(A)	≤40 dB(A)
Altitude	4000m	4000m	4000m	4000m
Self-consumption night	< 1W	< 1W	< 1W	< 1W
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Cooling concept	Smart cooling	Smart cooling	Smart cooling	Smart cooling
Environmental Protection Rating	IP65	IP65	IP65	IP65
Relative humidity	0~100%	0~100%	0~100%	0~100%
<b>Features</b>				
Display	Graphic LCD	Graphic LCD	Graphic LCD	Graphic LCD
Interfaces: RS232/R485/WiFi/LAN/GPRS	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Warranty: 5 years / 10 years	yes / opt	yes / opt	yes / opt	yes / opt

CE, IEC 62109-1/2, IEC 61727, IEC 62116, VDE 0126-1-1, Greece, VFR 2014, CEI 0-21, CEI 0-16, VDE-AR-N4105, EN50438, G59/3, AS 4777, PEA, IEC 60529, IEC 60068, IEC 61683, DRRG

# MAX

## 50~80KTL3 LV



Suitable for both large scale commercial rooftop and ground mounted solar plants, Growatt Max series grid-tied inverter is with upto 80kW big capacity. First quad-core inverter in the industry, provides it fast processing capability to handle transient grid fault. with optimized design, it also brings 98.67% high weighted China efficiency, 0.3% higher than industry level, along with extraordinary 6 MPPT trackers, ensures high yield of system.

- 6 MPPTs
- Smart diagnosis
- High efficiency up to 99%
- Local WIFI connection
- String monitoring
- AC&DC type II SPD

### GROWATT · PRODUCT

Datasheet	MAX 50KTL3 LV	MAX 60KTL3 LV	MAX 70KTL3 LV	MAX 80KTL3 LV
<b>Input Data</b>				
Max.DC power	65000W	78000W	91000W	104000W
Max.DC voltage	1100V	1100V	1100V	1100V
Start Voltage	250V	250V	250V	250V
PV voltage range	200V-1000V	200V-1000V	200V-1000V	200V-1000V
Nominal voltage	585V	585V	600V	685V
Full load DC voltage range	500V-850V	520V-850V	600V-850V	685V-850V
Max. input current per MPPT	25A	25A	25A	25A
Number of MPP trackers / strings per MPP tracker	6/2	6/2	6/2	6/2
<b>Output (AC)</b>				
Rated AC output power	50000W	60000W	70000W	80000W
Max. AC apparent power	55500VA	66600VA	77700VA	88800VA
Max. output current	80.5A	96.6A	112.7A	128.8A
AC nominal voltage	230V/400V	230V/400V	230V/400V	230V/400V
AC grid frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Power factor	0.8leading ...0.8lagging	0.8leading ...0.8lagging	0.8leading ...0.8lagging	0.8leading ...0.8lagging
THDI	<3%	<3%	<3%	<3%
AC grid connection type	3W+N+PE	3W+N+PE	3W+N+PE	3W+N+PE
<b>Efficiency</b>				
Max. efficiency	98.8%	98.8%	99%	98.8%
Euro - eta	98.3%	98.3%	98.4%	98.3%
MPPT efficiency	99.9%	99.9%	99.9%	99.9%
<b>Protection Devices</b>				
DC reverse polarity protection	yes	yes	yes	yes
DC Switch	yes	yes	yes	yes
DC Surge protection	Type II	Type II	Type II	Type II
Ground fault monitoring	yes	yes	yes	yes
Output short circuit protection	yes	yes	yes	yes
AC Surge protection	Type II	Type II	Type II	Type II
String fault monitoring	yes	yes	yes	yes
Anti-PID protection	opt	opt	opt	opt
AFCI protection	opt	opt	opt	opt
<b>General Data</b>				
Dimensions (W / H / D) in mm	860/600/300	860/600/300	860/600/300	860/600/300
Weight	82kg	82kg	82kg	82kg
Operating temperature range	-25°C ... +60°C	-25°C ... +60°C	-25°C ... +60°C	-25°C ... +60°C
Noise emission (typical)	≤55dB(A)	≤55dB(A)	≤55dB(A)	≤55dB(A)
Self-Consumption	< 1W*	< 1W*	< 1W*	< 1W*
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Cooling concept	Smart cooling	Smart cooling	Smart cooling	Smart cooling
Environmental Protection Rating	IP65	IP65	IP65	IP65
Altitude	4000m	4000m	4000m	4000m
Relative Humidity	0-100%	0-100%	0-100%	0-100%
<b>Features</b>				
Display	LED/WIFI+APP	LED/WIFI+APP	LED/WIFI+APP	LED/WIFI+APP
Interfaces:USB/R485/GPRS	yes / yes / opt	yes / yes / opt	yes / yes / opt	yes / yes / opt
Warranty:5 years / 10 years	yes / opt	yes / opt	yes / opt	yes / opt

CQC, CE, VDE 0126-1-1, UTE C 15-712, VDE-AR-N4105, EN50438, DRRG, CEI 0-16, BDEW, IEC 62116, IEC61727, IEC 60068, IEC 61683, AS 4777

# Growatt SPH 3000~6000



Single phase all-in-one hybrid inverter ideal for home systems. stunning IP65 protection level, more durable and flexible for installation; multiple programmable working modes, decide by yourself how to realize self-sufficiency and make the max out of your system; the EPS output can even provide backup supply during grid absence; comprehensive accessories including battery, meter and datalogger optional for different application scenarios.

- Dual MPP trackers
- IP65 & Natural cooling
- Programmable working modes
- Supports Export Control
- Online Smart Service

## GROWATT · PRODUCT

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	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
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/RF/Wi-Fi	yes/yes /opt/opt	yes/yes /opt/opt	yes/yes /opt/opt	yes/yes /opt/opt	yes/yes /opt/opt	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

# Growatt SPA 1000~3000TL BL



With Growatt SPA series AC-coupled battery inverter, it's quite easy to update any existing solar system to storage system at lower cost, together with Growatt ShineServer Portal, check your system's performance and energy consumption at any time.

- IP65 & Natural cooling
- Supporting Single&Three Phase system
- Workmodes programmable
- Online Smart Service

## GROWATT · PRODUCT

Datasheet	SPA1000TL BL	SPA2000TL BL	SPA3000TL BL
<b>AC connection</b>			
Rated AC apparent power	1000VA	2000VA	3000VA
Max. AC current	6A	10A	16A
AC nominal voltage (range)	230V (180V-270V)	230V (180V-270V)	230V (180V-270V)
AC grid frequency (range)	50Hz / 60Hz (±5Hz)	50Hz / 60Hz (±5Hz)	50Hz / 60Hz (±5Hz)
Power factor, configurable	1, 0.8leading...0.8lagging	1, 0.8leading...0.8lagging	1, 0.8leading...0.8lagging
THDi	<3%	<3%	<3%
AC connection	Single phase	Single phase	Single phase
<b>AC output power (Back-up)</b>			
Rated AC output apparent power	1000VA	2000VA	3000VA
Rated AC output voltage	230V	230V	230V
Rated AC output frequency	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz
<b>Battery data</b>			
Battery voltage range	42~59V	42~59V	42~59V
Max charging voltage	58V	58V	58V
Max charging and discharging current	24A	44A	66A
Peak charging and discharging power	1000W	2000W	3000W
Battery Type	Lithium /Lead-acid	Lithium /Lead-acid	Lithium /Lead-acid
DoD	80% /50%	80% /50%	80% /50%
Capacity of battery	2~12 kWh	2~12 kWh	2~12 kWh
<b>Efficiency</b>			
Max. Charge efficiency	92.5%	94.0%	94.5%
Max. Discharge efficiency	92.0%	93.5%	94.0%
<b>Protection devices</b>			
Battery reverse protection	yes	yes	yes
Output over current protection	yes	yes	yes
Output over voltage protection-varistor	yes	yes	yes
Ground fault monitoring	yes	yes	yes
Grid monitoring	yes	yes	yes
Integrated all - pole sensitive leakage current monitoring unit	yes	yes	yes
<b>General Data</b>			
Dimensions (W / H / D) in mm	428/458/180	428/458/180	428/458/180
Weight	17kg	17kg	17kg
Operating temperature range	- 25°C ... +60°C	- 25°C ... +60°C	- 25°C ... +60°C
Noise emission (typical)	≤ 25 dB(A)	≤ 25 dB(A)	≤ 25 dB(A)
Altitude	2000m	2000m	2000m
Self-Consumption	<4W	<4W	<4W
Inverter Topology	transformerless	transformerless	transformerless
DC/DC topology	HF transformer	HF transformer	HF transformer
Cooling concept	Natural	Natural	Natural
Environmental Protection Rating	IP65	IP65	IP65
Relative humidity	100%	100%	100%
<b>Features</b>			
AC connection	connector	connector	connector
Battery connection	Screw	Screw	Screw
Display	LCD	LCD	LCD
Interfaces: RS485/ USB /CAN/Wi-Fi/RF	yes/yes/yes/opt/opt	yes/yes/yes/opt/opt	yes/yes/yes/opt/opt
Warranty:5 years/10 years	yes/opt	yes/opt	yes/opt

CE, IEC62109, G83, VDE0126-1-1, VDE-AR-N4105, CEI 0-21, IEC62116&IEC61727, EN50438, AS4777, AS/NZS 3100

# Growatt SPH 4000~10000 TL3 BH



Three phase all-in-one hybrid inverter ideal for home and small commercial systems. its battery ready design can help reduce initial system investment; stunning IP65 protection level, more durable and flexible for installation; multiple programmable working modes, decide by yourself how to realize self-sufficiency and make the max out of your system; the EPS output can even provide backup supply during grid absence; comprehensive accessories including battery, meter and datalogger optional for different application scenarios.

- IP65 & Natural cooling
- 3-Phase and Battery Ready
- Programmable working modes
- Compatible with high-voltage battery
- Online Smart Service

# NEW



## GROWATT · PRODUCT

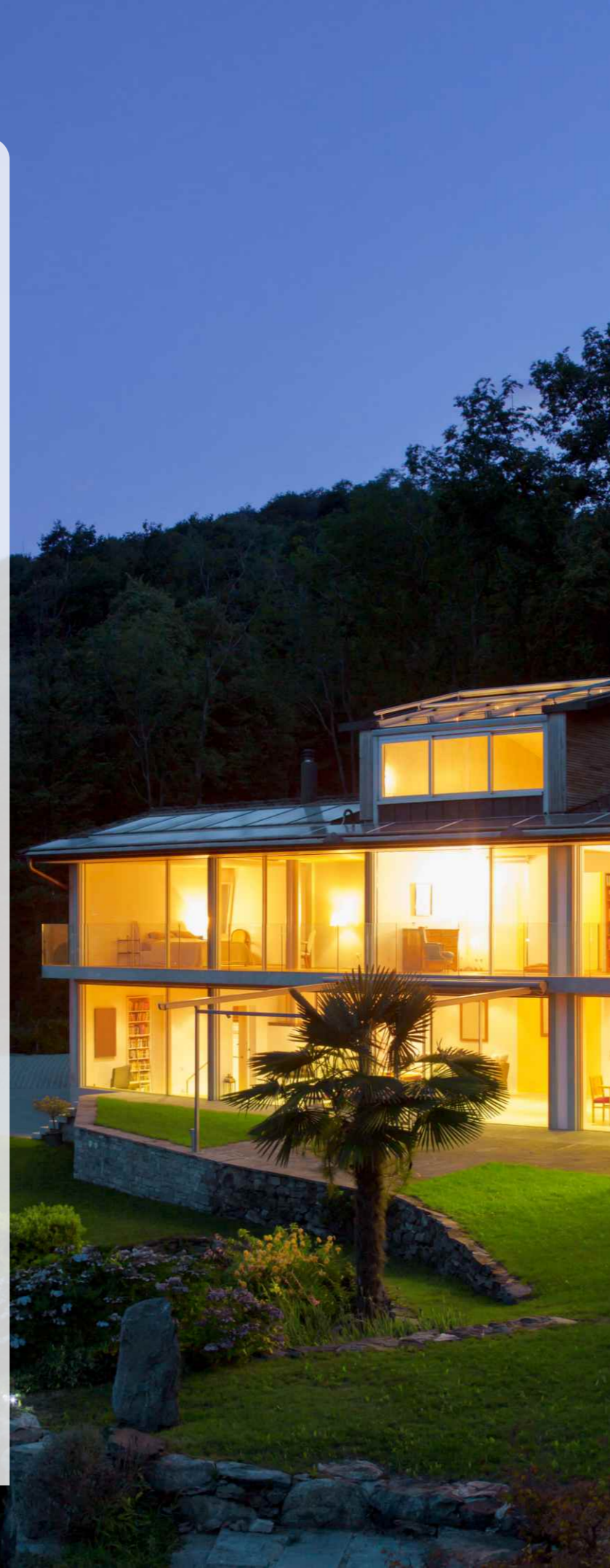
Datasheet	SPH4000TL3 BH	SPH5000TL3 BH	SPH6000TL3 BH	SPH7000TL3 BH	SPH8000TL3 BH	SPH10000TL3 BH
<b>DC input data</b>						
Max. recommended PV power (for module STC)	5200W	6500W	7800W	9100W	10400W	13000W
Max. DC voltage	1000V	1000V	1000V	1000V	1000V	1000V
Start Voltage	160V	160V	160V	160V	160V	160V
MPP voltage range / normal voltage	160V-1000V / 600V	160V-1000V / 600V	160V-1000V / 600V	160V-1000V / 600V	160V-1000V / 600V	160V-1000V / 60V
MPP voltage range at full power	200-850V	250-850V	300-850V	350-850V	400-850V	500-850V
Max. input current per string	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 data (On-grid)</b>						
Rated AC output power	4000W	5000W	6000W	7000W	8000W	10000W
Max. AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Max. output current	6A	7.5A	9A	11A	12A	15A
AC nominal voltage	230V/400V	230V/400V	230V/400V	230V/400V	230V/400V	230V/400V
AC grid frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
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%
AC grid connection type	3/N/PE	3/N/PE	3/N/PE	3/N/PE	3/N/PE	3/N/PE
<b>AC output data (Backup)</b>						
Max. AC output power	4000W	5000W	6000W	6000W	6000W	6000W
Rated AC output voltage	230V/400V	230V/400V	230V/400V	230V/400V	230V/400V	230V/400V
Rated AC output frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
THDv	<3%	<3%	<3%	<3%	<3%	<3%
Switch time	0.5S	0.5S	0.5S	0.5S	0.5S	0.5S
<b>Battery data</b>						
Battery voltage range	160~550V	160~550V	160~550V	160~550V	160~550V	160~550V
Max charging voltage	550V	550V	550V	550V	550V	550V
Recommended battery voltage	200V	250V	300V	350V	400V	500V
Max charging and discharging current	20A	20A	20A	20A	20A	20A
Max charging and discharging power	4000W	5000W	6000W	7000W	8000W	10000W
Type of battery	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	5~50kWh	5~50kWh	5~50kWh	5~50kWh	5~50kWh	5~50kWh
<b>Efficiency</b>						
Max. efficiency	97.6%	97.8%	98.0%	98.2%	98.2%	98.2%
Euro European efficiency	97.0%	97.2%	97.3%	97.4%	97.4%	97.5%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%	99.5%	99.5%
Battery charge/discharge efficiency	94.0%	94.0%	96.2%	96.2%	97.4%	97.4%
<b>Protection devices</b>						
DC switch	yes	yes	yes	yes	yes	yes
DC reverse polarity protection	yes	yes	yes	yes	yes	yes
PV overvoltage protection	Type II	Type II	Type II	Type II	Type II	Type II
Battery reverse protection	yes	yes	yes	yes	yes	yes
Output over current protection	yes	yes	yes	yes	yes	yes
Output AC overvoltage Protection-Varistor	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 current monitoring unit	yes	yes	yes	yes	yes	yes
<b>General data</b>						
Dimensions (W / H / D) in mm	423/505/198	423/505/198	423/505/198	423/505/198	423/505/198	423/505/198
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)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)
Altitude	3000m	3000m	3000m	3000m	3000m	3000m
Self-consumption night	<7W	<7W	<7W	<7W	<7W	<7W
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	0...100%	0...100%	0...100%	0...100%	0...100%	0...100%
<b>Features</b>						
Display	LCD	LCD	LCD	LCD	LCD	LCD
Interfaces:RS232 / Rs485 / CAN / USB / Wi-Fi / RF	yes / yes / yes / yes / opt / opt	yes / yes / yes / yes / opt / opt	yes / yes / yes / yes / opt / opt	yes / yes / yes / yes / opt / opt	yes / yes / yes / yes / opt / opt	yes / yes / yes / yes / opt / opt
Warranty: 5 years /10 years	yes / opt	yes / opt	yes / opt	yes / opt	yes / opt	yes / opt

# Growatt SPA 4000~10000 TL3 BH



Growatt three-phase & battery add-on AC-coupled solution for updating existing solar grid-tied system, compatible with high voltage batteries, maximize your solar system self-consumption and reduce your electricity bill.

- IP65 & Natural cooling
- Supports retrofit & New system
- Compatible with 1 & 3 phase system
- Workmodes programmable
- Online Smart Service



## GROWATT · PRODUCT

Datasheet	SPA4000TL3 BH	SPA5000TL3 BH	SPA6000TL3 BH	SPA7000TL3 BH	SPA8000TL3 BH	SPA10000TL3 BH
<b>AC Connection</b>						
Rated AC power	4000W	5000W	6000W	7000W	8000W	10000W
Max AC apparent power	4000VA	5000VA	6000VA	7000VA	8000VA	10000VA
Max. current	6A	7.5A	9A	11A	12A	15A
AC nominal voltage	230V / 400V	230V / 400V	230V / 400V	230V / 400V	230V / 400V	230V / 400V
AC grid frequency	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz
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%
AC grid connection type	3/N/PE	3/N/PE	3/N/PE	3/N/PE	3/N/PE	3/N/PE
<b>AC output data (Backup)</b>						
Max. AC output power	4000W	5000W	6000W	6000W	6000W	6000W
Rated AC output voltage	230V / 400V	230V / 400V	230V / 400V	230V / 400V	230V / 400V	230V / 400V
Rated AC output frequency	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz	50Hz / 60Hz
THDv	<3%	<3%	<3%	<3%	<3%	<3%
Switch time	0.5S	0.5S	0.5S	0.5S	0.5S	0.5S
<b>Battery data</b>						
Battery voltage range	160~550V	160~550V	160~550V	160~550V	160~550V	160~550V
Max charging voltage	550V	550V	550V	550V	550V	550V
Recommended battery voltage	200V	250V	300V	350V	400V	500V
Max charging and discharging current	20A	20A	20A	20A	20A	20A
Max charging and discharging power	4000W	5000W	6000W	7000W	8000W	10000W
Type of battery	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	5~50kWh	5~50kWh	5~50kWh	5~50kWh	5~50kWh	5~50kWh
<b>Efficiency</b>						
Battery charge/discharge efficiency	94.0%	94.0%	96.2%	96.2%	97.4%	97.4%
<b>Protection devices</b>						
BAT reverse protection	yes	yes	yes	yes	yes	yes
Output over current protection	yes	yes	yes	yes	yes	yes
Output AC overvoltage Protection - Varistor	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 current monitoring unit	yes	yes	yes	yes	yes	yes
<b>General data</b>						
Dimensions (W / H / D) in mm	423/505/198	423/505/198	423/505/198	423/505/198	423/505/198	423/505/198
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)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)	≤ 35 dB(A)
Altitude	3000m	3000m	3000m	3000m	3000m	3000m
Self-Consumption	<7 W	<7 W	<7 W	<7 W	<7 W	<7 W
Inverter 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>						
AC connection	Connector	Connector	Connector	Connector	Connector	Connector
Battery connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
Display	LCD	LCD	LCD	LCD	LCD	LCD
Interfaces: RS232 / RS485 / CAN / USB / Wi-Fi / RF	yes /yes /yes / yes / opt / opt	yes /yes /yes / yes / opt / opt	yes /yes /yes / yes / opt / opt	yes /yes /yes / yes / opt / opt	yes /yes /yes / yes / opt / opt	yes /yes /yes / yes / opt / opt
Warranty:5 years/10 years	yes/opt	yes/opt	yes/opt	yes/opt	yes/opt	yes/opt

# Growatt SPF 2000~5000TL HVM



Growatt SPF series off grid solar inverter is integrated with a MPPT solar charge controller, a high frequency pure sine wave inverter and a UPS function module in one machine, which is perfect for off grid backup power and self-consumption applications. The transformerless design provides reliable power conversion in compact size. Besides, it's worry-free to start up motor-type loads such as motors, water pumps, and compressors as well as the common home device. Growatt SPF 4KW/5KW can be wired in parallel to increase the output capacity

- Integrated MPPT charge controller
- Configurable grid or solar input priority
- Optional WIFI/ GPRS remote monitoring
- Parallel for scalability

## GROWATT · PRODUCT

Datasheet	SPF 2000TL HVM	SPF 3000TL HVM	SPF 3000TL HVM-48	SPF 4000TL HVM	SPF 5000TL HVM
Battery voltage	24VDC	24VDC	48VDC	48VDC	48VDC
<b>INVERTER OUTPUT</b>					
RATED POWER	2000VA/ 2000W	3000VA/ 3000W	3000VA/ 3000W	4000VA/ 4000W	5000VA/ 5000W
Parallel Capability	No	No	No	Yes, 6 units	Yes, 6 units
AC Voltage Regulation (Battery Mode)	230VAC ± 5% @ 50/60Hz	230VAC ± 5% @ 50/60Hz	230VAC ± 5% @ 50/60Hz	230VAC ± 5% @ 50/60Hz	230VAC ± 5% @ 50/60Hz
Surge Power	4000VA	6000VA	6000VA	8000VA	10000VA
Efficiency (Peak)	93%	90%	93%	93%	90%
Waveform	Pure sine wave	Pure sine wave	Pure sine wave	Pure sine wave	Pure sine wave
Transfer Time	10 ms (For Personal Computers); 20 ms (For Home Appliances)				
<b>SOLAR CHARGER</b>					
Maximum PV Array Power	1000W	1000W	2400W	4500W	4500W
MPPT Range @ Operating Voltage	30VDC ~ 80VDC	30VDC ~ 80VDC	60VDC ~ 115VDC	60VDC ~ 115VDC	60VDC ~ 115VDC
Maximum PV Array Open Circuit Voltage	100VDC	100VDC	145VDC	145VDC	145VDC
Maximum Solar Charge Current	40A	40A	40A	80A	80A
Maximum Efficiency	97%	97%	97%	97%	97%
Standby Power Consumption	2 W	2 W	2 W	2 W	2 W
<b>AC CHARGER</b>					
Charge Current	30A	30A	15A	60A	60A
AC Input Voltage	230 VAC	230 VAC	230 VAC	230 VAC	230 VAC
Selectable Voltage Range	170-280 VAC (For Personal Computers) ; 90-280 VAC (For Home Appliances)				
Frequency Range	50Hz/60Hz (Auto sensing)	50Hz/60Hz (Auto sensing)	50Hz/60Hz (Auto sensing)	50Hz/60Hz (Auto sensing)	50Hz/60Hz (Auto sensing)
<b>PHYSICAL</b>					
Dimension (D/W/H) in mm	120/315/390	120/315/390	120/315/390	130/350/455	130/350/455
Net Weight (kgs)	7	8	8	14.5	14.5
<b>OPERATING ENVIRONMENT</b>					
Humidity	5% to 95% Relative Humidity(Non-condensing)	5% to 95% Relative Humidity(Non-condensing)	5% to 95% Relative Humidity(Non-condensing)	5% to 95% Relative Humidity(Non-condensing)	5% to 95% Relative Humidity(Non-condensing)
Operating Temperature	0°C - 55°C	0°C - 55°C	0°C - 55°C	0°C - 55°C	0°C - 55°C
Storage Temperature	-15°C - 60°C	-15°C - 60°C	-15°C - 60°C	-15°C - 60°C	-15°C - 60°C

# Growatt HPS 30~150



Hybrid inverter from 30kW to 150kW for small and middle capacity commercial application. all-in-one solution supporting solar, load, DG, grid and battery connection.

- Programmable working modes
- Comprehensive protections
- Touch screen LCD
- Seamless transfer on/off grid
- Compatible with high-voltage battery
- Parallel for scalability

## GROWATT · PRODUCT

Datasheet	HPS 30	HPS 50	HPS 100	HPS 120	HPS 150
<b>AC(Grid-connected)</b>					
Apparent power	33kVA	55kVA	110kVA	150kVA	165kVA
Rated power	30kW	50kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
Voltage range	360V - 440V	360V - 440V	360V - 440V	360V - 440V	360V - 440V
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Frequency range	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz	45~55/55~65Hz
THDI	<3%	<3%	<3%	<3%	<3%
PF	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading	0.8lagging~0.8leading
AC connection	3/N/PE	3/N/PE	3/N/PE	3/N/PE	3/N/PE
Transformer	yes	yes	yes	yes	yes
<b>AC(Off-grid)</b>					
Rated power	33kVA	55kVA	110kVA	132kVA	165kVA
Rated power	30kW	48kW	100kW	120kW	150kW
Rated voltage	400V	400V	400V	400V	400V
Rated current	43A	72A	144A	173A	217A
THDU	≤2%linear	≤2%linear	≤2%linear	≤2%linear	≤2%linear
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Overload capability	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min
<b>DC(battery and PV)</b>					
Max PV Open-circuit voltage	1000 VDC	1000 VDC	1000 VDC	1000 VDC	1000 VDC
Recommended PV power	30kWp	50kWp	100kWp	120kWp	150kWp
PV MPPT voltage range	480VDC-800VDC	480VDC-800VDC	480VDC-800VDC	480VDC-800VDC	480VDC-800VDC
Nominal battery voltage	420V	420V	420V	420V	420V
Battery voltage	352-600V*	352-600V*	352-600V*	352-600V*	352-600V*
Max charging power	30kW	50kW	100kW	120kW	150kW
Max charging current	85A	142A	285A	340A	425A
<b>General Data</b>					
Dimension (W/D/H) in mm	950/750/1860	950/750/1860	1200/800/1900	1200/800/1900	1400/800/1900
Weight	440kg	620kg	900kg	1024kg	1250kg
Environmental temperature	-25 °C ... +55 °C	-25 °C ... +55 °C	-25 °C ... +55 °C	-25 °C ... +55 °C	-25 °C ... +55 °C
Relative humidity	0 ~95%	0 ~95%	0 ~95%	0 ~95%	0 ~95%
Protection degree	IP20	IP20	IP20	IP20	IP20
Noise emission	6000m	6000m	6000m	6000m	6000m
Standby consumption	<30W	<30W	<30W	<30W	<30W
Cooling	Forced-air	Forced-air	Forced-air	Forced-air	Forced-air
<b>Communication</b>					
Display	Touch screen	Touch screen	Touch screen	Touch screen	Touch screen
Communication interface	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN

\* Battery voltage is determined by the following equation:  
 $V_{min} = 352 \times V_n / V1$ ,  $V_{max} = (V_{mpp} - 100) \times V_n / V2$ ,  $V_{max} < 600VDC$   
 V1 is battery cell discharge cut-off voltage, V2 is battery cell boost charge voltage, Vn is battery cell nominal voltage.



# Growatt PCS 50~630



Bidirectional battery inverter suitable for off-grid, hybrid or on-grid application. supporting MW level system by paralleling multiple units.

- Programmable working modes
- Comprehensive protections
- Touch screen LCD
- Seamless transfer on/off grid(optional)
- Compatible with high-voltage battery
- Parallel for scalability

## GROWATT · PRODUCT

Datasheet	PCS50	PCS100	PCS250	PCS500	PCS630
<b>AC(Grid-connected)</b>					
Apparent power	55kVA	110kVA	275kVA	550kVA	693kVA
Rated power	50KW	100KW	250KW	500KW	630KW
Rated voltage	400V	400V	400V	400V	400V
Rated current	72A	144A	361A	722A	909A
Voltage range	310V-450V	310V-450V	310V-450V	310V-450V	310V-450V
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Frequency range	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz	45-55/55-65Hz
THDI	<3%	<3%	<3%	<3%	<3%
PF	0.8lagging-0.8leading	0.8lagging-0.8leading	0.8lagging-0.8leading	0.8lagging-0.8leading	0.8lagging-0.8leading
AC connection	3/N/PE	3/N/PE	3/N/PE	3/PE	3/PE
Transformer	Yes	Yes	Yes	NO	NO
<b>AC(Off-grid)</b>					
Rated voltage	400V	400V	400V	400V	400V
THDU	≤2%linear	≤2%linear	≤2%linear	≤2%linear	≤2%linear
Rated frequency	50/60Hz	50/60Hz	50/60Hz	50/60Hz	50/60Hz
Overload capability	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min	110%-10 mins 120%-1 min
<b>DC(Battery)</b>					
Rated power	50kW	100kW	250kW	500kW	630kW
Current regulation	±1%	±1%	±1%	±1%	±1%
Voltage regulation	±1%	±1%	±1%	±1%	±1%
Voltage ripple	<3%	<3%	<3%	<3%	<3%
Current ripple	<2%	<2%	<2%	<2%	<2%
Rated voltage	600VDC	600VDC	600VDC	650VDC	650VDC
Voltage range	450V-820V	450V-820V	450V-820V	600V-820V	600V-820V
Rated current	84A	167A	417A	769A	969A
<b>General Information</b>					
Maximum efficiency	95.50%	97.10%	97.30%	98.50%	98.50%
Protection degree	IP20	IP20	IP20	IP20	IP20
Noise emission	65dB(A)@1m	65dB(A)@1m	65dB(A)@1m	65dB(A)@1m	65dB(A)@1m
Environmental temperature	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C	-25°C to +55°C
Cooling	Forced air	Forced air	Forced air	Forced air	Forced air
Relative humidity	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing	0-95% non-condensing
Maximum altitude	5000m (derated above 3000m)	5000m (derated above 3000m)	5000m (derated above 3000m)	5000m (derated above 3000m)	5000m (derated above 3000m)
Dimension(W/D/H)	600/800/1630mm	1100/850/1890mm	1600/850/2080mm	1200/800/1900	1200/800/1900
Weight	450kg	820kg	1465kg	900Kg	900Kg
Transformer	Yes	Yes	Yes	NO	NO
On/Off grid transfer	Manual(default) Automatic(optional) ≤20ms	Manual(default) Automatic(optional) ≤20ms	Manual(default) Automatic(optional) ≤20ms	Manual(default) Automatic(optional) ≤20ms	Manual(default) Automatic(optional) ≤20ms
<b>Communication</b>					
Display	Touch screen	Touch screen	Touch screen	Touch screen	Touch screen
Communication interface	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN	RS485/CAN

# Growatt ShineWiFi-S



Wireless monitoring datalogger with more flexible installation, suitable for applications where cable routing is not convenient and WIFI is available.

- Cable free, easy installation
- 50 meters long range, wide coverage
- Build-in storage, 1 month data
- Online monitoring and maintenance



## GROWATT · PRODUCT

Datasheet	ShineWiFi-S
<b>Wireless Parameters</b>	
Wireless standard	802.11 b/g/n
Frequency range	2412M ~ 2472M
Transmit power	802.11b: 16±2 dBm (@11Mbps) 802.11g: 14±2 dBm (@54Mbps) 802.11n: 13±2 dBm (@HT20, MCS7)
Receiver sensitivity	CCK, 1 Mbps: -90dBm CCK, 11 Mbps: -85dBm 6 Mbps (1/2 BPSK): -88dBm 54 Mbps (3/4 64-QAM): -70dBm HT20, MCS7 (65 Mbps, 72.2 Mbps): -67dBm
<b>Hardware Parameters</b>	
Data interface	RS232(Modbus RTU protocol)
Operating voltage	9V(+/-15%)
Operating current	100mA
<b>Application on Parameters</b>	
Supported servers	ShineServer
Inverter communication	RS232(Modbus RTU protocol)
Server communication	TCP(Modbus TCP protocol)
Support network	2.4G WIFI
Max. communication range	50m
Max. power consumption@transmit	1.2W
Configure type	APP configure
Data transfer interval	5 Minutes
Default server URL	server.growatt.com
<b>General Data</b>	
Dimensions(Length/Width/Height)	135/79/29 mm
Weight	60g
Manual language	English, Chinese
Operating temperature	-40°C ~ +85°C
Warranty	1 years
CE	

# Growatt ShineLink



Wireless monitoring datalogger with more flexible installation, suitable for applications where cable routing is not convenient, configuration free design.

- Cable free, easy installation
- Automatic IP addressing, plug and play
- 200 meters long range, wide coverage
- Multiple inverters supported, up to 8
- Build-in storage, 1 month data
- Online monitoring and maintenance

## GROWATT · PRODUCT

Datasheet	ShineLink
<b>Communication Interface</b>	
Rf433	Yes
<b>Max. Communication Range</b>	
Rf433( in free-field conditions)	Up to 200 m
Rf433( two walls blocking)	20 m
<b>Power Supply</b>	
Power consumption	<2W standby, <5W peak
AC power supply input voltage	196V~250V
AC power supply input frequency	50/60Hz
<b>Current Measurement</b>	
Measurement range	Max.90A
Accuracy	3%
<b>General Specifications</b>	
Dimensions(L/H/W) in mm	105/85/26
Weight	< 1kg
Mounting options	Tabletop/wall-mount
Degree of protection	IP30
Status display	LED
Ambient temperature range	-25 to 60 °C
Humidity	0-95% (non condensing)
<b>Features</b>	
Programmable dry contact	Opt
Graphical user interface	Android/iOS APP
Remote firmware upgrades	Yes
Max. number of devices to monitor	8(RF433)
Warranty	1 years

CE

# Growatt ShineMaster



Cost effective solution for commercial and utility grade solar plants, supports up to 32 inverters connected in RS485 daisy chain, storage port inbuilt supports flexible storage.

- Local webserver for easy configuration
- Supports export control with meters
- Up to 32 inverters connection
- Multi-function and high performance



## GROWATT · PRODUCT

Datasheet	ShineMaster
<b>Max. Communication Range</b>	
Power adapter	Input: 100-240V, 50/60Hz AC Output 5V(+/-15%), 1A DC
Rf433( two walls blocking)	20 m
<b>Application Parameters</b>	
Max. communication range	500m
Communication with inverters	RS485 (Modbus RTU protocol)
Communication with server	TCP(Modbus TCP protocol)
Support network	WLAN
Data transfer interval	5 Minutes
Default server URL	server.growatt.com
Supported servers	ShineServer
<b>General Data</b>	
Dimensions(W/H/D) in mm	130/84/25
Weight	180g
Language	English
Mounting options	Wall-mounted
Ambient temperature range	-30°C ~ +60°C
Degree of protection	IP30
Warranty	1 year
CE	