



powering tomorrow
Growatt

GROWATT NEW ENERGY TECHNOLOGY CO.,LTD

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- Only one with **8+** Years Experience
- **185,000+** Unites Installed in Australia
- **90,000+** Unites Working Perfectly for **5** Years +
- Increased Local Service and Support



A New Milestone for Photovoltaics

As the CEO of Growatt New Energy, I am very honored to recommend our excellent team, our high-efficiency and cost-effective inverters, energy storage products, as well as smart energy management systems and other supporting service to all the partners.

Known by all the customers, Growatt is a new energy company based on an R&D team with 10 years experience in PV and power industry. Growatt team has always been committed to new cost-effective energy product design and maintains sustainable progress. The technology and product performance has been assessed A level by world first-class certification company and EPC company.

Growatt has been engaged in solar photovoltaic inverters and energy storage systems since 2010, and until now its products have covered over 100 countries worldwide, quickly growing as the world leading supplier of cost-effective inverters with high efficiency.

Growatt has a full range of inverters from 1kW to 2.52MW, and flexible energy storage solutions, as well as smart energy management systems, which are well suited for residential, commercial and large-scale power plants applications.

In residential solar application, Growatt provides high efficiency and compact inverters and storage products to customers with a simple and intelligent user experience. Meanwhile, it has won a more extensive global market coverage, and stands out from other manufacturers.

In commercial and large-scale power station applications, more stable and effective inverters together with smart energy management system also give customers more cost competitive advantage.

With the efficient products, Growatt offers every customer comprehensive pre-sales and after-sales service, to ensure the optimal products for customized demands. For customers, Growatt is more than just a supplier, but a more reliable partner.

About Growatt

Growatt New Energy Technology Co., Ltd was established on May 2010, a professional new energy company focusing on photovoltaic inverters, energy storage products, as well as smart energy monitoring and management system. Until now, Growatt total shipment is over 1,000,000 PCS and covers more than 100 countries in Europe, America, Africa, and Asia Pacific, famous as a world leading manufacturer of cost-effective photovoltaic inverters with high efficiency. For Australia market, back to 2010, the very early days of Growatt, we unveiled Growatt's first inverter in Australia Market, after all these eight years Growatt has sold more than 200,000 inverters in Australia region and 80,000 of them are working smoothly for more than 5 years.

Our Products

Growatt offers a full range of PV products with leading-edge technology, including 1-80kW string inverters, 100kW-2.52MW central inverters, storage solutions, smart energy monitoring and managing systems, which are completely applicable for residential, industrial and commercial rooftops, large-scale ground plants and storage systems.

Our Achievement

At the start of 2012, Sequoia Capital and China Merchants invested in Growatt strategically, which is the basis for the high and stable development of Growatt. With the excellent performance in both domestic and international market, Growatt has been awarded with some honorable titles, like "The Fastest Growing Company of 2012" "Top 10 Enterprises of Innovation of 2013 in China" "Most Competitive PV Inverter Company in China" "Top 10 String Inverter Manufactures of 2014 in China" "Top 10 Most Popular PV Inverter Company of 2015 in China" "The No.1 Residential Inverter Provider of 2016 in China" "Top 1 residential inverter, Top 3 string inverter from PVBL 2017" "Top Brand PV inverters Netherland 2018 from EUPD Research" etc. Growatt has been the largest inverter exporter for 8 years, being the most popular Chinese inverter supplier in global market.

Growatt is taking the significant step of establishing the Growatt Group. The Group will consist of 7 business divisions - 1-80kW string inverters, 100kW-2.52MW central inverters, energy storage products, smart energy monitoring and management systems, electric vehicle charging, solar system EPC and business investment - and its creation reflects the company's determination to be the global leader of Chinese user-side smart energy solution providers.

Our R&D and Service Team

With an R&D team more than 200 engineers, 40% of the staff, who have been deeply engaged in the photovoltaic industry for 10 years. Thanks to the expertise of its engineers, Growatt is currently holding more than 50 patents, and Growatt takes the mission to increase the products availability and efficiency, putting continuous innovation to make Growatt products easier for installation and operation, and more cost-effective for solar plant construction.

Other than the R&D team, building an elite service team is Growatt's another goal. In Growatt, service is not only the basic principle, but also blends into the hearts of the staff, and reflects in the daily work of everyone. In order to improve the service system worldwide, Growatt has established branch offices in Frankfurt, Sydney, Los Angeles, Oxford, Chennai, Bangkok, Shenzhen, Hongkong, Beijing and Suzhou. Ever since 2010, Growatt set up our first service center in Sydney Silverwater, over the past eight years, our service engineers are dedicated in answering client's queries, improving Customer Service and providing routine training and maintenance. Now, for any after-sale service issues Growatt guarantees that it will be solved or provide suitable solution within 48 hours. Two service numbers+ 61 2 80651298 / +61 423 487 311 will ensure no customer's call would be missed.

Certification



World-class Components

Growatt chooses world-class suppliers to ensure the high quality of its products. With top-class partners Growatt provides inverters with high quality and efficiency to the whole world.

<p>Diode</p>	<p>MCU</p>
<p>Fuse</p>	<p>Current Transducer</p>
<p>Mos IGBT</p>	
<p>IC</p>	
<p>Capacitor</p>	
<p>Relay</p>	



powering tomorrow
Growatt



Single phase inverter

1000-S	2500MTL-S	2500TL-X
1500-S	3000MTL-S	3000TL-X
2000-S	3600MTL-S	3600TL-X
3000-S	4200MTL-S	4200TL-X
	5000MTL-S	5000TL-X
	5500MTL-S	6000TL-X

Product Model

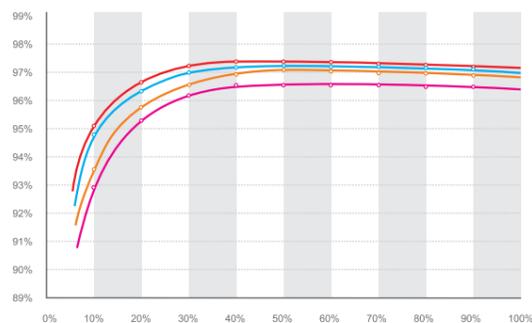
Growatt 1000-S | 1500-S
2000-S | 3000-S



Leading - edge Technology

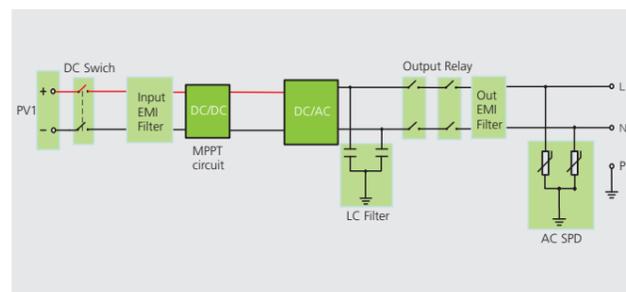
- Maximum efficiency of 97.6% and wide input voltage range
- Internal DC switch
- Transformerless GT topology
- Compact design
- Ethernet / RF technology / WiFi
- Easy installation
- Comprehensive Growatt warranty program

Growatt 3000-S efficiency



200V
250V
300V
400V

Growatt 1-3k-S topology



Datasheet

Input Data (DC)

	Growatt 1000-S	Growatt 1500-S	Growatt 2000-S	Growatt 3000-S
Max. recommended PV power (for module STC)	1300W	1950W	2600W	3900W
Max. DC voltage	450V	450V	450V	550V
Start voltage	80V	80V	80V	80V
PV voltage range	70V-450V	70V-450V	70V-450V	70V-550V
MPP work voltage range/ nominal voltage	70V-450V/180V	70V-450V/250V	70V-450V/360V	70V-550V/360V
Full load dc voltage range	110V-400V	175V-400V	200V-400V	250V-500V
Max. input current	10A	10A	11A	13A
Max. input current per string	10A	10A	11A	13A
Number of independent MPP trackers /strings per MPP tracker	1/1	1/1	1/1	1/1

Output (AC)

	Growatt 1000-S	Growatt 1500-S	Growatt 2000-S	Growatt 3000-S
Rated AC output power	1000W	1600W	2000W	3000W
Max. AC power	1000W	1650W	2000W	3000W
Max. output current	4.7A	7.8A	9.5A	14.3A
AC nominal voltage	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V
AC grid frequency	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
THDi	<3%	<3%	<3%	<3%
AC connection	Single phase	Single phase	Single phase	Single phase

Efficiency

	Growatt 1000-S	Growatt 1500-S	Growatt 2000-S	Growatt 3000-S
Max. efficiency	97.4%	97.4%	97.4%	97.6%
Euro-eta	96.5%	97%	97%	97.3%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%

Protection Devices

	Growatt 1000-S	Growatt 1500-S	Growatt 2000-S	Growatt 3000-S
DC reverse polarity protection	yes	yes	yes	yes
DC switch	yes	yes	yes	yes
Output over current protection	yes	yes	yes	yes
Output over voltage 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

General Data

	Growatt 1000-S	Growatt 1500-S	Growatt 2000-S	Growatt 3000-S
Dimensions (W / H / D) in mm	271*267*142	271*267*142	271*267*142	271*320*142
Weight	6.1kg	6.1kg	6.1kg	8.8kg
Operating temperature range	- 25°C ... +60°C			
Noise emission (typical)	≤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
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Cooling concept	Natural	Natural	Natural	Natural
Environmental Protection Rating	IP65	IP65	IP65	IP65
Altitude	2000m without derating	2000m without derating	2000m without derating	2000m without derating
Relative humidity	100%	100%	100%	100%

Features

	Growatt 1000-S	Growatt 1500-S	Growatt 2000-S	Growatt 3000-S
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/ 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
Warranty: 5 years / 10 years	yes /opt	yes /opt	yes /opt	yes /opt

Certificates and Approvals

CE, VDE 0126-1-1, IEC 62109, G83, AS4777, AS/NZS 3100, CEIO-21, VDE-AR-N4105, EN50438, CQC, UTE C 15-712, IEC 61683, IEC 60068, IEC 61727, IEC 62116, INMETRO

Product Model

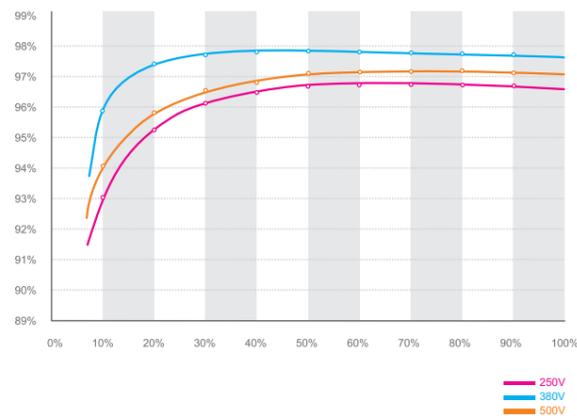
**Growatt 2500MTL-S | 3000MTL-S | 3600MTL-S
4200MTL-S | 5000MTL-S | 5500MTL-S**



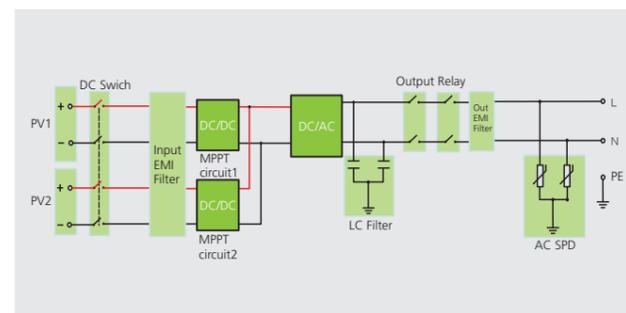
Leading - edge Technology

- Double MPPT Tracker, MPPT tracking accuracy more than 99.5%
- Max. Efficiency 97.9%, European Efficiency 97.4%
- Integrated DC switch for added safety protection
- Transformerless design and high power density, offer lighter and more convenient installation
- Power factor continuously adjustable
- Flexible communication connection, support RF, WiFi, Ethernet
- Comply with European, Asia-Pacific safety regulations

Growatt 5000MTL-S efficiency



Growatt 2.5-5.5kMTL-S topology



Datasheet

Growatt 2500MTL-S | Growatt 3000MTL-S | Growatt 3600MTL-S | Growatt 4200MTL-S | Growatt 5000MTL-S | Growatt 5500MTL-S

Input Data (DC)

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
PV voltage range	70V-500V	70V-500V	70V-550V	70V-550V	70V-550V	70V-550V
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

Output (AC)

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	220V/230V /240V	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V
AC grid frequency	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					

Efficiency

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%

Protection Devices

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 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

General Data

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					
Noise emission (typical)	≤25 dB(A)					
Self-Consumption night	< 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					
Relative humidity	100%	100%	100%	100%	100%	100%

Features

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					

Certificates and Approvals

CE, IEC62109, G83, VDE0126-1-1, UTE C 15-712,G59, AS4777, AS/NZS 3100, CEI0-21, VDE-AR-N4105, EN50438, CQC, IEC 61683, IEC 60068, IEC 61727, IEC 62116, INMETRO

Product Model

Growatt 2500TL-X | 3000TL-X | 3600TL-X 4200TL-X | 5000TL-X | 6000TL-X



Leading - edge Technology

High Yields

- Max. efficiency 98.7%
- DC/AC ratio up to 1.4

User Friendly

- Touch key and OLED display
- Support export-control application

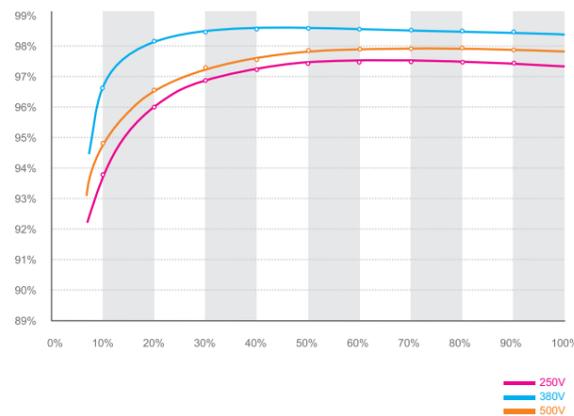
Safe & Reliable

- Type II SPD on DC side
- DC switch optional

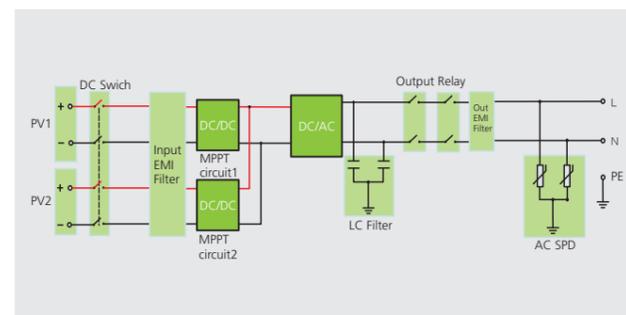
Easy Maintenance

- Free online service
- Inverter USB upgrade

Growatt 6000TL-X efficiency



Growatt 2.5-6kTL-X topology



Datasheet

Input Data (DC)

	Growatt 2500TL-X	Growatt 3000TL-X	Growatt 3600TL-X	Growatt 4200TL-X	Growatt 5000TL-X	Growatt 6000TL-X
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	70V-550V /360V					
Full load dc voltage range	130V-500V	160V-500V	190V-500V	220V-500V	250V-500V	280V-500V
Max. input current of tracker A/tracker B	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A	12.5A/12.5A
Number of independent MPP trackers / strings per MPP tracker	2/1	2/1	2/1	2/1	2/1	2/1

Output (AC)

	Growatt 2500TL-X	Growatt 3000TL-X	Growatt 3600TL-X	Growatt 4200TL-X	Growatt 5000TL-X	Growatt 6000TL-X
Rated AC output power	2500W	3000W	3600W	4200W	5000W*1	6000W
Max. AC apparent power	2500VA	3000VA	3600VA	4200VA	5000VA	6000VA
Max. output current	12A	14.9A	17.2A	20A	23.9A*2	28.7A
AC nominal voltage	220V/230V /240V	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V	220V/230V/240V
AC grid frequency	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					

Efficiency

	Growatt 2500TL-X	Growatt 3000TL-X	Growatt 3600TL-X	Growatt 4200TL-X	Growatt 5000TL-X	Growatt 6000TL-X
Max. efficiency	98.5%	98.5%	98.5%	98.7%	98.7%	98.7%
Euro weighted efficiency	98%	98%	98%	98.2%	98.2%	98.2%
MPPT efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%

Protection Devices

	Growatt 2500TL-X	Growatt 3000TL-X	Growatt 3600TL-X	Growatt 4200TL-X	Growatt 5000TL-X	Growatt 6000TL-X
DC reverse polarity protection	yes	yes	yes	yes	yes	yes
DC switch	opt	opt	opt	opt	opt	opt
DC surge protection	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

General Data

	Growatt 2500TL-X	Growatt 3000TL-X	Growatt 3600TL-X	Growatt 4200TL-X	Growatt 5000TL-X	Growatt 6000TL-X
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	-35°C ... +60°C					
Noise emission (typical)	≤30 dB(A)					
Altitude	3000m	3000m	3000m	3000m	3000m	3000m
Self-Consumption night	< 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%

Features

	Growatt 2500TL-X	Growatt 3000TL-X	Growatt 3600TL-X	Growatt 4200TL-X	Growatt 5000TL-X	Growatt 6000TL-X
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	OLED	OLED	OLED	OLED	OLED
Interfaces: RS485 / USB / Wi-Fi / LAN / GPRS / RF	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					

Certificates and Approvals

CE, IEC62109, G83, VDE0126-1-1, VFR2014, G59, AS4777, AS/NZS 3100, CEI0-21, VDE-AR-N4105, EN50438, CQC, IEC61683, IEC60068, IEC61727, IEC62116

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

Residential Storage Product

Growatt SPH3000 | SPH3600 | SPH4000
SPH4600 | SPH5000 | SPH6000



Growatt SPH series is perfectly suited to coping with the electricity demand of a private household, as a good residential storage solution, Growatt SPH series can connect PV, battery and grid to one inverter, which is the best choice for new storage system.

Leading - edge Technology

User-friendly

- Local graphic LCD and four buttons, easier for LCD operation
- Compact design for easy installation

Reliable

- IP65 protection degree, better lifetime guarantee
- Natural cooling, no additional fans
- Integrated backed-up function, transfer time within 0.5s

Flexible

- Storage ready solution, you can add battery later
- Dynamic feed-in control
- Charging and discharging time and power schedulable

Enhanced safety

- Online smart service along with system operation
- Smart battery management ensure battery safety
- Comprehensive protections for whole system

Datasheet	Growatt SPH3000	Growatt SPH3600	Growatt SPH4000	Growatt SPH4600	Growatt SPH5000	Growatt SPH6000
DC Input Data						
Max. recommended PV power	6600W	6600W	6600W	8000W	8000W	8000W
Max. DC voltage	550V	550V	550V	550V	550V	550V
Start voltage	150V	150V	150V	150V	150V	150V
PV voltage range	120V~550V	120V~550V	120V~550V	120V~550V	120V~550V	120V~550V
MPP voltage range/nominal voltage	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
AC Output						
Rated AC output power	3000W	3680W	4000W	4600W	5000W	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	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 Output Dower(Backup)						
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
Battery Data						
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					
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
Efficiency						
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%
Protection Devices						
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
General Data						
Dimensions (W / H / D)	547/516/170 mm					
Weight	27kg	27kg	27kg	27kg	27kg	27kg
Operating temperature range	- 25°C ... +60°C					
Noise emission (typical)	≤ 25 dB(A)					
Altitude	2000m	2000m	2000m	2000m	2000m	2000m
Self-Consumption	<3 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%
Features						
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					
Display	LCD	LCD	LCD	LCD	LCD	LCD
Warranty: 5 years / 10 years	yes /opt					
Certificates and Approvals						
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						

Residential Storage Product-AC Couple

Growatt SPA1000TL BL | SPA2000TL BL SPA3000TL BL



Leading - edge Technology

User-friendly

- Local graphic LCD and 4 buttons, easy to operate
- Compact design for easy installation

Reliable

- IP65 protection degree
- Natural cooling, no need additional fans
- Work as back-up when blackout
- Online smart service escort system operation

Flexible

- For retrofit or new systems
- Charging and discharging power & time are programmable

Datasheet	Growatt SPA1000TL BL	Growatt SPA2000TL BL	Growatt SPA3000TL BL
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AC connection

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

AC output power (Back-up)

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

Battery data

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

Efficiency

Max. Charge efficiency	92.5%	94.0%	94.5%
Max. Discharge efficiency	92.0%	93.5%	94.0%

Protection Devices

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

General Data

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	<4 W	<4 W	<4 W
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%

Features

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

Certificates and Approvals

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

New Generation Lithium Battery

Growatt GBLI5010



User-friendly

- Wall-mounted design for space saving
- Top hander design, easy to transport
- Battery capacity is 5.7kWh, usable capacity is 4.58kWh

Enhanced safety

- Excellent safety performance with LFP (Lithium Iron Phosphate) technology
- Intelligent protections of abnormal voltage, current, temperature, SOC, etc
- Online monitoring even battery cell information

Datasheet

Growatt GBLI5010

Nominal Parameters

Nominal voltage	51.2V
Nominal capacity	112Ah
Nominal energy	5734.4Wh
Useable energy	4587.5Wh

Electrical Parameters

Operating voltage range	43.2~56.8V
Max.charge voltage	57.6V
Max.continuous discharge current	60A
Max.continuous charge current	60A
Max.continuous discharge power	3000W

Protections

Over voltage protection	Yes
Over current protection	Yes
Short circuit protection	Yes
Over temperature protection	Yes

Communication Parameters

Network interface	RS485
Communication protocol	Modbus

Structural Parameters

Length	669mm
Width	486mm
Height	154mm
Weight	64KG

Other Parameters

Design life(25°C)	>10 years
Cycle life(25 °C, 80%DOD)	≥5000
Mounting	Wall-mounted
IP protection degree	IP20
Storage time (-20 C~35 C)	3 months power off
Operation temperature	-10°C~45°C
Storage temperature	-20°C~60°C
Transport standard	UN38.3
EMC standard	IEC 61000
Warranty	5 years

Certificates and Approvals

CE, IEC 61000, UN38.3



Three Phase Inverter

3000TL3-S	7000TL3-S	12000TL3-S	30000TL3-S
4000TL3-S	8000TL3-S	13000TL3-S	33000TL3-S
5000TL3-S	9000TL3-S	15000TL3-S	40000TL3-NS
6000TL3-S	10000TL3-S		50000TL3-S
	11000TL3-S		

50KTL3 LV
 60KTL3 LV
 70KTL3 LV
 80KTL3 LV



Product Model

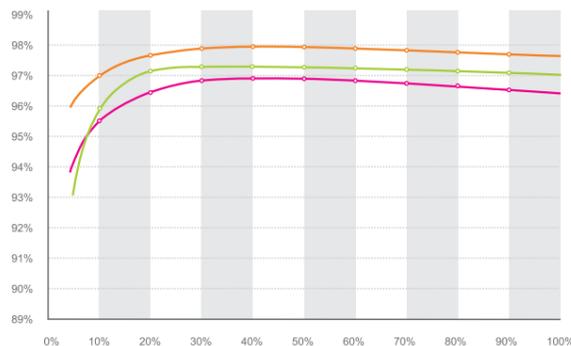
Growatt 3000TL3-S | 4000TL3-S | 5000TL3-S | 6000TL3-S



Leading - edge Technology

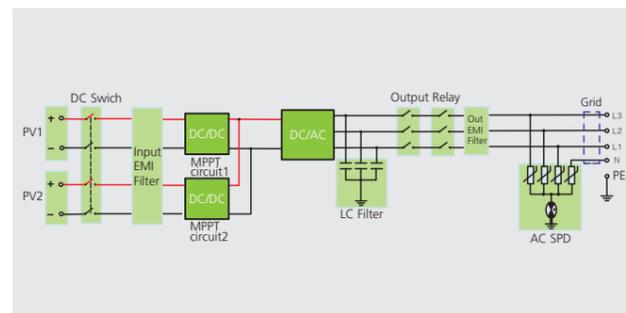
- Max. DC voltage up to 1000V
- Max. efficiency 98%
- Compact design
- Multi MPP controller
- Natural cooling
- High power density, offer lighter and easy installation
- Comprehensive Growatt warranty program

Growatt 6000TL3-S efficiency



— 480V
— 650V
— 800V

Growatt 3-6kTL3-S topology



Datasheet	Growatt 3000TL3-S	Growatt 4000TL3-S	Growatt 5000TL3-S	Growatt 6000TL3-S
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Input Data	Growatt 3000TL3-S	Growatt 4000TL3-S	Growatt 5000TL3-S	Growatt 6000TL3-S
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

Output (AC)	Growatt 3000TL3-S	Growatt 4000TL3-S	Growatt 5000TL3-S	Growatt 6000TL3-S
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	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

Efficiency	Growatt 3000TL3-S	Growatt 4000TL3-S	Growatt 5000TL3-S	Growatt 6000TL3-S
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%

Protection Devices	Growatt 3000TL3-S	Growatt 4000TL3-S	Growatt 5000TL3-S	Growatt 6000TL3-S
DC reverse polarity protection	yes	yes	yes	yes
DC switch	yes	yes	yes	yes
Output AC overcurrent 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

General Data	Growatt 3000TL3-S	Growatt 4000TL3-S	Growatt 5000TL3-S	Growatt 6000TL3-S
Dimensions(W/H/D)	480/448/200 mm	480/448/200 mm	480/448/200 mm	480/448/200 mm
Weight	21.2kg	21.2kg	21.2kg	21.2kg
Operating temperature range	-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%

Features	Growatt 3000TL3-S	Growatt 4000TL3-S	Growatt 5000TL3-S	Growatt 6000TL3-S
DC connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Screw terminal	Screw terminal	Screw terminal	Screw terminal
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

Certificates and Approvals

CE, IEC 62109-1/2, VDE 0126-1-1, Greece, UTE C 15-712, VDE-AR-N4105, G83, EN50438, CEI 0-21, AS4777, IEC 61727, IEC 62116, CQC

Product Model

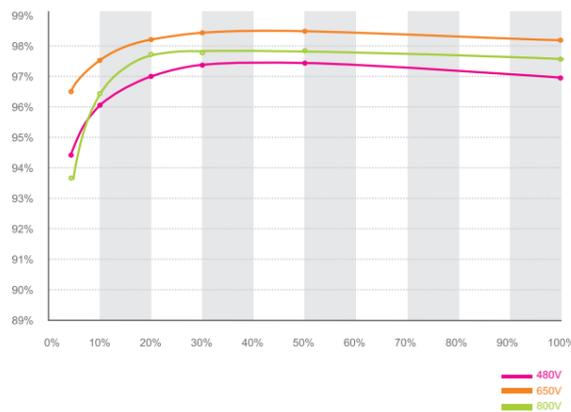
Growatt 7000TL3-S | 8000TL3-S 9000TL3-S | 10000TL3-S 11000TL3-S



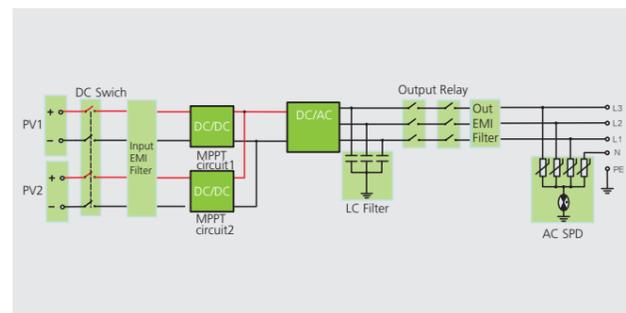
Leading - edge Technology

- Max. DC Voltage up to 1000V
- Max efficiency 98.4%
- Compact design
- Multi MPP controller
- Natural cooling, fanless design
- High power density, offer lighter and easy installation
- Comprehensive Growatt warranty program

Growatt 11000TL3-S efficiency



Growatt 7-11kTL3-S topology



Datasheet

Input Data

	Growatt 7000TL3-S	Growatt 8000TL3-S	Growatt 9000TL3-S	Growatt 10000TL3-S	Growatt 11000TL3-S
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
Full load DC voltage range	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

Output (AC)

	Growatt 7000TL3-S	Growatt 8000TL3-S	Growatt 9000TL3-S	Growatt 10000TL3-S	Growatt 11000TL3-S
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	230V/400V	230V/400V	230V/400V	230V/400V
AC grid frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Adjustable power factor	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

Efficiency

	Growatt 7000TL3-S	Growatt 8000TL3-S	Growatt 9000TL3-S	Growatt 10000TL3-S	Growatt 11000TL3-S
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%

Protection Devices

	Growatt 7000TL3-S	Growatt 8000TL3-S	Growatt 9000TL3-S	Growatt 10000TL3-S	Growatt 11000TL3-S
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

General Data

	Growatt 7000TL3-S	Growatt 8000TL3-S	Growatt 9000TL3-S	Growatt 10000TL3-S	Growatt 11000TL3-S
Dimensions(W/H/D)	480/448/200 mm	480/448/200 mm	480/448/200 mm	480/448/200 mm	480/448/200 mm
Weight	21.6kg	21.6kg	21.6kg	21.6kg	21.6kg
Operating temperature range	-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%

Features

	Growatt 7000TL3-S	Growatt 8000TL3-S	Growatt 9000TL3-S	Growatt 10000TL3-S	Growatt 11000TL3-S
DC connection	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)	H4/MC4(opt)
AC connection	Screw terminal				
Display	LCD	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	yes/yes/opt/opt/opt
Warranty:5 years/10 years	yes/opt	yes/opt	yes/opt	yes/opt	yes/opt

Certificates and Approvals

CE, IEC 62109-1/2, VDE 0126-1-1, Greece, UTE C 15-712, VDE-AR-N4105, G83, EN50438, CEI 0-21, AS4777, IEC 61727, IEC 62116, CQC

Product Model

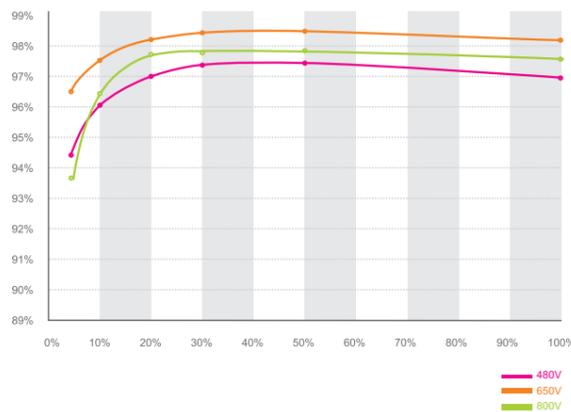
Growatt 12000TL3-S | 13000TL3-S 15000TL3-S



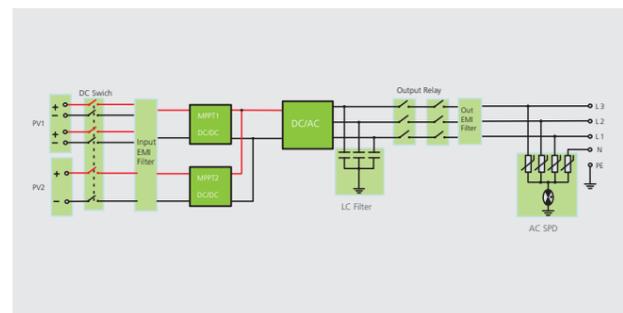
Leading - edge Technology

- Max. DC Voltage up to 1000V
- Max efficiency 98.4%
- Compact design
- Multi MPP controller
- 2+1 strings for flexible configuration
- Natural cooling, fanless design
- High power density, offer lighter and easy installation
- Flexible communication connection, support RF, WiFi, Ethernet
- Comprehensive Growatt warranty program

Growatt 15000TL3-S efficiency



Growatt 12000-15000TL3-S topology



Datasheet	Growatt 12000TL3-S	Growatt 13000TL3-S	Growatt 15000TL3-S
Input Data			
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
Output (AC)			
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	230V/400V	230V/400V
AC grid frequency	50Hz/60Hz	50Hz/60Hz	50Hz/60Hz
Adjustable power factor	0.8 leading -0.8lagging	0.8 leading -0.8lagging	0.8 leading -0.8lagging
THDi	<3%	<3%	<3%
AC grid connection type	3W+N+PE	3W+N+PE	3W+N+PE
Efficiency			
Max. efficiency	98.4%	98.4%	98.4%
Euro - eta	97.8%	98%	98%
MPPT efficiency	99.5%	99.5%	99.5%
Protection Devices			
DC reverse polarity protection	yes	yes	yes
DC switch	yes	yes	yes
Output AC overcurrent 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
General Data			
Dimensions (W / H / D)	480/448/200 mm	480/448/200 mm	480/448/200 mm
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%
Features			
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/R485/ RF/Ethernet/WIFI	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
Certificates and Approvals			
CE, IEC 62109-1/2, VDE 0126-1-1, Greece, UTE C 15-712, VDE-AR-N4105, G83, EN50438, CEI 0-21, AS4777, IEC 61727, IEC 62116, CQC			

Product Model

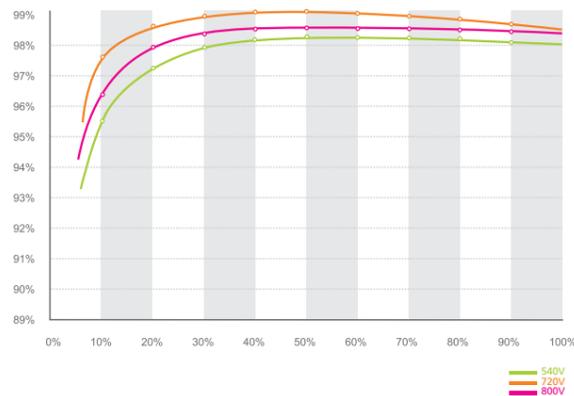
Growatt 30000TL3-S | 33000TL3-S
40000TL3-NS | 50000TL3-S



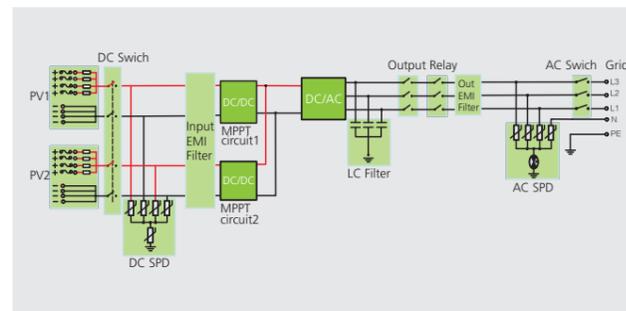
Leading - edge Technology

- Maximum efficiency of 99%
- Multi MPP controller and MTL string
- 8 strings intelligent monitoring and Fuse protection
- Leading IPM (Intelligent Power Module), more reliable
- Compact design and easy installation
- Comprehensive warranty program
- Internal DC switch and Transformerless
- Type II surge arresters for both DC and AC
- Anti-PID for PV module
- Supporting AC power supply

Growatt 50000TL3-S efficiency



Growatt 30-50k TL3-(N)S topology



Datasheet

Input Data

	Growatt 30000TL3-S	Growatt 33000TL3-S	Growatt 40000TL3-NS	Growatt 50000TL3-S
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 DC 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

Output (AC)

Rated AC output power	30kW	33kW	40kW	48kW
Max. AC apparent power	30kVA	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
Adjustable power factor	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

Efficiency

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%

Protection Devices

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

General Data

Dimensions (W / H / D)	470/754/270 mm	470/754/270 mm	470/754/270 mm	470/754/270 mm
Weight	48kg	48kg	48kg	48kg
Operating temperature range	-25 °C ... +60 °C			
Noise emission (typical)	≤50 dB(A)	≤50 dB(A)	≤50 dB(A)	≤50 dB(A)
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
Altitude	4000m	4000m	4000m	4000m
Relative Humidity	0~100%	0~100%	0~100%	0~100%

Features

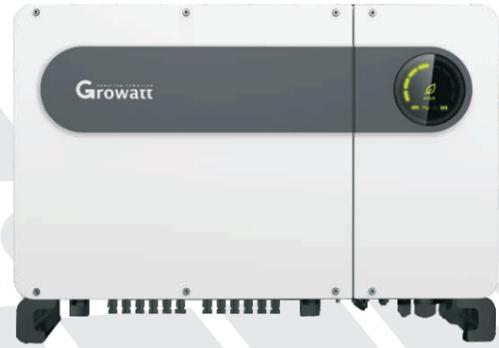
Display	Graphic LCD	Graphic LCD	Graphic LCD	Graphic LCD
Interfaces: RS232/R485/WiFi/LAN /GPRS	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt	yes / yes / opt / opt / opt
Warranty:5 years / 10 years	yes / opt	yes / opt	yes / opt	yes / opt

Certificates and Approvals

CE, IEC 62109-1/2, IEC 61727, IEC 62116, VDE 0126-1-1, Greece, UTE C 15-712, CEI 0-21, CEI 0-16, VDE-AR-N4105, EN50438, G59/3, AS 4777, PEA, IEC 60529, IEC 60068, IEC 61683, DRRG

Product Model

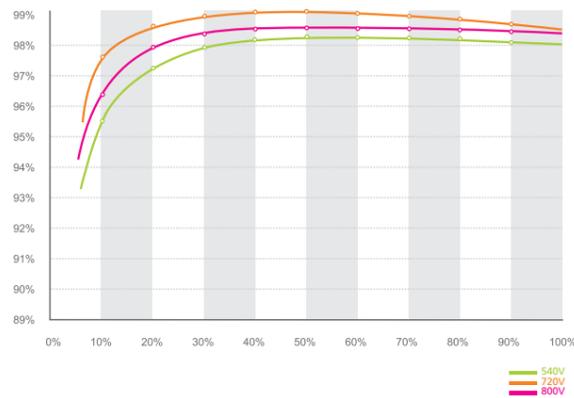
MAX 50KTL3 LV | 60KTL3 LV 70KTL3 LV | 80KTL3 LV



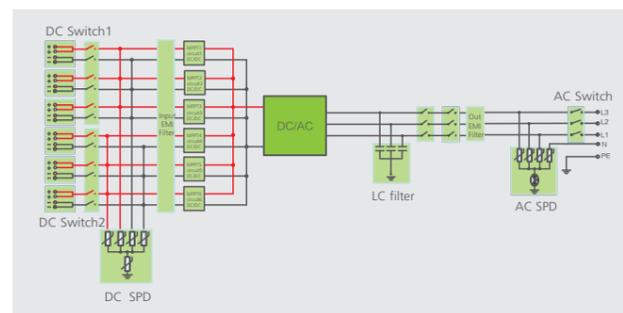
Leading - edge Technology

- Maximum efficiency of 99%
- Multi MPP controller and MTL string
- 8 strings intelligent monitoring and Fuse protection
- Leading IPM (Intelligent Power Module), more reliable
- Compact design and easy installation
- Comprehensive warranty program
- Internal DC switch and Transformerless
- Type II surge arresters for both DC and AC
- Anti-PID for PV module
- Supporting AC power supply

Growatt 80KTL3 LV efficiency



Growatt 50-80KTL3 LV topology



Datasheet

MAX 50KTL3 LV

MAX 60KTL3 LV

MAX 70KTL3 LV

MAX 80KTL3 LV

Input Data

	MAX 50KTL3 LV	MAX 60KTL3 LV	MAX 70KTL3 LV	MAX 80KTL3 LV
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

Output (AC)

	MAX 50KTL3 LV	MAX 60KTL3 LV	MAX 70KTL3 LV	MAX 80KTL3 LV
Rated AC output power	30kW	33kW	40kW	48kW
Max. AC apparent power	30kVA	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
Adjustable power factor	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

Efficiency

	MAX 50KTL3 LV	MAX 60KTL3 LV	MAX 70KTL3 LV	MAX 80KTL3 LV
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%

Protection Devices

	MAX 50KTL3 LV	MAX 60KTL3 LV	MAX 70KTL3 LV	MAX 80KTL3 LV
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

General Data

	MAX 50KTL3 LV	MAX 60KTL3 LV	MAX 70KTL3 LV	MAX 80KTL3 LV
Dimensions (W / H / D)	470/754/270 mm	470/754/270 mm	470/754/270 mm	470/754/270 mm
Weight	48kg	48kg	48kg	48kg
Operating temperature range	-25 °C ... +60 °C			
Noise emission (typical)	≤50 dB(A)	≤50 dB(A)	≤50 dB(A)	≤50 dB(A)
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
Altitude	4000m	4000m	4000m	4000m
Relative Humidity	0~100%	0~100%	0~100%	0~100%

Features

	MAX 50KTL3 LV	MAX 60KTL3 LV	MAX 70KTL3 LV	MAX 80KTL3 LV
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

Certificates and Approvals

CE, IEC 62109-1/2, IEC 61727, IEC 62116, VDE 0126-1-1, Greece, UTE C 15-712, CEI 0-21, CEI 0-16, VDE-AR-N4105, EN50438, G59/3, AS 4777, PEA, IEC 60529, IEC 60068, IEC 61683, DRRG

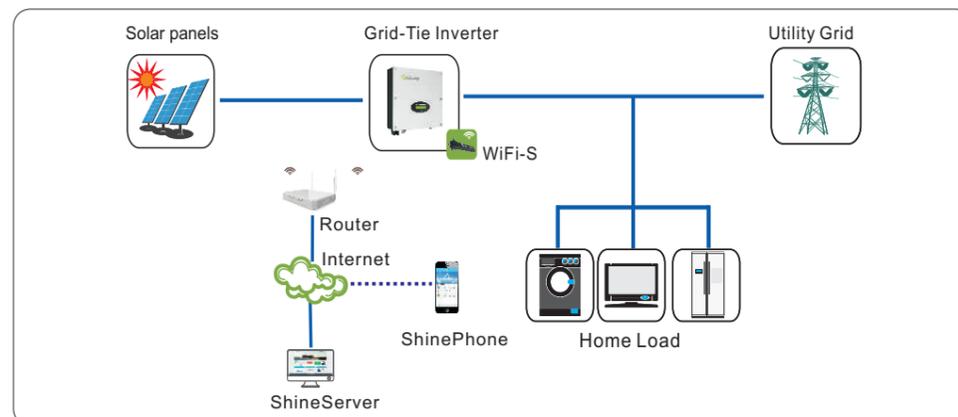
Product Model

Growatt ShineWiFi-S



Newly recommended for house-owners

- Easy to use
- Plug-and-play commissioning
- 100-meter wireless connection to inverter
- Remote firmware updating for inverter
- Free online monitoring via Shine Server



Datasheet

ShineWiFi-S

Wireless Parameters

Wireless standard	802.11 b/g/n
Frequency range	2412M ~ 2484M
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 (½ BPSK): -88dBm 54 Mbps (3/4 64-QAM): -70dBm HT20, MCS7 (65 Mbps, 72.2 Mbps): -67dBm

Hardware Parameters

Data interface	RS232(Modbus RTU protocol)
Operating voltage	9V(+/-15%)
Operating current	100mA

Application Parameters

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

General Data

Dimensions(Length/Width/Height)	135/79/29 mm
Weight	60g
Manual language	English, Chinese
Operating temperature	-40°C ~ +85°C
Warranty	1 years

Certification

CE

Product Model

Growatt ShineLink



Leading - edge Technology

ShineLink is a new generation monitoring solution for grid-tie, off-grid inverter and it is composed of ShineLanBox and ShineRFStick. Unique wireless communication (RF433) makes the installation more convenient and flexible.

Simple

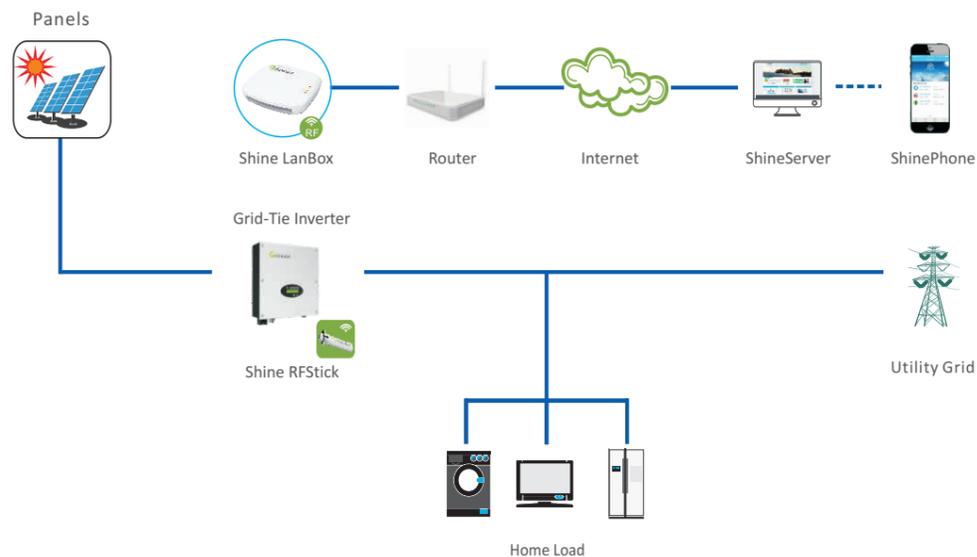
- Easily installation
- Automatic IP addressing
- Plug-and-play

Reliable

- Max. communication range of 200m
- Data archiving for 40 days even the internet outage

Smart

- Monitoring of up 8 inverters via RF433
- Both Android and IOS UI are available



Datasheet

ShineLink

Communication Interface

Rf433	Yes
-------	-----

Max. Communication Range

RF433(in free-field conditions)	Up to 200 m
RF433(two walls blocking)	20 m

Power Supply

AC power supply input voltage	196V~250V
AC power supply input frequency	50/60Hz
Power consumption	<2W standby, <5W peak

Current Measurement

Measurement range	Max.90A
Accuracy	3%

General Specifications

Dimensions(L/H/W)mm	105/85/26mm
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)

Features

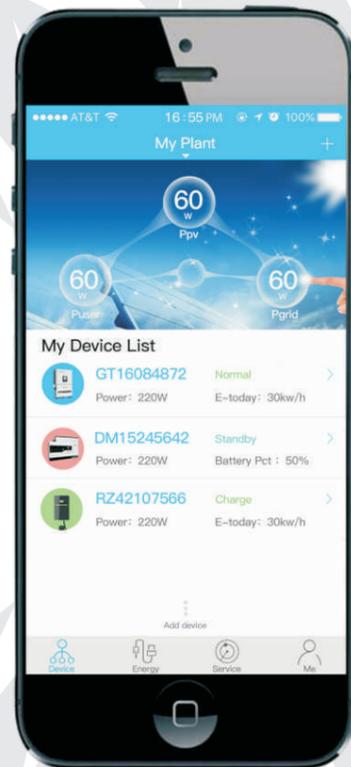
Programmable dry contact	Opt
Graphical user interface	Android/IOS APP
Remote firmware upgrades	Yes
Max. number of devices to monitor	8(RF433)
Warranty	1 years

Certificates and Approvals

CE

Product Model

Growatt ShinePhone



Download **ShinePhone**



Datasheet

ShinePhone

General Data

Available languages	English, Chinese, Japanese, Dutch, Hungarian, Italian
Supported operating systems	Android / iOS
Source of data	server-growatt-com

Plant Information

Plant overview	Quick yield overview of all your PV plants
Specified plant	All important data at a glance including energy output, yield gains, current power
Plant installation data	Summary of all plant information which contains installation data, location data and income data
Device overview	Display of all important data about inverters, environment monitor, and electric meter
Plant event log	Display of all the warning events of the plant

Device Information

Inverter data	All inverter running status and data could be obtained at any time
Environment monitor data	Key parameters about environment could be obtained
Electric meter data	Primary parameters at the point of connection are collected in every measured period

Product Model

Growatt ShineServer



Whether for residential system or commercial system, even for PV power station, Growatt could deliver a satisfactory monitoring solution based on Shine Server, which acts as a reliable, powerful and secure web-enabled platform. With flexible and sophisticated design, Shine Server provides highly interactive and immediate access to key system data at any time and any place. Special views are enabled accounting for the different requirements of different applicants and target groups. The powerful analysis and reporting functions help owners and operators to improve the productivity of PV plant and the efficiency of operations.

Features

- Ease of operation and maintenance
- Quick overview of all PV plant status
- Monitor and record several of PV plants with centralized management
- Professional analysis function to help maximize the system performance
- Real-time access to key performance worldwide via PC or mobile phones

Datasheet	ShineServer
Languages	
Available languages	English, Chinese, French, Japanese
System Requirements	
Supported operating systems	All
Recommended browsers	Internet Explorer as of version 8, Firefox as of version 5, Google Chrome as of version 14, Safari as of version 5, Opera as of version 11
Supported data logger	Shine WebBox、ShineWiFi、ShineLAN、ShinePhone
Access	
Website	http://server.growatt.com
Plant Information	
Plant overview	Quick yield overview of all your PV plants
Specified plant	All important data at a glance including energy output, yield gains, environmental status
Plant installation data	Summary of all plant information which contains installation data, location data and income data
Device overview	Display of all important data about data logger, inverters, environment monitor, smart meter and other key devices
Time periods	5 mins
Plant Management	
Account	User could manage all PV plants with one same account
Monitoring	
Inverter status	All inverter running status are recorded automatically. The warning of fault is highlighted and immediate.
Status Reporting	
Event reports	Timely e-mail reports on system fault and plant error.
Background Operating	
Plant management	Add new plant, edit and delete existed plant
Device management	Intuitive operation to manage all devices
Inverter setting	simple parameter setting for inverters including power management

String Inverter Project List

Phitsanulok Thailand 134MW solar plant

Location
Phitsanulok, Thailand

Project Volume
134MW

Model Used
Growatt 16700TL3-HE-TH



Gent Belgium 4MW solar plant

Location
Gent, Belgium

Project Volume
4MW

Model Used
Growatt 20000UE



China Southern Grid 52MW rooftop solar plant

Location
Guangdong, China

Project Volume
52MW

Model Used
Growatt 40000TL3



Frankfurt Germany 4.3MW solar plant

Location
Frankfurt, Germany

Project Volume
4.3MW

Model Used
Growatt 20000UE

Brisbane Australia 30kW solar plant

Location
Brisbane, Australia

Project Volume
30kW

Model Used
Growatt 20000UE
Growatt 10000UE



New Jersey 2MW solar plant

Location
New Jersey, USA

Project Volume
2MW

Model Used
Growatt 20000TL3-US



Foxcon 20MW rooftop solar plant

Location
Hubei, Jiangsu, China

Project Volume
20MW

Model Used
Growatt 20000UE



Netherland Liander 1.5MW solar plant

Location
Netherland

Project Volume
1.5MW

Model Used
Growatt 20000UE

National Grid Longyuan 8.5MW renewable city demo solar plant

Location
Xinjiang, China

Project Volume
8.5MW

Model Used
Growatt 20000UE



Greece 1.2MW solar plant

Location
Greece

Project Volume
1.2MW

Model Used
Growatt 20000UE



Growatt Zhejiang 5MW solar plant

Location
Zhejiang, China

Project Volume
5MW

Model Used
Growatt 20000UE



Hyperion 4MW solar plant

Location
Hyderabad, India

Project Volume
4MW

Model Used
Growatt 20000TL3-HE

Central Inverter Project List



Ground solar plant 127MW in Lampang Thailand

Location
Lampang, Thailand

Project Volume
127MW

Model Used
Growatt CP 500 Station



Hainan Taineng 20MW hill solar plant

Location
Hainan, China

Project Volume
20MW

Model Used
Growatt CP500TL

Qinghai Germu 72MW Suncore solar plant

Location
Qinghai, China

Project Volume
72MW

Model Used
Growatt CP500TL
Growatt CP1000 Station



National Grid Hengguan 20MW desert solar plant

Location
Inner Mongolia, China

Project Volume
20MW

Model Used
Growatt CP1000 Station



Shenyang Jindu 40MW BIPV solar plant

Location
Dalian, China

Project Volume
40MW

Model Used
Growatt 20000UE



China Southern Grid 12MW rooftop solar plant

Location
Guangdong, China

Project Volume
12MW

Model Used
Growatt CP1000 Station

SAIC 40MW rooftop solar plant

Location
Shanghai, Nanjing, China

Project Volume
40MW

Model Used
Growatt CP1000 Station



Canadian Solar 10MW hill solar plant

Location
Jiangsu, China

Project Volume
10MW

Model Used
Growatt CP1000 Station



Ground solar plant 20MW in Ghana Africa

Location
Ghana

Project Volume
20MW

Model Used
Growatt CP500TL



3.3MW greenhouse solar plant in Henan

Location
Henan, China

Project Volume
3.3MW

Model Used
Growatt CP1000 Station

Storage System Project List



Suffolk, UK residential storage system

Location
Suffolk, UK

Model Used
Growatt SP2000
Growatt GBLI 5001

Leicester, UK residential storage system

Location
Leicester, UK

Model Used
Growatt SP2000
Growatt GBLI 5001



Norwich, UK residential storage system

Location
Norwich, UK

Model Used
Growatt SP2000
Growatt GBLI 5001



Perugia residential storage system

Location
Perugia, Italy

Model Used
Growatt SP2000
Growatt GBLI 5001



South Africa Durban storage system

Location
Durban, South Africa

Project Volume
50kW, 60kWh

Model Used
Growatt PCS 50



Factory storage system in South Africa

Location
South Africa

Project Volume
100kW, 200kWh

Model Used
Growatt PCS 100

Jamaica factory storage system

Location
Jamaica

Project Volume
100kW, 90kWh

Model Used
Growatt PCS 100



Royal Thai Airforce storage system

Location
Thailand

Project Volume
1.9MW, 2.7MWh

Model Used
Growatt PCS 100



Xinjiang Military storage system

Location
Xinjiang, China

Project Volume
100kW, 200kWh

Model Used
Growatt PCS 100



Bintan Island storage system in Indonesia

Location
Bintan Island, Indonesia

Project Volume
250kW, 500kWh

Model Used
Growatt PCS 250



Service



Service hotline
+61 2 8065 1298/+61 423 487 311



Service Email
service@ginverter.com

Business Email
info@ginverter.com

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7 X 24 global online support

