

Solar inverters
for Asia

Solar inverters
for Europe

Solar inverters
for America

Solar inverters
for the Earth

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Green Inverter from

powering tomorrow
Growatt

A New Milestone for Photovoltaic

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

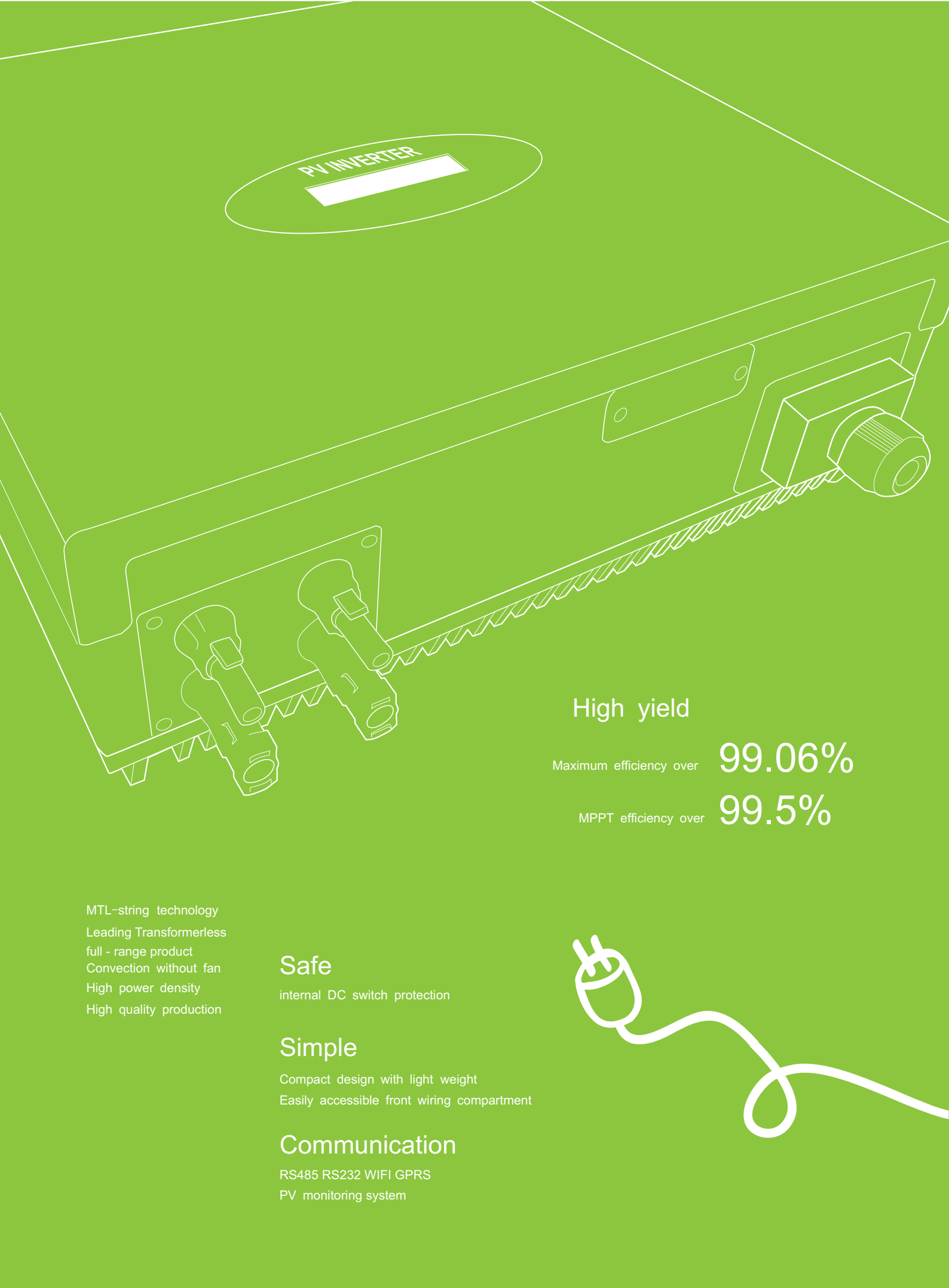
Known by all the customers, Growatt is a new energy company based on an R&D team with 10 years experience in PV and power industry. Growatt team has always been committed to more cost-effective new energy product design and maintains sustainable progress. The technology and product performance has been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

From 2010, Growatt start the R&D and sales for the photovoltaic inverter, until now Growatt has reached an installation of 2.7GW worldwide, quickly growing as the world leading supplier of cost-effective inverters with high efficiency.

Growatt has a full production line of inverters from 1kW to 1.26MW, together with our smart energy management system, which are applicable for residential & commercial roof and ground plants. In residential application, Growatt provides more efficient and lighter

inverters, winning a more extensive global market coverage compared with competitors, while offering simple and more intelligent experience for home users. In utility scale and large power station, more stable and effective inverters together with smart energy management system, also give customers more cost competitive advantage.

Together with the efficient inverters, Growatt provides every customer excellent pre-sales and after-sales service, to ensure the matching products for customized demands, perfect product application service, and prompt maintenance guide. For customers, Growatt is more than just a supplier, but a more reliable partner.

High yield

Maximum efficiency over **99.06%**

MPPT efficiency over **99.5%**

- MTL-string technology
- Leading Transformerless
- full - range product
- Convection without fan
- High power density
- High quality production

Safe

internal DC switch protection

Simple

Compact design with light weight
Easily accessible front wiring compartment

Communication

RS485 RS232 WIFI GPRS
PV monitoring system



About Growatt

Growatt New Energy Technology Co., Ltd was established on May 2010, a professional and vigorous new energy company focusing on photovoltaic inverters. Until now, Growatt has reached over 2.7GW installation worldwide, famous as a world leading manufacturer of cost-effective photovoltaic inverters with high efficiency.

Our Products

Growatt offers a full line of solar inverters from 1KW to 1.26MW, together with our smart energy monitoring and managing systems, which are completely applicable for residential, commercial roof, utility-scale plant, and small off-grid system. Until now, Growatt has reached over 2.7GW installation in Europe, America, Africa, and Asia Pacific. To be worth raising, Growatt has been the largest inverter exporter for 5 years, being the most popular Chinese inverter supplier in international market.

Our Achievement

At the start of 2012, Sequoia Capital and China Merchants have 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 "TOP 5 Inverter Suppliers in China" "2013 Top 10 Enterprises of Innovation in China" "Equipment China-Award of Innovation Product Pioneer" "2014 Top 10 String Inverter Manufactures in China" "2015 Top 10 String Inverter Manufactures in China"etc.

Growatt, with big steps, is developing to be the Growatt Group, which will consist of 6 business departments, i.e. 1-40kW string inverters, 100kW-1.26MW central inverters, solar system EPC, electric vehicle charger, backup energy system, and investment business dept., and determined into be the leader in the power electronics industry.

Our R&D and Service Team

With a R&D team more than 100 engineers, 40% of the staff, who has been deeply engaged in the photovoltaic industry for 10 years, Growatt takes the mission to increase the inverter availability and efficiency, putting continuous innovation to make Growatt inverter 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, Shenzhen, Hongkong, and Beijing.

Certification



With world-class components suppliers

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.

Mos IGBT



IC

Fuse



Capacitor



Current Transducer



Relay



Diode



MCU



Single Phase Inverter

Growatt 1000-S/1500-S/2000-S/3000-S

Growatt 2500MTL-S/3000MTL-S

Growatt 3600MTL-S/4200MTL-S/5000MTL-S/5500MTL-S

Growatt 2000HF/3000HF

Growatt 5000HF



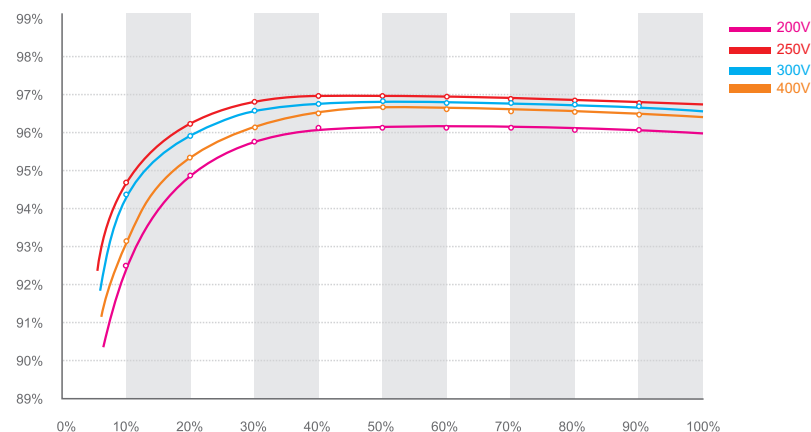


Growatt 1000-S/1500-S/2000-S/3000-S

Leading - edge Technology

- Maximum efficiency of 97% and wide input voltage range
- Internal DC switch
- Transformerless GT topology
- Compact design
- Ethernet / RF technology / WiFi
- Sound control
- Easy installation
- Comprehensive Growatt warranty program

Growatt 1500-S efficiency



Datasheet	Growatt 1000-S	Growatt 1500-S	Growatt 2000-S	Growatt 3000-S
Input data (DC)				
Max. recommended PV power (for module STC)	1300W	1900W	2300W	3400W
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/ 2
Output (AC)				
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; range	220,230,240V; 180Vac-280Vac	220,230,240V; 180Vac-280Vac	220,230,240V; 180Vac-280Vac	220,230,240V; 180Vac-280Vac
AC grid frequency; range	50,60 Hz;±5 Hz	50,60 Hz;±5 Hz	50,60 Hz;±5 Hz	50,60 Hz;±5 Hz
Power factor	1	1	1	1
THDI	<3%	<3%	<3%	<3%
AC connection	Single phase	Single phase	Single phase	Single phase
Efficiency				
Max. efficiency	97%	97%	97%	97%
Euro weighted efficiency	95.5%	96.5%	96.5%	96.5%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%
Protection Devices				
DC reverse polarity protection	yes	yes	yes	yes
DC switch rating for each MPPT	opt	opt	opt	opt
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				
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 with derating above 45°C	- 25°C ... +60°C with derating above 45°C	- 25°C ... +60°C with derating above 45°C	- 25°C ... +60°C with derating above 45°C
Noise emission (typical)	≤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
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	IP 65	IP 65	IP 65	IP 65
Relative humidity	100%	100%	100%	100%
Features				
DC connection	H4	H4	H4	H4
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, CEI0-21, VDE-AR-N4105, EN50438, CQC

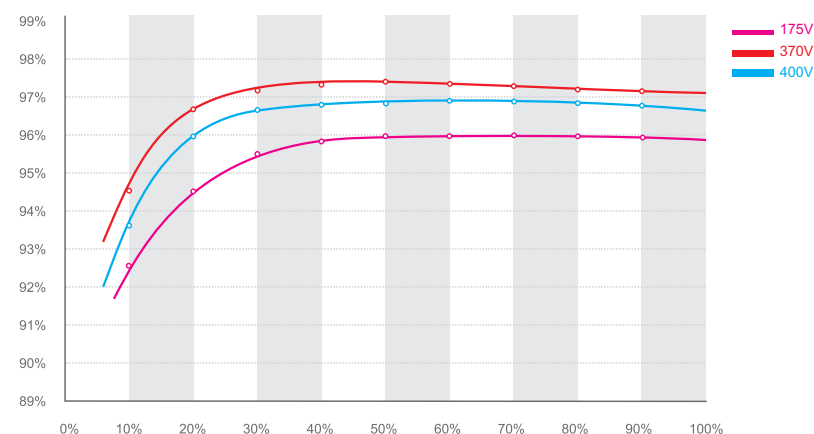


Growatt 2500MTL-S/3000MTL-S

Leading - edge Technology

- Double MPPT Tracker, MPPT tracking accuracy more than 99.5%
- Max. Efficiency 97.6%, European Efficiency 97.4%
- Integrated DC switch for added safety protection
- Transformerless design and high power density, offer lighter and more convenient installation
- 5 years standard warranty
- Power factor continuously adjustable
- Flexible communication connection, support RF, WiFi, Ethernet
- Comply with European, Asia-Pacific safety regulations

Growatt 3000MTL-S efficiency



Datasheet	Growatt 2500MTL-S	Growatt 3000MTL-S
Input Data		
Max. recommended PV power (for module STC)	2900W	3500W
Max. DC voltage	500V	500V
Start voltage	100V	100V
PV voltage range	70V-500V	70V-500V
MPP work voltage range/ nominal voltage	80V-500V /360V	80V-500V /360V
Full load dc voltage range	130V-450V	160V-450V
Max. input current of tracker A/ tracker B	10A/10A	10A/10A
Max. input current per string of tracker A/tracker B	10A/10A	10A/10A
Number of independent MPP trackers / strings per MPP tracker	2/1	2/1
Output (AC)		
Rated AC output power	2500W	3000W
Max. AC apparent power	2500VA	3000VA
Max. output current	11.3A	13.6A
AC nominal voltage; range	220V/230V /240V; 180Vac-280Vac	220V/230V/240V;180Vac - 280Vac
AC grid frequency; range	50Hz,60Hz /± 5Hz	50Hz,60Hz /± 5Hz
Phase factor at rated power	1	1
Displacement power factor, configurable	0.8leading...0.95lagging	0.8leading...0.95lagging
THDI	<3%	<3%
AC connection	Single phase	Single phase
Efficiency		
Max. efficiency	97.6%	97.6%
Euro weighted efficiency	97%	97%
MPPT efficiency	99.5%	99.5%
Protection Devices		
DC reverse polarity protection	yes	yes
DC switch rating for each MPPT	yes	yes
Output over current protection	yes	yes
Output over voltage protection-varistor	yes	yes
Ground fault monitoring	yes	yes
Grid monitoring	yes	yes
Integrated all - pole sensitive leakage current monitoring unit	yes	yes
General Data		
Dimensions (W / H / D) in mm	355*419*138	355*419*138
Weight	14KG	14KG
Operating temperature range	- 25°C ... +60°C	- 25°C ... +60°C
Noise emission (typical)	≤25 dB(A)	≤25 dB(A)
Altitude	2000m without derating	2000m without derating
Self-Consumption night	< 0.5 W	< 0.5 W
Topology	Transformerless	Transformerless
Cooling concept	Natural	Natural
Environmental Protection Rating	IP65	IP65
Relative humidity	100%	100%
Features		
DC connection	H4/MC4(opt)	H4/MC4(opt)
AC connection	Connector	Connector
Display	LCD	LCD
Interfaces: RS232 / RF / Wi-Fi / LAN/GPRS	yes / opt / opt / opt /opt	yes / opt / opt / opt /opt
Warranty: 5 years / 10 years	yes / opt	yes / opt
Certificates and Approvals		
CE, IEC62109, G83, VDE0126-1-1, G59, AS4777, AS/NZS 3100, CEI0-21, VDE-AR-N4105, EN50438, CQC		

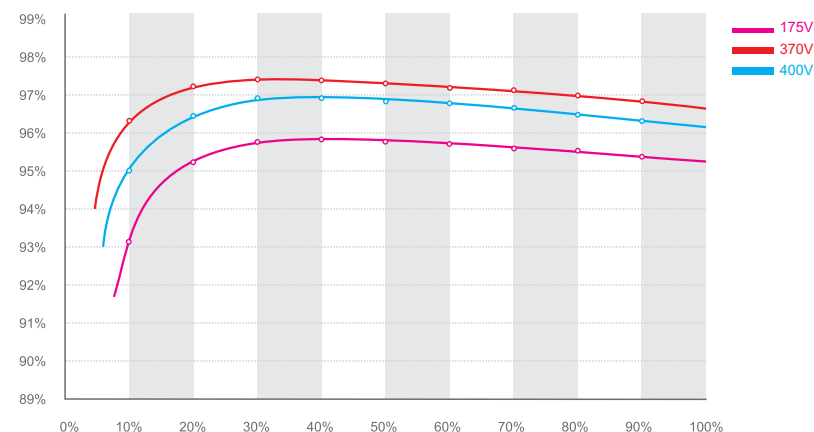


Growatt 3600MTL-S/4200 MTL-S/5000MTL-S/5500MTL-S

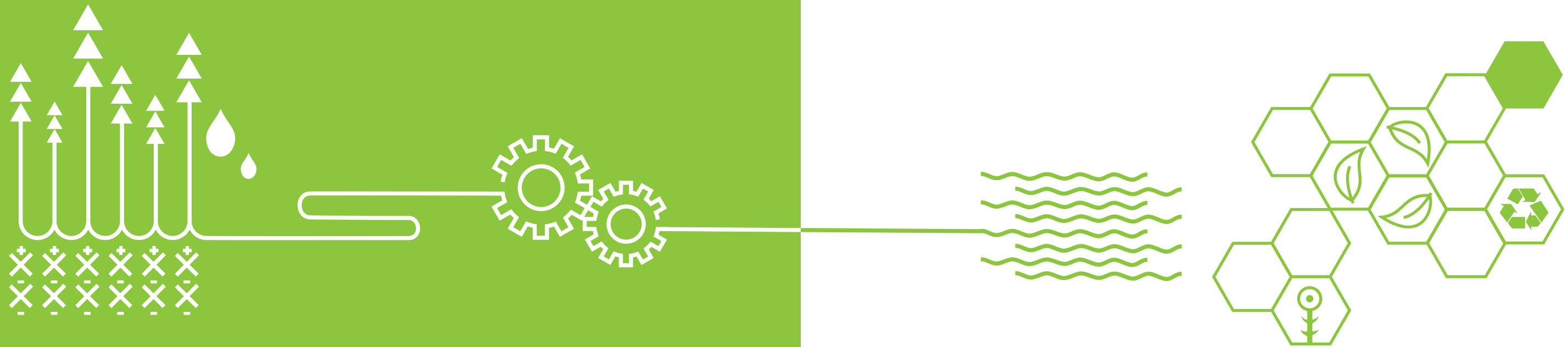
Leading - edge Technology

- 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
- 5 years standard warranty
- Power factor continuously adjustable
- Flexible communication connection, support RF, WiFi, Ethernet
- Comply with European, Asia-Pacific safety regulations

Growatt 5000MTL-S efficiency



Datasheet	Growatt 3600MTL-S	Growatt 4200MTL-S	Growatt 5000MTL-S	Growatt 5500MTL-S
Input Data				
Max. recommended PV power (for module STC)	4100W	4800W	5300W	5750W
Max. DC voltage	550V	550V	550V	550V
Start voltage	100V	100V	100V	100V
PV voltage range	70V-550V	70V-550V	70V-550V	70V-550V
MPP work voltage range/nominal voltage	80V-550V /360V	80V-550V /360V	80V-550V /360V	80V-550V /360V
Full load dc voltage range	190V-500V	150V-500V	160V-500V	175V-500V
Max. input current of tracker A/tracker B	10A/10A	15A/15A	15A/15A	15A/15A
Max. input current per string of tracker A/tracker B	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
Output (AC)				
Rated AC output power	3600W	4200W	4600W	5000W
Max. AC apparent power	3600VA	4200VA	4600VA	5000VA
Max. output current	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
AC grid frequency; range	50Hz,60Hz /± 5Hz	50Hz,60Hz /± 5Hz	50Hz,60Hz /± 5Hz	50Hz,60Hz /± 5Hz
Phase factor at rated power	1	1	1	1
Displacement power factor, configurable	0.8leading... 0.95lagging	0.8leading... 0.95lagging	0.8leading... 0.95lagging	0.8leading... 0.95lagging
THDI	<3%	<3%	<3%	<3%
AC connection	Single phase	Single phase	Single phase	Single phase
Efficiency				
Max. efficiency	97.9%	97.9%	97.9%	97.9%
Euro weighted efficiency	97.4%	97.4%	97.4%	97.4%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%
Protection Devices				
DC reverse polarity protection	yes	yes	yes	yes
DC switch rating for each MPPT	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				
Dimensions (W / H / D) in mm	355*419*138	355*419*138	355*374*158	355*374*158
Weight	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
Noise emission (typical)	≤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
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
Relative humidity	100%	100%	100%	100%
Features				
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, IEC62109, G83, VDE0126-1-1, G59, AS4777, AS/NZS 3100, CEI0-21, VDE-AR-N4105, EN50438, CQC				



Three Phase Inverter

Growatt 4000UE / 5000UE / 6000UE

Growatt 7000UE / 8000UE / 9000UE

Growatt 10000UE / 12000UE / 18000UE / 20000UE

Growatt 30000TL3 / 33000TL3 / 40000TL3



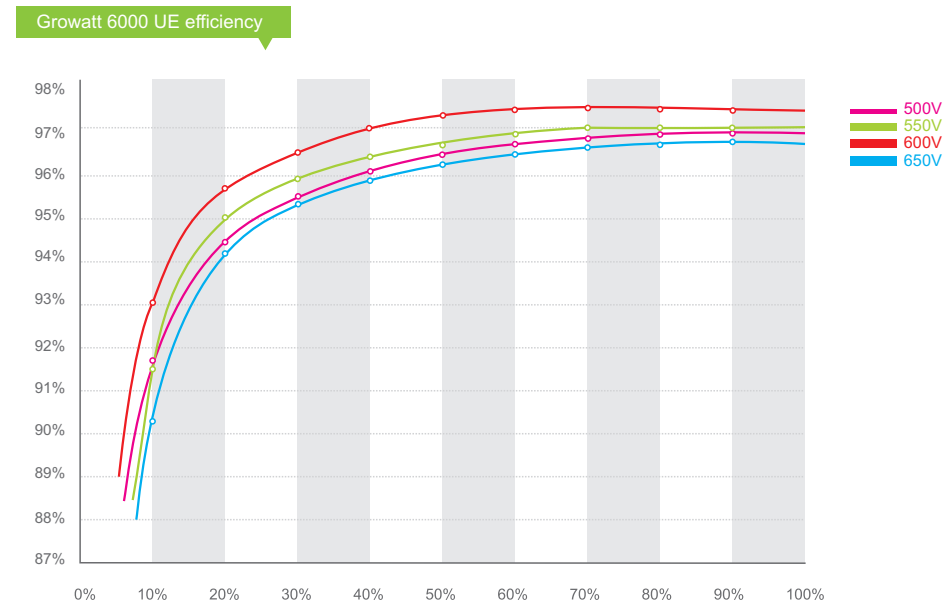
Growatt 4000UE / 5000UE / 6000UE

Leading - edge Technology

- DC input voltage up to 800V
- Compact design
- Easy installation
- Maximum efficiency of 97.5%
- Multi MPP controller
- Comprehensive Growatt warranty program
- Internal DC switch
- Ethernet / RF technology / WiFi
- Transformerless
- Sound control

Europe / Australia ENS

- Simple national setting of line supply monitoring(ENS)
- Multi - language display
- Easy country configuration
- Currently available for Germany, Austria, France, UK Switzerland, Italy and Spain etc.



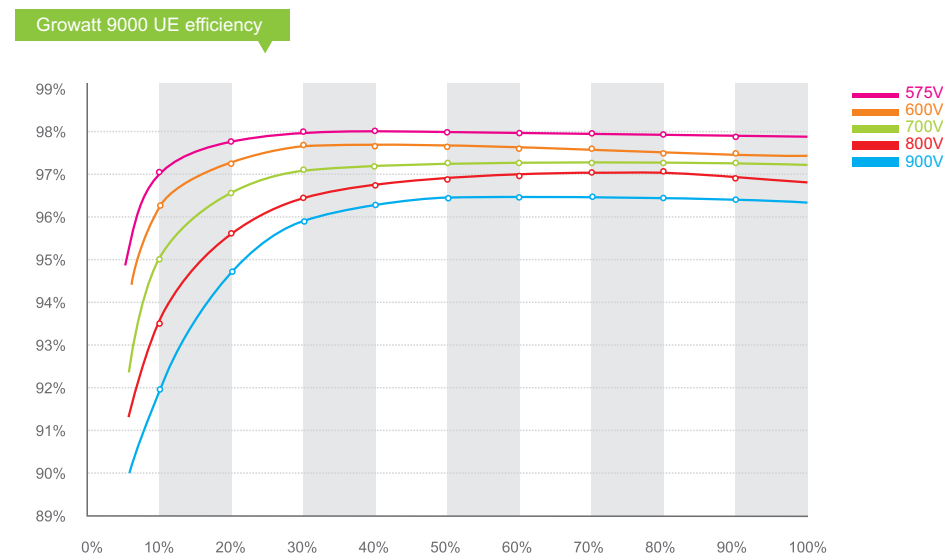
Datasheet	Growatt 4000UE	Growatt 5000UE	Growatt 6000UE
Input Data			
Max. DC power	4200W	5200W	6300W
Max DC voltage	800V	800V	800V
Start Voltage	150V	150V	150V
PV voltage range	140V - 800V	140V - 800V	140V - 800V
MPP voltage range / nominal voltage	200V - 800V / 580V	200V - 800V / 580V	200V - 800V / 580V
Full load DC voltage range	250V - 750V	300V - 750V	350V - 750V
Number of MPP trackers/strings per MPP tracker	2/1	2/1	2/1
Max. input current/per string	9A / 9A	9A / 9A	10A / 10A
Output (AC)			
Rated AC output power	4000W	5000W	6000W
Max. AC apparent power	4000VA	5000VA	6000VA
Max. output current	6.4A	7.9A	9.3A
AC nominal voltage; range	230V/400V; 184 - 275V	230V/400V; 184 - 275V	230V/400V; 184 - 275V
AC grid frequency; range	50-60Hz; 44-55Hz/54-65Hz	50-60Hz; 44-55Hz/54-65Hz	50-60Hz; 44-55Hz/54-65Hz
Power factor at rated power	1	1	1
Displacement power factor configurable	0.9 leading -0.9lagging	0.9 leading -0.9lagging	0.9 leading -0.9lagging
THDi (@Full load &THDv<1%)	<3%	<3%	<3%
AC connection	3/N/PE, 3W+PE(Opt)	3/N/PE, 3W+PE(Opt)	3/N/PE, 3W+PE(Opt)
Efficiency			
Max. efficiency	97%	97.4%	97.5%
Euro - eta	95.1%	96.3%	96.5%
MPPT efficiency	99.5%	99.5%	99.5%
Protection Devices			
DC reverse polarity protection	yes	yes	yes
DC switch for each MPPT	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)	433/566/195 mm	433/566/195 mm	433/566/195mm
Weight	30kg	31.1kg	31.1kg
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	IP 65	IP 65	IP 65
Altitude	2000m without derating	2000m without derating	2000m without derating
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/LAN/RF/WiFi/GPRS	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
Certificates and Approvals			
CE, VDE0126-1-1, VDE-AR-N4105, IEC 62109-1/-2, C-tick, AS/NZS 3100, AS4777, EN61000-6-2, EN61000-6-3, IEC61727, IEC62116, G83, EN50438			



Growatt 7000UE / 8000UE / 9000UE

Leading - edge Technology

- DC input voltage up to 1000V
- Compact design
- Sound control
- Maximum efficiency of 98%
- Multi MPP controller
- Easy installation
- Internal DC switch
- MTL - String
- Comprehensive Growatt warranty program
- Transformerless
- Ethernet / RF technology / WiFi



Datasheet	Growatt 7000UE	Growatt 8000UE	Growatt 9000UE
Input Data			
Max. DC power	7700W	8800W	9900W
Max DC voltage	1000V	1000V	1000V
Start Voltage	350V	350V	350V
PV voltage range	180V - 1000V	180V - 1000V	180V - 1000V
MPP voltage range / nominal voltage	300V - 1000V / 600V	300V - 1000V / 600V	300V - 1000V / 600V
Number of MPP trackers/ strings per MPP tracker	2/2	2/2	2/2
Max. input current	15A / 15A	15A / 15A	15A / 15A
Max. input current per string	15A	15A	15A
Output (AC)			
Rated AC output power	7KW	8KW	9KW
Max. AC apparent power	7.0KVA	8.0KVA	9.0KVA
Max. output current	11.7A	13.3A	15A
AC nominal voltage; range	230V/400V; 184 - 275V	230V/400V; 184 - 275V	230V/400V; 184 - 275V
AC grid frequency; range	50-60Hz; 44-55Hz/54-65Hz	50-60Hz; 44-55Hz/54-65Hz	50-60Hz; 44-55Hz/54-65Hz
Power factor at rated power	1	1	1
Displacement power factor configurable	0.8 leading -0.8lagging	0.8 leading -0.8lagging	0.8 leading -0.8lagging
THDi (@Full load &THDv<1%)	<3%	<3%	<3%
AC connection	3/N/PE, 3W+PE(Opt)	3/N/PE, 3W+PE(Opt)	3/N/PE, 3W+PE(Opt)
Efficiency			
Max. efficiency	98%	98%	98%
Euro - eta	97.0%	97.2%	97.5%
MPPT efficiency	99.5%	99.5%	99.5%
Protection Devices			
DC reverse polarity protection	yes	yes	yes
DC switch for each MPPT	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)	490/740/235 mm	490/740/235 mm	490/740/235 mm
Weight	41kg	41kg	41kg
Operating temperature range	-25 °C ... +60 °C	-25 °C ... +60 °C	-25 °C ... +60 °C
Noise emission (typical)	≤55 dB(A)	≤ 55 dB(A)	≤ 55 dB(A)
Self-Consumption (night)	< 0.5W	< 0.5W	< 0.5W
Topology	Transformerless	Transformerless	Transformerless
Cooling concept	Smart cooling	Smart cooling	Smart cooling
Environmental Protection Rating	IP 65	IP 65	IP 65
Altitude	2000m without derating	2000m without derating	2000m without derating
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/ LAN/RF/WiFi/GPRS	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
Certificates and Approvals			
VDE-AR-N4105, CE, VDE 0126-1-1, IEC 62109-1/-2, AS4777, AS/NZS 3100, IEC61727, IEC62116, G83, EN50438			



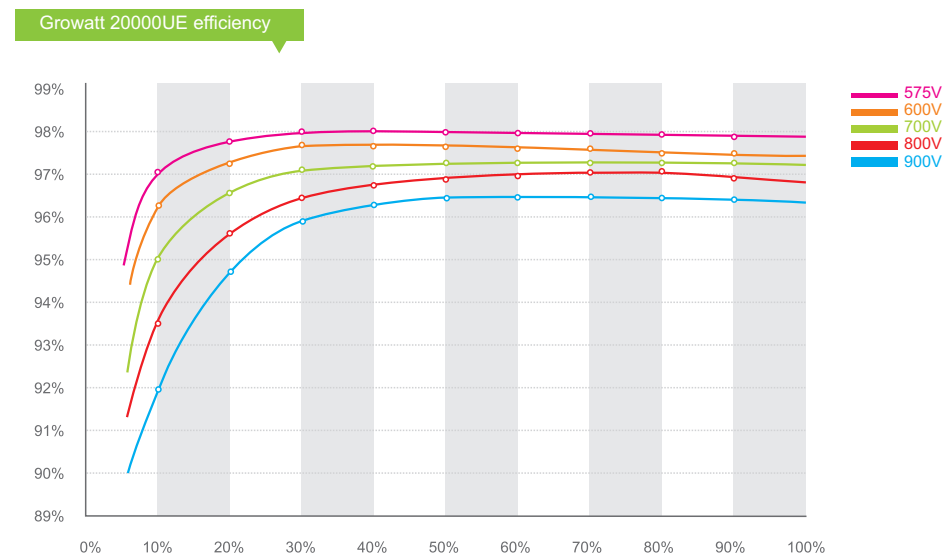
Growatt 10000UE / 12000UE / 18000UE / 20000UE

Leading - edge Technology

- DC input voltage up to 1000V
- Compact design
- Sound control
- Maximum efficiency of 98%
- Multi MPP controller
- Easy installation
- Internal DC switch
- MTL - String
- Comprehensive Growatt warranty program
- Transformerless
- Ethernet / RF technology / WiFi

Europe / Australia ENS

- Simple national setting of line supply monitoring(ENS)
- Multi - language display
- Easy country configuration
- Currently available for Germany, Austria, France, UK Switzerland, Italy and Spain etc.



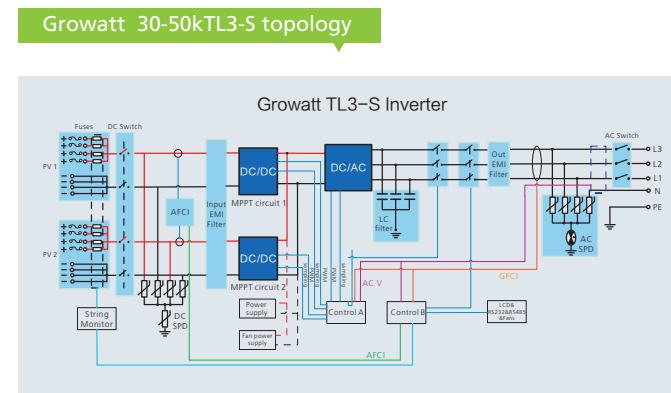
Datasheet	Growatt 10000UE	Growatt 12000UE	Growatt 18000UE	Growatt 20000UE
Input Data				
Max. DC power	11000W	13200W	19800W	22000W
Max DC voltage	1000V	1000V	1000V	1000V
Start Voltage	350V	350V	350V	350V
PV voltage range	180V - 1000V	180V - 1000V	180V - 1000V	180V - 1000V
MPP voltage range / nominal voltage	300V - 1000V / 600V	300V - 1000V / 600V	300V - 1000V / 600V	300V - 1000V / 600V
Full load DC voltage range	400V - 800V	400V - 800V	400V - 800V	400V - 800V
Number of MPP trackers/ strings per MPP tracker	2/2	2/2	2/3	2/3
Max. input current	15A / 15A	17A / 17A	23A / 23A	26A / 26A
Max. input current per string	20A	20A	20A	20A
Output (AC)				
Rated AC output power	10KW	12KW	18KW	20KW
Max. AC apparent power	10KVA	12KVA	18KVA	20KVA
Max. output current	16A	19A	28.6A	32A
AC nominal voltage; range	230V/400V 184 - 275V	230V/400V 184 - 275V	230V/400V 184 - 275V	230V/400V 184 - 275V
AC grid frequency; range	50-60Hz; 44-55Hz/54-65Hz	50-60Hz; 44-55Hz/54-65Hz	50-60Hz; 44-55Hz/54-65Hz	50-60Hz; 44-55Hz/54-65Hz
Power factor at rated power	1	1	1	1
Displacement power factor configurable	0~0.8leading - 0~0.8lagging	0~0.8leading - 0~0.8lagging	0~1leading -0~1lagging	0~1leading - 0~1lagging
THDI	<3%	<3%	<3%	<3%
AC connection	3/N/PE, 3W+PE(Opt)	3/N/PE, 3W+PE(Opt)	3/N/PE, 3W+PE(Opt)	3/N/PE 3W+PE(Opt)
Efficiency				
Max. efficiency	98%	98%	98%	98%
Euro - eta	97.5%	97.5%	97.5%	97.5%
MPPT efficiency	99.5%	99.5%	99.5%	99.5%
Protection Devices				
DC reverse polarity protection	yes	yes	yes	yes
DC switch for each MPPT	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				
Dimensions (W / H / D)	490/740/235 mm	490/740/235 mm	570/740/235 mm	570/740/235 mm
Weight	41kg	41kg	60kg	60kg
Operating temperature range	-25 °C ... +60 °C (with derating above45°C)	-25 °C ... +60 °C (with derating above45°C)	-25 °C ... +60 °C (with derating above45°C)	-25 °C ... +60 °C (with derating above45°C)
Noise emission (typical)	≤ 55 dB(A)	≤ 55 dB(A)	≤ 55 dB(A)	≤ 55 dB(A)
Self-Consumption (night)	<0.5W	<0.5W	<0.5W	<0.5W
Standby consumption	12W	12W	12W	12W
Topology	Transformerless	Transformerless	Transformerless	Transformerless
Cooling concept	Smart cooling	Smart cooling	Smart cooling	Smart cooling
Environmental Protection Rating	IP 65	IP 65	IP 65	IP 65
Altitude	2000m without derating	2000m without derating	2000m without derating	2000m without derating
Relative Humidity	0~100%	0~100%	0~100%	0~100%
Features				
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/R485/ LAN/RF/WiFi/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
Warranty:5 years / 10 years	yes / opt	yes / opt	yes / opt	yes / opt
Certificates and Approvals				



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
- Uses 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
- Optional AC switch / AFCI function
- Supporting AC power supply



Datasheet	Growatt 30000TL3-S	Growatt 33000TL3-S	Growatt 40000TL3-NS	Growatt 50000TL3-S
Input Data				
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
Output (AC)				
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	50/60Hz	50/60Hz	50/60Hz	50/60Hz
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
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 for each MPPT	yes	yes	yes	yes
AC Switch	opt	opt	opt	opt
DC Surge protection	Class II	Class II	Class II	Class II
Ground fault monitoring	yes	yes	yes	yes
Output short circuit protection	yes	yes	yes	yes
AC Surge protection	Class II	Class II	Class II	Class II
String Fuse protection	yes	yes	yes	yes
String fault monitoring	yes	yes	yes	yes
Anti-PID protection	yes	yes	yes	yes
AFCI protection	opt	opt	opt	opt
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 (with derating above45°C)	-25 °C ... +60 °C (with derating above45°C)	-25 °C ... +60 °C (with derating above45°C)	-25 °C ... +60 °C (with derating above45°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 without derating	4000m without derating	4000m without derating	4000m without derating
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, VFR 2014, CEI 0-21, CEI 0-16, VDE-AR-N4105, EN50438, G59/3, AS 4777, PEA, IEC 60529, IEC 60068, IEC 61683,				