



Solar inverters  
for Asia

Solar inverters  
for Europe

Solar inverters  
for America

Solar inverters  
for the Earth

GROWATT NEW ENERGY TECHNOLOGY CO.,LTD

Building B, Jiayu Industrial Zone, #28 Guanghui Road,  
Longteng Community, Shiyan, Baoan District,  
Shenzhen, P.R.China.

T + 86 755 2747 1900

F + 86 755 2749 1460

E [info@ginverter.com](mailto:info@ginverter.com)

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

Green Inverters from

**Growatt**  
powering tomorrow

## 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 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.

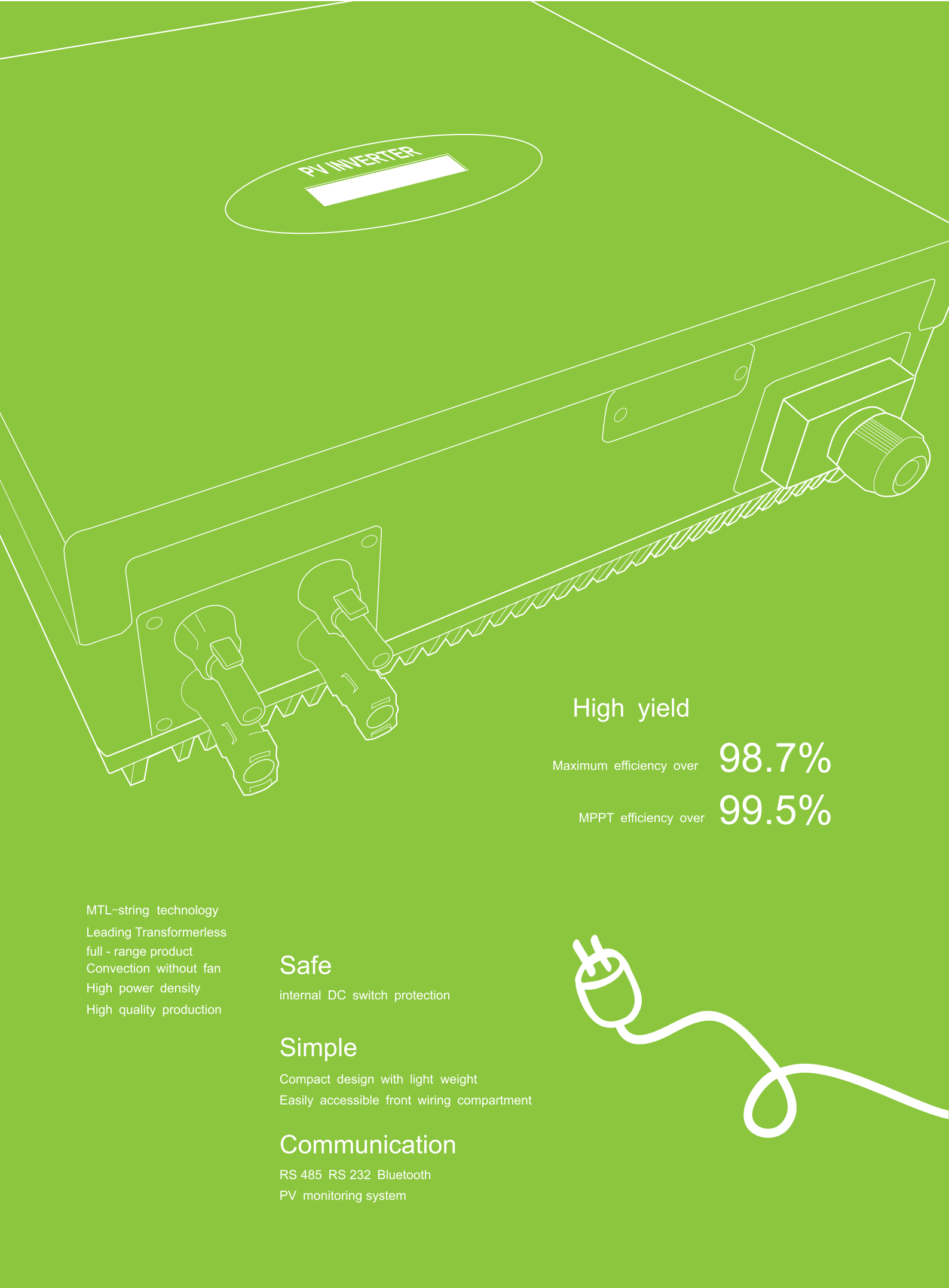
From 2010, Growatt start the R&D and sales for the photovoltaic inverter, until now Growatt has reached an installation of 600MW worldwide, quickly growing as the world leading supplier of cost-effective inverters with high efficiency.

Growatt has a full production line of inverters from 1kW to 1MW, together with our smart monitoring 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 monitoring 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.

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*David*



### High yield

Maximum efficiency over **98.7%**

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

RS 485 RS 232 Bluetooth  
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 nearly 600MW 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 monitoring systems, which are completely applicable for residential, commercial roof, utility-scale plant, and small off-grid system. Until now, Growatt has reached over 1.5GW installation in Europe, America, Africa, and Asia Pacific. To be worth raising, Growatt has been the largest inverter exporter for 3 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”ect.

Growatt, with big steps, is developing to be the Growatt Group, which will consist of 6 business departments, i.e. 1-20kW photovoltaic inverters, 100kW-1MW 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, Huston, Shenzhen, Hongkong, and Beijing.

## Certification



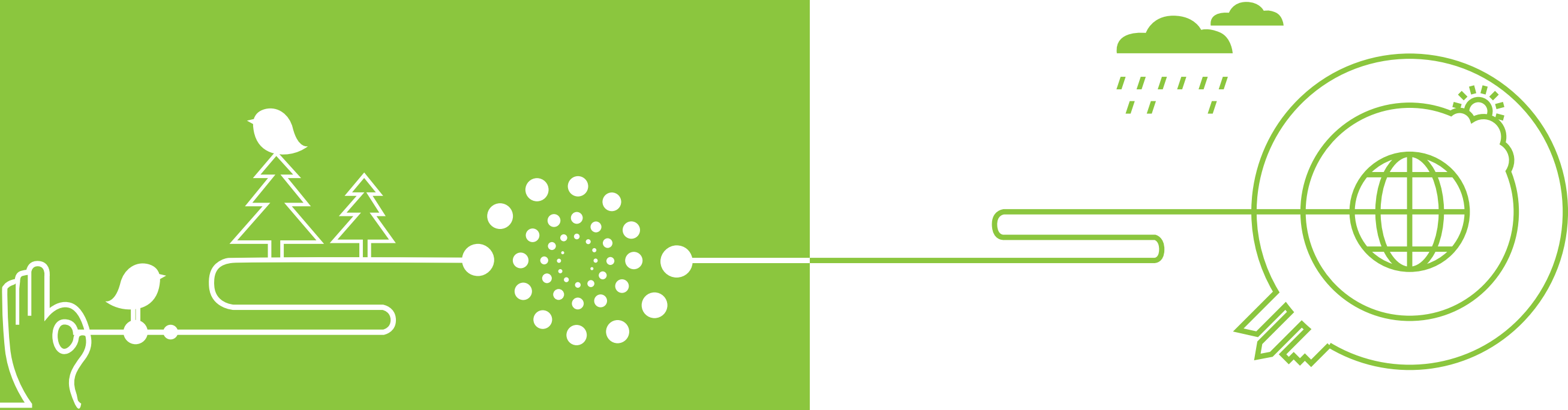
## With world-class components suppliers

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.



# Single Phase Inverter

- Growatt 1000S/1500S
- Growatt 1000/1500/2000/3000
- Growatt 4000/4400/5000
- Sungold 1000/1500/2000/3000
- Sungold 5000/5000S
- Growatt 2500MTL/3000MTL
- Growatt 3600MTL/4200MTL/5000MTLS/5000MTL
- Growatt 3600MTL-10/4200MTL-10/5000MTL-10/6000MTL-10
- Growatt 2000HF/2500HF/3000HF





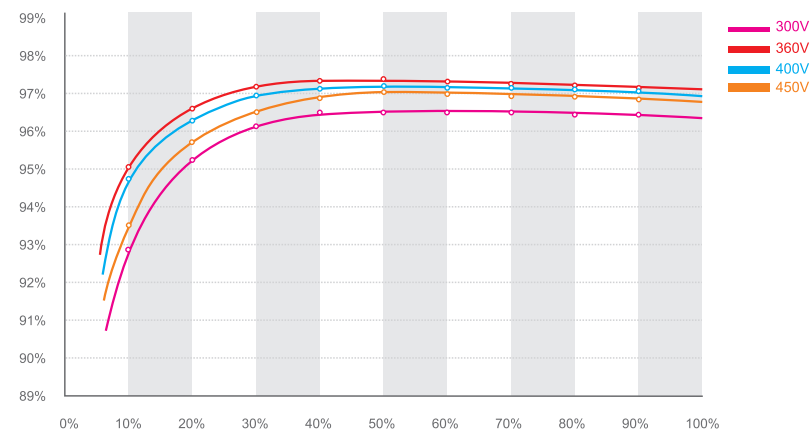


## Growatt 1000S / 1500S

### 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 1500S efficiency



| Datasheet                                                     | Growatt 1000S                 | Growatt 1500S                 |
|---------------------------------------------------------------|-------------------------------|-------------------------------|
| Input Data                                                    |                               |                               |
| Max. DC power                                                 | 1300W                         | 1900W                         |
| Max. DC voltage                                               | 450V                          | 450V                          |
| Start voltage                                                 | 80V                           | 80V                           |
| PV voltage range                                              | 70V - 450V                    | 70V - 450V                    |
| MPPT work voltage range/ nominal voltage                      | 70V-450V/180V                 | 70V-450V/250V                 |
| Full load dc voltage range                                    | 110V - 400V                   | 175V-400V                     |
| Number of MPP trackers /strings per MPP tracker               | 1 / 1                         | 1 / 1                         |
| Max. input current of tracker                                 | 10A                           | 10A                           |
| Max. input current per string of tracker                      | 10A                           | 10A                           |
| Output (AC)                                                   |                               |                               |
| Rated AC output power                                         | 1000W                         | 1600W                         |
| Max. AC power                                                 | 1000W                         | 1650W                         |
| Max. output current                                           | 4.6A                          | 7.5A                          |
| AC nominal voltage; range                                     | 220V/230V/240V; 180Vac-280Vac | 220V/230V/240V; 180Vac-280Vac |
| AC grid frequency ;range                                      | 50, 60Hz; ± 5Hz               | 50, 60Hz; ± 5Hz               |
| Power factor                                                  | 1                             |                               |
| THDI                                                          | <3%                           | <3%                           |
| AC connection                                                 | Single phase                  | Single phase                  |
| Efficiency                                                    |                               |                               |
| Max. efficiency                                               | 97%                           | 97%                           |
| Euro-eta                                                      | 95.5%                         | 96.5%                         |
| MPPT efficiency                                               | 99.5%                         | 99.5%                         |
| Protection Devices                                            |                               |                               |
| DC reverse polarity protection                                | yes                           | yes                           |
| DC switch for each MPPT                                       | yes                           | yes                           |
| Output over current protection                                | yes                           | yes                           |
| Output overvoltage 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)                                        | 271/267/127 mm                | 271/267/127mm                 |
| Weight                                                        | 5 kg                          | 5 kg                          |
| Operating temperature range                                   | -25 °C ... +60 °C             | -25 °C ... +60 °C             |
| Noise emission (typical)                                      | ≤25 dB(A)                     | ≤25 dB(A)                     |
| Self-Consumption (night)                                      | < 0.5 W                       | < 0.5 W                       |
| Topology                                                      | Transformerless               | Transformerless               |
| Cooling concept                                               | Natural                       | Natural                       |
| Environmental Protection Rating                               | IP 65                         | IP 65                         |
| Altitude                                                      | 2000m without derating        | 2000m without derating        |
| Relative Humidity                                             | 0~100%                        | 0~100%                        |
| Features                                                      |                               |                               |
| DC connection                                                 | H4/MC4(opt)                   | H4/MC4(opt)                   |
| AC connection                                                 | Connector                     | Connector                     |
| Display                                                       | LCD                           | LCD                           |
| Interfaces: RS232/Ethernet /RF/WiFi                           | yes / opt/ opt / opt          | yes / opt/ opt / opt          |
| Warranty: 5 years / 10 years                                  | yes / opt                     | yes / opt                     |
| Certificates and Approvals                                    |                               |                               |
| CE, VDE 0126-1-1, IEC-62109, G83                              |                               |                               |



Growatt 1000 / 1500 / 2000 / 3000

Leading - edge Technology

- Maximum efficiency of 97.3% and wide input voltage range

■ Internal DC switch

■ Transformerless GT topology
- Compact design

■ MTL - String

■ Ethernet / RF technology / WiFi

■ Comprehensive Growatt warranty programi
- Sound control

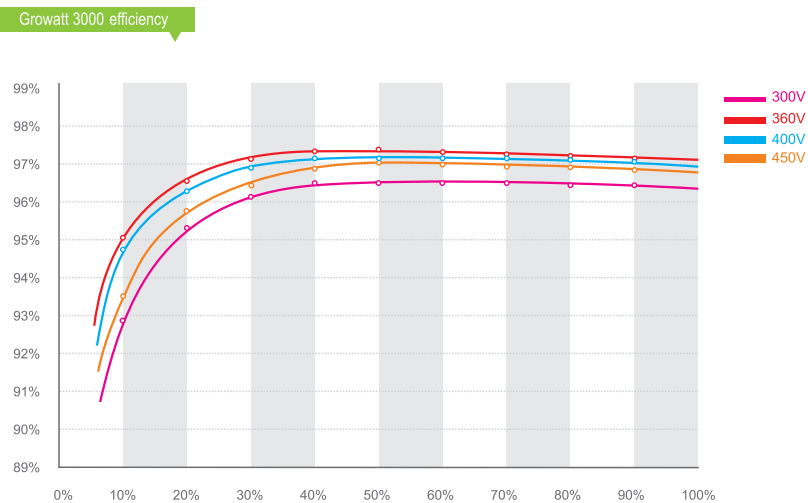
■ Easy installation

Europe ENS

- Simple national setting of line supply monitoring(ENS)

■ Easy country configuration
- Multi - language display

■ Currently available for Germany, Austria, France Switzerland, UK, Italy and Spain etc.



| Datasheet                                                     | Growatt 1000                  | Growatt 1500                  | Growatt 2000                  | Growatt 3000                  |
|---------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Input Data                                                    |                               |                               |                               |                               |
| Max. DC power                                                 | 1300W                         | 1900W                         | 2500W                         | 3300W                         |
| Max. DC voltage                                               | 450V                          | 450V                          | 500V                          | 500V                          |
| Start voltage                                                 | 90V                           | 90V                           | 120V                          | 120V                          |
| PV voltage range                                              | 70V - 450V                    | 70V - 450V                    | 90V - 500V                    | 90V - 500V                    |
| MPPT work voltage range/ nominal voltage                      | 70V-450V/180V                 | 70V-450V/360V                 | 95V-500V/360V                 | 95V-500V/360V                 |
| Full load dc voltage range                                    | 110V - 400V                   | 175V - 400V                   | 195V-450V                     | 250V - 450V                   |
| Number of MPP trackers /strings per MPP tracker               | 1 / 1                         | 1 / 1                         | 1 / 2                         | 1 / 2                         |
| Max. input current of tracker                                 | 10A                           | 10A                           | 12A                           | 15A                           |
| Max. input current per string of tracker                      | 10A                           | 10A                           | 12A                           | 15A                           |
| Output (AC)                                                   |                               |                               |                               |                               |
| Rated AC output power                                         | 1000W                         | 1600W                         | 2000W                         | 2850W                         |
| Max. AC power                                                 | 1100W                         | 1650W                         | 2200W                         | 2850W                         |
| Max. output current                                           | 5.5A                          | 8A                            | 11A                           | 15A                           |
| 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                                      | 50, 60Hz;± 5Hz                | 50, 60Hz;± 5Hz                | 50, 60Hz;± 5Hz                | 50, 60Hz;± 5Hz                |
| 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%                           | 97.3%                         | 97.3%                         |
| Euro-eta                                                      | 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 for each MPPT                                       | yes                           | yes                           | yes                           | yes                           |
| Output over current protection                                | yes                           | yes                           | yes                           | yes                           |
| Output 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)                                        | 360/329/132 mm                | 360/329/132 mm                | 360/329/132 mm                | 360/329/132 mm                |
| Weight                                                        | 11.5 kg                       | 11.5 kg                       | 11.7 kg                       | 12.2kg                        |
| 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)                     |
| 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                         |
| 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/RS485/ Ethernet/RF/WiFi                     | 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, VDE 0126-1-1, G83, RD1663, EN50438, VDE-AR-N4105, IEC 62109, ENEL-Guide, CEI 0-21



Growatt 4000 / 4400 / 5000

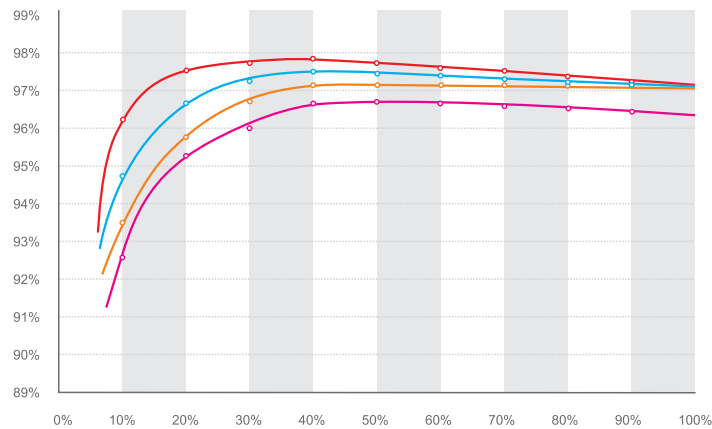
Leading - edge Technology

- Maximum efficiency of 97.8% and wide input voltage range
  - Internal DC switch
  - Comprehensive Growatt warranty program
- Compact design
  - Ethernet / RF technology / WiFi
  - Transformerless GT topology
- Sound control
  - Easy installation
  - MTL - String

Europe ENS

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

Growatt 5000 efficiency



| Datasheet                                                                  | Growatt 4000                  | Growatt 4400                  | Growatt 5000                  |
|----------------------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Input Data                                                                 |                               |                               |                               |
| Max. DC power                                                              | 4600W                         | 5000W                         | 5800W                         |
| Max. DC voltage                                                            | 580V                          | 580V                          | 580V                          |
| Start voltage                                                              | 120V                          | 120V                          | 120V                          |
| PV voltage range                                                           | 90V - 580V                    | 90V - 580V                    | 90V - 580V                    |
| MPPT work voltage range/nominal voltage                                    | 95V-580V/360V                 | 95V-580V/360V                 | 95V-580V/360V                 |
| Full load dc voltage range                                                 | 250V - 500V                   | 250V - 500V                   | 250V - 500V                   |
| Number of MPP trackers /strings per MPP tracker                            | 1 / 3                         | 1 / 3                         | 1 / 3                         |
| Max. input current of tracker                                              | 20A                           | 20A                           | 20A                           |
| Max. input current per string of tracker                                   | 20A                           | 20A                           | 20A                           |
| Output (AC)                                                                |                               |                               |                               |
| Rated AC output power                                                      | 3680W                         | 4200W                         | 4600W                         |
| Max. AC power                                                              | 4000W                         | 4400W                         | 5000W                         |
| Max. output current                                                        | 16A                           | 21A                           | 25A                           |
| AC nominal voltage; range                                                  | 220V/230V/240V; 180Vac-280Vac | 220V/230V/240V; 180Vac-280Vac | 220V/230V/240V; 180Vac-280Vac |
| AC grid frequency ;range                                                   | 50, 60Hz;±5Hz                 | 50, 60Hz;±5Hz                 | 50, 60Hz;±5Hz                 |
| Power factor                                                               | 1                             | 1                             | 1                             |
| THDI                                                                       | <3%                           | <3%                           | <3%                           |
| AC connection                                                              | Single phase                  | Single phase                  | Single phase                  |
| Efficiency                                                                 |                               |                               |                               |
| Max.efficiency                                                             | 97.8%                         | 97.8%                         | 97.8%                         |
| Euro-eta                                                                   | 97.4%                         | 97.4%                         | 97.4%                         |
| 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 over current protection                                             | yes                           | yes                           | yes                           |
| Output 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)                                                     | 406/406/192 mm                | 406/406/192 mm                | 406/406/192 mm                |
| Weight                                                                     | 21kg                          | 21kg                          | 21kg                          |
| 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)                     |
| 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                                                          | 100%                          | 100%                          | 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/RS485/ Ethernet/RF/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, VDE 0126-1-1, DK5940, G83, G59, RD1663, EN50438, IEC 62109, ENEL-Guide |                               |                               |                               |



Sungold 1000 / 1500 / 2000 / 3000

Leading - edge Technology

- Maximum efficiency of 97.3% and wide input voltage range

■ Transformerless GT topology

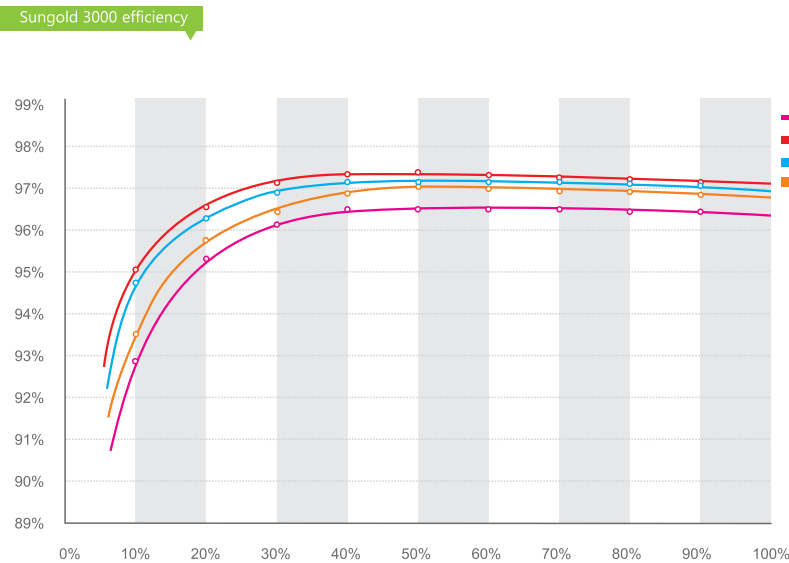
■ Compact design

■ MTL - String
- Ethernet / RF technology / WiFi

■ Sound control

■ Easy installation

■ Comprehensive Growatt warranty program



| Datasheet                                                     | Sungold 1000                | Sungold 1500                | Sungold 2000                | Sungold 3000                |
|---------------------------------------------------------------|-----------------------------|-----------------------------|-----------------------------|-----------------------------|
| Input Data                                                    |                             |                             |                             |                             |
| Max. DC power                                                 | 1300W                       | 1900W                       | 2500W                       | 3300W                       |
| Max. DC voltage                                               | 450V                        | 450V                        | 500V                        | 500V                        |
| Start voltage                                                 | 90V                         | 150V                        | 150V                        | 150V                        |
| PV voltage range                                              | 70V - 450V                  | 100V - 450V                 | 100V - 500V                 | 100V - 500V                 |
| MPPT work voltage range / nominal voltage                     | 70V-450V/ 180V              | 120V-450V/ 360V             | 120V-500V/ 360V             | 120V-500V/ 360V             |
| Full load dc voltage range                                    | 110V - 400V                 | 175V - 400V                 | 195V - 450V                 | 250V - 450V                 |
| Number of MPP trackers /strings per MPP tracker               | 1 / 1                       | 1 / 1                       | 1 / 2                       | 1 / 2                       |
| Max. input current of tracker                                 | 10A                         | 10A                         | 12A                         | 15A                         |
| Max. input current per string of tracker                      | 10A                         | 10A                         | 12A                         | 15A                         |
| Output (AC)                                                   |                             |                             |                             |                             |
| Rated AC output power                                         | 1000W                       | 1650W                       | 2000W                       | 2850W                       |
| Max. AC power                                                 | 1100W                       | 1650W                       | 2200W                       | 2850W                       |
| Max. output current                                           | 5.5A                        | 8A                          | 11A                         | 15A                         |
| AC nominal voltage; range                                     | 230V; 207Vac~263Vac         | 230V; 207Vac~263Vac         | 230V; 207Vac~263Vac         | 230V; 207Vac~263Vac         |
| AC grid frequency ;range                                      | 50, 60Hz;±5Hz               | 50, 60Hz;±5Hz               | 50, 60Hz;±5Hz               | 50, 60Hz;±5Hz               |
| 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%                         | 97.3%                       | 97.3%                       |
| Euro-eta                                                      | 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 for each MPPT                                       | yes                         | yes                         | yes                         | yes                         |
| Output over current protection                                | yes                         | yes                         | yes                         | yes                         |
| Output 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)                                        | 360/329/132 mm              | 360/329/132 mm              | 360/329/132 mm              | 360/329/132 mm              |
| Weight                                                        | 11.5kg                      | 11.5kg                      | 11.7kg                      | 12.2kg                      |
| 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)                   |
| 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                       |
| Altitude                                                      | 2000m without derating      | 2000m without derating      | 2000m without derating      | 2000m without derating      |
| Relative Humidity                                             | 100%                        | 100%                        | 100%                        | 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/RS485/Ethernet/RF/WiFi                      | 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, IEC62109, AS4777, AS/NZS 3100                             |                             |                             |                             |                             |



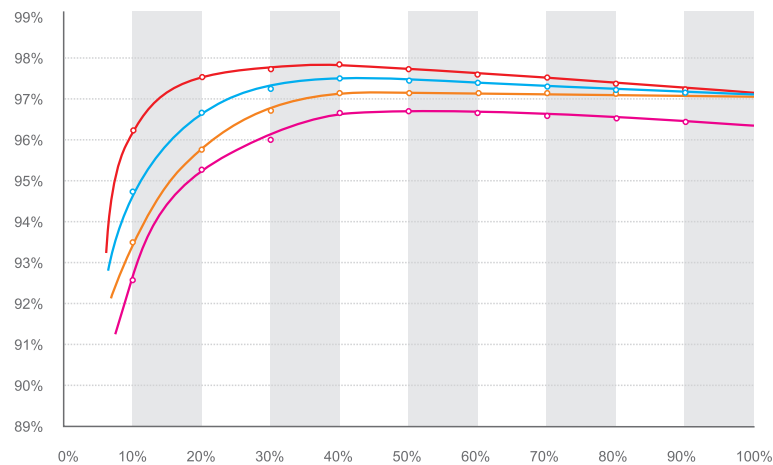


Sungold 5000S /5000

Leading - edge Technology

- Maximum efficiency of 97.8% and wide input voltage range
  - Transformerless GT topology
  - Compact design
  - MTL - String
- Ethernet / RF technology / WiFi
  - Sound control
  - Easy installation
  - Comprehensive Growatt warranty program

Sungold 5000 efficiency



| Datasheet                                                     | Sungold 5000S               | Sungold 5000                |
|---------------------------------------------------------------|-----------------------------|-----------------------------|
| Input Data                                                    |                             |                             |
| Max. DC power                                                 | 5300W                       | 5800W                       |
| Max. DC voltage                                               | 580V                        | 580V                        |
| Start voltage                                                 | 150V                        | 150V                        |
| PV voltage range                                              | 100V - 580V                 | 100V - 580V                 |
| MPPT work voltage range/ nominal voltage                      | 120V-580V/ 360V             | 120V-580V/ 360V             |
| Full load dc voltage range                                    | 250V - 500V                 | 250V - 500V                 |
| Number of MPP trackers/ strings per MPP tracker               | 1 / 3                       | 1 / 3                       |
| Max. input current of tracker                                 | 20A                         | 21A                         |
| Max. input current per string of tracker                      | 20A                         | 21A                         |
| Output (AC)                                                   |                             |                             |
| Rated AC output power                                         | 4600W                       | 5000W                       |
| Max. AC power                                                 | 4600W                       | 5000W                       |
| Max. output current                                           | 23A                         | 25A                         |
| AC nominal voltage; range                                     | 230V; 207Vac~263Vac         | 230V; 207Vac~263Vac         |
| AC grid frequency ;range                                      | 50, 60Hz;±5Hz               | 50, 60Hz;±5Hz               |
| Power factor                                                  | 1                           | 1                           |
| THDI                                                          | <3%                         | <3%                         |
| AC connection                                                 | Single phase                | Single phase                |
| Efficiency                                                    |                             |                             |
| Max.efficiency                                                | 97.8%                       | 97.8%                       |
| Euro-eta                                                      | 97.4%                       | 97.4%                       |
| MPPT efficiency                                               | 99.5%                       | 99.5%                       |
| Protection Devices                                            |                             |                             |
| DC reverse polarity protection                                | yes                         | yes                         |
| DC switch for each MPPT                                       | yes                         | yes                         |
| Output over current protection                                | yes                         | yes                         |
| Output overvoltage 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)                                        | 406/406/192 mm              | 406/406/192 mm              |
| Weight                                                        | 21kg                        | 21kg                        |
| Operating temperature range                                   | -25 °C ... +60 °C           | -25 °C ... +60 °C           |
| Noise emission (typical)                                      | ≤25 dB(A)                   | ≤25 dB(A)                   |
| Self-Consumption (night)                                      | < 0.5 W                     | < 0.5 W                     |
| Topology                                                      | Transformerless             | Transformerless             |
| Cooling concept                                               | Natural                     | Natural                     |
| Environmental Protection Rating                               | IP 65                       | IP 65                       |
| Altitude                                                      | 2000m without derating      | 2000m without derating      |
| Relative Humidity                                             | 100%                        | 100%                        |
| Features                                                      |                             |                             |
| DC connection                                                 | H4/MC4(opt)                 | H4/MC4(opt)                 |
| AC connection                                                 | Screw terminal              | Screw terminal              |
| Display                                                       | LCD                         | LCD                         |
| Interfaces: RS232/RS485/ Ethernet/RF/WiFi                     | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt |
| Warranty: 5 years / 10 years                                  | yes / opt                   | yes / opt                   |
| Certificates and Approvals                                    |                             |                             |
| CE, IEC62109, AS4777, AS/NZS 3100                             |                             |                             |

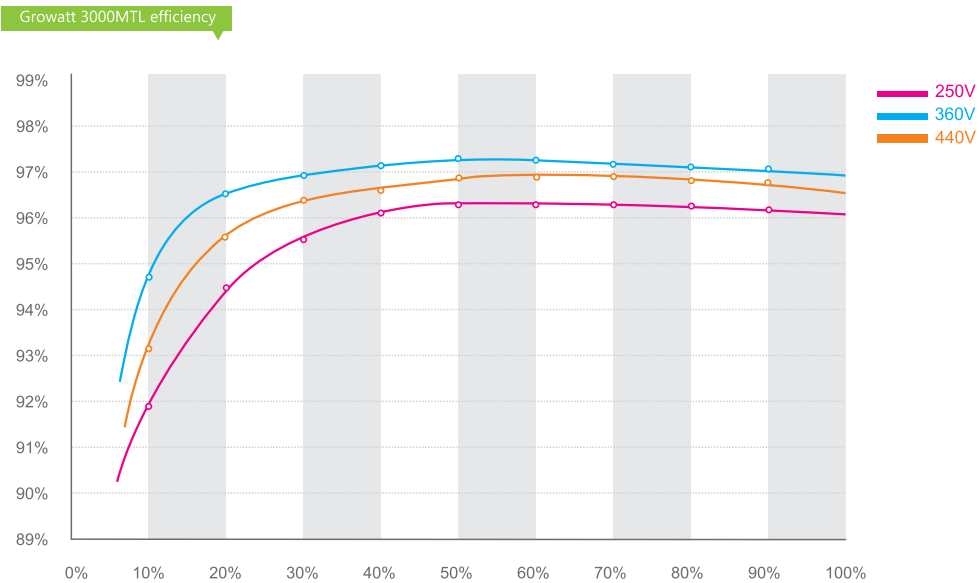




Growatt 2500 MTL / 3000 MTL

Leading - edge Technology

- Maximum efficiency of 97.5% and wide input voltage range
  - Internal DC switch
  - Transformerless GT topology
  - Compact design
- Sound control
  - Easy installation
  - MTL - String
  - Ethernet / RF technology / WiFi
- Simple national setting of line supply monitoring(ENS)
  - Easy country configuration
- Multi - language display
  - Currently available for Germany, Austria, France, UK, Austria, Switzerland, Italy and Spain etc.



| Datasheet                                                          | Growatt 2500 MTL            | Growatt 3000 MTL            |
|--------------------------------------------------------------------|-----------------------------|-----------------------------|
| Input Data                                                         |                             |                             |
| Max. DC power                                                      | 2900W                       | 3500W                       |
| Max. DC voltage                                                    | 500V                        | 500V                        |
| Start voltage                                                      | 120V                        | 120V                        |
| PV voltage range                                                   | 90V - 500V                  | 90V - 500V                  |
| MPPT work voltage range/nominal voltage                            | 95V-500V/360V               | 95V-500V/360V               |
| Full load dc voltage range                                         | 160V - 450V                 | 175V - 450V                 |
| Number of independent MPP inputs /strings per MPP input            | 2 / 1                       | 2 / 1                       |
| 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                   |
| Output (AC)                                                        |                             |                             |
| Rated AC output power                                              | 2500W                       | 3000W                       |
| Max. AC power                                                      | 2500W                       | 3000W                       |
| Max. output current                                                | 12.5A                       | 15A                         |
| AC nominal voltage; range                                          | 220V/230V/240V; 180V - 280V | 220V/230V/240V; 180V - 280V |
| AC grid frequency; range                                           | 50,60Hz;±5 Hz               | 50,60Hz;±5 Hz               |
| Power factor                                                       | 1                           | 1                           |
| THDI                                                               | <3%                         | <3%                         |
| AC connection                                                      | Single phase                | Single phase                |
| Efficiency                                                         |                             |                             |
| Max.efficiency                                                     | 97.5%                       | 97.5%                       |
| Euro-eta                                                           | 97%                         | 97%                         |
| MPPT efficiency                                                    | 99.5%                       | 99.5%                       |
| Protection Devices                                                 |                             |                             |
| DC reverse polarity protection                                     | yes                         | yes                         |
| DC switch for each MPPT                                            | yes                         | yes                         |
| Output over current protection                                     | yes                         | yes                         |
| Output overvoltage 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)                                             | 360/421/152 mm              | 360/421/152 mm              |
| Weight                                                             | 15.6kg                      | 15.6kg                      |
| Operating temperature range                                        | -30 °C ... +60 °C           | -30 °C ... +60 °C           |
| Noise emission (typical)                                           | ≤25 dB(A)                   | ≤ 25 dB(A)                  |
| Self-Consumption (night)                                           | < 0.5 W                     | < 0.5 W                     |
| Topology                                                           | Transformerless             | Transformerless             |
| Cooling concept                                                    | Natural                     | Natural                     |
| Environmental Protection Rating                                    | IP 65                       | IP 65                       |
| Altitude                                                           | 2000m without derating      | 2000m without derating      |
| Relative Humidity                                                  | 0~100%                      | 0~100%                      |
| Features                                                           |                             |                             |
| DC connection                                                      | H4/MC4(opt)                 | H4/MC4(opt)                 |
| AC connection                                                      | Screw terminal              | Screw terminal              |
| Display                                                            | LCD                         | LCD                         |
| Interfaces: RS232/RS485/ Ethernet/RF/WiFi                          | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt |
| Warranty: 5 years / 10 years                                       | yes / opt                   | yes / opt                   |
| Certificates and Approvals                                         |                             |                             |
| CE, VDE0126-1-1, VDE-AR-N4105, G83, IEC 62109, AS4777, AS/NZS 3100 |                             |                             |



Growatt 3600MTL / 4200MTL / 4600MTL/  
5000MTLS / 5000MTL

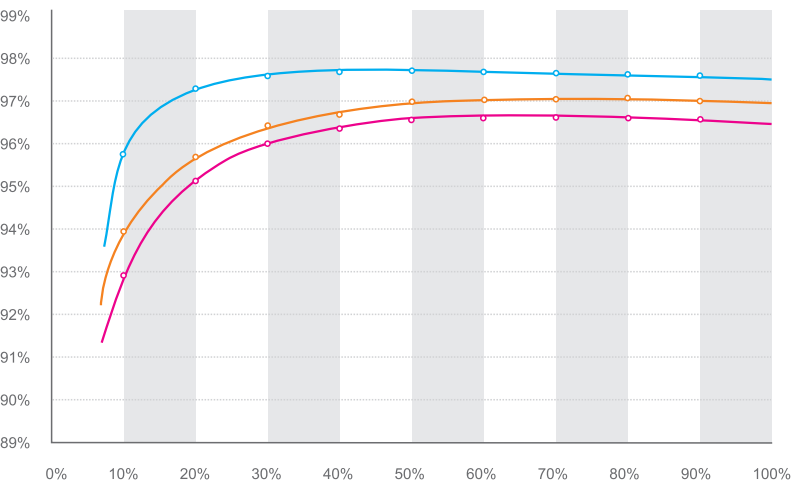
Leading - edge Technology

- Maximum efficiency of 97.9% and wide input voltage range
  - Internal DC switch
  - Transformerless GT topology
- Compact design
  - Multi MPP controller
  - MTL - String
- Ethernet/RF technology/WiFi
  - Sound control
  - Easy installation

Europe / Australia ENS

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

Growatt 5000MTL efficiency



| Datasheet                                                     | Growatt 3600MTL                 | Growatt 4200MTL                 | Growatt 5000MTLS                | Growatt 5000MTL                 |
|---------------------------------------------------------------|---------------------------------|---------------------------------|---------------------------------|---------------------------------|
| Input Data                                                    |                                 |                                 |                                 |                                 |
| Max. DC power                                                 | 4100W                           | 4800W                           | 5300W                           | 5800W                           |
| Max. DC voltage                                               | 600V                            | 600V                            | 600V                            | 600V                            |
| Start voltage                                                 | 120V                            | 120V                            | 120V                            | 120V                            |
| PV voltage range                                              | 90V-600V                        | 90V-600V                        | 90V-600V                        | 90V-600V                        |
| MPPT work voltage range / nominal voltage                     | 95V-600V/360V                   | 95V-600V/360V                   | 95V-600V/360V                   | 95V-600V/360V                   |
| Full load dc voltage range                                    | 190V-580V                       | 175V-580V                       | 175V-580V                       | 175V-580V                       |
| Number of MPP trackers /strings per MPP tracker               | 2 / 2                           | 2 / 2                           | 2 / 2                           | 2 / 2                           |
| 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                       |
| Output (AC)                                                   |                                 |                                 |                                 |                                 |
| Rated AC output power                                         | 3600W                           | 4200W                           | 4600W                           | 5000W                           |
| Max. AC power                                                 | 3600W                           | 4200W                           | 4600W                           | 5000W                           |
| Max. output current                                           | 18A                             | 21A                             | 23A                             | 25A                             |
| 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                                      | 50, 60Hz ; ±5Hz                 | 50, 60Hz ; ±5Hz                 | 50, 60Hz ; ±5Hz                 | 50, 60Hz ; ±5Hz                 |
| Power factor                                                  | 1                               | 1                               | 1                               | 1                               |
| THDI                                                          | <3%                             | <3%                             | <3%                             | <3%                             |
| AC connection                                                 | Single phase                    | Single phase                    | Single phase                    | Single phase                    |
| Efficiency                                                    |                                 |                                 |                                 |                                 |
| Max. efficiency                                               | 97.6%                           | 97.9%                           | 97.9%                           | 97.9%                           |
| Euro-eta                                                      | 97%                             | 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 for each MPPT                                       | yes                             | yes                             | yes                             | yes                             |
| Output over current protection                                | yes                             | yes                             | yes                             | yes                             |
| Output 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)                                        | 360/510/188 mm                  | 360/510/188 mm                  | 360/510/188 mm                  | 360/510/188 mm                  |
| Weight                                                        | 24kg                            | 24kg                            | 24kg                            | 24kg                            |
| Operating temperature range                                   | -25 °C ... +60 °C with          | -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)                       |
| 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                               | IP 65                           | IP 65                           | IP 65                           | IP 65                           |
| Altitude                                                      | 2000m without derating          | 2000m without derating          | 2000m without derating          | 2000m without derating          |
| Relative Humidity                                             | 100%                            | 100%                            | 100%                            | 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/RS485/ Ethernet/RF/WiFi                     | 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, VDE0126-1-1, CGC, DK5940, G59, G83, RD1663, RD1699, EN50438, IEC 62109, ENEL-GUIDE, AS4777, AS/NZS 3100



Growatt 3600MTL-10/4200MTL-10/5000MTL-10/6000MTL-10

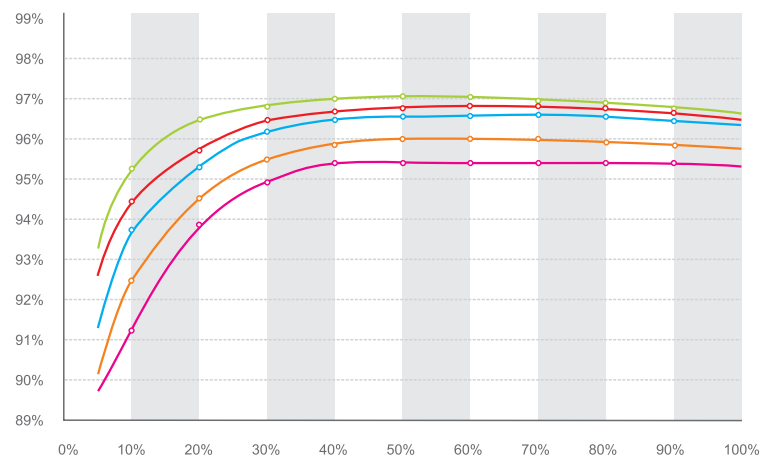
Leading - edge Technology

- 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
  - Strong AC output power overload capability
  - Flexible communication connection, support Bluetooth, RF, Zigbee,WiFi
- Comply with European, Asia-Pacific, and Ocean safety regulations

Europe / Australia ENS

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

Growatt 6000MTL-10 efficiency



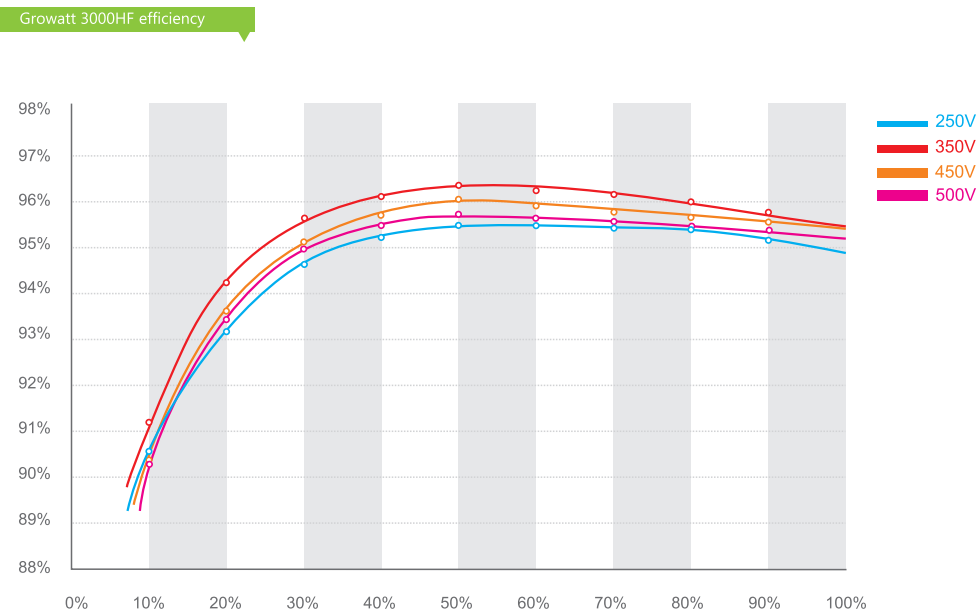
| Datasheet                                                        | Growatt 3600MTL-10                 | Growatt 4200MTL-10                 | Growatt 5000MTL-10                 | Growatt 6000MTL-10                 |
|------------------------------------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Input Data                                                       |                                    |                                    |                                    |                                    |
| Max. DC power                                                    | 4100W                              | 4800W                              | 5300W                              | 6900W                              |
| Max. DC voltage                                                  | 600V                               | 600V                               | 600V                               | 600V                               |
| Start voltage                                                    | 150V                               | 150V                               | 150V                               | 150V                               |
| PV voltage range                                                 | 100V-600V                          | 100V-600V                          | 100V-600V                          | 100V-600V                          |
| MPPT voltage range/<br>nominal voltage                           | 175V-550V/360V                     | 175V-550V/360V                     | 175V-550V/360V                     | 175V-550V/360V                     |
| Full load DC voltage range                                       | 175V-550V                          | 175V-550V                          | 175V-550V                          | 175V-550V                          |
| Number of MPP trackers/<br>strings per MPP tracker               | 2 / 2                              | 2 / 2                              | 2 / 2                              | 2 / 2                              |
| Max. input current of tracker A<br>/tracker B                    | 10A / 10A                          | 15A / 15A                          | 15A / 15A                          | 18A / 18A                          |
| Max. input current per string<br>of tracker A/tracker B          | 10A / 10A                          | 15A / 15A                          | 15A / 15A                          | 18A / 18A                          |
| Output (AC)                                                      |                                    |                                    |                                    |                                    |
| Rated AC output power                                            | 3600W                              | 4200W                              | 4600W                              | 6000W                              |
| Max. AC apparent power                                           | 3600VA                             | 4200VA                             | 4600VA                             | 6000VA                             |
| Max. output current                                              | 18A                                | 21A                                | 23A                                | 30A                                |
| AC nominal voltage;<br>range                                     | 220V/230V/240V;<br>180Vac - 280Vac | 220V/230V/240V;<br>180Vac - 280Vac | 220V/230V/240V;<br>180Vac - 280Vac | 220V,230V,240V;<br>180Vac - 280Vac |
| AC grid frequency; range                                         | 50Hz,60Hz / ± 5Hz                  | 50Hz,60Hz / ± 5Hz                  | 50Hz,60Hz / ± 5Hz                  | 50Hz,60Hz / ± 5Hz                  |
| Power factor at rated power                                      | 1                                  | 1                                  | 1                                  | 1                                  |
| Displacement power factor,<br>configurable*                      | 0.8leading...<br>0.8lagging        | 0.8leading...<br>0.8lagging        | 0.8leading...<br>0.8lagging        | 0.8leading...<br>0.8lagging        |
| THDI                                                             | <3%                                | <3%                                | <3%                                | <3%                                |
| AC connection                                                    | Single phase                       | Single phase                       | Single phase                       | Single phase                       |
| Efficiency                                                       |                                    |                                    |                                    |                                    |
| Max.efficiency                                                   | 97.1%                              | 97.1%                              | 97.1%                              | 97.1%                              |
| Euro-eta                                                         | 96.5%                              | 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 for each MPPT                                          | yes                                | yes                                | yes                                | yes                                |
| Output over current protection                                   | yes                                | yes                                | yes                                | yes                                |
| Output overvoltage protection<br>-varistor                       | yes                                | yes                                | yes                                | yes                                |
| Ground fault monitoring                                          | yes                                | yes                                | yes                                | yes                                |
| Grid monitoring                                                  | yes                                | yes                                | yes                                | yes                                |
| Integrated all-pole sensitive<br>leakage current monitoring unit | yes                                | yes                                | yes                                | yes                                |
| General Data                                                     |                                    |                                    |                                    |                                    |
| Dimensions (W / H / D)                                           | 360/538/166 mm                     | 360/538/185 mm                     | 360/538/185 mm                     | 402/510/210 mm                     |
| Weight                                                           | 20.3kg                             | 25.7kg                             | 25.7kg                             | 29.4kg                             |
| 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)                          |
| 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                              |
| Altitude                                                         | 2000m<br>without derating          | 2000m<br>without derating          | 2000m<br>without derating          | 2000m<br>without derating          |
| Relative Humidity                                                | 100%                               | 100%                               | 100%                               | 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/RS485/<br>Ethernet/RF/WiFi                     | yes / yes /<br>opt / opt / opt     | yes / yes /<br>opt / opt / opt     | yes / yes /<br>opt / opt / opt     | yes / yes /<br>opt / opt / opt     |
| Warranty: 5 years / 10 years                                     | yes / opt                          | yes / opt                          | yes / opt                          | yes / opt                          |
| Certificates and Approvals                                       |                                    |                                    |                                    |                                    |
| CE, IEC 62109, VDE 0126-1-1, VDE-AR-N4105, CEI 0-21, PEA         |                                    |                                    |                                    |                                    |



Growatt 2000HF / 2500HF / 3000HF

Leading - edge Technology

- Maximum efficiency of 96.5% and wide input voltage range
  - DC switch optional
  - High frequency
  - Compact design
  - MTL - String
- Ethernet / RF technology / WiFi
  - Sound control
  - Fanless cooling concept
  - Easy installation
  - High reliability



| Datasheet                                                     | Growatt 2000HF                | Growatt 2500HF                | Growatt 3000HF                |
|---------------------------------------------------------------|-------------------------------|-------------------------------|-------------------------------|
| Input Data                                                    |                               |                               |                               |
| Max. DC power                                                 | 2300W                         | 2900W                         | 3500W                         |
| Max. DC voltage                                               | 600V                          | 600V                          | 600V                          |
| Start voltage                                                 | 150V                          | 150V                          | 150V                          |
| PV voltage range                                              | 100V - 600V                   | 100V - 600V                   | 100V - 600V                   |
| MPPT work voltage range /nominal voltage                      | 120V - 600V/380V              | 120V - 600V/380V              | 120V - 600V/380V              |
| Full load dc voltage range                                    | 195V - 480V                   | 195V - 480V                   | 250V - 480V                   |
| Number of independent MPP trackers/strings per MPP tracker    | 1 / 2                         | 1 / 2                         | 1 / 2                         |
| Max. input current/per string                                 | 12A / 12A                     | 15A / 15A                     | 15A / 15A                     |
| Output (AC)                                                   |                               |                               |                               |
| Rated AC output power                                         | 2000W                         | 2500W                         | 3000W                         |
| Max. AC power                                                 | 2000W                         | 2500W                         | 3000W                         |
| Max. output current                                           | 10A                           | 12A                           | 14.3A                         |
| AC nominal voltage; range                                     | 220V,230V,240V; 180Vac-280Vac | 220V,230V,240V; 180Vac-280Vac | 220V,230V,240V; 180Vac-280Vac |
| AC grid frequency; range                                      | 50,60Hz;±5Hz                  | 50,60Hz;±5Hz                  | 50,60Hz;±5Hz                  |
| Power factor                                                  | >0.99                         | >0.99                         | >0.99                         |
| THDI                                                          | <3%                           | <3%                           | <3%                           |
| AC connection                                                 | Single phase                  | Single phase                  | Single phase                  |
| Efficiency                                                    |                               |                               |                               |
| Max.efficiency                                                | 96.5%                         | 96.4%                         | 96.3%                         |
| Euro - eta                                                    | 95.5%                         | 95.5%                         | 95.5%                         |
| 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 over current protection                                | yes                           | yes                           | yes                           |
| Output 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)                                        | 440/455/135 mm                | 440/455/135 mm                | 440/455/135 mm                |
| Weight                                                        | 18kg                          | 18kg                          | 18.5kg                        |
| 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)                     |
| Self-Consumption (night)                                      | < 0.5 W                       | < 0.5 W                       | < 0.5 W                       |
| Topology                                                      | HF Transformer                | HF Transformer                | HF Transformer                |
| 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/RS485/ Ethernet/RF/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, AS4777, AS/NZS 3100, VDE 0126-1-1, VDE-AR-N4105, G83, RD1663, DK5940, IEC 62109

## Single Phase Inverter-US

Growatt 1500-US/2000-US/3000-US

Growatt 3600MTL-US/4200MTL-US/5000MTL-US

Growatt 2000 HF-US/2500 HF-US/3000 HF-US

Growatt 8000TL-US/9000TL-US/10000TL-US/1100TL-US



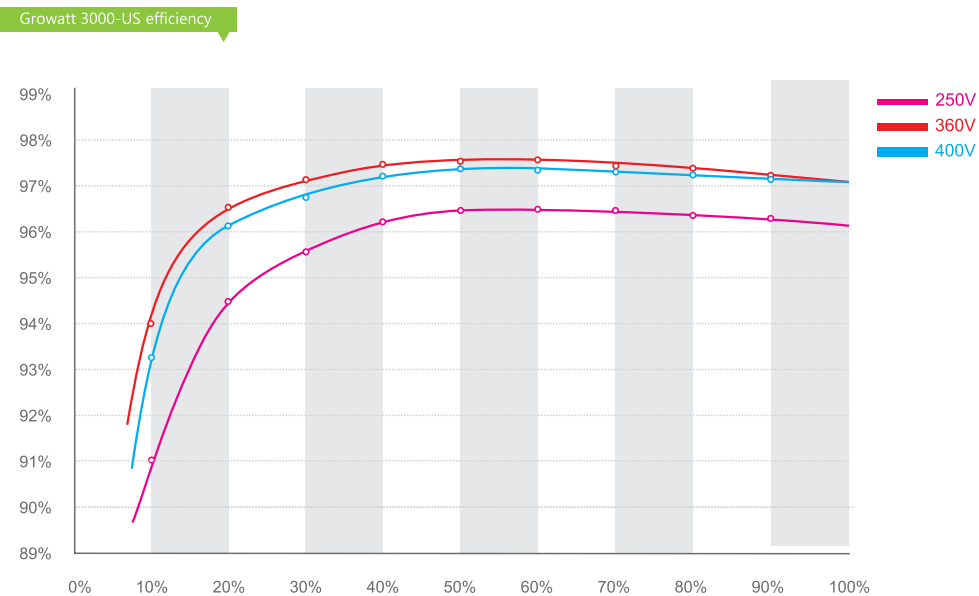




Growatt 1500-US / 2000-US / 3000-US

Leading - edge Technology

- Maximum efficiency of 97.5% and wide input voltage range
  - Internal DC switch
  - Transformerless GT topology
  - Compact design
- MTL - String
  - Ethernet / RF technology / WiFi
  - Sound control
  - Easy installation



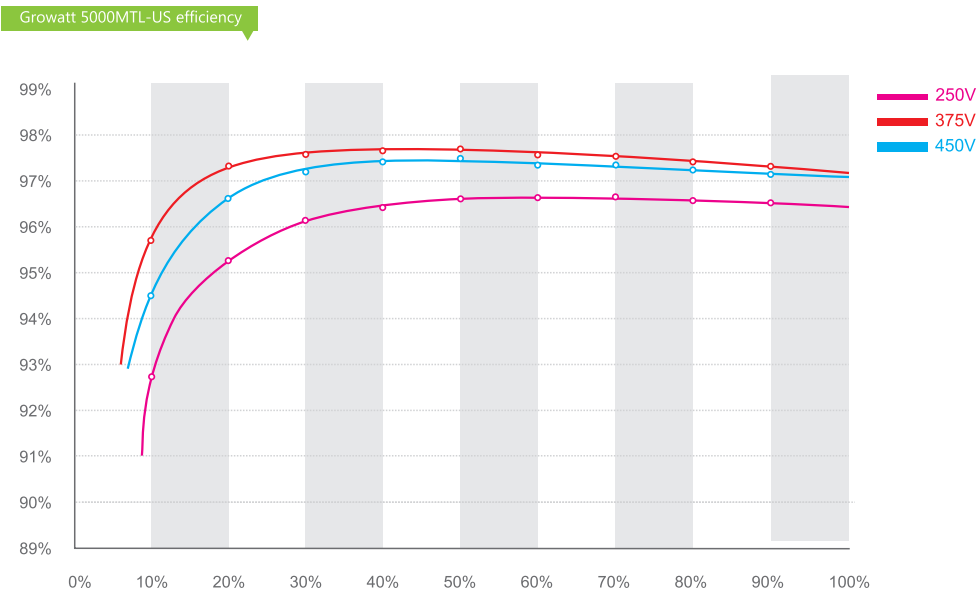
| Datasheet                                                     | Growatt 1500-US                                                                      | Growatt 2000-US              | Growatt 3000-US              |
|---------------------------------------------------------------|--------------------------------------------------------------------------------------|------------------------------|------------------------------|
| Input Data                                                    |                                                                                      |                              |                              |
| Max. DC power                                                 | 1800W                                                                                | 2300W                        | 3200W                        |
| Max. DC voltage                                               | 450V                                                                                 | 500V                         | 500V                         |
| Start voltage                                                 | 150V                                                                                 | 150V                         | 150V                         |
| DC nominal voltage                                            | 360V                                                                                 | 360V                         | 360V                         |
| PV voltage range                                              | 100V - 450V                                                                          | 100V - 500V                  | 100V - 500V                  |
| MPP voltage range                                             | 120V - 400V                                                                          | 120V - 450V                  | 120V - 450V                  |
| Number of independent MPP trackers/strings per MPP tracker    | 1 / 1                                                                                | 1 / 2                        | 1 / 2                        |
| Max. input current of the MPP tracker                         | 12A                                                                                  | 14A                          | 17A                          |
| Output (AC)                                                   |                                                                                      |                              |                              |
| Rated AC output power                                         | 1500W@208Vac<br>1650W@240Vac                                                         | 1800W@208Vac<br>2000W@240Vac | 2500W@208Vac<br>2800W@240Vac |
| AC nominal voltage; range                                     | Default:240V single phase, optional:208 single phase;<br>183-228@208V, 211-264V@240V |                              |                              |
| AC grid frequency; range                                      | 60Hz; 59.3-60.5Hz                                                                    | 60Hz; 59.3-60.5Hz            | 60Hz; 59.3-60.5Hz            |
| Max. output current                                           | 8A / 7.8A                                                                            | 9.7A / 9.4A                  | 15A / 14.2A                  |
| Phase shift (cosφ)                                            | 1                                                                                    | 1                            | 1                            |
| THDI                                                          | <3%                                                                                  | <3%                          | <3%                          |
| AC connection                                                 | Single phase                                                                         | Single phase                 | Single phase                 |
| Efficiency                                                    |                                                                                      |                              |                              |
| Max.efficiency                                                | 97%                                                                                  | 97%                          | 97%                          |
| CEC efficiency                                                | 96%                                                                                  | 96.5%                        | 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 over current protection                                | yes                                                                                  | yes                          | yes                          |
| Output 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                          |
| AFCI compliant to UL 1699B                                    | yes                                                                                  | yes                          | yes                          |
| General Data                                                  |                                                                                      |                              |                              |
| Dimensions (W / H / D)                                        | 360/465/165 mm                                                                       | 360/465/165 mm               | 360/465/165 mm               |
| Weight                                                        | 14.6kg                                                                               | 15.1kg                       | 15.9kg                       |
| 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)                    |
| Self-Consumption (night)                                      | < 0.5 W                                                                              | < 0.5 W                      | < 0.5 W                      |
| Topology                                                      | Transformerless                                                                      | Transformerless              | Transformerless              |
| Cooling concept                                               | Natural                                                                              | Natural                      | Natural                      |
| Enclosure                                                     | Type 3R                                                                              | Type 3R                      | Type 3R                      |
| Altitude                                                      | 2000m without derating                                                               | 2000m without derating       | 2000m without derating       |
| Humidity                                                      | 100%                                                                                 | 100%                         | 100%                         |
| Features                                                      |                                                                                      |                              |                              |
| DC connection                                                 | Screw terminal                                                                       | Screw terminal               | Screw terminal               |
| AC connection                                                 | Screw terminal                                                                       | Screw terminal               | Screw terminal               |
| Display                                                       | LCD                                                                                  | LCD                          | LCD                          |
| Interfaces: RS232/RS485/ Ethernet/RF/WiFi                     | yes / yes / opt / opt / opt                                                          | yes / yes / opt / opt / opt  | yes / yes / opt / opt / opt  |
| Warranty: 10 years / 15 years                                 | yes / opt                                                                            | yes / opt                    | yes / opt                    |
| Certificates and Approvals                                    |                                                                                      |                              |                              |



Growatt 3600MTL-US / 4200MTL-US / 5000MTL-US

Leading - edge Technology

- Maximum efficiency of 97.5% and wide input voltage range
  - Internal DC switch
  - Transformerless GT topology
  - Compact design
  - Multi MPP tracker
- Sound control
  - Easy installation
  - MTL - String
  - Ethernet / RF technology / WiFi



| Datasheet                                                     | Growatt 3600MTL-US                                                                                                                      | Growatt 4200MTL-US          | Growatt 5000MTL-US            |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|-------------------------------|
| Input Data                                                    |                                                                                                                                         |                             |                               |
| Max. DC power                                                 | 3800W                                                                                                                                   | 4400W                       | 5200W                         |
| Max. DC voltage                                               | 600V                                                                                                                                    | 600V                        | 600V                          |
| Start voltage                                                 | 150V                                                                                                                                    | 150V                        | 150V                          |
| DC nominal voltage                                            | 360V                                                                                                                                    | 360V                        | 360V                          |
| PV voltage range                                              | 100V - 600V                                                                                                                             | 100V - 600V                 | 100V - 600V                   |
| MPP voltage range                                             | 120V - 550V                                                                                                                             | 120V - 550V                 | 120V - 550V                   |
| Number of independent MPP trackers/strings per MPP tracker    | 2 / 2                                                                                                                                   | 2 / 2                       | 2 / 2                         |
| Max. input current of the MPP tracker                         | 12A                                                                                                                                     | 15A                         | 15A                           |
| Output (AC)                                                   |                                                                                                                                         |                             |                               |
| Rated AC output power                                         | 3600W                                                                                                                                   | 4200W                       | 4600W@208V<br>5000W@240V/277V |
| AC nominal voltage; range                                     | Default:240V single phase, optional:208V single phase, 277V single phase, 240V split phase<br>183-228@208V, 211-264V@240V, 244-305@277V |                             |                               |
| AC grid frequency; range                                      | 60Hz; 59.3-60.5Hz                                                                                                                       | 60Hz; 59.3-60.5Hz           | 60Hz; 59.3-60.5Hz             |
| Max. output current                                           | 18A / 17.1A / 14.8A                                                                                                                     | 21A / 20A / 17.2A           | 23.7A / 22A / 20.5A           |
| Phase shift (cos φ)                                           | 1                                                                                                                                       | 1                           | 1                             |
| THDI                                                          | <3%                                                                                                                                     | <3%                         | <3%                           |
| AC connection                                                 | Single phase                                                                                                                            | Single phase                | Single phase                  |
| Efficiency                                                    |                                                                                                                                         |                             |                               |
| Max.efficiency                                                | 97.5%                                                                                                                                   | 97.5%                       | 97.5%                         |
| CEC efficiency                                                | 97%                                                                                                                                     | 97%                         | 97%                           |
| 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 over current protection                                | yes                                                                                                                                     | yes                         | yes                           |
| Output 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                           |
| AFCI compliant to UL 1699B                                    | yes                                                                                                                                     | yes                         | yes                           |
| General Data                                                  |                                                                                                                                         |                             |                               |
| Dimensions (W / H / D)                                        | 360/650/188 mm                                                                                                                          | 360/650/188 mm              | 360/650/188 mm                |
| Weight                                                        | 24kg                                                                                                                                    | 26kg                        | 26kg                          |
| 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)                     |
| Self-Consumption (night)                                      | < 0.5 W                                                                                                                                 | < 0.5 W                     | < 0.5 W                       |
| Topology                                                      | Transformerless                                                                                                                         | Transformerless             | Transformerless               |
| Cooling concept                                               | Natural                                                                                                                                 | Natural                     | Natural                       |
| Enclosure                                                     | Type 3R                                                                                                                                 | Type 3R                     | Type 3R                       |
| Altitude                                                      | 2000m without derating                                                                                                                  | 2000m without derating      | 2000m without derating        |
| Humidity                                                      | 100%                                                                                                                                    | 100%                        | 100%                          |
| Features                                                      |                                                                                                                                         |                             |                               |
| DC connection                                                 | Screw terminal                                                                                                                          | Screw terminal              | Screw terminal                |
| AC connection                                                 | Screw terminal                                                                                                                          | Screw terminal              | Screw terminal                |
| Display                                                       | LCD                                                                                                                                     | LCD                         | LCD                           |
| Interfaces: RS232/RS485/ Ethernet/RF/WiFi                     | yes / yes / opt / opt / opt                                                                                                             | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt   |
| Warranty: 10 years / 15 years                                 | yes / opt                                                                                                                               | yes / opt                   | yes / opt                     |
| Certificates and Approvals                                    |                                                                                                                                         |                             |                               |

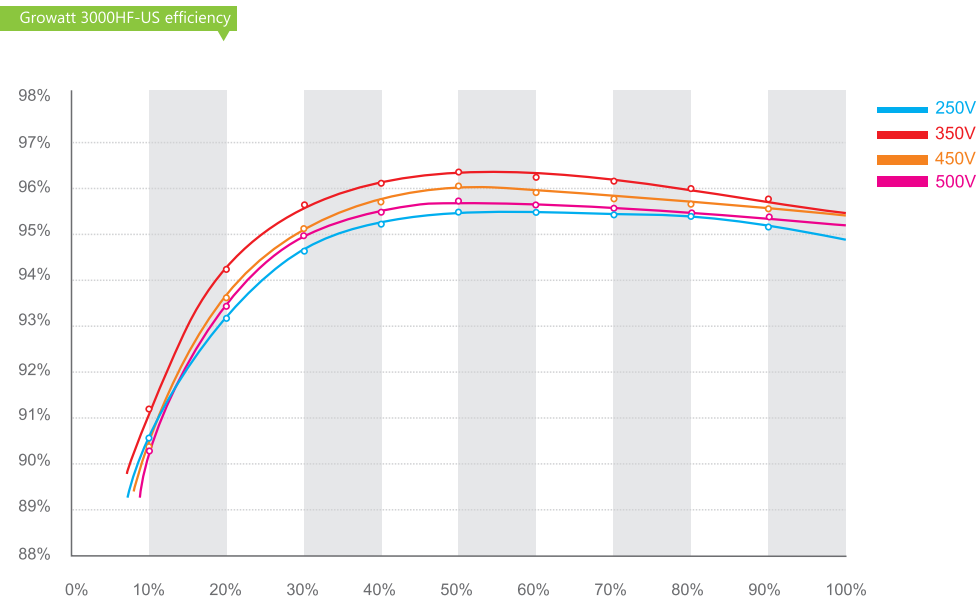
UL1741, UL1998 , IEEE 1547, CSA C22.2 No.107.1-1, FCC Part15(Class A&B)



Growatt 2000 HF-US / 2500 HF-US / 3000 HF-US

Leading - edge Technology

- Maximum efficiency of 96.5% and wide input voltage range
  - High frequency
  - Compact design
  - MTL - String
  - Ethernet / RF technology / WiFi
- Integrated DC switch-disconnect
  - Sound control
  - Fanless cooling concept
  - Easy installation
  - High yields and high reliability



| Datasheet                                                        | Growatt 2000 HF-US           | Growatt 2500 HF-US          | Growatt 3000 HF-US          |
|------------------------------------------------------------------|------------------------------|-----------------------------|-----------------------------|
| Input Data                                                       |                              |                             |                             |
| Max. DC power                                                    | 2200W                        | 2700W                       | 3200W                       |
| Max. DC voltage                                                  | 600V                         | 600V                        | 600V                        |
| Start voltage                                                    | 150V                         | 150V                        | 150V                        |
| DC nominal voltage                                               | 370V@240VAC                  | 370V@240VAC                 | 370V@240VAC                 |
| PV voltage range/<br>MPP voltage range                           | 100V - 600V/120V - 600V      | 100V - 600V/120V - 600V     | 100V - 600V/120V - 600V     |
| Full load dc voltage range                                       | 195V - 480V                  | 195V - 480V                 | 250V - 480V                 |
| Number of independent MPP<br>trackers/strings per MPP tracker    | 1 / 2                        | 1 / 2                       | 1 / 2                       |
| Max. input current of the<br>MPP tracker                         | 12A                          | 15A                         | 15A                         |
| Max. input short circuit current                                 | 16A                          | 16A                         | 16A                         |
| Output (AC)                                                      |                              |                             |                             |
| Rated AC output power                                            | 2000W@208V<br>2000W@240 V    | 2500W@208V<br>2500W@240 V   | 2800W@208V<br>3000W@240V    |
| AC nominal voltage; range                                        | 208V/240V; 183V - 228V@208V, | 211V - 264V@240V            |                             |
| AC grid frequency; range                                         | 60Hz; 59.3 - 60.5Hz          | 60Hz; 59.3 - 60.5Hz         | 60Hz; 59.3 - 60.5Hz         |
| Max. output current (cosφ=1)                                     | 9.6A/8.3A                    | 12A/10.4A                   | 13.4A/12.5A                 |
| Power factor (cosφ)                                              | >0.99                        | >0.99                       | >0.99                       |
| THDI                                                             | <3%                          | <3%                         | <3%                         |
| AC connection                                                    | Single phase                 | Single phase                | Single phase                |
| Efficiency                                                       |                              |                             |                             |
| Max.efficiency                                                   | 96.5%                        | 96.4%                       | 96.3%                       |
| CEC efficiency                                                   | 95.5%                        | 95.5%                       | 95.5%                       |
| 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                         |
| Input over voltage protection                                    | yes                          | yes                         | yes                         |
| DC insulation measure                                            | yes                          | yes                         | yes                         |
| AC short circuit protection                                      | yes                          | yes                         | yes                         |
| Output over voltage<br>protection-varistor                       | yes                          | yes                         | yes                         |
| Ground fault monitoring                                          | yes                          | yes                         | yes                         |
| Grid monitoring                                                  | yes                          | yes                         | yes                         |
| Integrated all-pole sensitive<br>leakage current monitoring unit | yes                          | yes                         | yes                         |
| AFCI compliant to UL 1699B                                       | yes                          | yes                         | yes                         |
| General Data                                                     |                              |                             |                             |
| Dimensions (W / H / D)                                           | 575/455/160 mm               | 575/455/160 mm              | 575/455/160 mm              |
| Weight                                                           | 22kg                         | 22kg                        | 22.5kg                      |
| 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)                   |
| Self-Consumption (night)                                         | < 0.5 W                      | < 0.5 W                     | < 0.5 W                     |
| Topology                                                         | HF Transformer               | HF Transformer              | HF Transformer              |
| Cooling concept                                                  | Natural                      | Natural                     | Natural                     |
| Enclosure                                                        | Type 3R                      | Type 3R                     | Type 3R                     |
| Altitude                                                         | 2000m without derating       | 2000m without derating      | 2000m without derating      |
| Relative Humidity                                                | 0~100%                       | 0~100%                      | 0~100%                      |
| Features                                                         |                              |                             |                             |
| Display                                                          | LCD                          | LCD                         | LCD                         |
| Interfaces: RS232/RS485/<br>Ethernet/RF/WiFi                     | yes / yes / opt / opt / opt  | yes / yes / opt / opt / opt | yes / yes / opt / opt / opt |
| Warranty: 10 years / 15 years                                    | yes / opt                    | yes / opt                   | yes / opt                   |

Certificates and Approvals

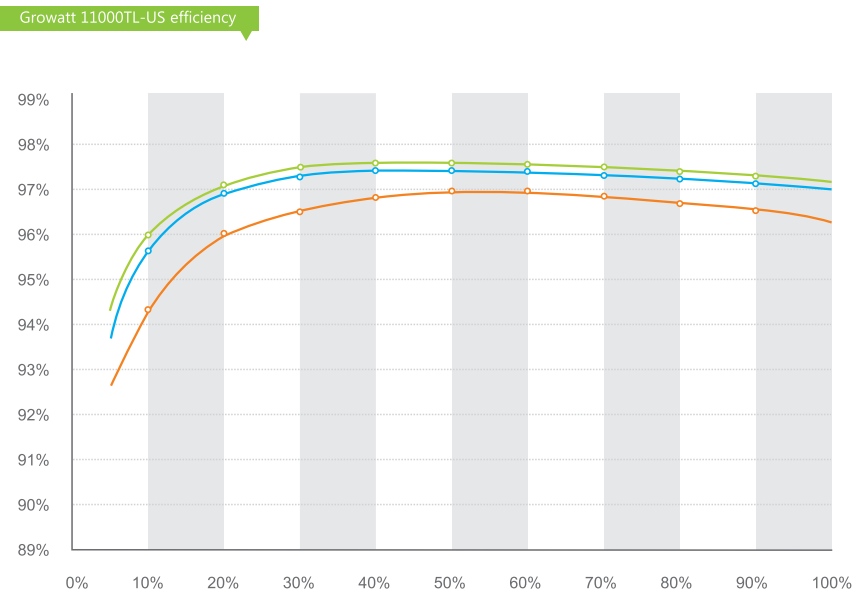
UL1741, UL1998 , IEEE 1547, CSA C22.2 NO.107.1-1, FCC PART15(CLASS A&B)



Growatt 8000TL-US/9000TL-US/10000TL-US/11000TL-US

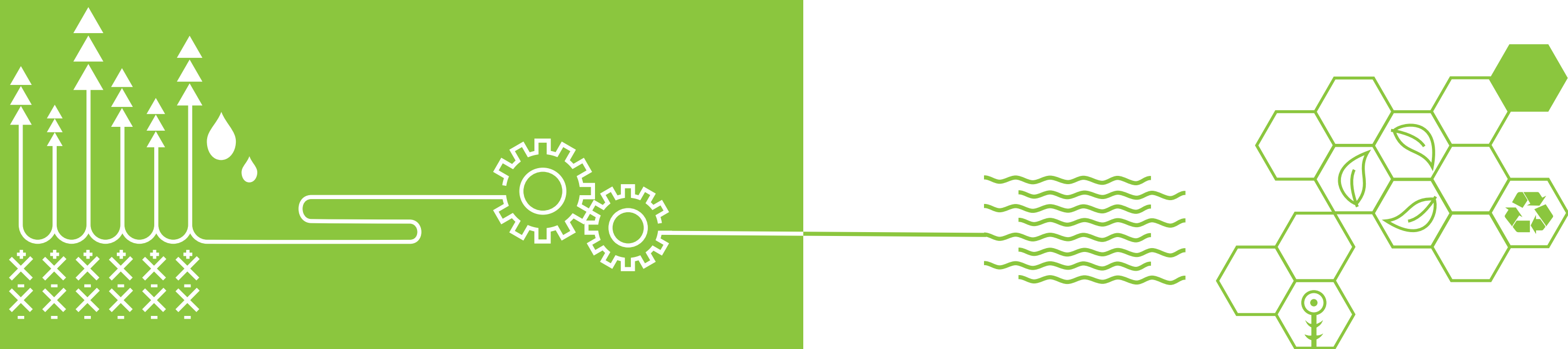
Leading - edge Technology

- High efficiency of 97.8% delivery more energy
  - Integrated DC disconnect switch
  - Consistent and stable performance across entire input voltage and output power range
  - Intelligent temperature management
- Power balancer for three-phase grid connection
  - Ethernet / RF technology / WiFi
  - Sound control, easy installation maintenance procedure
  - Newest generation IGBTs and advanced MPPT algorithms



| Datasheet                                                  | Growatt 8000TL-US                       | Growatt 9000TL-US                  | Growatt 10000TL-US                 | Growatt 11000TL-US          |
|------------------------------------------------------------|-----------------------------------------|------------------------------------|------------------------------------|-----------------------------|
| Input Data                                                 |                                         |                                    |                                    |                             |
| Max. DC power                                              | 8300W                                   | 9300W                              | 10350W                             | 11400W                      |
| Max. DC voltage                                            | 600V                                    | 600V                               | 600V                               | 600V                        |
| Start voltage                                              | 360V                                    | 360V                               | 360V                               | 360V                        |
| DC nominal voltage                                         | 345V@208VAC<br>379V@240VAC              | 345V@208VAC<br>379V@240VAC         | 345V@208VAC<br>379V@240VAC         | 379V                        |
| PV voltage range                                           | 300-600V@208VAC<br>345-600V@240VAC      | 300-600V@208VAC<br>345-600V@240VAC | 300-600V@208VAC<br>345-600V@240VAC | 345-600V                    |
| MPP voltage range                                          | 300-480V@208VAC<br>345-480V@240VAC      | 300-480V@208VAC<br>345-480V@240VAC | 300-480V@208VAC<br>345-480V@240VAC | 345-480V                    |
| Number of independent MPP trackers/strings per MPP tracker | 1 / 4                                   | 1 / 4                              | 1 / 4                              | 1 / 4                       |
| Max. input current / per string                            | 30A / 16A                               | 33A / 16A                          | 36A / 16A                          | 35A / 16A                   |
| Output (AC)                                                |                                         |                                    |                                    |                             |
| Rated AC output power                                      | 8000W                                   | 9000W                              | 10000W                             | 11000W                      |
| AC nominal voltage; range                                  | 208V/240V; 183~229V@208V, 211~264V@240V |                                    |                                    |                             |
| AC grid frequency; range                                   | 60Hz;59.3-60.5Hz                        | 60Hz;59.3-60.5Hz                   | 60Hz;59.3-60.5Hz                   | 60Hz;59.3-60.5Hz            |
| Max. output current                                        | 44A@208VAC<br>38A@240VAC                | 48A@208VAC<br>43A@240VAC           | 49A@208VAC<br>48A@240VAC           | 48A                         |
| Power factor                                               | 1                                       | 1                                  | 1                                  | 1                           |
| THDI                                                       | <3%                                     | <3%                                | <3%                                | <3%                         |
| AC connection                                              | Two phase                               | Two phase                          | Two phase                          | Two phase                   |
| Efficiency                                                 |                                         |                                    |                                    |                             |
| Max. efficiency                                            | 97.8%                                   | 97.8%                              | 97.8%                              | 97.8%                       |
| CEC. efficiency                                            | 97%                                     | 97%                                | 97%                                | 97%                         |
| MPPT efficiency                                            | 99.5%                                   | 99.5%                              | 99.5%                              | 99.5%                       |
| Protection Devices                                         |                                         |                                    |                                    |                             |
| DC reverse-polarity protection                             | yes                                     | yes                                | yes                                | yes                         |
| Input over voltage protection -Varistor                    | opt                                     | opt                                | opt                                | opt                         |
| DC insulation measure                                      | yes                                     | yes                                | yes                                | yes                         |
| AC short circuit protection                                | yes                                     | yes                                | yes                                | yes                         |
| Output over voltage protection -Varistor                   | yes                                     | yes                                | yes                                | yes                         |
| AFCI compliant to UL 1699B                                 | yes                                     | yes                                | yes                                | yes                         |
| General Data                                               |                                         |                                    |                                    |                             |
| Dimensions (W / H / D)                                     | 400/743/222 mm                          | 400/743/222 mm                     | 400/743/222 mm                     | 400/743/222 mm              |
| Weight                                                     | 40kg                                    | 40kg                               | 40kg                               | 40kg                        |
| Operating temperature range                                | -25 °C ... +60 °C                       | -25 °C ... +60 °C                  | -25 °C ... +60 °C                  | -25 °C ... +60 °C           |
| Noise emission                                             | < 46 dB                                 | < 46 dB                            | < 46 dB                            | < 46 dB                     |
| Self-Consumption (night)                                   | < 0.5 W                                 | < 0.5 W                            | < 0.5 W                            | < 0.5 W                     |
| Topology                                                   | Transformerless                         | Transformerless                    | Transformerless                    | Transformerless             |
| Cooling concept                                            | Fan cooling                             | Fan cooling                        | Fan cooling                        | Fan cooling                 |
| Electronics protection rating /connection area             | NEMA 3R                                 | NEMA 3R                            | NEMA 3R                            | NEMA 3R                     |
| Altitude                                                   | 2000m without derating                  | 2000m without derating             | 2000m without derating             | 2000m without derating      |
| Relative Humidity                                          | 100%                                    | 100%                               | 100%                               | 100%                        |
| Features                                                   |                                         |                                    |                                    |                             |
| Display                                                    | LCD                                     | LCD                                | LCD                                | LCD                         |
| Interfaces: RS232/RS485/ Ethernet/RF/WiFi                  | yes / yes / opt / opt / opt             | yes / yes / opt / opt / opt        | yes / yes / opt / opt / opt        | yes / yes / opt / opt / opt |
| Warranty: 10 years / 15 years                              | yes / opt                               | yes / opt                          | yes / opt                          | yes / opt                   |
| Certificates and Approvals                                 |                                         |                                    |                                    |                             |

UL1741, UL1998, IEEE1547, FCC Part 15(class B), CSA C22.2 No.107.1



## Three Phase Inverter

Growatt 4000UE / 5000UE / 6000UE

Growatt 7000UE / 8000UE / 9000UE

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

Growatt 10000TL3-US / 12000TL3-US / 18000TL3-US / 20000TL3-US





Growatt 4000UE / 5000UE / 6000UE

Leading - edge Technology

- DC input voltage up to 800V

■ Maximum efficiency of 97.5%

■ Internal DC switch

■ Transformerless
- Compact design

■ Multi MPP controller

■ Ethernet / RF technology / WiFi

■ Sound control
- Easy installation

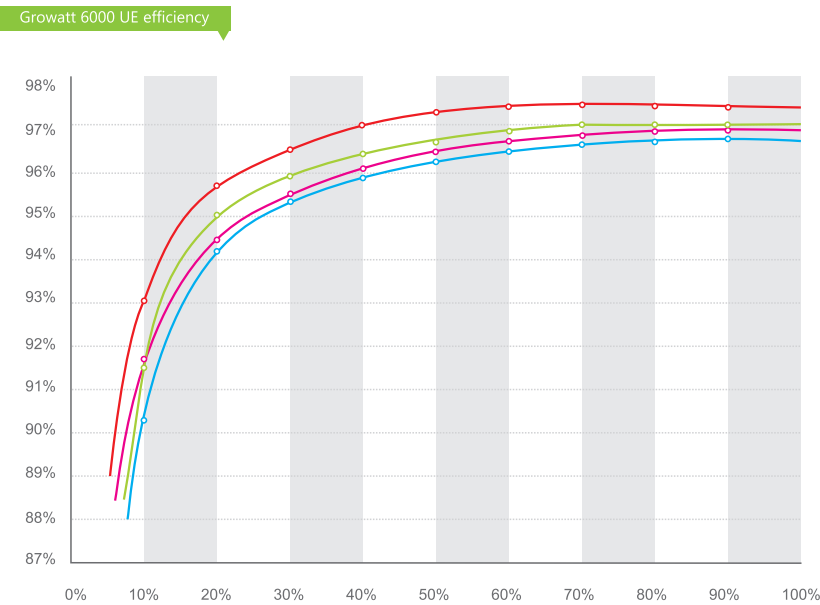
■ Comprehensive Growatt warranty program

Europe / Australia ENS

- Simple national setting of line supply monitoring(ENS)

■ Easy country configuration
- Multi - language display

■ 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/Ethernet/RF/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, 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

■ Maximum efficiency of 98%

■ Internal DC switch

■ Transformerless
- Compact design

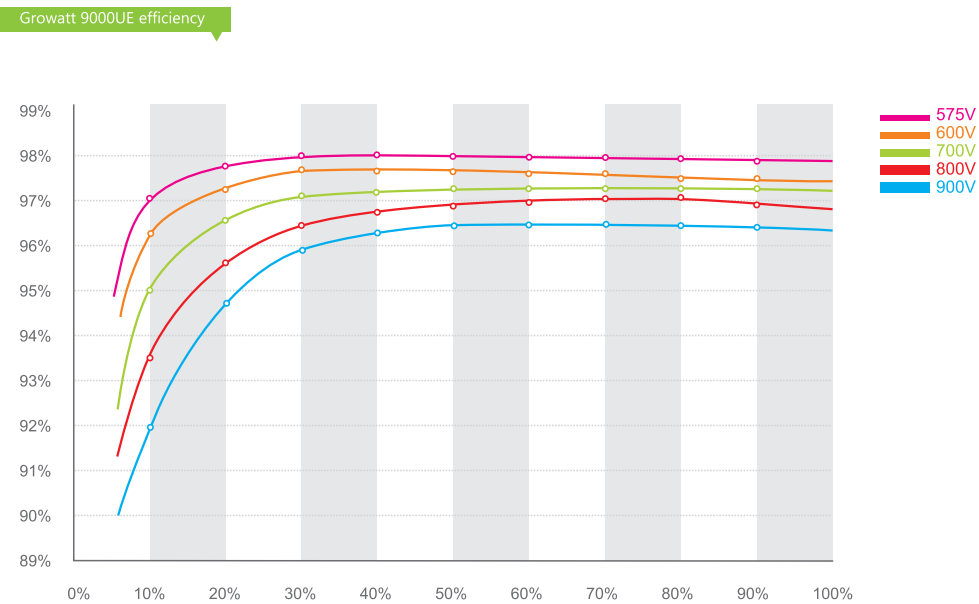
■ Multi MPP controller

■ MTL - String

■ Ethernet / RF technology / WiFi
- Sound control

■ Easy installation

■ Comprehensive Growatt warranty program



| 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/ Ethernet/RF/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                                                                            |                             |                             |                             |
| 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

■ Maximum efficiency of 98%

■ Internal DC switch

■ Transformerless
- Compact design

■ Multi MPP controller

■ MTL - String

■ Ethernet / RF technology / WiFi
- Sound control

■ Easy installation

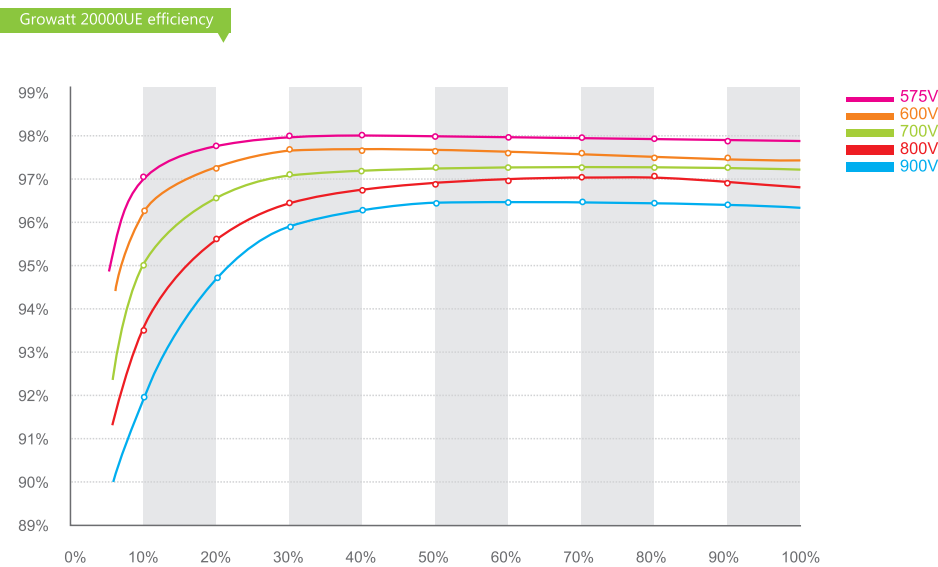
■ Comprehensive Growatt warranty program

Europe / Australia ENS

- Simple national setting of line supply monitoring(ENS)

■ Easy country configuration
- Multi - language display

■ 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<br>184 - 275V                     | 230V/400V<br>184 - 275V                     | 230V/400V<br>184 - 275V                     | 230V/400V<br>184 - 275V                     |
| AC grid frequency; range                                      | 50-60Hz;<br>44-55Hz/54-65Hz                 | 50-60Hz;<br>44-55Hz/54-65Hz                 | 50-60Hz;<br>44-55Hz/54-65Hz                 | 50-60Hz;<br>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/ Ethernet/RF/WiFi                      | 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                                    |                                             |                                             |                                             |                                             |

VDE-AR-N4105, CEI 0-21, CEI 0-16, CE, VDE 0126-1-1, IEC 62109, RD 1663, G59, C-tick, AS4777, AS/NZS 3100, IEC61727, IEC62116, BDEW(For 18-20k), IEC 61683, NRS 097-2-1, PEA, MEA, G59, EN50438

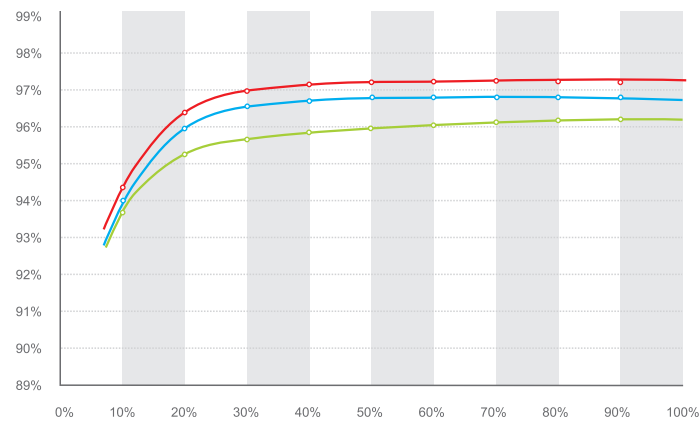


Growatt 10000TL3-US /12000TL3-US /  
18000TL3-US /20000TL3-US

Leading - edge Technology

- Special for commercial plant application
- Dual independent MPP tracking and advanced MPPT algorithms lead to optimal energy harvesting
- Consistent and stable performance across entire input voltage and output power range
- Integrated DC disconnect switch
- High efficiency of 97.5% delivery more energy
- Ethernet / RF technology / WiFi
- Easy installation and maintenance procedure
- Innovative device designed and Intelligent applications
- Comprehensive protection for IGBTs, overvoltage, short-circuit, overload, overheat, etc
- Flexible system design with safety fuse module, lightning protection module and AFCI module

Growatt 20000TL3-US efficiency



| Datasheet                                                          | Growatt 10000TL3-US                | Growatt 12000TL3-US                | Growatt 18000TL3-US                | Growatt 20000TL3-US                |
|--------------------------------------------------------------------|------------------------------------|------------------------------------|------------------------------------|------------------------------------|
| Input Data                                                         |                                    |                                    |                                    |                                    |
| Max. DC power                                                      | 10500W                             | 12500W                             | 18750W                             | 20850W                             |
| Max. DC voltage                                                    | 600V                               | 600V                               | 600V                               | 600V                               |
| Start voltage                                                      | 120V                               | 120V                               | 120V                               | 120V                               |
| DC nominal voltage                                                 | 375V                               | 375V                               | 375V                               | 375V                               |
| PV voltage range                                                   | 80V - 600V                         | 80V - 600V                         | 80V - 600V                         | 80V - 600V                         |
| MPP voltage range (Full load)                                      | 250V - 600V                        | 250V - 600V                        | 250V - 600V                        | 250V - 600V                        |
| Number of independent MPP trackers/strings per MPP tracker         | 2 / 3                              | 2 / 3                              | 2 / 5                              | 2 / 5                              |
| Max. input current of MPP Tracker A / Tracker B                    | 21A / 21A                          | 25A / 25A                          | 38A / 38A                          | 42A / 42A                          |
| Max. input short circuit current                                   | 32A / 32A                          | 32A / 32A                          | 50A / 50A                          | 50A / 50A                          |
| Output (AC)                                                        |                                    |                                    |                                    |                                    |
| Rated AC output power                                              | 10000W                             | 12000W                             | 18000W                             | 20000W                             |
| Rated AC voltage                                                   | 480V                               | 480V                               | 480V                               | 480V                               |
| AC voltage range                                                   | 422-528VAC                         | 422-528VAC                         | 422-528VAC                         | 422-528VAC                         |
| AC grid frequency; range                                           | 60 Hz;59.3-60.5 Hz                 | 60 Hz;59.3-60.5 Hz                 | 60 Hz;59.3-60.5 Hz                 | 60 Hz;59.3-60.5 Hz                 |
| Max. output current(cos φ=1)                                       | 12A                                | 14.5A                              | 21.5A                              | 24A                                |
| Power factor (cos φ)                                               | >0.99<br>(0.9Leading - 0.9Lagging) | >0.99<br>(0.9Leading - 0.9Lagging) | >0.99<br>(0.9Leading - 0.9Lagging) | >0.99<br>(0.9Leading - 0.9Lagging) |
| Harmonics                                                          | <3%                                | <3%                                | <3%                                | <3%                                |
| Grid connection type                                               | 3/N/E                              | 3/N/E                              | 3/N/E                              | 3/N/E                              |
| Efficiency                                                         |                                    |                                    |                                    |                                    |
| Max.efficiency                                                     | 97%                                | 97%                                | 97.5%                              | 97.5%                              |
| CEC-Weighted Efficiency                                            | 95.5%                              | 95.5%                              | 96%                                | 96.5%                              |
| MPPT efficiency                                                    | 99.5%                              | 99.5%                              | 99.5%                              | 99.5%                              |
| Protectopm devices                                                 |                                    |                                    |                                    |                                    |
| DC switch for each MPP tracker                                     | yes                                | yes                                | yes                                | yes                                |
| DC reverse-polarity protection                                     | yes                                | yes                                | yes                                | yes                                |
| DC/AC over voltage protection-Varistor                             | yes                                | yes                                | yes                                | yes                                |
| DC/AC over voltage protection -DIN rail surge arrester(Optional)   | Class II                           | Class II                           | Class II                           | Class II                           |
| DC insulation measure                                              | yes                                | yes                                | yes                                | yes                                |
| AC short circuit protection                                        | yes                                | yes                                | yes                                | yes                                |
| AFCI compliant to UL 1699B                                         | yes                                | yes                                | yes                                | yes                                |
| General Data                                                       |                                    |                                    |                                    |                                    |
| Diemensions(W/H/D)                                                 | 530/705/247 mm                     | 530/705/247 mm                     | 650/740/247 mm                     | 650/740/247 mm                     |
| Weight                                                             | 46kg                               | 46kg                               | 63kg                               | 63kg                               |
| Operation temperature range                                        | -25 °C ... +60 °C                  | -25 °C ... +60 °C                  | -25 °C ... +60 °C                  | -25 °C ... +60 °C                  |
| Noise emission                                                     | ≤50dB(A)                           | ≤50dB(A)                           | ≤50dB(A)                           | ≤50dB(A)                           |
| Self-Consumption (night)                                           | < 3 W                              | < 3 W                              | < 3 W                              | < 3 W                              |
| Topology                                                           | Transformerless                    | Transformerless                    | Transformerless                    | Transformerless                    |
| Cooling concept                                                    | Fan Cool                           | Fan Cool                           | Fan Cool                           | Fan Cool                           |
| Electronics protection rating/connection area                      | NEMA 3R                            | NEMA 3R                            | NEMA 3R                            | NEMA 3R                            |
| Altitude                                                           | 2000m without derating             | 2000m without derating             | 2000m without derating             | 2000m without derating             |
| Relative Humidity                                                  | 0~100%                             | 0~100%                             | 0~100%                             | 0~100%                             |
| Features                                                           |                                    |                                    |                                    |                                    |
| Display                                                            | Graphic                            | Graphic                            | Graphic                            | Graphic                            |
| Interfaces: RS232/RS485/ Ethernet/RF/WiFi                          | yes / yes / opt / opt / opt        | yes / yes / opt / opt / opt        | yes / yes / opt / opt / opt        | yes / yes / opt / opt / opt        |
| Warranty: 10 years / 15 years                                      | yes / opt                          | yes / opt                          | yes / opt                          | yes / opt                          |
| Certificates and Approvals                                         |                                    |                                    |                                    |                                    |
| UL1741, UL1998, IEEE1547, FCC Part 15(class B), CSA C22.2 No.107.1 |                                    |                                    |                                    |                                    |

## Central Inverter

Growatt CP100

Growatt CP250

Growatt CP500TL/630TL

Growatt CP1000 Station/CP1260 Station





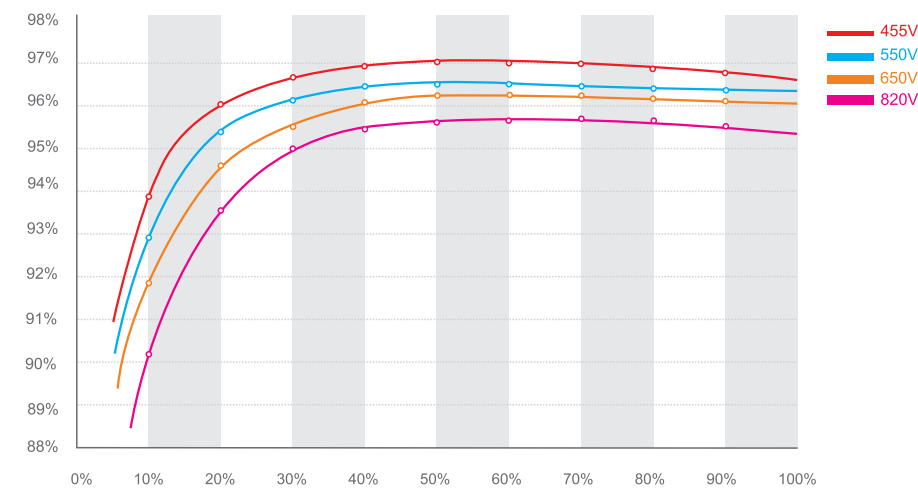


## Growatt CP100

### Leading - edge Technology

- Max efficiency over 98%, deliver more energy
- Powerful grid management functions(including LVRT)
- Active power continuous adjustment (0-100%)
- Reactive power adjustable, PF range 0.9lagging-0.9leading
- Friendly touch monitoring interface, easy installation maintenance procedure
- Certificate and approvals includedmaintenance
- Design for max.ROI: Newest generation IGBTs and advanced MPPT Algorithms
- Auxiliary electrical heating (optional)
- Comprehensive protection for overvoltage,islanding,short-circuit,overload,overheat etc.

Growatt CP100 efficiency



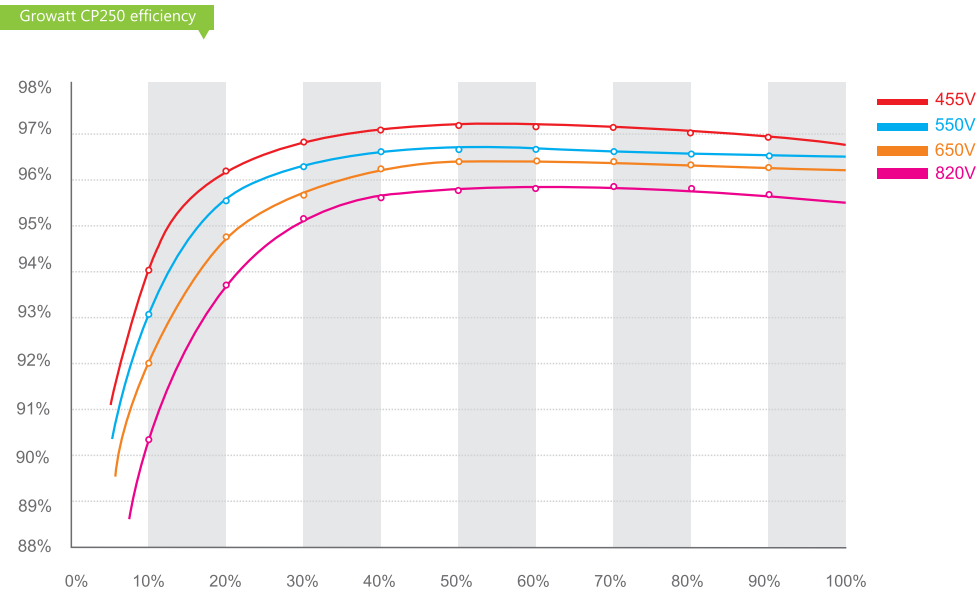
| Datasheet                   | Growatt CP100              |
|-----------------------------|----------------------------|
| Input Data                  |                            |
| Max. DC power               | 115KW                      |
| Max. DC voltage             | 1000V                      |
| DC Voltage Range            | 450V - 1000V               |
| MPPT Voltage Range          | 450V - 850V                |
| Rated Input Voltage         | 600V                       |
| Start Voltage/Power         | 500V/1000W                 |
| Maximum Input Current       | 250A                       |
| Number of Independent MPPT  | 1                          |
| Number of DC Inputs         | 2                          |
| Output Data(AC)             |                            |
| Rated AC Power              | 100KVA                     |
| Rated AC Voltage            | 400V                       |
| AC Voltage Range            | 310V - 450V                |
| Rated Frequency             | 50Hz/60Hz                  |
| Frequency Range             | 45-55Hz/55-65Hz            |
| Rated current               | 144A                       |
| Maximum Output Current      | 160A                       |
| Power Factor (cosφ)         | 0.9lagging – 0.9leading    |
| THDI                        | <3%(@Pac,r)                |
| Efficiency                  |                            |
| Maximum Efficiency          | 97.1%                      |
| Euro Efficiency             | 96.5%                      |
| MPPT Efficiency             | 99.9%                      |
| Protection                  |                            |
| DC Disconnection Device     | DC circuit breaker         |
| AC Disconnection Device     | AC circuit breaker         |
| DC Overvoltage Protection   | Surge arrester type II     |
| AC Overvoltage Protection   | Surge arrester type II     |
| Grid monitoring/Management  | yes/yes                    |
| Ground monitoring           | yes                        |
| Over Temperature Protection | yes                        |
| Insulation monitoring       | yes                        |
| General Data                |                            |
| Dimension (W/H/D)           | 1100/1890/850 mm           |
| Weight                      | 820kg                      |
| Operating Temperature Range | -25 °C ... +55 °C          |
| Relative Humidity           | 0 ~95%                     |
| Degree of Protection        | IP 20                      |
| Noise Emission              | 65dB(A)@1m                 |
| Maximum Operating Altitude  | 6000m(Derating over 3000m) |
| Standby consumption         | <100W                      |
| Cooling                     | Air Forced                 |
| Topology                    | Low Frequency Transformer  |
| Display                     | Touch screen LCD           |
| Communication Interface     | RS 485/ Ethernet           |
| Certificates and Approvals  |                            |
| CE, TUV, CGC, LVRT, ZVRT    |                            |



Growatt CP250

Leading - edge Technology

- Max efficiency over 98%, deliver more energy
  - Powerful grid management functions(including LVRT)
  - Active power continuous adjustment (0-100%)
  - Reactive power adjustable, PF range 0.9lagging-0.9leading
  - Friendly touch monitoring interface, easy installation maintenance procedure
  - Certificate and approvals included
- Design for max.ROI: Newest generation IGBTs and advanced MPPT Algorithms
  - Auxiliary electrical heating (optional)
  - Comprehensive protection for overvoltage,islanding short-circuit,overload,overheat etc.



| Datasheet                   | Growatt CP250              |
|-----------------------------|----------------------------|
| Input Data                  |                            |
| Max. DC power               | 285KW                      |
| Max. DC voltage             | 1000V                      |
| DC Voltage Range            | 450V - 1000V               |
| MPPT Voltage Range          | 450V - 850V                |
| Rated Input Voltage         | 600V                       |
| Start Voltage/Power         | 500V/2500W                 |
| Maximum Input Current       | 635A                       |
| Number of Independent MPPT  | 1                          |
| Number of DC Inputs         | 4                          |
| Output Data(AC)             |                            |
| Rated AC Power              | 250KVA                     |
| Rated AC Voltage            | 400V                       |
| AC Voltage Range            | 310V - 450V                |
| Rated Frequency             | 50Hz/60Hz                  |
| Frequency Range             | 45-55Hz/55-65Hz            |
| Rated current               | 361A                       |
| Maximum Output Current      | 400A                       |
| Power Factor (cos ϕ )       | 0.9lagging – 0.9leading    |
| Total Harmonic Distortion   | <3%(@Pac,r)                |
| Efficiency                  |                            |
| Maximum Efficiency          | 97.3%                      |
| Euro Efficiency             | 96.7%                      |
| MPPT Efficiency             | 99.9%                      |
| Protection                  |                            |
| DC Disconnection Device     | DC circuit breaker         |
| AC Disconnection Device     | AC circuit breaker         |
| DC Overvoltage Protection   | Surge arrester type II     |
| AC Overvoltage Protection   | Surge arrester type II     |
| Grid monitoring/Management  | yes/yes                    |
| Ground monitoring           | yes                        |
| Over Temperature Protection | yes                        |
| Insulation monitoring       | yes                        |
| General Data                |                            |
| Dimension (W/H/D)           | 1600/2080/850 mm           |
| Weight                      | 1465kg                     |
| Operating Temperature Range | -25 °C ... +55 °C          |
| Relative Humidity           | 0~95%                      |
| Degree of Protection        | IP 20                      |
| Noise Emission              | 65dB(A)@1m                 |
| Maximum Operating Altitude  | 6000m(Derating over 3000m) |
| Standby consumption         | <100W                      |
| Cooling                     | Air Forced                 |
| Topology                    | Low Frequency Transformer  |
| Display                     | Touch screen LCD           |
| Communication Interface     | RS 485/ Ethernet           |
| Certificates and Approvals  |                            |
| CE, TUV, CGC, LVRT, ZVRT    |                            |

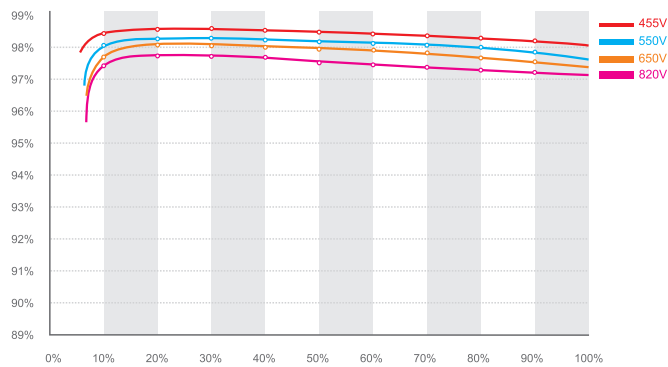


Growatt CP500TL / CP630TL

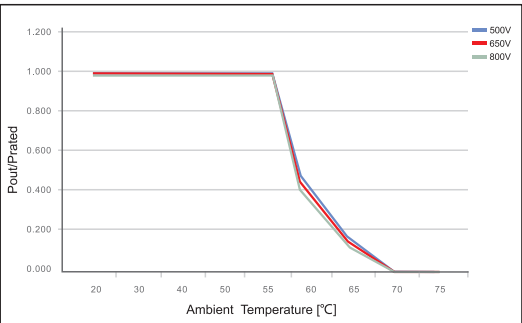
Leading - edge Technology

- High conversion efficiency of 98.6% deliver more energy
  - Powerful grid management functions(including LVRT)
  - Active power continuous adjustment (0-100%)
  - Reactive power adjustable ,PF range 0.9lagging-0.9leading
  - Transformer-less inverter for direct connection to MV transformrer
  - Friendly touch monitoring interface, easy installation maintenance procedure
- Design for max.ROI: Newest generation IGBTs and advanced MPPT Algorithms
  - Auxiliary electrical heating (optional)
  - Comprehensive protection for overvoltage islanding,short-circuit,overload,overheat etc.
  - Certificate and approvals included

Growatt CP500 efficiency



Temperature derating characteristics



| Datasheet                          | Growatt CP500TL            | Growatt CP630TL            |
|------------------------------------|----------------------------|----------------------------|
| Input Data                         |                            |                            |
| Max. DC power                      | 575KW                      | 725KW                      |
| Max. DC voltage                    | 1000V                      | 1000V                      |
| DC Voltage Range                   | 500V - 1000V               | 500V - 1000V               |
| MPPT Voltage Range                 | 500V - 850V                | 500V - 850V                |
| Rated Input Voltage                | 600V                       | 600V                       |
| Start Voltage/Power                | 520V/5000W                 | 520V/6300W                 |
| Maximum Input Current              | 1120A                      | 1450A                      |
| Number of Independent MPPT         | 1                          | 1                          |
| Number of DC Inputs                | 2x5                        | 2x5                        |
| Output (AC)                        |                            |                            |
| Rated AC Power                     | 500KVA                     | 630KVA                     |
| Rated AC Voltage                   | 315V                       | 315V                       |
| AC Voltage Range                   | 250V - 362V                | 250V - 362V                |
| Rated Frequency                    | 50Hz/60Hz                  | 50Hz/60Hz                  |
| Frequency Range                    | 45-55Hz/55-65Hz            | 45-55Hz/55-65Hz            |
| Rated current                      | 917A                       | 1155A                      |
| Maximum Output Current             | 1008A                      | 1296A                      |
| Power Factor (cos ϕ )              | 0.9lagging – 0.9leading    | 0.9lagging – 0.9leading    |
| Total Harmonic Distortion          | <3%(@Pac,r)                | <3%(@Pac,r)                |
| Efficiency                         |                            |                            |
| Maximum Efficiency                 | 98.7%                      | 98.7%                      |
| Euro Efficiency                    | 98.5%                      | 98.5%                      |
| MPPT Efficiency                    | 99.9%                      | 99.9%                      |
| Protection                         |                            |                            |
| DC Disconnection Device            | DC circuit breaker         | DC circuit breaker         |
| AC Disconnection Device            | AC circuit breaker         | AC circuit breaker         |
| DC Overvoltage Protection          | Surge arrester type II     | Surge arrester type II     |
| AC Overvoltage Protection          | Surge arrester type II     | Surge arrester type II     |
| Grid monitoring/Management         | yes/yes                    | yes/yes                    |
| Ground monitoring                  | yes                        | yes                        |
| Over Temperature Protection        | yes                        | yes                        |
| Insulation monitoring              | yes                        | yes                        |
| General Data                       |                            |                            |
| Dimension (W/H/D)                  | 2000/2180/850 mm           | 2000/2180/850 mm           |
| Weight                             | 1620kg                     | 1620kg                     |
| Operating Temperature Range        | -25 °C ...+55°C            | -25 °C ...+55°C            |
| Relative Humidity                  | 0~95%                      | 0~95%                      |
| Degree of Protection               | IP 20                      | IP 20                      |
| Noise Emission                     | 65dB(A)@1m                 | 65dB(A)@1m                 |
| Maximum Operating Altitude         | 6000m(Derating over 3000m) | 6000m(Derating over 3000m) |
| Standby consumption                | <100W                      | <100W                      |
| Cooling                            | Air Forced                 | Air Forced                 |
| Topology                           | Transformerless            | Transformerless            |
| Display                            | Touch screen LCD           | Touch screen LCD           |
| Communication Interface            | RS 485/ Ethernet           | RS 485/ Ethernet           |
| Certificates and Approvals         |                            |                            |
| CE, TUV, CGC, LVRT, ZVRT, PEA, G59 |                            |                            |



Growatt CP1000 Station / CP1260 Station

Leading - edge Technology

- High conversion efficiency of 98.7% deliver more energy
- Powerful grid management functions (including LVRT)
- Active power continuous adjustment (0-100%)
- Reactive power continuous adjustment (0-100%)
- Integrated with SCADA monitoring system, totally compatible with smart-grid interface
- Intelligent control, entirely meet the requirements of grid
- Provide a turnkey solution, easy installation and maintenance
- Comprehensive protection for overvoltage, islanding, short-circuit, overload, etc.

Configuration list

- Growatt CP500TL x2
  - Cooling system
  - Container shelter
  - Surge arrester
- Fire extinguisher
  - 4000W AC distribution box
  - DC distribution cabinet x2

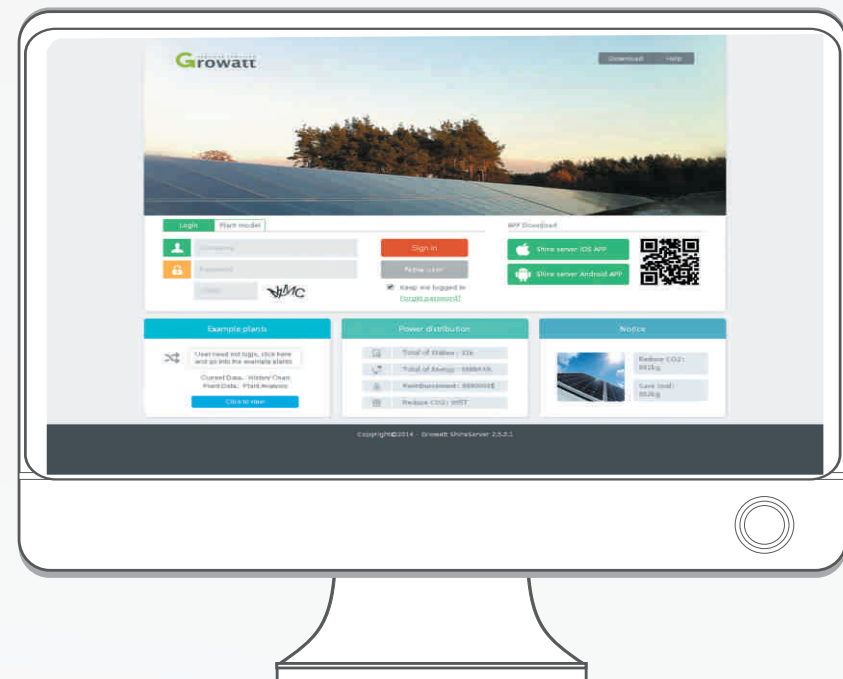
| Datasheet                     | Growatt CP1000 Station     | Growatt CP1260 Station     |
|-------------------------------|----------------------------|----------------------------|
| Input Data                    |                            |                            |
| Max. DC power                 | 1150KW                     | 1450KW                     |
| Max. DC voltage               | 1000V                      | 1000V                      |
| DC Voltage Range              | 500V - 1000V               | 500V - 1000V               |
| MPPT Voltage Range            | 500V - 850V                | 500V - 850V                |
| Rated Input Voltage           | 600V                       | 600V                       |
| Start Voltage/Power           | 520V/10000W                | 520V/12600W                |
| Maximum Input Current         | 2240A                      | 2900A                      |
| Number of Independent MPPT    | 1                          | 1                          |
| Number of DC Inputs           | 2x10                       | 2x10                       |
| Output (AC)                   |                            |                            |
| Rated AC Power                | 1000KVA                    | 1260KVA                    |
| Rated AC Voltage              | 315V                       | 315V                       |
| AC Voltage Range              | 250V - 362V                | 250V - 362V                |
| Rated Frequency               | 50Hz/60Hz                  | 50Hz/60Hz                  |
| Frequency Range               | 45-55Hz/55-65Hz            | 45-55Hz/55-65Hz            |
| Rated current                 | 1833A                      | 2310A                      |
| Maximum Output Current        | 2016A                      | 2592A                      |
| Power Factor (cosφ)           | 0.9lagging – 0.9leading    | 0.9lagging – 0.9leading    |
| THDI                          | <3%(@Pac,r)                | <3%(@Pac,r)                |
| Efficiency                    |                            |                            |
| Maximum Efficiency            | 98.7%                      | 98.7%                      |
| Euro Efficiency               | 98.5%                      | 98.5%                      |
| MPPT Efficiency               | 99.9%                      | 99.9%                      |
| Protection                    |                            |                            |
| DC Disconnection Device       | DC circuit breaker         | DC circuit breaker         |
| AC Disconnection Device       | AC circuit breaker         | AC circuit breaker         |
| DC Overvoltage Protection     | Surge arrester type II     | Surge arrester type II     |
| AC Overvoltage Protection     | Surge arrester type II     | Surge arrester type II     |
| Grid monitoring/Management    | yes/yes                    | yes/yes                    |
| Ground monitoring             | yes                        | yes                        |
| Over Temperature Protection   | yes                        | yes                        |
| Insulation monitoring         | yes                        | yes                        |
| General Data                  |                            |                            |
| Dimension (W/H/D)             | 3600/3000/2896 mm          | 3600/3000/2896 mm          |
| Weight                        | 6000kg                     | 6000kg                     |
| Operating Temperature Range   | -25 °C ... +55 °C          | -25 °C ... +55 °C          |
| Relative Humidity             | 0~95%                      | 0~95%                      |
| Degree of Protection          | IP 54                      | IP 54                      |
| Noise Emission                | 65dB(A)@1m                 | 65dB(A)@1m                 |
| Maximum Operating Altitude    | 6000m(Derating over 3000m) | 6000m(Derating over 3000m) |
| Standby consumption           | <200W                      | <200W                      |
| Cooling                       | Air Forced                 | Air Forced                 |
| Topology                      | Transformerless            | Transformerless            |
| Display                       | Touch screen LCD           | Touch screen LCD           |
| Communication Interface       | RS 485/ Ethernet           | RS 485/ Ethernet           |
| Certificates and Approvals    |                            |                            |
| CE, TUV, CGC, LVRT, ZVRT, G59 |                            |                            |



## Monitoring System

ShineWiFi  
ShineLAN  
ShineVision  
ShineWebBox  
ShineServer  
ShinePhone



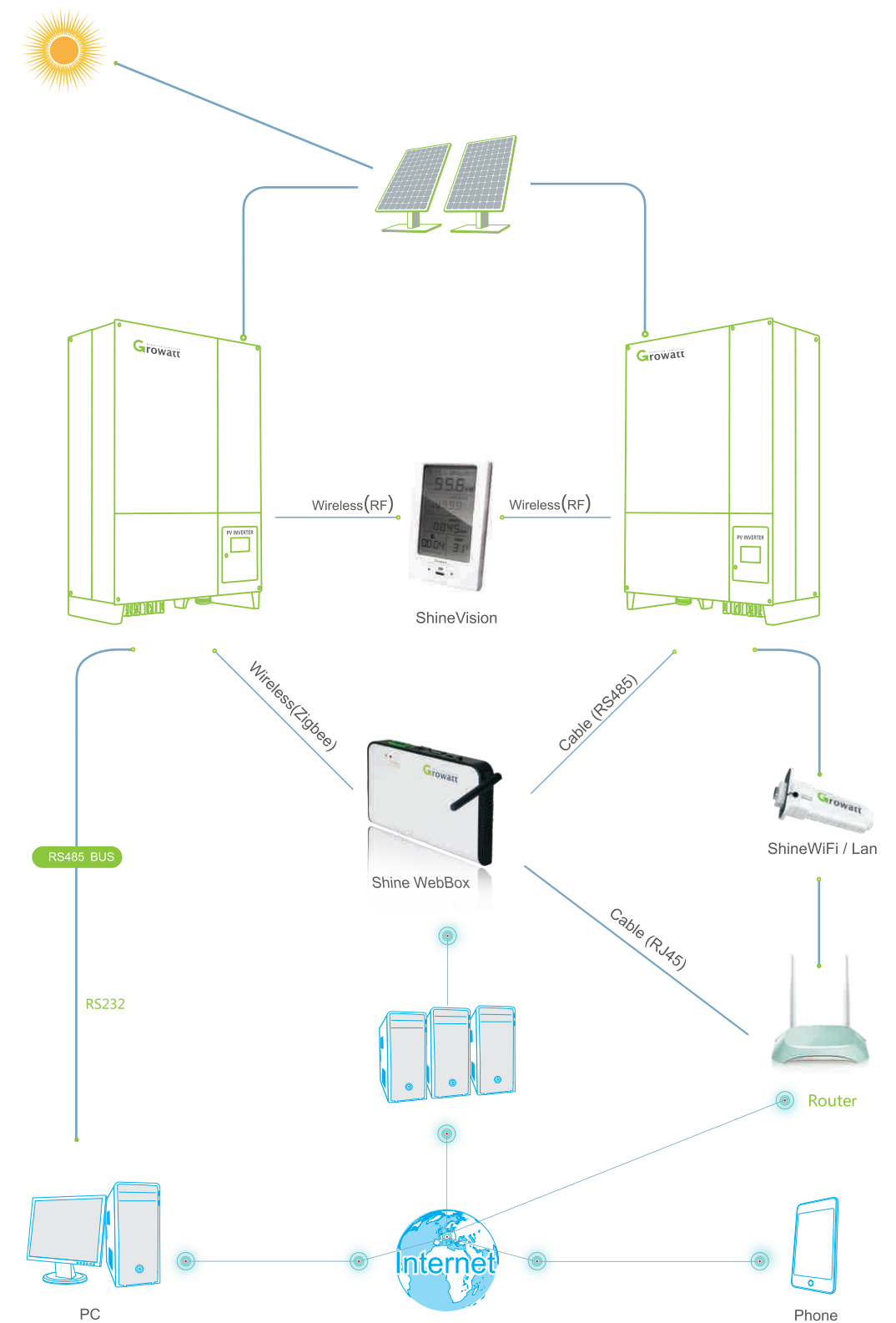


## Growatt Monitoring system

Growatt monitoring system provide you the perfect solution for every application, regardless whether you want to monitor the yield of a home roof system or of a solar power station.

Through the powerful back-ups from our hardware and software, various communication protocols and interfaces, our customers can simply manage the portfolis of different systems-- from residential to commercial roof to utility scale--from any location of the world.

With our web-enabled platform, you won't miss any change.

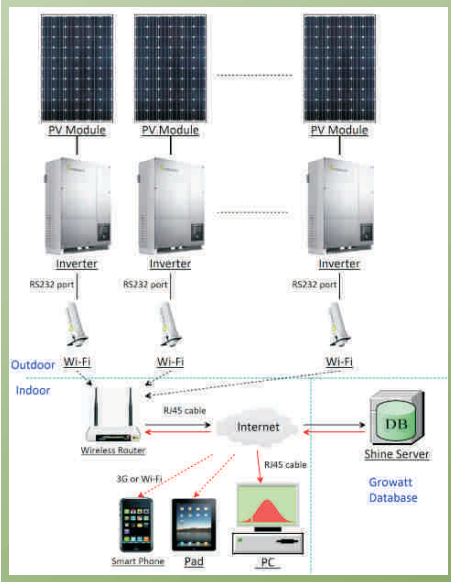




## ShineWiFi

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                                                               |
|---------------------------------|-------------------------------------------------------------------------|
| General Data                    |                                                                         |
| Dimensions(Length/Width/Height) | 135/79/29 mm                                                            |
| Weight                          | 63g                                                                     |
| Software language               | English, Chinese                                                        |
| Language of the manual          | English, Chinese                                                        |
| Wireless Parameters             |                                                                         |
| Certification                   | FCC/CE                                                                  |
| Wireless type                   | WiFi                                                                    |
| Wireless standard               | 802.11 b/g/n                                                            |
| Frequency range                 | 2.412GHz ~ 2.484GHz                                                     |
| Antenna gain                    | 2.5 dBi                                                                 |
| Transmit power                  | 802.11b: +20dBm(Max.)<br>802.11g: +18dBm(Max.)<br>802.11n: +15dBm(Max.) |
| Receiver sensitivity            | 802.11b: -89dBm(Max.)<br>802.11g: -81dBm(Max.)<br>802.11n: -71dBm(Max.) |
| Hardware Parameters             |                                                                         |
| Data interface                  | UART : 9600bps   Ethernet : 100Mbps                                     |
| Operating voltage               | 9V(+/-15%)                                                              |
| Operating current               | 100mA ~ 300mA                                                           |
| Operating temperature           | -25℃ ~ +55℃                                                             |
| Storage temperature             | -30℃ ~ +60℃                                                             |
| Network type                    | AP(Access Point) Mode; Station Mode(with Soft AP)                       |
| Software Parameters             |                                                                         |
| Security mechanisms             | WEP/WPA-PSK/WPA2-PSK/WAPI                                               |
| Encryption                      | WEP64/WEP128/TKIP/AES                                                   |
| WLAN default IP                 | 192.168.10.100                                                          |
| Application Parameters          |                                                                         |
| Supported servers               | ShineServer                                                             |
| Inverter communication          | RS232(Modbus RTU protocol)                                              |
| Server communication            | WiFi via router(Modbus TCP protocol)                                    |
| Supported routers               | Wireless router(Include 3G router)                                      |
| User configuration interface    | Integrated web server(Internet browser)                                 |
| Max.communication range         | 100m                                                                    |
| Data transfer interval          | 5 Minutes                                                               |
| Default server URL              | server.growatt.com                                                      |
| Others                          |                                                                         |
| Warranty                        | 1 year                                                                  |



ShineLan

Newly recommended for house-owners

- Easy to use
- Plug-and-play commissioning
- Direct data exchange with Router via Rj45
- Remote firmware updating for inverter
- Free online monitoring via Shine Server



| Datasheet                              | ShineLan                                                           |
|----------------------------------------|--------------------------------------------------------------------|
| General Data                           |                                                                    |
| Dimensions(Length/Width/Height)        | 144/80/38 mm                                                       |
| Weight                                 | 100g                                                               |
| Software language                      | English, Chinese                                                   |
| Language of the manual                 | English, Chinese                                                   |
| Certification                          | FCC/CE                                                             |
| Wireless Parameters                    |                                                                    |
| Wireless type                          | WiFi                                                               |
| Wireless standard                      | 802.11 b/g/n                                                       |
| Frequency range                        | 2.412GHz ~ 2.484GHz                                                |
| Antenna gain                           | 2.5 dBi                                                            |
| Security mechanisms                    | WEP/WPA-PSK/WPA2-PSK/WAPI                                          |
| Encryption                             | WEP64/WEP128/TKIP/AES                                              |
| Wired Parameters                       |                                                                    |
| Data speed of UART                     | 9600bps                                                            |
| Data speed of Ethernet                 | 100Mbps                                                            |
| Type of interface                      | RS232、RJ45                                                         |
| Indicator lamp                         | LED for status of network / LED for status of data transmission    |
| Hardware Parameters                    |                                                                    |
| Operating voltage                      | 9V(+/-20%)                                                         |
| Operating current                      | 100mA ~ 300mA                                                      |
| Operating temperature                  | -25℃ ~ +55℃                                                        |
| Storage temperature                    | -30℃ ~ +60℃                                                        |
| Software Parameters                    |                                                                    |
| WLAN default IP                        | 192.168.10.100                                                     |
| Supported servers                      | ShineServer                                                        |
| Auto switch between wired and wireless | Support                                                            |
| Ways of firmware update                | Integrated web server/Remote FTP Server                            |
| Application Parameters                 |                                                                    |
| Inverter communication                 | RS232(Modbus RTU protocol)                                         |
| Server communication                   | RJ45 via router(Modbus TCP protocol)                               |
| Supported routers                      | Common router(Include wired router, wireless router and 3G router) |
| User configuration interface           | Integrated web server(Internet browser)                            |
| Max.communication range                | 100m by direct interconnection, far in successive steps            |
| Data transfer interval                 | 5 Minutes (default)                                                |
| Default server URL                     | server.growatt.com                                                 |



## ShineVision

### The all-in-one wireless monitoring package for home

Informative, cute, and easy to operate, the ShineVision with Radio Frequency not only has sexy design, but also provides an innovative monitoring solution. Key data is visible on its display, including daily, monthly, total power yield and income, DC and AC voltage, energy yield in Euros, US dollars and Pounds, temperature, time, as well as insolation levels, which can be accessed just like a mobile phone. It can update and store the latest data permanently. ShineVision also can be set up to emit an audio signal to tell operators of system errors automatically.

### Features

- RF communication for wireless operation
- Automatic monitoring of up to six inverters simultaneously, applicable for small home system
- Simple installation. It can be placed anywhere indoor with signal coverage
- Easy-to-understand data display by simple key operation: real-time power, three-phase AC voltage, PV voltage, daily, monthly and total power yield and income, temperature, light intensity, the date and time
- Data archiving automatically and permanently with high security
- Audio alarm in the event of errors
- Low power consumption, powered by adaptor or battery

| Datasheet                              | ShineVision                                                           |
|----------------------------------------|-----------------------------------------------------------------------|
| Communication                          |                                                                       |
| Inverter communication                 | Wireless radio frequency                                              |
| Number of inverters                    | Max.6 units                                                           |
| Communication range                    |                                                                       |
| Partition communication                | Max.30m                                                               |
| Power supply                           |                                                                       |
| Power adapter                          | Input : 100-240V, 50/60Hz AC<br>Output: 5V/0.1A AC                    |
| Type of battery                        | Number 5 AA alkaline battery                                          |
| Environmental conditions for operation |                                                                       |
| Emitter temperature                    | -10℃ ~ 60℃                                                            |
| Monitor temperature                    | -10 ℃ ~ 50℃                                                           |
| Humidity range                         | ≤80%                                                                  |
| Protection rating                      | IP20                                                                  |
| General Data                           |                                                                       |
| Dimensions (W / H / D)                 | 217/150/72 mm                                                         |
| Weight                                 | 0.82kg                                                                |
| Installation site                      | Indoor                                                                |
| Deployment options                     | Desktop device                                                        |
| Language versions                      | English                                                               |
| Features                               |                                                                       |
| Display                                | LCD display                                                           |
| Operation                              | key-press                                                             |
| Warranty                               | 12 months                                                             |
| Information displayed                  |                                                                       |
| General Information                    | Time, date, temperature                                               |
| System Data                            | AC voltage, PV voltage, daily yield, monthly yield, total yield, etc. |



## ShineWebBox

It is a cost-effective and compact monitoring device, specially designed for solar power plant. Using stable Linux operating system with high-speed CPU, smartly record your system features. Provide local data storage, wireless and easy TCP/IP configuration, and present plant data over Internet.

### Features:

- A multi-functional and high-performance communication data logger
- Keep user informed of the system’s status at any time
- Massive storage with flexible parameters setting, system information management, reactive power control, error prompt and record
- Remote monitoring and maintenance for medium and large solar power plants
- Flexible display, evaluation and rapid detection of any change
- Collects data and uploads information over the internet in near real-time to Growatt Shine Server platform

| Datasheet                    | ShineWebBox                                                       |
|------------------------------|-------------------------------------------------------------------|
| Communication                |                                                                   |
| Communication with inverters | RS485 （Wire connection）<br>ZigBee （Wireless connection）           |
| Communication with PC        | 10/100 Mbit Ethernet                                              |
| Communication range          | RS485: 1200m<br>ZigBee: 300m (without obstacle)<br>Ethernet: 100m |
| Electrical Data              |                                                                   |
| Power adapter                | Input: 100~240V,50/60Hz AC<br>Output: 5V,2A DC                    |
| Power consumption            | 2.5W                                                              |
| Environmental Conditions     |                                                                   |
| Ambient temperature          | 0 - 45℃                                                           |
| Relative air humidity        | 5%-95%                                                            |
| General Data                 |                                                                   |
| Dimensions(W/H/D)            | 185/125/30 mm                                                     |
| Net weight                   | 0.42kg                                                            |
| Mounting location            | Indoor                                                            |
| Mounting type                | Wall mounting , tabletop device                                   |
| Status indicator             | LED                                                               |
| Language                     | English                                                           |
| Data update frequency        | 5 minutes                                                         |





## 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                                                                          |



ShinePhone

Download **ShinePhone**

For iOS



For Android



| 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             |





Residential

Utility

Comercial



## Service

Choose Growatt

Choose golden service

7 X 24 global on line support

Service hotline:

+86 755 2747 1942

Email: [service@ginverter.com](mailto:service@ginverter.com)

Business hotline

+86 755 2747 1900

Email: [info@ginverter.com](mailto:info@ginverter.com)

## Growatt Photovoltaic Inverter

The cost of PV inverter is just a small proportion of the whole PV system, however the system operation and power generation are completely controlled by the inverter. Growatt PV inverter has been tested by many professional organizations, which is very applicable for residential solar system, as well as power plant.

## High Efficiency

On the PV market of developed countries, the national power grid conditions are relatively good. Therefore most of the countries choose more environmentally friendly and efficient multicrystalline silicon solar panel. For such applications, the Growatt transformerless inverters brings more stable and sustainable higher power generation. Growatt inverter can also be applied with parts of the noncrystallosilicon modules and concentrator modules.

## Easy Installation

Easy wall mount installation, convenient AC/DC connections. Internal DC switch, automatic detection of grid safety and disconnect settings. By simple adjustment, Growatt inverter can be applied in different countries with different grids and safety standards.

## Safe and Reliable

Internal DC switch; AC/DC side safety protection and failure checking; communications by RS485, RS232, WiFi.

## Smart Monitoring

Growatt inverters can wirelessly communicated by RF technology, WiFi. Using Monitoring Server to realize power plant monitoring, system diagnostics and maintenance.

## Warranty

All the Growatt inverter has 5 years standard warranty.

